

Plenary Lecture

October 14 (Thu), 13:30-14:20, Room 205

A Journey to Molecular Excitonic World

Chair : Dongwhan Lee (Seoul National University)



Prof. Dongho Kim

Department of Chemistry,
Yonsei University, Korea

Brief Profiles

2000-present / Underwood Distinguished Professor, Yonsei University

1986-2000 / Korea Research Institute of Standards & Science

Various synthetic strategies have been developed to devise a variety of artificial molecular arrays in molecular photonics because of their similarities in architecture and subunit structures to the natural photosynthetic light-harvesting complexes. For the molecular arrays to be efficient devices, they should have very regular pigment arrangements which allow a facile light energy or charge flow along the array but do not result in the alteration of individual properties of the constituent pigments leading to the formation of energy or charge sink. In these respects, understanding of photophysical properties of these macromolecular architectures is essential for the rational design of molecular devices for photovoltaic, or optoelectronic applications. Here, we have revealed that the ultrafast excitation energy migration processes in molecular arrays are strongly influenced by the electronic couplings among the constituent molecules as well as the structural rigidity of overall architectures. Our investigations have been extended to H-type aggregated perylenebisimide (PBI) and polythiophene oligomers (linear vs. cyclic). Not only intermolecular exciton couplings but intramolecular electronic structures have been investigated in a series of expanded porphyrins in conjunction with their molecular structures, the number of π -electrons (Hückel's $[4n+2]$ rule) as well as their conjugation pathways. Our study demonstrates a relationship between the photophysical properties such as absorption/emission properties, excited state dynamics and the aromaticity of expanded porphyrin systems. Based on these spectroscopic observations, we have found the reversal of aromaticity in the excited states of aromatic/antiaromatic expanded porphyrin congeners.[4] Detailed studies of the modulation events are expected to provide additional fruitful insight into the relationship between (anti) aromaticity and electronic structures. To the extent this proves true, it could have far-reaching practical applications that complement the advances in theoretical understanding that our studies are likely to provide.

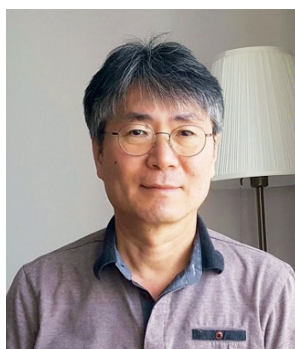
Award Lecture

2021 Taikyue Ree Academic Award

October 15 (Fri), 13:30-14:20, Room 205

Postsynthetic Modifications of Metal–organic Frameworks and Their Applications

Chair : Eunsung Lee (POSTECH)



Prof. Myoung Soo Lah

Department of Chemistry,
UNIST, Korea

Brief Profiles

Present / Professor, Department of Chemistry, Ulsan National Institute of Science and Technology, Korea

1991 / Ph.D, Department of Chemistry, University of Michigan, Ann Arbor, USA

1984 / M.S, Department of Chemistry, Seoul National University, Korea

1982 / B.S, Department of Chemistry, Seoul National University, Korea

Stepwise approaches can be used to obtain a variety of metal–organic frameworks (MOFs) that are not attainable by one-pot solvothermal reaction. MOF-74 is one of the most explored MOFs, but its functionalization is limited to the dative post-synthetic modification (PSM) of the monodentate solvent site. Owing to the nature of the organic ligand and framework structure of MOF-74, the covalent PSM of MOF-74 is very demanding. The covalent PSM of the amino group of amino-tagged defective Ni-MOF-74, which is prepared by de novo solvothermal synthesis using aminosalicic acid as a functionalized fragmented organic ligand, generates metal-binding sites, and subsequent post-synthetic metalation with Pd(II) ions affords Pd(II)-incorporated Ni-MOF-74 catalyst. This catalyst exhibits highly efficient, size-selective, and recyclable catalytic activity for the Suzuki–Miyaura cross-coupling reaction. Meanwhile, a MOF having superprotonic conductivity is prepared by dative PSM of MOF-808. The activation of the sulfamate (SA)-grafted MOF-808 changes the binding mode of the grafted SA from monodentate to bridging bidentate, thus converting the neutral amido ($-S-NH_2$) moiety of the grafted SA to the more acidic cationic sulfiliminium ($-S=NH_2^+$) moiety. The MOF with sulfiliminium moiety is found to have a proton conductivity of 7.89×10^{-2} S/cm. Moreover, this superprotonic conductivity is well maintained over 1000 cycles of conductivity measurements and for similar cyclic measurements each day for seven days.

Scientific Programs

Symposium

KCS Symposium 1
October 13 (Wed), Room 101

Chair



Myungeun Seo
Present Associate Professor, Department of Chemistry, KAIST, Korea
2008 Ph.D., Department of Chemistry, KAIST, Korea
2002 B.S., Department of Chemistry, KAIST, Korea

Speaker



Hee-Seung Lee
Present Professor, Department of Chemistry, KAIST, Korea
Present Director, Center for Multiscale Chiral Architectures (CMCA)



Haeshin Lee
2010- Present Professor, Department of Chemistry, KAIST, Korea
2007 Ph.D., Department of Biomedical Engineering, Northwestern University, USA
1997 B.S., Department of Biological Sci., KAIST, Korea



Jintaek Gong
Present Research Assistant Professor, Center for Multiscale Chiral Architectures, KAIST, Korea
2020 Post-Doctoral Researcher, National Science Institute, KAIST, Korea
2017 Ph.D., Department of Chemistry, KAIST, Korea



Sang Woo Han
Present Professor, Department of Chemistry, KAIST



Dong Ki Yoon
2021 Professor, Department of Chemistry, KAIST, Korea



Hyunjoon Song
Present Professor, Department of Chemistry, KAIST, Korea
2002 Postdoc, Department of Chemistry, UC Berkeley, USA
2000 Ph.D., Department of Chemistry, KAIST, Korea



Byeong-Su Kim
2018- Present Professor, Department of Chemistry, Yonsei University, Korea
2009- Assistant and Associate Professor, Department of Chemistry, UNIST, Korea
2007- 2009 Postdoctoral Research Associate, Department of Chemical Engineering, MIT, USA



Sunkyu Han
2014 - Assistant/Associate Professor, Department of Chemistry, KAIST, Korea
2012 - 2014 Postdoc, Department of Chemistry, Yale University, USA
2006 - Graduate Student, Department of Chemistry, MIT, USA

3. [KAIST-SRC Symposium] Frontiers in Multiscale Chirality

Organizer : Hee-Seung Lee (KAIST)

Chair : Myungeun Seo (KAIST)

- 13:30 **KCS1-1** Foldamer-Based Chiral Molecular Architectures
Hee-Seung Lee
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- 14:00 **KCS1-2** Surface Coatings by Polyphenols and Phenolamines
Haeshin Lee
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- 14:20 **KCS1-3** Creating Highly Crystalline Nanoplate Foldecture from Short α -Amino Acid Peptides and Its Molecular-level Structural Analysis
Jintaek Gong
Center for Multiscale Chiral Architectures, Korea Advanced Institute of Science and Technology, Korea
- 14:40 Coffee Break
- 14:50 **KCS1-4** Plasmonic Hybrid Nanoarchitectures for Boosting Light-to-Chemical Energy Conversion
Sang Woo Han
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- 15:10 **KCS1-5** Light-driven fabrication of helical nanostructures for optical applications
Dong Ki Yoon
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- 15:30 **KCS1-6** Structural Complexity Manifested during Electrodeposition of Heterometals
Hyunjoon Song
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- 15:50 **KCS1-7** Supramolecular Polymers Based on C₃-Symmetric Triphenylene Triimides: From Point Chirality to Helicity
Byeong-Su Kim
Department of Chemistry, Yonsei University, Korea
- 16:10 **KCS1-8** Multiscale Chiral Architectures: A Molecular Level Approach
Sunkyu Han
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

Organizer



Taiha Joo
Present Professor, Department of Chemistry, POSTECH, Korea
Ph. D. Department of Chemistry, Cornell University, USA
B.S. Department of Chemistry, Seoul National University

Chair



Yoonsoo Pang
Present Associate Professor, Department of Chemistry, GIST, Korea
2007 Ph.D. Department of Chemistry, UIUC, USA
1996 B.S., Department of Chemistry, Seoul National University, Korea



Sung Jee Kim
Professor POSTECH



Young Min Rhee
Present Professor, Department of Chemistry, KAIST

Speaker



Dongho Kim
1986- Korea Research Institute of Standards & Science
2000- Underwood Distinguished Professor, Yonsei University



Cheol Ho Choi
2001 Professor, Department of Chemistry, Kyungpook National University



Kyungwon Kwak
Present Professor, Department of Chemistry, Korea University, Korea
2016 Department of Chemistry, Chung-Ang University, Korea
2010 Department of Chemistry, Bioengineering, University of California at Berkeley, USA



Ji Hoon Shim
Present Prof., Department of Chemistry, POSTECH, Korea

4. [POSTECH-SRC Symposium] Measurements and Theory of Electronic and Nuclear Quantum Coherences

Organizer : Taiha Joo (POSTECH)

Chair : Yoonsoo Pang (GIST)

- 13:30 **KCS2-1** Molecular reaction dynamics in excited state by measuring nuclear wave packets
Taiha Joo
Department of Chemistry, Pohang University of Science and Technology, Korea
- 13:40 **KCS2-2** Direct observation of the ultrafast structural dynamics engineering the fate of the excimer state
Dongho Kim
Department of Chemistry, Yonsei University, Korea
- 13:50 **KCS2-3** MRSF as A Method of Choice for Nonadiabatic Molecular Dynamics (NAMD)
Cheol Ho Choi
Department of Chemistry, Kyungpook National University, Korea
- 14:00 **KCS2-4** Intramolecular Charge Transfer in the Excited States
Yoonsoo Pang
Department of Chemistry, Gwangju Institute of Science and Technology, Korea
- 14:10 Coffee Break

Chair : Sung Jee Kim (POSTECH)

- 14:30 **KCS2-5** Coherent Emission from Nanoparticles
Sung Jee Kim
Department of Chemistry, Pohang University of Science and Technology, Korea
- 14:40 **KCS2-6** The Intra-band electron dynamics of HgS Quantum dot Studied by Infrared Pump-Probe and 2D-IR Spectroscopy
Kyungwon Kwak
Department of Chemistry, Korea University, Korea
- 14:50 **KCS2-7** Temperature evolution of electronic coherence in solid
Ji Hoon Shim
Department of Chemistry, Pohang University of Science and Technology, Korea
- 15:00 **KCS2-8** Cluster Frameworks
Sarah Sunah Park
Department of Chemistry, Pohang University of Science and Technology, Korea
- 15:10 Coffee Break

**Sarah Sunah Park**

Present Assistant Professor, Department of Chemistry, POSTECH
2019 Postdoctoral Fellow, Department of Chemistry, Northwestern University
2017 Ph.D., Department of Chemistry, MIT

**Nam Ki Lee**

2017- Present Associate Professor, Department of Chemistry, Seoul National University
2009- 2016 Assistant and Associate Professor, Department of Physics, POSTECH
2005 Ph.D. Department of Chemistry, Seoul National University

**Jongcheol Seo**

Present Assistant Professor, Department of Chemistry, POSTECH, Korea

**Kyung Hwan Kim**

Present Assistant Professor, Department of Chemistry, POSTECH, Korea

Chair : Young Min Rhee (KAIST)

- 15:30 **KCS2-9** Vibrational Coherence and Molecular Dynamics
Young Min Rhee
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- 15:40 **KCS2-10** New method for single-protein tracking in a living cell using photoconversion
Nam Ki Lee
Division of Chemistry, Seoul National University, Korea
- 15:50 **KCS2-11** Exciton-driven ionization for the mass spectrometric analysis of semiconductor nanoparticles
Jongcheol Seo
Department of Chemistry, Pohang University of Science and Technology, Korea
- 16:00 **KCS2-12** X-ray Studies of Water's Anomalous Properties and the Mechanism of Chemical Reactions
Kyung Hwan Kim
Department of Chemistry, Pohang University of Science and Technology, Korea

Organizer

**Nak Cheon Jeong**
Present Associate Professor, Department of Emerging Materials Science, DGIST, Korea

2012 Postdoctor, Department of Chemistry, Northwestern University, USA

2008 Ph.D, Department of Chemistry, Sogang University, Korea

**Mi Hee Lim**
Present Professor, Department of Chemistry, KAIST, Korea

2018.02-2021.02 Associate Professor, Department of Chemistry, KAIST, Korea

2013.09-2018.01 Associate Professor, Department of Chemistry, UNIST, Korea

Chair

**Wonwoo Nam**
Present Professor, Department of Chemistry and Nano Science, Ewha Womans University, Korea

1990 Ph.D, Department of Chemistry, UCLA, USA

1985 B.S. Department of Chemistry, CSULA, USA

Speaker

**Shunichi Fukuzumi**
Present Designated Professor, Meijo University, Japan

2015-2021 Distinguished Professor, Ewha Womans University, Korea

1994-2015 Professor, Osaka University, Japan

**Hyunwoo Kim**
2020- Present Assistant Professor, Department of Chemistry and Nanoscience, Ewha Womans University, Korea

2019-2020 Postdoctoral Associate, Department of Chemistry and Chemical Biology, Cornell University, USA

2018-2019 Postdoctoral Associate, Center for Hydrocarbon Functionalization, Institute for Basic Science (IBS), Korea

**Hongseok Yun**
2021 Assistant Professor, Department of Chemistry, Hanyang University, Korea

2019 Research Assistant Professor, Department of Chemical and Biomolecular Engineering, KAIST, Korea

2016 Post-Doc, Department of Chemical and Biomolecular Engineering, KAIST, Korea

**Youngsoo Kim**
Present Assistant Professor, Department of Chemistry, Yeungnam University, Korea

2017 Postdoc, Department of Chemistry, University of Illinois at Urbana-Champaign, USA

5. [International Symposium for Emerging Investigators]
Light-Matter Interaction and Electron Transfer: State of the Art and Remaining Challenges

Organizer : Mi Hee Lim (KAIST), Nak Cheon Jeong (DGIST)

Chair : Wonwoo Nam (Ewha Woman University)

13:30 **KCS3-1** Molecular Functional Models of Photosynthesis
Shunichi Fukuzumi
Graduate School of Science and Engineering, Meijo University, Japan

14:30 Coffee Break

Chair : Nak Cheon Jeong (DGIST)

14:35 **KCS3-2** Radical hydrodifluoromethylation of alkenes via an electroreductively triggered two-pronged approach: the key distinction between organic photosynthesis and electrosynthesis
Hyunwoo Kim
*Department of Chemistry and Nanoscience, Ewha Womans University, Korea*14:50 **KCS3-3** Light-Induced Switching of Block Copolymer Particle Structure and Property
Hongseok Yun
*Department of Chemistry, Hanyang University, Korea*15:05 **KCS3-4** Turning Photons into Chemical Reactions: Kinetic Studies of Plasmonic Au Photocatalysts
Youngsoo Kim
*Department of Chemistry, Yeungnam University, Korea*15:20 **KCS3-5** Spin-Flip Density Functional Theory for Redox Properties of Organic Photoredox Catalysts in Excited States
Hyungjun Kim
*Department of Chemistry, Incheon National University, Korea*15:35 **KCS3-6** Functional Integration of Catalysts for Efficient Utilization of Photogenerated Charge Carriers
Sung Yul Lim
Department of Chemistry, Kyung Hee University, Korea

15:50 Coffee Break

- 2009 Ph.D. Department of Chemistry, Korea University, Korea
- Hyungjun Kim**
 Present Assistant professor, Department of Chemistry, Incheon National University, Korea
 2015-2018 Postdoc, Department of Chemistry, University of Michigan, USA
 2008-2014 Ph.D., Department of Chemistry, KAIST, Korea
- Sung Yul Lim**
 Present Assistant Professor, Department of Chemistry, Kyung Hee University, Korea
 2016 Ph.D., Department of Chemistry, Seoul National University, Korea
 2009 B.S., Department of Chemistry, Seoul National University, Korea
- Wooseok Lee**
 Sep. 2019 - present Integrated MS&PhD student, Department of Chemistry, KAIST, Korea
- Kyoungwon Choi**
 Present Student, Department of Chemical Engineering, POSTECH, Korea
- Jun Su Kang**
 Present Integrated master's/doctoral course student, Department of Chemistry, KAIST
 2018 B.S., Department of Chemistry, Yonsei University, Korea
- Dongsun Choi**
 Present Postdoctoral researcher, Department of Chemistry, Korea University, Korea
- Yongseok Hong**
 2021 Postdoc, Department of Chemistry, Yonsei University, Korea
- Changhyeok Choi**
 Present Postdoc, Department of chemical and biomolecular engineering, KAIST, Korea
 2021 Ph.D., Department of chemical and biomolecular engineering, KAIST, Korea
 2015 B.S., Department of Applied Chemistry, Kyungpook National University, Korea
- SangMyeong Han**
 Present Ph.D. student, Department of Chemistry, Yonsei University, Korea
- Hyeong Cheol Kang**
 Present Combined MS/PhD, Department of Energy and Materials Engineering, Dongguk University, Korea
 2020 B.S., Department of Energy and Materials Engineering, Dongguk University, Korea

Chair : Mi Hee Lim (KAIST)

- 15:55 **KCS3-7** Site-Selective Direct C–H Pyridylation of Unactivated Alkanes *via* Photocatalysis
Wooseok Lee, Sungwoo Hong
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- 16:05 **KCS3-8** Development of highly efficient and stable perovskite solar cells
Kyoungwon Choi, Taiho Park^{1,*}
Pohang University of Science and Technology, Korea
¹*Department of Chemical Engineering, Pohang University of Science and Technology, Korea*
- 16:15 **KCS3-9** Emergence, Amplification, and Suppression of Supramolecular Chirality by Circularly Polarized Light
Jun Su Kang, Woo youn Kim^{1,*}, Myungeun Seo
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
¹*Department of Chemistry, KAIST, Korea*
- 16:25 **KCS3-10** Mid-Infrared Energy State Study in Self-Doped Quantum Dots
Dongsun Choi, Kwang Seob Jeong
Department of Chemistry, Korea University, Korea
- 16:35 **KCS3-11** Probing the structural dynamics controlling the nature of the exciton by time-domain Raman spectroscopy
Yongseok Hong, Dongho Kim
Department of Chemistry, Yonsei University, Korea
- 16:45 **KCS3-12** Theoretical insights into the potential-dependent competition between electrocatalytic dinitrogen reduction and hydrogen evolution reactions
Changhyeok Choi, Geun Ho Gu, Yousung Jung
Department of chemical and biomolecular engineering, Korea Advanced Institute of Science and Technology, Korea
- 16:55 **KCS3-13** Size-Dependent Light Harvesting from Nonthermalized Excited States of Gold Clusters
SangMyeong Han, Hongmei Xu, Dongil Lee
Department of Chemistry, Yonsei University, Korea
- 17:05 **KCS3-14** Hydrogen Atom Transfer Coupled Dye-Sensitized Photoelectrochemical Cell for Oxidative Cleavage of Lignin
Hyeong Cheol Kang, Saerona Kim¹, Gyu Leem¹, Jae-Joon Lee
Department of Energy and Materials Engineering, Dongguk University, Korea
¹*Chemistry, State University of New York, United States*
- 17:15 Coffee Break
- 17:20 Discussion & Mentoring Sessions

Speaker



Duckhwan Lee
Present Professor Emeritus,
Sogang University, Korea
1985- Professor of Chemistry
2019 Sogang University, Korea



Geun Bae Kim
Present Professor, Dept of Science
Studies, Jeonbuk National
University, Korea
2019- Dean, College of Natural
2021 Sciences, Jeonbuk National
University, Korea
2011- President, Korean History of
2013 Science Society, Korea



Mi Hye Yi
Present President, Korea Research
Institute of Chemical Technology,
Korea
2020 Vice-President, Korean Federation
of Science and Technology
Societies (KOFST), Korea



Yong-Zu Kim
Present President/CEO, LegoChem
Biosciences, Inc.
2005 Director, New Drug R&D
Institute, US LifeSciences, Inc.
1983 Ph.D, Department of Chemistry,
KAIST, Korea



Hongje Jang
2016 Associate professor, Department
Present of Chemistry, Kwangwoon
University, Korea

6. 75th Anniversary of the Korean Chemical Society: Journey to Coexistence and Sustainability

Chair : Dongwhan Lee (Seoul National University)

Congratulatory Remarks 1

Introduction of Programs

Opening Remarks

Ok-Sang Jung
President, Korean Chemistry Society

History of the KCS for 75 Years

KCS4-1 For Quantum Jump toward the Centennial of the KCS
Duckhwan Lee
Sogang University, Korea

KCS4-2 Building a Foundation of Human Capital for KCS
Geun Bae Kim
Jeonbuk National University, Korea

History of the KCS for 75 Years

Congratulatory Remarks 2

KCS4-3 Chemistry for Us, Chemistry for EARTH
Mi Hye Yi
KRICT, Korea

KCS4-4 High-tech Chemical Industry in Korea that Grew with the Korean
Chemical Society: Challenges and Future of Global Drug Development
Yong-Zu Kim
LegoChem Biosciences, Korea

KCS4-5 Chemistry for Public: Alchemy, Bomb, and Drug
Hongje Jang
Kwangwoon University, Korea

Congratulatory Remarks 3

Closing Remarks

Dongwhan Lee
Seoul National University, Korea

Organizer



Sangtae KIM
Present DONGWOO FINE-CHEM
Research & Technology
Division CTO
2009-
2018 DONGWOO FINE-CHEM
Electronic Materials R&D
Center Director

Chair



Jongsoo Lee
Present DONGWOO FINE-CHEM Color
R&D Center Director
2010-
2020 DONGWOO FINE-CHEM
Foundation Technology R&D
Center Team Leader

Speaker



Sangwoo Lim
Present Professor, Dept. Chemical and
Biomolecular Eng. Yonsei
University, Korea
2007-
2005 Motorola / Freescale
Semiconductor, Principal Staff
Scientist, USA
1998-
2000 Post-doc, Dept. Electrical
Engineering, Stanford
University, USA



Jinho Ahn
Present Professor, Materials Science and
Engineering, Hanyang University
Present Director, EUV Industry-University
Collaboration Center (EUV-IUCC)
Present Director, BK21-FOUR Nano
Convergence Leader Program,
HYU



Ho Gyu Yoon
1996-
Present Professor, Department of
Materials Science &
Engineering, Korea University,
Korea
1993-
1996 Senior researcher, Electronic
Materials, Chell Industries Inc.
1993 Ph.D., Nagoya Institute of
Technology

7. Future Information Technology for 'Super-Connected' Creative Society [The 15th Story of Future IT Technology with Dongwoo Fine-chem Co., Ltd.]

Organizer : Sangtae KIM (DONGWOO FINECHEM)

Chair : Jongsoo Lee (DONGWOO FINECHEM)

- 15:30 Opening
- 15:50 **KCSS-1** Challenges in Wet Chemical Processes for Semiconductor Scaling Down
Sangwoo Lim
Department of Chemical and Biomolecular Engineering, Yonsei University, Korea
- 16:30 **KCSS-2** EUV Lithography: Principles and Key Materials
Jinho Ahn
Department of Material Science and Engineering, Hanyang University, Korea
- 17:10 **KCSS-3** Rational design of epoxy molding compound for reliability and workability
Ho Gyu Yoon
Department of Materials Science and Engineering, Korea University, Korea

Symposium

Polymer Chemistry Symposium 1
October 14 (Thu), Room 101

Organizer



Won Jong Kim
Present Professor, Department of Chemistry,
POSTECH, Korea
Ph.D. Ph.D. Department of Biomolecular
Engineering, Tokyo Institute of
Technology, Japan

Chair



Won-Gun Koh
Present Professor, Department of Chemical
& Biomolecular Engineering, Yonsei
University
2004 Ph.D. Department of Chemical
Engineering, Penn State University
1999 B.S. Department of Chemical
Engineering, Yonsei University



Jin-Woo Oh
Present Professor, Department of
Nanopower Engineering, Pusan
National University, Korea
Present Director, Institute of BIT
convergence technology
Present Director, Center for Plague Meta-
Materials (Future Materials Discovery
Business)

Speaker



Soo-Hong Lee
Present Professor, Department of Medical
Biotechnology, Dongguk University,
Korea
2016 Professor, Department of Biomedical
Science, Oka University, Korea
2005 Postdoctoral Research Associate,
Department of Bioengineering, Rice
University, USA



Dong-Wook Han
Present Professor, Department of Optics and
Mechatronics Engineering, Pusan
National University, Korea
2004 Ph.D. Graduate Program in
Biomedical Engineering, Yonsei
University, Korea
1998 B.S. Department of Biochemistry,
Yonsei University, Korea



In-Kyu Park
Present Professor, Department of Biomedical
Sciences, Chonnam National
University, Korea
2002 Ph.D. Natural Fiber Science, Seoul
National University, Korea
1998 M.S. Natural Fiber Science, Seoul
National University, Korea



Yeu Chun Kim
Present Associate Professor, Department of
Chemical and Biomolecular
Engineering, KAIST, Korea
2007 Ph.D. Department of Chemical and
Biomolecular Engineering from
Georgia Institute of Technology, US
2001 M.S. Department of Chemical and
Biomolecular Engineering, KAIST,
Korea



Tae-Lim Choi
Present Professor, Chemistry, SNU
2003 Ph.D. Chemistry, Caitech
Editor Journal of Polymer Science

8. Special Symposium by Mid-career Biomaterials Scientists

Organizer : Won jong Kim (POSTECH)

Chair : Won-Gun Koh (Yonsei University)

- 15:40 **POLY1-1** Biomaterials-based cellular reprogramming and stem cell differentiation for personalized regenerative medicine
Soo-Hong Lee
Department of Medical Biotechnology, Dongguk University, Korea
- 16:10 **POLY1-2** Promotion of Myogenesis in Graphene-Incorporated 2D Substrates and 3D Scaffolds
Dong-Wook Han
Department of Optics and Mechatronics Engineering, Pusan National University, Korea

Chair : Jin-Woo Oh (Pusan National University)

- 16:40 **POLY1-3** Biomedical applications of stimuli responsive nanoparticles
In-Kyu Park
Department of Biomedical Sciences, Chonnam National University, Korea
- 17:10 **POLY1-4** Biomedical application of Polypeptide & Nanosystem for cancer therapy
Yeu Chun Kim
Department of Chemical and Biomolecular Engineering, Korea Advanced Institute of Science and Technology, Korea

<Award Lecture: Macromolecular Chemistry Division Award for Advancement of Science>

- 17:40 **POLY1-5** Universal Suzuki-Miyaura Catalyst-Transfer Polymerization for Precision Synthesis of Strong Donor/Acceptor-Based Conjugated Polymers
Tae-Lim Choi
Division of Chemistry, Seoul National University, Korea
- 18:10 Polymer Chemistry Division General Meeting

Organizer

**Do-Hoon Hwang**

Present Professor, Department of Chemistry, Pusan National University, Korea
1995 Ph.D, Department of Chemistry, KAIST, Korea
1990 B.S, Department of Chemistry, Pusan National University, Korea

Speaker

**Byung Jun Jung**

Present Professor, Department of Materials Science and Engineering, University of Seoul, Korea
2010 Postdoc, Department of Materials Science and Engineering, Johns Hopkins University, USA
2004 Ph. D., Department of Chemistry, KAIST, Korea

**Myungwoong Kim**

Present Associate Professor, Department of Chemistry, Inha University, Korea
2015 Postdoctoral Associate, Department of Materials Science and Engineering, Cornell University, USA
2013 Ph.D., Department of Materials Science and Engineering, University of Wisconsin-Madison, USA

**Ji-Hyun Jang**

Present Professor, School of Energy and Chemical Engineering, UNIST, Korea
2009 Post. Doc. Dept. of Materials Science and Engineering, MIT
2003 Ph. D. Dept. of Chemistry, KAIST

**Jin-kyun Lee**

Present Professor, Polymer Science & Eng. Inha University, ROK
2005-2010 Research associate, Cornell University, US
1998-2001 Research scientist, SK Innovation, ROK

9. Recent Trends in Patterning Materials

Organizer : Do-Hoon Hwang (Pusan National University)

Chair : Do-Hoon Hwang (Pusan National University)

- 09:00 **POLY2-1** Photolithographic approaches for OLED pixel patterning
Byung Jun Jung*, Jin-kyun Lee^{1,*}
Department of Materials Science and Engineering, University of Seoul, Korea
¹*Department of Polymer Science & Engineering, Inha University, Korea*
- 09:25 **POLY2-2** Photoimageable Polymeric Systems to Engineer Functional Surfaces Utilizable for Lithographic Applications
Myungwoong Kim
Department of Chemistry, Inha University, Korea

Chair : Byung Jun Jung (University of Seoul)

- 09:50 **POLY2-3** Zirconium-based photoresists for extreme ultraviolet lithography
Ji-Hyun Jang
Energy and Chemical Engineering, Ulsan National Institute of Science and Technology, Korea
- 10:15 **POLY2-4** Extreme UV resists based on radical chemistry of fluorinated molecules
Jin-kyun Lee
Department of Polymer Science & Engineering, Inha University, Korea

Organizer



Eunji Lee
Present Associate Professor, School of Materials Science and Engineering, GIST, Korea
2009 Ph.D., Department of Chemistry, Yonsei University, Korea

Chair



Myungwoong Kim
Present Associate Professor, Department of Chemistry, Inha University, Korea
2015 Postdoctoral Associate, Department of Materials Science and Engineering, Cornell University, USA
2013 Ph.D., Department of Materials Science and Engineering, University of Wisconsin-Madison, USA

Speaker



Kyueui Lee
Present Assistant Professor, Department of Chemistry, Kyungpook National University, Korea
2021 Postdoc, Department of Bioengineering, University of California at Berkeley, USA
2017 Ph.D., Department of Chemistry, KAIST, Korea



Ye-Jin Hwang
Present Assistant Professor, Department of Chemical Engineering, Inha University
2017 Postdoc, Department of Chemical Engineering, MIT
2015 Ph.D., Department of Chemical Engineering, University of Washington



Chang yun Son
Present Professor, Department of Chemistry, POSTECH, Korea
2017-2020 Postdoc, Caltech, USA
2017 Ph.D., Univ. of Wisconsin-Madison, USA



Jaewon Lee
Present Assistant Professor, Department of Chemical Engineering and Applied Chemistry, Chungnam National University, Korea
2017.01-2020.02 Postdoc., CPOS, University of California Santa Barbara

10. Recent Trends in Early-career Polymer Chemists

Organizer : Eunji Lee (GIST)

Chair : Myungwoong Kim (Inha University)

- 14:30 **POLY3-1** Polymeric Materials Inspired by Natural Polyphenols
Kyueui Lee
Department of Chemistry, Kyungpook National University, Korea
- 14:55 **POLY3-2** Stille polycondensation in flow for the preparation of conjugated polymers
Ye-Jin Hwang
Chemical Engineering, Inha University, Korea

Chair : Eunji Lee (GIST)

- 15:20 **POLY3-3** Understanding molecular driving force of self-assembly in highly charged soft materials systems via predictive molecular simulations
Chang yun Son
Department of Chemistry, Pohang University of Science and Technology, Korea
- 15:45 **POLY3-4** Design of Narrow Bandgap Conjugated Polymers and Molecular Semiconductors for Solution-Processed Near-Infrared Photovoltaics and Photodetectors
Jaewon Lee
Department of Chemical Engineering and Applied Chemistry, Chungnam National University, Korea

Organizer



Jin Seok Lee
2020.03 Professor, Department of Chemistry, Hanyang University, Seoul, Korea
2009.03 Assistant/Associate/Full Professor, Department of Chemistry, Soekmyung Women's University, Seoul, Korea
2006.11 Post-doctor, Department of Chemistry and Chemical Biology, Harvard University, MA, USA

Speaker



Ki Tae Nam
2017 - present Director, SOFT Foundry, Seoul National University, Korea
2019 - present Professor, Seoul National University, Korea



Donghwan Kim
1994-present Professor, Korea University
2018 President, Korea Photovoltaic Society
2004-2008 President, Korea Photovoltaic Development Organization



Kwanghee Lee
2020-Present Director of Energy Valley Institute of Technology (EVIT)
2019-Present Director of Research Institute for Solar and Sustainable Energies (RISE, RIST), Korea
2018-Present The 30th International Photovoltaic Science and Engineering Conference (PVSEC-30) Program Chair



Kyung Byung Yoon
Present Loyola Distinguished Professor, Sogang University
Present Fellow, Royal Society of Chemistry & American Chemical Society
Present Member, Korea Academy of Science and Technology

11. Past, Present and Future of Energy Chemistry in Korea

Organizer : Jin Seok Lee (Hanyang University)

Chair : Jin Seok Lee (Hanyang University)

- 15:40 **INOR1-1** Electrocatalyst for Water Oxidation and CO₂ Reduction
Ki Tae Nam
Department of Materials Science and Engineering, Seoul National University, Korea
- 16:05 **INOR1-2** Past, Present, and Future of Korea Photovoltaic Solar Energy Society
Donghwan Kim
Materials Science and Engineering, Korea University, Korea
- 16:30 **INOR1-3** RECENT REVIEW ON ORGANIC AND PEROVSKITE SOLAR CELLS FOR BIPV APPLICATIONS
Kwanghee Lee
Department of Materials Science and Engineering, Gwangju Institute of Science and Technology, Korea
- 16:55 **INOR1-4** Problems of the current research directions and desirable new research directions to mitigate the climate change
Kyung Byung Yoon
Department of Chemistry, Sogang University, Korea
- 17:40 Inorganic Chemistry Division General Meeting

Organizer



Min Hyung Lee
Present Professor, Department of Chemistry, University of Ulsan, Korea
2001 Ph.D, Department of Chemistry, KAIST, Korea
1995 B.S, Department of Chemistry, KAIST, Korea

Speaker



Kang Mun Lee
Present Associate Professor, Department of Chemistry, Kangwon National University, Korea
2014 Research Staff, Samsung Advanced Institute of Technology, Korea
2013 Ph.D, Department of Chemistry, KAIST, Korea



Ho-Jin Son
Present Associate Professor, Department of Advanced Materials Chemistry, Korea University, Sejong, Korea
2014 Postdoc, Department of Chemistry, Northwestern University, USA
2009 Ph.D, Department of Chemistry, Korea University, Sejong, Korea



Eunsung Lee
Present Associate Professor, Department of Chemistry, POSTECH, Korea
2013 Postdoc, Department of Chemistry, Harvard University, USA
2009 Ph.D, Department of Chemistry, Stanford University, USA



Sanghun Nam
2015 Team leader, R&D team, SPCI, Korea
2018 Director, Marketing team, SPCI, Korea



Tae-Lim Choi
Present Professor, Chemistry, SNU
2003 Ph.D, Chemistry, Caltech
Editor Journal of Polymer Science

12. Recent Trends in Inorganic Chemistry I: Organometallic Chemistry

Organizer : Min Hyung Lee (University of Ulsan)

Chair : Min Hyung Lee (University of Ulsan)

- 09:00 **INOR2-1** Strategic molecular design to control photophysical characteristics of *ortho*-Carboranyl Luminophores
Kang Mun Lee
Department of Chemistry, Kangwon National University, Korea
- 09:20 **INOR2-2** Modulating the Reactivity of Metal-hydride (M-H) species for Carbon Dioxide Reduction
Ho-Jin Son
Department of Advanced Materials Chemistry, Korea University, Sejong, Korea
- 09:40 **INOR2-3** Cobalt-Catalyzed C-O Bond Functionalization: Mechanistic Insight
Eunsung Lee
Department of Chemistry, Pohang University of Science and Technology, Korea
- 10:00 **INOR2-4** Status of metallocene catalysts for producing high quality polyolefin and the role of SPCI
Sanghun Nam
Marketing team, SPCI, Korea
- 10:20 **INOR2-5** Regioselective Cyclopolymerization of 1,6-heptadiynes Using Ru-based Olefin Metathesis Catalysts
Tae-Lim Choi
Division of Chemistry, Seoul National University, Korea

Organizer

**Junhyeok Seo**

Present Assistant Professor, Department of Chemistry, Gwangju Institute of Science and Technology, Korea
2017 Postdoc, Department of Chemistry, The University of Texas at Austin, USA
2013 Ph.D. Department of Chemistry, Brown University, USA

Speaker

**Youngmin You**

Present Associate Professor, Chemical Engineering and Materials Science, Ewha Womans University, Korea
2011 Postdoctoral Fellow, Chemistry, Massachusetts Institute of Technology, USA
2007 Ph.D., Materials Science and Engineering, Seoul National University, Korea

**Seung Jae Lee**

Present Associate Professor, Department of Chemistry, Jeonbuk National University, Korea
2017 Assistant Professor, Department of Chemistry, Jeonbuk National University, Korea
2010 Ph.D., Department of Pharmaceutical Sciences, University of Maryland School of Pharmacy, USA

**Mi Hee Lim**

Present Professor, Department of Chemistry, KAIST, Korea
2018.02-2021.02 Associate Professor, Department of Chemistry, KAIST, Korea
2013.09-2018.01 Associate Professor, Department of Chemistry, UNIST, Korea

**Jaehung Cho**

Present Professor, Department of Chemistry, UNIST, Korea

**Seungwoo Hong**

Present Professor, Department of Chemistry, Sookmyung Women's University, Korea
2015-2016 Postdoc, Department of Chemistry, Ewha Woman's University, Korea
2014-2015 Postdoc, Department of Chemistry and Chemical Biology, Harvard University, USA

13. Recent Trends in Inorganic Chemistry II: Bioinorganic Chemistry

Organizer : Junhyeok Seo (GIST)

Chair : Junhyeok Seo (GIST)

- 14:30 **INOR3-1** Generating Circularly Polarized Luminescence from Abiogenic Molecules
Youngmin You
Chemical Engineering and Materials Science, Ewha Womans University, Korea
- 14:55 **INOR3-2** Allosteric Effects of Hydroxylase by Reductase and Regulatory Enzymes in Soluble Methane Monooxygenase
Seung Jae Lee
Department of Chemistry and Institute for Molecular Biology and Genetics, Jeonbuk National University, Korea
- 15:20 **INOR3-3** Bioinorganic Strategies to Study Multiple Facets in Alzheimer's Disease
Mi Hee Lim
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- 15:45 **INOR3-4** Mid valent metal reactive oxygen intermediates in the oxidation reaction
Jaehung Cho
Department of Chemistry, UNIST, Korea
- 16:10 **INOR3-5** Bioinspired Nonheme Iron Complex That Triggers Mitochondrial Apoptotic Signaling Pathway Specifically for Colorectal Cancer Cells
Seungwoo Hong
Department of Chemistry, Sookmyung Women's University, Korea

Organizer

Hyun Ook Seo



Present Assistant Professor, Department of Chemistry and Energy Engineering, Sangmyung University, Korea

2016 Research Fellow, Institute of Basic Science, Sungkyunkwan University, Korea

2014 Researcher, Deutsches Elektronen-Synchrotron DESY, Germany



Han-Kyu Choi

2019- Assistant professor, Department of Chemistry, Kunsan National University, Korea

2014 Ph.D. Korea University, Department of Chemistry, Korea

2010 B.S. Korea University, Department of Chemistry, Korea

Chair

Sangwoon Yoon



Present Professor, Department of Chemistry, Chung-Ang University, Korea

2003 Ph.D. Department of Chemistry, University of Wisconsin-Madison, USA

1994 B.S. Department of Chemistry, Seoul National University, Korea

Speaker

Zee Hwan Kim



Present Professor, Department of Chemistry, Seoul National University, Seoul, Korea

2005-2013 Assistant and Associate Professor, Department of Chemistry, Korea University, Seoul, Korea

2002 Ph. D. Department of Chemistry, Stanford University, California, USA



Jeunghee Park

Present Professor, Department of Advanced Materials Chemistry, Korea University-Sejong Campus, Korea

1988 Ph.D. Department of Chemistry, Columbia University, USA



Wooyul Kim

Present Associate Professor, Department of Chemical and Biological Engineering, Sookmyung Women's University

2016 Postdoc, Lawrence Berkeley National Laboratory

2012 Ph.D. Division of Environmental Science and Engineering, POSTECH



Hyunseob Lim

2019- Present Assistant Professor, Department of Chemistry, GIST, Korea

2017-2019 Assistant Professor, Department of Chemistry, Chonnam National University, Korea

2014-2017 Research Fellow, IBS, Korea



Doo-Hyun Ko

2012-2015 Senior Researcher, Korea Institute of Science and Technology

2015-2021 Associate Professor, Department of Chemistry, Kyung Hee University, Korea

2021- present Associate Professor, Department of Chemistry, Sungkyunkwan University, Korea

14. Advances in Materials and Surface Physical Chemistry

Organizer : Hyun Ook Seo (Sangmyung University),
Han-Kyu Choi (Kunsan National University)

Chair : Sangwoon Yoon (Chung-Ang University)

<Award Lecture: Kim Myung Soo Award>

15:40 **PHYS1-1** Molecule-Light-Metal Interactions at Nanoscale
Zee Hwan Kim
Department of Chemistry, Seoul National University, Korea

Chair : Hyun Ook Seo (Sangmyung University)

16:10 **PHYS1-2** Phase Transition of Two-Dimensional Transition Metal Dichalcogenide Nanosheets to Enhance Electrocatalytic Performance
Jeunghee Park
Department of Advanced Materials Chemistry, Korea University, Korea

16:30 **PHYS1-3** Time-resolved operando spectroscopy for photocatalysis to electrocatalysis
Wooyul Kim
Department of Chemical and Biological Engineering, Sookmyung Women's University, Korea

16:50 Coffee Break

Chair : Han-Kyu Choi (Kunsan National University)

17:00 **PHYS1-4** Surface Chemical Modification of 2D Materials for Tuning Electronic and Optical Properties
Hyunseob Lim
Department of Chemistry, Gwangju Institute of Science and Technology, Korea

17:20 **PHYS1-5** Plasmonic-induced fluorescence resonance energy transfer for spectrum conversion
Doo-Hyun Ko
Department of Chemistry, Sungkyunkwan University, Korea

Symposium

Physical Chemistry Symposium 2
October 15 (Fri), Room 103

Organizer



Ilsun Yoon

Present Associate Professor, Department of Chemistry, Chungnam National University, Korea
2013 Postdoc, Nanoengineering Department, University of California San Diego, US
2006 Ph. D, Department of Chemistry, KAIST, Korea



Hye Ran Koh

Present Associate Professor, Department of Chemistry, Chung-Ang University, Korea
2009 Ph.D, Department of Chemistry, Seoul National University, Korea
2002 B.S, Department of Chemistry, Seoul National University, Korea

Speaker

Woon Yong Sohn

2020- Present Assistant Professor, Department of Chemistry, Chungbuk National University, Korea
2016- 2020 Assistant Professor, Department of Applied Chemistry, Chuo University, Japan
2015- 2016 PostDoc, Atomic Energy and Alternative Energies Commission (CEA), France



Jaehong Park

Present Assistant Professor, Department of Chemistry and Nanoscience, Ewha Womans University, Korea
2017 Jr. Associate Professor, Department of Molecular Engineering, Kyoto University, Japan
2013 Postdoc, National Renewable Energy Laboratory, USA



Chang Ho Sohn

Present Assistant Professor, Advanced Science Institute, Yonsei University, Korea



Kwanyong Seo

Present Tenured Associate Professor, School of Energy and Chemical Engineering, UNIST, Korea
2013 Postdoc, School of Engineering and Applied Sciences, Harvard University, USA
2008 Ph.D, Department of Chemistry, KAIST, Korea



Jeongsuk Seo

Present Assistant Professor, Department of Chemistry, Chonnam National University, Korea
2017 Assistant Professor, Research Initiative for Supra-Materials (RISM), Shinshu University, Japan



Youngku Sohn

Present Department of Chemistry/ Chemical Engineering and Applied Chemistry, Chungnam National University, Korea



15. Recent Advances in Physical Chemistry

Organizer : Ilsun Yoon (Chungnam National University),
Hye Ran Koh (Chung-Ang University)

Chair : Ilsun Yoon (Chungnam National University)

- 09:00 **PHYS2-1** Enhanced Photoelectrochemical Water Splitting Efficiency of BiVO₄ Based-Photoelectrode by Building Phase-Junction Configuration
Woon Yong Sohn
Department of Chemistry, Chungbuk National University, Korea
- 09:20 **PHYS2-2** The role of polymer crystalline domain for exciton-dissociation
Jaehong Park
Department of Chemistry and Nanoscience, Ewha Womans University, Korea
- 09:40 **PHYS2-3** Frontiers in Sequencing and Imaging-based Methodologies for Single-cell Analysis
Chang Ho Sohn
Advanced Science Institute, Yonsei University, Korea
- 10:00 **PHYS2-4** Light management with surface microwires structure for c-Si photovoltaics
Kwanyong Seo
School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology, Korea
- 10:20 **PHYS2-5** Perovskite-type Oxynitrides AB(O,N)₃ for Solar Water Splitting
Jeongsuk Seo
Department of Chemistry, Chonnam National University, Korea
- 10:40 **PHYS2-6** Electrochemical CO₂ reduction over Au-modified metal oxide electrodes in experimental physical chemistry approaches
Youngku Sohn
Department of Chemistry, Chungnam National University, Korea

Organizer



Jun Soo Kim
2011- Present Associate Professor, Department of Chemistry and Nanoscience, Ewha Womans University, Korea
2009-2011 Postdoctoral, Department of Biomedical Engineering, Northwestern University, USA



Hyungjun Kim
Present Assistant, Associate professor, KAIST, Korea
2012 Senior researcher, KAIST, Korea
2009 PhD, Caltech, USA

Chair



Sangwoon Yoon
Present Professor, Department of Chemistry, Chung-Ang University, Korea
2003 Ph. D., Department of Chemistry, University of Wisconsin-Madison, USA
1994 B.S., Department of Chemistry, Seoul National University, Korea



Jae Woo Park
Present Assistant Professor, Department of Chemistry, Chungbuk National University, Korea
2018 Postdoctoral Associate, Department of Chemistry, Northwestern University, USA
2015 Ph. D., Department of Chemistry, POSTECH, Korea

Speaker



Sanghun Lee
Present Associate Professor, Department of Chemistry, Gachon University, Korea



Jungho Shin
2019 - Present Senior Researcher, Chemical Data-driven Research Center, Korea Research Institute of Chemical Technology, Korea
2015 - 2019 Postdoctoral researcher, Theoretical Department, Fritz Haber Institute of the Max Planck Society, Germany
2015 - 2019 Postdoctoral researcher, Physics Department, Humboldt University of Berlin, Germany



Cheol Ho Choi
2001 ~ Professor, Department of Chemistry, Kyungpook National University



Eunji Sim
Present Professor, Department of Chemistry, Yonsei University, Korea

16. Advances in Theoretical and Computational Chemistry

Organizer : Jun Soo Kim (Ewha Womans University),
Hyungjun Kim (Incheon National University)

Chair : Sangwoon Yoon (Chung-Ang University)

<Award Lecture: Young Physical Chemistry Award>

14:30 **PHYS3-1** Computational design for DNA-based nanoscale Brownian motors driven by nonequilibrium fluctuations
Jun Soo Kim
Department of Chemistry and Nanoscience, Ewha Womans University, Korea

<Award Lecture: Young Physical Chemistry Award>

14:55 **PHYS3-2** Structure and phase transitions of the electric double layer
Hyungjun Kim
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

Chair : Jae Woo Park (Chungbuk National University)

15:20 **PHYS3-3** Characteristics of various polymers from atomistic molecular dynamics simulation
Sanghun Lee
Department of Chemistry, Gachon University Global Campus, Korea

15:40 **PHYS3-4** Materials Data eXplorer: web-based data service for advanced data-driven research in chemistry community
Jungho Shin, Hyunju Chang^{1,*}
Chemical Data-driven Research Center, Korea Research Institute of Chemical Technology, Korea
¹*chemical data driven research center, Korea Research Institute of Chemical Technology, Korea*

16:00 **PHYS3-5** MRSF and REKS for Strong Electron Correlations
Cheol Ho Choi
Department of Chemistry, Kyungpook National University, Korea

16:20 **PHYS3-6** Recent Advances in Density-Corrected Density Functional Theory
Eunji Sim
Department of Chemistry, Yonsei University, Korea

Organizer

**Wonryeon Cho**

Present Professor, Department of Chemistry, Wonkwang University, Korea
2006 Ph.D, Department of Chemistry, Purdue University, USA
1993 M.S, Department of Chemistry, POSTECH, Korea

**Tae-Young Kim**

Present Associate Professor, School of Earth Sciences & Environmental Engineering, GIST, Korea
2009 Ph.D, Department of Chemistry, Indiana University, Bloomington IN, USA
2001 M.S, Department of Chemistry, Seoul National University, Korea

Speaker

**Suhkmann Kim**

Present Professor, Department of Chemistry, Pusan National University, Korea

**Kwan Ha Park**

present Professor, Kunsan National University, 부산광역시

**Byoung-Cheori Kang**

Present Professor, Department of Agriculture, Forestry and Bioresources, Seoul National University, Korea
1999 Ph.D, Seoul National University, Korea
1992 M.S, Seoul National University, Korea

**Hun-Young So**

Present Advisor, Shimadzu Scientific Korea
1988-2013 Researcher, Korea Research Institute of Standards and Science

**Hye Sung Cho**

2021 Head, Center for Analytical Sciences, Battery R&D, LG Energy Solution
2017 Head, Center for Analytical Sciences, LG Chem
2007 Research Fellow, Corporate R&D, LG Chem

17. Recent Studies in Bioanalyses Using Non-human Subjects

Organizer : Wonryeon Cho (Wonkwang University)

Chair : Wonryeon Cho (Wonkwang University)

- 15:30 **ANAL1-1** Multi-omics approaches to investigate responses of olive flounder with infectious disease.
Suhkmann Kim
Department of Chemistry, Pusan National University, Korea
- 15:50 **ANAL1-2** Quantitative proteomics reveals the mechanisms of physiological responses of marine ectotherms to environmental stressors
Tae-Young Kim^{*}, Woo Young Song¹
School of Earth Sciences and Environmental Engineer, Gwangju Institute of Science and Technology, Korea
¹*Earth Sciences & Environmental Engineering, Gwangju Institute of Science and Technology, Korea*
- 16:10 **ANAL1-3** Concept and practice of chemical analysis tools in studies with drugs in aquatic animals
Kwan Ha Park
Kunsan National University, Korea
- 16:30 **ANAL1-4** Molecular Genetic Study of Capsainoids Biosynthetic Pathway
Byoung-Cheori Kang
Department of Agriculture, Forestry and Bioresources, Seoul National University, Korea

Chair : Tae-Young Kim (GIST)

<Award Lecture : Distinguished Contribution in Analytical Technology>

- 16:50 **ANAL1-5** Mass Spectrometry and Metrology in Chemistry
Hun-Young So
Shimadzu Scientific Korea, Korea

<Award Lecture : Distinguished Contribution in Analytical Technology>

- 17:05 **ANAL1-6** Analytical Science as a core technology of industry
Hye Sung Cho
LG Energy Solution, Korea

<Award Lecture : Academic Excellence in Analytical Chemistry>

- 17:20 **ANAL1-7** Biomarker Discovery and Diagnostics for Human Health
Wonryeon Cho
Department of Chemistry, Wonkwang University, Korea
- 17:45 Analytical Chemistry Division General Meeting

Organizer



Youngsoo Kim
Present Assistant Professor, Department of Chemistry, Yeungnam University, Korea
2017 Postdoc, Department of Chemistry, University of Illinois at Urbana-Champaign, USA
2009 Ph.D. Department of Chemistry, Korea University, Korea

Speaker



Sung Ik Yang
Present Professor, Department of Applied Chemistry, Kyung Hee University, Korea
1998 Ph.D. Department of Chemistry, Seoul National University, Korea
1994 MS, Department of Chemistry, Seoul National University, Korea



Byung-Kwon Kim
Present Associate Professor, Department of Chemistry and Nanoscience, Ewha Womans University, Korea
2015 Postdoc, Department of Chemistry, University of Texas at Austin, USA
2012 Ph.D. Department of Chemistry, KAIST, Korea



Jae-Seung Lee
2009-present Professor, Department of Materials Science and Engineering, Korea University, Republic of Korea



Jeong-Wook Oh
Present Assistant Professor, Department of Chemistry, Hankyuk University of Foreign Studies, Korea
2020 Research Professor, Department of Chemistry, Seoul National University, Korea
2009 Ph.D. Department of Chemistry, Seoul National University, Korea



Cheolam Hong
2019- Assistant Professor, Department of Chemistry and Biochemistry, Yeungnam University, Korea
2013 Ph.D. Department of Biological Sciences, KAIST, Korea
2009 B.S. Department of Biochemistry, Chungnam National University, Korea

18. Current Trends in Molecular Sensing Techniques for Bio and Environmental Analysis

Organizer : Youngsoo Kim (Yeungnam University)

Chair : Youngsoo Kim (Yeungnam University)

- 14:30 **ANAL2-1** Detection of hazardous materials in the Environment
Sung Ik Yang
Department of Applied Chemistry, Kyung Hee University, Korea
- 14:50 **ANAL2-2** Single entity electrochemistry for the detection of blood cells
Byung-Kwon Kim
Department of Chemistry and Nanoscience, Ewha Womans University, Korea
- 15:10 Coffee Break
- 15:20 **ANAL2-3** Synthesis of Noble Metal Nanostructure Probes with Controlled Sizes and Shapes for Bioanalytical Applications
Jae-Seung Lee
Department of Materials Science and Engineering, Korea University, Korea
- 15:40 **ANAL2-4** Plasmonic biosensing with static nanogap or dynamic nanogap
Jeong-Wook Oh
Department of Chemistry, Hankuk University of Foreign Studies, Korea
- 16:00 **ANAL2-5** Toehold DNA probes-mediated analysis for simple, specific, and sensitive detections of pathogen DNA
Cheolam Hong
Department of Chemistry and Biochemistry, Yeungnam University, Korea

Organizer

**Chan Hyuk Kim**

Present Associate Professor, Department of Biological Sciences, KAIST, Korea

2012 Postdoc, Department of Chemistry, Scripps Research, USA

2008 Ph.D., Department of Chemistry, Seoul National University, Korea

Speaker

**Dong-ki Lee**

Present Professor, Department of Chemistry, Sungkyunkwan University, Korea

Present CEO, OIX Pharmaceuticals

**Sangyong Jon**

2012- Present Professor, Department of Biological Sciences, KAIST, Korea

2004- 2012 Assistant, Associate Professor, Department of Life Science, GIST, Korea

2002- 2004 Postdoc, Department of Chemical Engineering, MIT

**Chul-Woong Chung**

Present CTO, LegoChem Biosciences

2018 Senior R&D Director, Beijing Harnoi Pharma.

2014 Head of Bio Center, LegoChem Biosciences

**Hyung Cheol Kim**

Present R&D Director, Curocell Inc., Daejeon, Korea

19. Diversity in Polymer Therapeutics

Organizer : Chan Hyuk Kim (KAIST)

Chair : Chan Hyuk Kim (KAIST)

- 15:40 **LIFE1-1** Therapeutic development using chemically modified asymmetric small interfering RNAs
Dong-ki Lee
Department of Chemistry, Sungkyunkwan University, Korea
- 16:10 **LIFE1-2** Bilirubin-derived nanomedicine as a novel therapeutic for intractable inflammatory diseases
Sangyong Jon
Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Korea
- 16:40 **LIFE1-3** Possibilities and Challenges in Antibody-Drug Conjugate Technology
Chul-Woong Chung
Legochem Biosciences, Inc., Korea
- 17:10 **LIFE1-4** Development of novel anti-CD19 CAR T cells resistant to PD-1 and TIGIT-mediated immune suppression
Hyung Cheol Kim
R&D Center, Curocell Inc., Korea

Organizer



Jungwook Kim
Present Associate Professor, Department of Chemistry, GIST, Korea
2004 Ph.D., Department of Chemistry, Texas A&M University, U.S.A.
1995 B.S., Department of Chemistry, Seoul National University, Korea

Speaker



Jeong-Yong Suh
Present Professor, Department of Agricultural Biotechnology, Seoul National University, Korea
1999 Ph.D., Department of Chemistry, KAIST
1993 B.S., Department of Chemistry, KAIST



Hyun Kyu Song
Present Professor, Department of Life Sciences, Korea University, Korea
2003 Principal Investigator, National Cancer Center



Jiho Yoo
Present Assistant Professor, College of Pharmacy, Chung-Ang University
2012 Ph.D. Department of biology, Yonsei University
2005 B.S. Department of biotechnology, Yonsei University



Ji-Joon Song
2009 Professor, Department of Biological Sciences, KAIST, Korea
2005 Research Fellow, Harvard Medical School



Young-Tae Chang
Present Professor, Department of Chemistry, POSTECH, Korea
2012 Professor, Department of Chemistry, National University of Singapore, Singapore
2000 Asst/Assoc. Professor, Department of Chemistry, New York University, USA

20. Structural Approaches to Understanding the Biological Function of Macromolecules

Organizer : Jungwook Kim (GIST)

Chair : Jungwook Kim (GIST)

- 09:00 **LIFE2-1** Structural and Mechanistic Diversity of anti-CRISPR proteins for CRISPR Inhibition
Jeong-Yong Suh
Agricultural Biotechnology, Seoul National University, Korea
- 09:25 **LIFE2-2** Structures of viral pyrimidine hydroxymethylases using X-ray free electron laser
Hyun Kyu Song
Division of Life Sciences, Korea University, Korea
- 09:50 **LIFE2-3** Cryo-EM structure of a mitochondrial calcium uniporter
Jiho Yoo
College of Pharmacy, Chung-Ang University, Korea
- 10:15 **LIFE2-4** Understanding the mechanism of assembly and modifications of DNA high-order structure
Ji-Joon Song
Department of Life Science, KAIST, Korea
- 10:40 **LIFE2-5** Metabolism Oriented Live-cell Distinction (MOLD) for immune cells
Young-Tae Chang
Department of Chemistry, Pohang University of Science and Technology, Korea

Organizer

**Won-jin Chung**

Present Associate Professor, Department of Chemistry, GIST, Korea
2014 Postdoc, Department of Chemistry, University of California, Irvine, USA
2008 Ph.D., Department of Chemistry, University of Illinois at Urbana-Champaign, USA

Chair

**Eun Joo Kang**

Present Professor, Department of Chemistry, Kyung Hee University, Korea
2009 Postdoc, Department of Chemistry, UC Berkeley, USA
2006 Ph.D., Department of Chemistry, Seoul National University, Korea

Speaker

**In Su Kim**

Present Professor, School of Pharmacy, Sungkyunkwan University, Korea
2009 Postdoc, Department of Chemistry, University of Texas at Austin
2006 Ph.D., School of Pharmacy, Sungkyunkwan University, Korea

**Phil Ho Lee**

1991-present Professor, Department of Chemistry, Kangwon National University, Korea
2012-present Fellow, The Korean Academy of Science and Technology
2020 President, Division of Organic Chemistry, Korean Chemical Society

**Young Ho Rhee**

2005-present Professor, Department of Chemistry, Pohang University of Science and Technology, Korea

**Sungwoo Hong**

Present Professor, Department of Chemistry, KAIST/BS, Korea

**Hong Geun Lee**

Present Assistant Professor, Department of Chemistry, Seoul National University
2016 Postdoc, MIT
2012 Ph.D., Harvard University

21. Current Trends in New Reactions and Methodology

Organizer : Won-jin Chung (GIST)

Chair : Eun Joo Kang (Kyung Hee University)

<Award Lecture: Sehi Jang Award>

15:40 **ORGN1-1** C-H Allylation and Alkylation for the Construction and Functionalization of N-Heterocycles
In Su Kim
School of Pharmacy, Sungkyunkwan University, Korea

Chair : Won-jin Chung (GIST)

16:10 **ORGN1-2** Functionalization of α -Carboranes
Phil Ho Lee
Department of Chemistry, Kangwon National University, Korea

16:30 **ORGN1-3** Pd-catalyzed Asymmetric Decarboxylative Addition of β -Keto Acids to Alkoxy- and Amidoallenes
Young Ho Rhee, Sukhyun Lee, Dong-Jin Jang, Juyeol Lee
Department of Chemistry, Pohang University of Science and Technology, Korea

16:50 **ORGN1-4** Investigation of Regioselective C-H Functionalization of Heteroarene
Sungwoo Hong
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

17:10 **ORGN1-5** A unified synthetic strategy to introduce heteroatoms via controlled functionalization of alkyl organometallic reagents
Hong Geun Lee
Department of Chemistry, Seoul National University, Korea

Organizer



Hyejin Kim
Present Senior research scientist,
Infectious Diseases Therapeutic
Research Center, KRICT, Korea
2015 Ph.D., Department of Chemistry,
Seoul National University, Korea
2009 B.S., Department of Chemistry
Education, Seoul National
University, Korea

Speaker



Dae-Shik Kim
Present Senior Principal Scientist,
Precision Chemistry, Eisai G2D2,
USA
2009 Postdoc. Department of
Chemistry, Harvard University,
USA
2007 Ph.D. Department of Chemistry,
University of Pennsylvania, USA



Taegyo Lee
Present Principal Scientist, Pfizer, USA
2016 Ph.D. University of California,
Berkeley, USA
2013 B.S. Seoul National University,
Republic of Korea



Jongrock Kong
Present Principal Scientist, Process
Research and Development,
Merck & C., Inc. USA
2007 - Postdoctoral Research Fellow,
2009 Department of Chemistry,
Princeton University
2002 - Graduate Research Associate,
2007 Department of Chemistry,
University of Texas at Austin

22. Current Trends in Medicinal and Process Chemistry

Organizer : Hyejin Kim (KRICT)

Chair : Hyejin Kim (KRICT)

- 09:00 **ORGN2-1** Discovery of E7766, a Macrocyclic-Bridged STING Agonist with Pan-Genotypic Activity
Dae-Shik Kim
Precision Chemistry, Eisai G2D2, United States
- 09:25 **ORGN2-2** Streamlined Synthesis of a Bicyclic Amine Moiety Using an Enzymatic Amidation and Identification of a Novel Solid Form
Taegyo Lee
Chemical Research and Development, Pfizer, United States
- 09:50 **ORGN2-3** Development of Biocatalytic Manufacturing Processes for an HIV agent Islatravir and a Covid-19 antiviral Molnupiravir
Jongrock Kong
Process Research & Development, Merck & Co., United States
- 10:15 Panel Discussion

Organizer

**Jongmin Park**

Present Assistant Professor, Department of Chemistry, Kangwon National University, Korea
2012 Ph.D. Department of Chemistry, Seoul National University, Korea
2005 B.S. Department of Chemistry, Seoul National University, Korea

Speaker

**Young-Tae Chang**

Present Professor, Department of Chemistry, POSTECH, Korea
2012 Professor, Department of Chemistry, National University of Singapore, Singapore
2000 Asst/Assoc. Professor, Department of Chemistry, New York University, USA

**Jiwon Seo**

2010- Present Professor, Department of Chemistry, GIST, Korea
2007- 2009 Postdoc, Stanford University, USA
2001- 2006 Ph.D. Department of Chemistry, Northwestern University, USA

**Jung-Min Kee**

2014-present Associate Professor, Department of Chemistry, UNIST, Korea
2008-2014 Postdoctoral Fellow, The Rockefeller Univ. & Princeton Univ., USA
2008 Ph. D., Stanford University, USA

**Eunha Kim**

Present Associate Professor, Department of Molecular Science and Technology, Ajou University, Korea
2015- 2019 Assistant Professor, Department of Molecular Science and Technology, Ajou University, Korea
2012- 2015 Postdoctoral fellow, Center for Systems Biology, Harvard Medical School/Massachusetts General Hospital, USA

23. Current Trends in Chemical Biology and Bioorganic Chemistry

Organizer : Jongmin Park (Kangwon National University)

Chair : Jongmin Park (Kangwon National University)

- 14:30 **ORGN3-1** New chemical approach for live cell distinction through lipid in cell membrane
Young-Tae Chang
Department of Chemistry, Pohang University of Science and Technology, Korea
- 14:55 **ORGN3-2** Effect of molecular chameleonicity on the membrane permeability of macrocyclic peptide cyclosporin O derivatives
Jiwon Seo
Chemistry, Gwangju Institute of Science and Technology, Korea
- 15:20 **ORGN3-3** Chemical Toolbox for Studying Histidine and Arginine Phosphorylation
Jung-Min Kee
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
- 15:45 **ORGN3-4** Aggregation-Induced Emission Luminogen for Bioimaging Based on an Indolizine Molecular Framework
Eunha Kim
Department of Molecular Science and Technology, Ajou University, Korea

Organizer

**Kwan-Young Jung**

Present Principal Researcher,
Therapeutics & Biotechnology
Division, KRICT, Korea
2013 Postdoc, University of Maryland
School of Pharmacy, USA
2009 Ph.D, Department of Life
Science, GSIST, Korea

Speaker

**Young Ho Seo**

Present Associate Professor, College of
Pharmacy, Keimyung University,
Korea

**Hongchan An**

Present Senior Researcher, New Drug
Development Center, Daegu-
Gyeongbuk Medical Innovation
Foundation (DGMIF), South
Korea
2014 Ph.D, Department of Pharmacy,
Seoul National University, South
Korea
2008 B.S. Department of
Manufacturing Pharmacy, Seoul
National University, South Korea

**Jonghoon Kim**

Present Assistant Professor, Department
of Chemistry, Soongsil
University, Korea
2019 Postdoc, Department of
Chemistry and Biochemistry,
University of California, Los
Angeles (UCLA), USA
2014 Ph. D. Department of Chemistry,
Seoul National University, Korea

**Jin hee Ahn**

Present Professor, Department of
Chemistry, Gwangju Institute of
Science and Technology

24. The Cutting Edge of Medicinal Chemistry

Organizer : Kwan-Young Jung (KRICT)

Chair : Kwan-Young Jung (KRICT)

- 15:40 **MEDI-1** Targeting Epigenetic Regulator HDAC Enzymes in Cancer
Young Ho Seo
College of Pharmacy, Keimyung University, Korea
- 16:10 **MEDI-2** Discovery of Bioactive Molecules from Bead-displayed Combinatorial Libraries
Hongchan An
New Drug Development Center, Daegu Gyeongbuk Medical Innovation Foundation, Korea
- 16:40 **MEDI-3** Development of HDAC Inhibitors for Treatment of Inflammatory Bowel Disease
Jonghoon Kim
Department of Chemistry, Soongsil University, Korea
- 17:10 **MEDI-4** Discovery of peripherally acting agents for metabolic disease
Jin hee Ahn
Department of Chemistry, Gwangju Institute of Science and Technology, Korea

Organizer

**Jongnam Park**

Present Associate Professor, Department of Biomedical Engineering, Ulsan National Institute of Science and Technology, Korea

2010 Postdoc, Department of Chemistry, Massachusetts Institute of Technology, USA

2005 Ph.D, School of Chemical and Biological Engineering, Seoul National University, Korea

Speaker

**Myungeun Seo**

Present Associate Professor, Department of Chemistry, KAIST, Korea

2008 Ph.D, Department of Chemistry, KAIST, Korea

2002 B.S., Department of Chemistry, KAIST, Korea

**Sanghwa Jeong**

Present Assistant Professor, Department of Biomedical Convergence Engineering, Pusan National University, Korea

2015 Ph.D, Department of Chemistry, POSTECH, Korea

2009 B.S., Department of Chemistry, POSTECH, Korea

**Jihyeon Yeom**

2020 Professor, Department of Materials Science and Engineering, KAIST

2017 Post-doc, Department of Chemical Engineering, MIT, USA

2011 Ph.D., Department of Macromolecular Science and Engineering, University of Michigan, USA

**Ki Tae Nam**

2017 - Director, SOFT Foundry, Seoul National University, Korea

2019 - Professor, Seoul National University, Korea

**Wan-In Lee**

Present Professor, Department of Chemistry and Chemical Engineering, Inha University, Korea

1993 Ph.D, Department of Chemistry, Brown University, United States

1981 B.S., Department of Chemistry, Seoul National University, Korea

25. Synthesis and Their Application of Nano-structured Chiral Materials

Organizer : Jongnam Park (UNIST)

Chair : Jongnam Park (UNIST)

- 15:40 **MAT1-1** How Chirality of Light Can Be Transmitted into Supramolecular Polymers
Myungeun Seo
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- 16:00 **MAT1-2** Near-infrared Single-walled Carbon Nanotubes for Dynamic Neurochemical Imaging
Sanghwa Jeong
School of Biomedical Convergence Engineering, Pusan National University, Korea
- 16:20 **MAT1-3** Multiscale Inorganic Chiral Structures and Their Applications
Jihyeon Yeom
Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology, Korea
- 16:40 **MAT1-4** Peptide Induced Chirality in Single Gold Nanoparticle
Ki Tae Nam
Department of Materials Science and Engineering, Seoul National University, Korea

<Award Lecture: Jin-Ho Choy Academic Award>

- 17:00 **MAT1-5** Diverse control of TiO₂-based nanostructures and their photoelectronic applications
Wan-In Lee
Department of Chemistry, Inha University, Korea
- 17:30 Materials Chemistry Division General Meeting

Organizer

**Hye Ryung Byon (KAIST)**

Present Associate Professor, Department of Chemistry, KAIST, Korea
2008 Ph. D. Department of Chemistry, POSTECH, Korea
2002 B.S. Department of Chemistry, Sookmyung Women's University, Korea

Speaker

**Minjeong Shin**

Present Assistant Professor, Department of Chemistry and Energy, Sungshin Women's University, Korea
2020 Postdoctoral Associate, Department of Mechanical Engineering, University of Michigan, USA
2019 Ph.D., Department of Chemistry, University of Illinois at Urbana-Champaign, USA

**Ji Hoon Lee**

Present Assistant Professor, School of Materials Science and Engineering, Kyungpook National University, Korea
2020 Postdoctoral Researcher, Department of Chemical Engineering, Columbia University, USA
2017 Ph. D., Graduate School of EEWS, KAIST, Korea

**Minah Lee**

Present Senior Research Scientist, KIST, Korea
2018 Postdoc, Department of Chemical Engineering, Stanford University, USA
2015 Ph.D., Department of Materials Science and Engineering, KAIST, Korea

**Seung-Tae Hong**

Present Professor, Department of Energy Science and Engineering, DGIST, Korea
2012 Principal Researcher, Battery research and CRD center, LG CHEM
1994 Ph.D. Department of Chemistry, Seoul National University, Korea

**Jae-Min Oh**

Present Professor, Department of Energy and Materials Engineering, Dongguk University, Korea
2005 Postdoc, Institut Européen des Membranes, France
2004 Ph.D. Department of Chemistry, Seoul National University, Korea

26. Advanced Electrode Materials for Next-generation Batteries

Organizer : Hye Ryung Byon (KAIST)

Chair : Hye Ryung Byon (KAIST)

- 09:10 **MAT2-1** Molecular Layer Deposition of Li-ion Conducting "Lithicone" Film and its Application in Solid-State Batteries
Minjeong Shin
Department of Chemistry and Energy, Sungshin Women's University, Korea
- 09:30 **MAT2-2** Layered Double Hydroxides as High Performance Cathode Materials for Aqueous Rechargeable Batteries
Ji Hoon Lee
School of Materials Science and Engineering, Kyungpook National University, Korea
- 09:50 **MAT2-3** Chemical prelithiation strategy preventing irreversible lithium loss in high capacity anodes
Minah Lee
Energy Storage Research Center, Korea Institute of Science and Technology, Korea
- 10:10 **MAT2-4** Exploration of cathode materials for emerging calcium-ion batteries
Seung-Tae Hong
Energy Science and Engineering, DGIST (Daegu Gyeongbuk Institute of Science and Technology), Korea
- <Award Lecture: Young Material Chemist Award>
- 10:30 **MAT2-5** Anionic and Cationic Clays as Building Blocks for Biomedical Materials
Jae-Min Oh
Department of Energy and Materials Engineering, Dongguk University, Korea

Organizer

**Jungwon Park**

Present Associate Professor, School of Chemical and Biological Engineering, Seoul National University, Korea
2012 Ph.D. Department of Chemistry, University of California, Berkeley
2003 B.S. Department of Chemistry, Pohang University of Science and Technology

Speaker

**Hyun-Wook Lee**

2020- present Associate Professor, School of Energy and Chemical Engineering, UNIST, Korea
2016- 2020 Assistant Professor, School of Energy and Chemical Engineering, UNIST, Korea
2012- 2015 Postdoctoral Scholar, Department of Materials, Sci. & Eng., Stanford University, USA

**Byung Hyo Kim**

Present Professor, Department of Organic Materials and Fiber Engineering, Soongsil University, Korea

**Hyun Seo Ahn**

Present Assistant Professor, Department of Chemistry, Yonsei University, Korea

**Chang Hyuck Choi**

Present Associate Professor, Materials Science and Engineering, GIST, Korea
2016 Postdoc, Electrocatalysis Group, Max-Planck-Institut für Eisenforschung, Germany
2012 Ph.D. Chemical and Biomolecular Engineering, KAIST, Korea

**Hyung-Suk Oh**

2017- Present Principal Research Scientist, Clean Energy Research Center, Korea Institute of Science and Technology, Korea
2020- Present Adjunct Professor, KIHU-KIST Department of Converting Science and Technology, Kyung Hee University, Korea
2012- 2017 Postdoctoral Researcher, Technical University of Berlin, Germany

**Yun Jeong Hwang**

2021- present Associate Professor, Department of Chemistry, Seoul National University, Korea
2012- 2021 Principal Investigator, Korea Institute of Science and Technology
2006- 2012 Ph.D. Department of Chemistry, University of California, Berkeley, USA

27. Advanced Characterization in Materials Chemistry

Organizer : Jungwon Park (Seoul National University)

Chair : Jungwon Park (Seoul National University)

- 14:30 **MAT3-1** *Operando* microscopy to provide significant insights in battery chemistry
Hyun-Wook Lee
School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology, Korea
- 14:50 **MAT3-2** Characterization of ultrasml nanoparticles using liquid-phase TEM and mass spectrometry
Byung Hyo Kim
Department of Organic Materials and Fiber Engineering, Soongsil University, Korea
- 15:10 **MAT3-3** Surfactant-free Synthesis of Nanoparticles via Discrete Single Entity Electrolysis of Aqueous Nanodroplets
Hyun Seo Ahn
Department of Chemistry, Yonsei University, Korea

Chair : Byung Hyo Kim (Soongsil University)

- 15:30 **MAT3-4** Electrochemical and Chemical Pt Dissolution During Electrocatalysis
Chang Hyuck Choi
Gwangju Institute of Science and Technology, Korea
- 15:50 **MAT3-5** Studies of electrocatalysts for water and CO₂ electrolysis via X-ray absorption spectroscopy (XAS)
Hyung-Suk Oh
Clean Energy Research Center, Korea Institute of Science and Technology, Korea
- 16:10 **MAT3-6** Design of stable electrocatalysts for CO₂ reduction reaction
Yun Jeong Hwang
Chemistry Department, Seoul National University, Korea

Organizer

**Jinho Chang**
Present Assistant Professor, Department
of Chemistry, Hanyang
University, Korea

Speaker

**Jung Hoon Yang**
Present Principal Researcher, Energy
Conversion & Storage Materials
Laboratory, Korea Institute of
Energy Research, Korea**Hyun Deog Yoo**
Present Associate Professor, Department
of Chemistry, Pusan National
University, Korea
2013 Postdoc, Department of
Chemistry, Bar-Ilan University,
Israel
2011 Ph.D. School of Chemical and
Biological Engineering, Seoul
National University, Korea**Seung Joon Yoo**
2021 Assistant Professor, School of
Materials Science and Engineering,
GIST**Jae-Joon Lee**
2016-present Professor, Dongguk University,
Department of Energy and
Materials Engineering
2020-present Vice President, Korean
Electrochemical Society (KECS)
2004-2016 Professor, Konkuk University,
Department of Applied
Chemistry

28. Electrochemistry for Post-Li Energy Storages

Organizer : Jinho Chang (Hanyang University)

Chair : Jinho Chang (Hanyang University)

- 15:40 **ELEC1-1** Electrochemical behavior of iodide as redox active species in the positive electrode of zinc-polyiodide flow battery
Jung Hoon Yang
Korea Institute of Energy Research, Korea
- 16:05 **ELEC1-2** Towards Anti-Corrosion of Zinc Metal for Advanced Zinc-Air Batteries
Hyun Deog Yoo^{*}, Sangram Keshari Mohanty¹
Department of Chemistry, Pusan National University, Korea
¹*Chemistry, Pusan National University, Korea*
- 16:30 **ELEC1-3** Designer redox-active organic molecules for redox-enhanced electrochemical capacitors
Seung Joon Yoo
School of Materials Science and Engineering, Gwangju Institute of Science and Technology, Korea
- 16:55 Coffee Break
- <Award Lecture: Q. Won Choi Academic Award>
- 17:05 **ELEC1-4** Evolution of Sensitization-based Photovoltaic Cells for Diverse Applications with Electrochemistry
Jae-Joon Lee
Research Center for Photoenergy Harvesting & Conversion Technology (phct), Dongguk University, Korea

Organizer

**Sung Yul Lim**

Present Assistant Professor, Department of Chemistry, Kyung Hee University, Korea
 2016 Ph.D, Department of Chemistry, Seoul National University, Korea
 2009 B.S, Department of Chemistry, Seoul National University, Korea

Speaker

**Seog Joon Yoon**

Present Assistant Professor, Department of Chemistry, Yeungnam University, Korea
 2017-2019 Post-Doc., Institute of Advanced Materials, University of Jaume I, Spain
 2012-2017 Ph.D. University of Notre Dame, United States

**Hyunwoo Kim**

2020- Present Assistant Professor, Department of Chemistry and Nanoscience, Ewha Woman's University, Korea
 2019-2020 Postdoctoral Associate, Department of Chemistry and Chemical Biology, Cornell University, USA
 2018-2019 postdoctoral Associate, Center for Hydrocarbon Functionalization, Institute for Basic Science (IBS), Korea

**Jongwoo Lim**

present assistant professor, department of chemistry, seoul national university, korea
 2016 postdoctoral researcher, stanford university
 2013 Ph.D, University of California, Berkeley

**Seung Kwon Seol**

2008 – present Principal Scientist, Korea Electrotechnology Research Institute
 2012 – present Professor, University of Science and Technology

29. Applications of Electrocatalysis for Renewable Energy Conversion

Organizer : Sung Yul Lim (Kyunghee University)

Chair : Sung Yul Lim (Kyung Hee University)

- 09:00 **ELEC2-1** Effect of Electric Field to Perovskite Quantum Dots for their Material/photophysical Properties
 ChaeHyun Lee, Kyoungsoo Kim¹, YeJi Shin, Donghoon Han¹, Seog Joon Yoon^{2,*}
Yeungnam University, Korea
¹Department of Chemistry, The Catholic University of Korea, Korea
²Department of Chemistry, Yeungnam University, Korea
- 09:30 **ELEC2-2** A RADICAL POLAR CROSSOVER STRATEGY IN ORGANIC ELECTROSYNTHESIS
Hyunwoo Kim
Department of Chemistry and Nanoscience, Ewha Womans University, Korea
- 10:00 **ELEC2-3** Manipulating dynamic surface transformation of electrocatalysts for superior water oxidation
Jongwoo Lim
Division of Chemistry, Seoul National University, Korea
- 10:30 **ELEC2-4** 3D printing with functional inks for 3D Printed Electronics
Seung Kwon Seol
Smart 3D Printing Research Team, Korea Electrotechnology Research Institute, Korea

Organizer

**Seounghey Paik**
Professor, Korea National University of Education

Speaker

**Jeonghee Nam**
present Professor, Department of Chemistry Education, Pusan National University, Korea**Hyunju Park**
Professor, Department of Chemistry Education, Chosun University, Korea**Hyunjung Kim**
Present Associate Professor, Department of Chemistry Education, Kongju National University, Korea**Seounghey Paik**
Professor, Korea National University of Education**30. Development of Textbooks on Chemistry Education for Pre-service Teachers**

Organizer : Seounghey Paik (Korea National University of Education)

Chair : Seounghey Paik (Korea National University of Education)

- 15:40 **EDU-1** Developing a textbook on teaching chemistry
Jeonghee Nam
Department of Chemical Education, Pusan National University, Korea
- 16:05 **EDU-2** Science Teaching Models for Chemistry Instruction
Hyunju Park, Hyunjung Kim^{1,*}
Faculty of Chemistry Education, Chosun University, Korea
¹*Department of Chemistry Education, Kongju National University, Korea*
- 16:30 Coffee Break
- 16:40 **EDU-3** Characteristics of Foreign Chemistry Curriculum
Hyunjung Kim
Department of Chemistry Education, Kongju National University, Korea
- 17:05 **EDU-4** Introduction to the "Chemistry Textbook Analysis" section of "Research and Teaching Method for Chemistry Textbooks"
Seounghey Paik
Department of Chemical Education, Korea National University of Education, Korea

Organizer

**Jin-Soo Park**

Present Professor, Department of Green Chemical Engineering, Sangmyung University, Korea

2005 Senior Researcher, Fuel Cell Research Center, Korea Institute of Energy Research, Korea

2004 Ph.D. Department of Environmental Science and Engineering, Gwangju Institute of Science and Technology, Korea

Speaker

**Byungchan Bae**

Present Principal Researcher, Korea Institute of Energy Research, Korea

2011 Lecturer, Fuel Cell Nanomaterials Center, University of Yamaguchi, Japan

2004 BS, MS, Ph.D, Department of Chemical Engineering, Sungkyunkwan University, Korea

**Hanjoo Kim**

2006 Ph.D., Department of Industrial Chemistry, Chungbuk University, Korea

2007 Senior Researcher, Energy Storage Research Center, Chungbuk University, Korea

Present CEO, PURECHEM Co.,Ltd

**Jung Hoon Yang**

Present Principal Researcher, Energy Conversion & Storage Materials Laboratory, Korea Institute of Energy Research, Korea

**Jeon soo Hong**

Present Research Institute, Changjotechno.co.,Ltd, Korea

31. Advances in Electrochemistry Using Ion Exchange Membranes for Environmental and Energy Applications

Organizer : Jin-Soo Park (Sangmyung University)

Chair : Jin-Soo Park (Sangmyung University)

- 15:40 **ENVR-1** Recent Progress in Development of High-Performance Cation-Exchange and Anion-Exchange Membranes for Electrochemical Energy Conversion System
Byungchan Bae
Fuel Cell Laboratory, Korea Institute of Energy Research, Korea
- 16:10 **ENVR-2** Importance of Ion Exchange Membrane in Capacitive Deionization.
Hanjoo Kim
PURECHEM Co., Ltd., Korea
- 16:40 **ENVR-3** Understanding the phenomenon of capacity decay through Nafion membranes in vanadium redox flow battery
Jung Hoon Yang
Korea Institute of Energy Research, Korea
- 17:10 **ENVR-4** Principle and application of bipolar electro dialysis
Jeon soo Hong, TAKEO KAWAHARA^{1,*}
Research Institute, CHANGJOTECHNO CO., Korea
¹ASTOM Corporation, Japan

Organizer



Min Sang Kwon
Present Assistant Professor, Department of Materials Science and Engineering, Seoul National University, Korea
2011 Ph.D., Department of Chemistry, Seoul National University, Korea
2006 B.S., Department of Materials Science and Engineering, Seoul National University, Korea

32. Oral Presentation for Young Polymer Scientists

Organizer : Min Sang Kwon (Seoul National University)

Chair : Min Sang Kwon (Seoul National University)

- 09:00 **POLY.O-1** Phase-separated Hydrogels with Embedded Nanogels to Improve Shrinking and Re-swelling Processes
Taehun Chung, Jihoon Han, Younsoo Kim
Department of Materials Science and Engineering, Pohang University of Science and Technology, Korea
- 09:10 **POLY.O-2** Single Chain Folding of Sequence-Controlled Graft Copolymers into Subdomain-Defined Polymer Nanoparticles
Jiyun Nam, Jae suk Lee¹, YongJoo Kim², Myungeun Seo^{3,*}
chemistry, Korea Advanced Institute of Science and Technology, Korea
¹*Department of Advanced Materials Engineering, Gwangju Institute of Science and Technology, Korea*
²*School of Advanced Materials Engineering, Kookmin University, Korea*
³*Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea*
- 09:20 **POLY.O-3** A High Toughening effect of Highly Branched Polycaprolactone-grafted Cellulose Copolymer on a fully Bio-based PLA Blend Material
Roshaan Zafar
Materials Science and Engineering, Seoul National University, Korea
- 09:30 **POLY.O-4** Antimicrobial PEGtides: A Modular Poly(Ethylene Glycol)-Based Peptidomimetic Approach to Combat Bacteria
Minseong Kim, Byeong-Su Kim^{1,*}
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
¹*Department of Chemistry, Yonsei University, Korea*
- 09:40 **POLY.O-5** Hydrolysis-Driven Viscoelastic Transition in Triblock Copolyether Hydrogels with Acetal Pendants
Jinsu Baek, Byeong-Su Kim^{1,*}
Department of chemistry, Yonsei University, Korea
¹*Department of Chemistry, Yonsei University, Korea*
- 09:50 **POLY.O-6** Synthesis of Poly[(Ethylene Glycol)-co-(Acyloxyated Ethylene Glycol)] via Post-modification of Poly(Ethylene Glycol)
Se Jong Kim, Jeung Gon Kim
Department of Chemistry, Jeonbuk National University, Korea
- 10:00 **POLY.O-7** Design of novel water-soluble purely organic photocatalyst for aqueous PET-RAFT polymerization
Yungyeong Lee, Min Sang Kwon

Department of Materials Science and Engineering, Seoul National University, Korea

- 10:10 **POLY.O-8** Supramolecularly Associated Block Copolymer Networks Forming Adhesive Ionogels for On-Skin type Strain Sensor
SoI An, Myungwoong Kim
Department of Chemistry, Inha University, Korea
- 10:20 **POLY.O-9** Solution- and Solid-state Mechanochemical Reactivity of Bottlebrush Polymers and Dendronized Polymers
Jinkyung Noh, Gregory Peterson^{1,*}, Tae-Lim Choi
Department of Chemistry, Seoul National University, Korea
¹*Chemistry, Incheon National University, Korea*
- 10:30 **POLY.O-10** Tandem Diaza-Cope Rearrangement Polymerization: Turning Stereospecific Intramolecular Reaction into Powerful Polymerization to Give Enantiopure Zn²⁺ Sensor
Soon-Hyeok Hwang, Tae-Lim Choi
Division of Chemistry, Seoul National University, Korea
- 10:40 **POLY.O-11** Molecular-Orientation-dependent Ion Transport Dynamics in Organic Mixed Ionic Electronic Conductors
Ji Hwan Kim, Myung-Han Yoon
Division of Advanced Materials Engineering, Gwangju Institute of Science and Technology, Korea

Organizer



Jungwon Park
Present Associate Professor, School of Chemical and Biological Engineering, Seoul National University, Korea
2012 Ph.D. Department of Chemistry, University of California, Berkeley
2003 B.S. Department of Chemistry, Pohang University of Science and Technology

Speaker



Joon Won Park
2019-2021 a Provost, POSTECH
2012 Chairman, Division of Inorganic Chemistry, KCS
1990- a Professor, Department of Chemistry, POSTECH



Jinhee Park
Present Associate Professor, Department of Emerging Materials Science, DGIST, Korea
2015 Senior Researcher, Korea Electrotechnology Research Institute, Korea
2013 Ph.D. Department of Chemistry, Texas A&M University, USA



Minyoung Yoon
Present Associate Professor, Department of Chemistry, Kyungpook National University, Korea
2012 Postdoc, Department of Chemistry, University California, Berkeley, USA
2011 Ph.D. Department of Chemistry, Pohang University of Science Technology, Korea

33. Oral Presentation of Young Scholars in Inorganic Chemistry (inc. Award Lectures)

Organizer : Jungwon Park (Seoul National University)

Chair : Jungwon Park (Seoul National University)

- 09:00 **INOR.O-1** Hexapodal Tricationic Amphiphiles for Anion-Induced and Aggregation-Enhanced Light Emission
Soohyung Kim, Dongwhan Lee
Division of Chemistry, Seoul National University, Korea
- 09:06 **INOR.O-2** Regulation of the Nitrile Activation of a Peroxocobalt(III) Complex using Redox-Inactive Metal Ions
Kyungmin Kim, Jaeheung Cho^{1,*}
Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology, Korea
¹*Department of Chemistry, UNIST, Korea*
- 09:12 **INOR.O-3** Minimalistic Principles for Designing Small Molecules with Multiple Reactivities against Pathological Factors in Dementia
Mingeun Kim, Mi Hee Lim
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- 09:18 **INOR.O-4** Ultramicroporous Metal-Organic Frameworks with Selective Adsorption of Ethane over Ethylene
Minjung Kang, Jong Hyeok Choe, Hyojin Kim, Daewon Kim, Hyein Park, Chang Seop Hong
Department of Chemistry, Korea University, Korea
- 09:24 **INOR.O-5** A Golgi Apparatus-targeting Fluorescent Probe for the Selective Sensing of Formaldehyde
Jinheung Kim*, Fortibui Maxine Mambo¹
Chemistry Department of Nano-Science, Ewha Womans University, Korea
¹*Chemistry, Ewha Womans University, Korea*
- 09:30 **INOR.O-6** Crystal Phase Transition creates RuC_x Nanosurface towards the Hydrogen Evolution Reaction in Alkaline Media
Jeonghyeon Kim, Hee Jin Kim, Sang-Il Choi
Department of Chemistry, Kyungpook National University, Korea
- 09:36 **INOR.O-7** Highly Luminescent and Catalytically Active Magic Semiconductor Clusters-Based Metal-Organic Frameworks
Woonhyuk Baek, Taeghwan Hyeon
Division of Chemical & Biological Engineering, Seoul National University, Korea

<Award Lecture: Si-Joong Kim Academic Award>

09:45 **INOR.O-8** Memories of the Late Professor Si-Joong Kim and My Academic Journey at POSTECH
Joon Won Park
Department of Chemistry, Pohang University of Science and Technology, Korea

<Award Lecture: Young Inorganic Chemist Award>

10:15 **INOR.O-9** From DGIST-1 to DGIST-7
Yesub Keum, Byeongchan Lee, Seonghun Park, Bongkyeom Kim, Jinhee Park
Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology, Korea

<Award Lecture: Young Inorganic Chemist Award>

10:45 **INOR.O-10** Metal-Organic Frameworks: Structure and Their Applications in Storage, Separation and Transport
Minyoung Yoon
Department of Chemistry and Green-Nano Materials Research Center, Kyungpook National University, Korea

Organizer



Woon Yong Sohn
2020- Present Assistant Professor, Department of Chemistry, Chungbuk National University, Korea
2016- 2020 Assistant Professor, Department of Applied Chemistry, Chuo University, Japan
2015- 2016 PostDoc, Atomic Energy and Alternative Energies Commission (CEA), France



Myung Won Lee
Present Associate Professor, Department of Chemistry, Pukyong National University, Korea
2008 Ph.D., Department of Chemistry, University of Pennsylvania, USA
1995 B.S., Department of Chemistry, Seoul National University, Korea

34. Oral Presentations for Young Physical Chemists

Organizer : Woon Yong Sohn (Chungbuk National University),
Myung Won Lee (Pukyong National University)

Chair : Myung Won Lee (Pukyong National University)

- 09:00 **PHYS.O-1** Uncertainty Estimation for AI-Accelerated Materials Design
Juhwan Noh, Yousung Jung
Department of Chemical and Biomolecular Engineering, Korea Advanced Institute of Science and Technology, Korea
- 09:15 **PHYS.O-2** Why Additional Corrections Terms Compensate DFA?
Suhwan Song, Eunji Sim
Department of Chemistry, Yonsei University, Korea
- 09:30 **PHYS.O-3** Localized Excitons in 2D Magnetic Semiconductor CrPS₄
Suhyeon Kim, Sunmin Ryu
Department of Chemistry, Pohang University of Science and Technology, Korea
- 09:45 **PHYS.O-4** Direct Observation of Distinct Amyloid Aggregation Dynamics in Water and Heavy Water Using Two-Dimensional Infrared (2D-IR) Spectroscopy
So Yeon Chun, MyungKook Son, Chae Ri Park, Chaiho Lim, Hugh I. Kim, Kyungwon Kwak, Minhaeng Cho
Department of Chemistry, Korea University, Korea

Chair : Woon Yong Sohn (Chungbuk National University)

- 10:00 **PHYS.O-5** Reproducing Quasi-Crystalline and Amorphous Structures via Dendritic Oligomers: Mechanisms for Singlet Exciton Fission
Juno Kim, Dongho Kim
Department of Chemistry, Yonsei University, Korea
- 10:15 **PHYS.O-6** Anisotropic circular dichroism spectroscopy of jet-cooled molecules
Changseop Jeong, Ji Yeon Yun¹, Jiyoung Heo², Nam Joon Kim
Department of Chemistry, Chungbuk National University, Korea
¹Department of chemistry, Chungbuk National University, Korea
²Department of Green Chemical Engineering, Sangmyung University, Korea
- 10:30 **PHYS.O-7** Small Biomolecules Induce Protein Aggregation through Charge-Charge Interaction
Minchae Kang, Sang Hak Lee^{1,*}
Department of chemistry, Pusan National University, Korea
¹Department of Chemistry, Pusan National University, Korea
- 10:45 **PHYS.O-8** Reversible molecular switch based on circular photoactive protein oligomers exhibits unexpected light-induced contraction
Sang Jin Lee, Tae Wu Kim¹, Hyotcherl Ihee
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
¹Department of Chemistry, Mokpo National University, Korea

Organizer



Sung Yul Lim
Present Assistant Professor, Department of Chemistry, Kyung Hee University, Korea
2016 Ph.D, Department of Chemistry, Seoul National University, Korea
2009 B.S, Department of Chemistry, Seoul National University, Korea

35. Oral Presentation of Young Analytical Chemists I

Organizer : Sung Yul Lim (Kyung Hee University)

Chair : Sung Yul Lim (Kyung Hee University)

- 09:00 **ANAL1.O-1** Subnanoscale probing of nanojunction using heterogeneous gap-mode Raman spectroscopy
Dongha Shin
department of chemistry, Inha University, Korea
- 09:06 **ANAL1.O-2** SERS-based serodiagnosis of acute febrile diseases using nanopopcorn microarray platforms
Kihyun Kim, Jaebum Choo
Department of Chemistry, Chung-Ang University, Korea
- 09:12 **ANAL1.O-3** Analysis of the effects of NO gas in cancer cells based on NO-generating electrochemical system
Chae ri Park, Jeeyoung Ma¹, Myungkook Son, Dongjoon Im, Sooyeon Chae, Kyongsuk Jin^{2,*}, Hugh I. Kim
Department of Chemistry, Korea University, Korea
¹*Chemistry, Korea University, Korea*
²*Chemistry Department, Korea University, Korea*
- 09:18 **ANAL1.O-4** Multifunctional Optical Probes in Dynamic Biological Environments Using Mesoporous Silica Shell Coated Single Gold Nanorods
Geun Wan Kim, Ji Won Ha
Department of Chemistry, University of Ulsan, Korea
- 09:24 **ANAL1.O-5** Pilot study for biomarker discovery of prostate cancer using proteomics
Miseon Jeong, Wonryeon Cho
Department of Chemistry, Wonkwang University, Korea
- 09:30 **ANAL1.O-6** Assessment of health risk under exposure of airborne particulate matter in mouse by LC-MS based metabolomics
Seungwoo Seo, Tae-Young Kim
School of Earth Science and Environmental Engineering, Gwangju Institute of Science and Technology, Korea
- 09:36 **ANAL1.O-7** Synthesis and characterization studies of Mn and Co composite as a cathode material for lithium secondary batteries
Hyeseung Kwon, Youngil Lee^{1,*}
University of Ulsan, Korea
¹*Department of Chemistry, University of Ulsan, Korea*
- 09:42 **ANAL1.O-8** Lipidomic analysis to evaluate effects of AMPK activation in diet-

- induced NASH mice
Yeajin Ju, Jueun Lee, Geum-Sook Hwang
Western Seoul Center, Korea Basic Science Institute, Korea
- 09:48 **ANAL1.O-9** Ionization behaviors and efficiencies of explosives of TNT, RDX, and PETN in APCI-MS
Chae eun Son, Sung-Seen Choi^{1,*}
Chemistry, Sejong University, Korea
¹*Department of Chemistry, Sejong University, Korea*
- 09:54 **ANAL1.O-10** Rare earth doped Magnetoplasmonic nanoparticles for the detection of heavy metal ions in water
Huu-Quang Nguyen, My-Chi Thi Nguyen, Jaebeom Lee
Department of Chemistry, Chungnam National University, Korea
- 10:00 **ANAL1.O-11** Characterizing the Optical Properties of Hollow Gold Nanoshells with Plasmonic Effect
Yun a Hong, Ji Won Ha
Department of Chemistry, University of Ulsan, Korea
- 10:06 **ANAL1.O-12** Electrochemical biosensor for Influenza A H1N1 with multiple amplification strategy
Jonghwan Lim, Sanghyeon Park, Seunghun Kim, Eun Bin Kang, Wan Soo Yun
Department of Chemistry, Sungkyunkwan University, Korea
- 10:12 **ANAL1.O-13** Synthesis of graphene oxide with highly preserved sp² carbon network as an efficient matrix for Laser Desorption/Ionization Time-of-Flight Mass Spectrometry
Seung-Woo Kim, Young-Kwan Kim^{1,*}
Chemistry, Dongguk University, Korea
¹*Department of Chemistry, Dongguk University, Korea*
- 10:18 **ANAL1.O-14** Recognition of bile components in bile using Au nanodendrite substrates modified with various alkanethiols as a tool for Raman spectroscopic identification of gall bladder cancer
Thu Thuy Bui, Hoeil Chung
Department of Chemistry, Hanyang University, Korea
- 10:24 **ANAL1.O-15** Synthesis and characterization of LiFeBO_{3-x}F_{2x}/C nanocomposite as cathode material for Li-ion batteries
Yujin Son, Youngil Lee
Department of Chemistry, University of Ulsan, Korea
- 10:30 **ANAL1.O-16** Quantitative proteomic analysis of VPA chemical mouse ASD model reveals enrichment of RNF146 and Wnt/ β-catenin signaling
Wooyoung Eric Jang, Min-Sik Kim^{1,*}
Chemistry, Kyung Hee University, Korea
¹*Department of New Biology, DGIST, Korea*
- 10:36 **ANAL1.O-17** Identification of Secondary Organosiloxane Aerosol (SOSA) Using Aerosol Mass Spectrometry
Hwajin Kim
Environmental Health, Seoul National University, Korea
- 10:42 **ANAL1.O-18** The Effects of Chemisorption on Refractive Index Sensitivity in Mesoporous Silica Coated Gold Nanorod

Seongeun Heo, Ji Won Ha

Department of Chemistry, University of Ulsan, Korea

10:48 **ANAL1.O-19** The effect of water and heavy water on fibrillation dynamics of intrinsically disordered proteins

MyungKook Son, Chae Ri Park, Sooyeon Chae, Dongjoon Im, Hugh I. Kim

Department of Chemistry, Korea University, Korea

10:54 **ANAL1.O-20** Rapid and sensitive detection of SARS-CoV-2 using SERS-based microdroplet sensor

Sohyun Park, Jaebum Choo

Department of Chemistry, Chung-Ang University, Korea

Organizer



Hyun Hee Lee
Present Research Scientist, Division of
Food Functionality Research,
Korea Food Research Institute,
Korea

36. Oral Presentation of Young Analytical Chemists II

Organizer : Hyun Hee Lee (Korea Food Research Institute)

Chair : Hyun Hee Lee (Korea Food Research Institute)

- 09:00 **ANAL2.O-1** Optically tunable plasmonic chiral superstructure
Siyeong Hwang, Juyong Gwak¹, Jaebeom Lee^{2,*}
Chemical Engineering and Applied Chemistry, Chungnam National University, Korea
¹*Department of Biomaterials Science, Pusan National University, Korea*
²*Chemistry, Chungnam National University, Korea*
- 09:06 **ANAL2.O-2** SERS-LFA strip for rapid classification of Influenza A and SARS-CoV-2
Mengdan Lu, Jaebum Choo^{1,*}
Chemistry, Chung-Ang University, China
¹*Department of Chemistry, Chung-Ang University, Korea*
- 09:12 **ANAL2.O-3** Investigation of TPT-VCR multidrug mechanisms in 3D spheroids human neuroblastoma cells
Sooyeon Chae, Chae Ri Park, MyungKook Son, Dongjoon Im, Hugh I. Kim
Department of Chemistry, Korea University, Korea
- 09:18 **ANAL2.O-4** Investigation of Oxygen Plasma Treatment Effect on Au@AuHg alloy Nanoparticles
Jaeran Lee, Ji Won Ha
Department of Chemistry, University of Ulsan, Korea
- 09:24 **ANAL2.O-5** Synthesis of $\text{LiFe}_{1-x}\text{Mn}_x\text{BO}_{2.7}\text{F}_{0.5}$ as a cathode material for Li-ion battery
Daeun Han, Youngil Lee
Department of Chemistry, University of Ulsan, Korea
- 09:30 **ANAL2.O-6** Efficacy of Natural Antibacterial Feed in *Paralichthys Olivaceus* using Proteomics
Junghoon Kang, Youngjin Kim, Wonryeon Cho
Department of Chemistry, Wonkwang University, Korea
- 09:36 **ANAL2.O-7** Long-term Effects of Exposure to Microplastics at Environmentally Relevant Concentrations on Lipidome of the Mouse Heart and Brain
Jonghyun Kim, Tae-Young Kim
School of Earth Sciences and Environmental Engineering, Gwangju Institute of Science and Technology, Korea
- 09:42 **ANAL2.O-8** Lipidomic profiling in serum and liver tissue of mice with nonalcoholic steatohepatitis (NASH)
Jiaxin Geng, Youngae Jung¹, Geum-Sook Hwang¹

Western Seoul Center, Korea Basic Science Institute, China

¹ Western Seoul Center, Korea Basic Science Institute, Korea

- 09:48 **ANAL2.O-9** A Study on the Effect of Ammonium ions on Yb/Lu Separation Efficiency
Aran Kim, Kang Hyuk Choi
Radioisotope Research Division, Korea Atomic Energy Research Institute, Korea
- 09:54 **ANAL2.O-10** Maximization of chiral chromatography efficiency through temperature control
Danbi Eun, Jae Jeong Ryoo^{1,*}
Dept. of Chemistry Education, Kyungpook National University, Korea
¹ *Department of Chemical Education, Kyungpook National University, Korea*
- 10:00 **ANAL2.O-11** Dynamic Nuclear Polarization of Selectively ²⁹Si Isotope-Enriched Silica Nanoparticles
Jiwon Kim, Donghyeok Jo¹, InCheol Heo², Won Cheol Yoo^{3,*}, Youngbok Lee^{4,*}
Department of Bionano technology, Hanyang University, Korea
¹ *Department of Bionano Technology, Center for Bionano intelligence Education and Research, Hanyang University, Korea*
² *Department of Applied chemistry, Hanyang University, Korea*
³ *Department of Chemical and Molecular Engineering, Hanyang University (ERICA), Korea*
⁴ *Department of Bio-Nano Engineering, Department of, Korea*
- 10:06 **ANAL2.O-12** The risk of dermal exposure of BPA-free materials
Min Jang
Center for Bio-based Chemistry, Korea Research Institute of Chemical Technology, Korea
- 10:12 **ANAL2.O-13** Engineering and Identification of Marine Bioactive Peptide to Enhance the Properties of Antioxidant and Anti-inflammatory
Soyun Choi, Dong-Ku Kang
Department of Chemistry, Incheon National University, Korea
- 10:18 **ANAL2.O-14** Identification and Analysis of Biomarkers from Novichok-inhibited Human Plasma
Woo-Hyeon Jeong
Chem-Bio Technology Center, Agency for Defense Development, Korea
- 10:24 **ANAL2.O-15** Colorimetric Detection for Receptor Binding Domain of SARS-CoV-2 virus for Developing Paper-based Immunoassay
Xiaoyue Xu, In Geol Choi^{1,*}
Department of Biotechnology, Korea University, China
¹ *Department of Biotechnology, Korea University, Korea*
- 10:30 **ANAL2.O-16** Synthesis and characterization of iodine-doped LiFeBO₃ as cathode for lithium-ion battery
Yujin Jeong, Youngil Lee
Department of Chemistry, University of Ulsan, Korea
- 10:36 **ANAL2.O-17** Characterizing Mercury Amalgamation on Single Mesoporous Silica Coated Gold Nanorods Using Spectroelectrochemistry
Yola Yolanda Alizar, Ji Won Ha^{1,*}
Chemistry, University of Ulsan, Korea

¹*Department of Chemistry, University of Ulsan, Korea*

10:42 **ANAL2.O-18** Comparing equilibrium structures of the Amyloid- β (1-42) dimers and assembly properties *in vitro*

Dongjoon Im, MyungKook Son, Chae Ri Park, Sooyeon Chae, Hugh I. Kim

Department of Chemistry, Korea University, Korea

10:48 **ANAL2.O-19** SERS-PCR Assays of SARS-CoV-2 using Au nanoparticles-inserted Au nanodimple substrates

Yixuan Wu, Jaebum Choo^{1,*}

Chemistry, Chung-Ang University, China

¹*Department of Chemistry, Chung-Ang University, Korea*

Oral Presentation

Life Chemistry Oral Presentation
October 14 (Thu), Room 105

Organizer



Woon Ju Song
Present Assistant Professor, Department of Chemistry, Seoul National University, Korea
2011 Ph.D, MIT, USA
2003 B.S, Ewha Womans University, Korea

Chair



Hak Joong Kim
Present Professor, Department of Chemistry, Korea University, Korea

Speaker



Seokhee Kim
Present Associate Professor, Department of Chemistry, Seoul National University, Korea
2005-2014 Postdoctoral Associate/Fellow, MIT, USA
2008 Ph.D. Chemistry and Chemical Biology, Harvard University, USA

37. Oral Presentations by Young Life Chemists

Organizer : Woon Ju Song (Seoul National University)

Chair : Woon Ju Song (Seoul National University)

- 09:00 **LIFE.O-1** A targeted protein upregulation strategy potentiates STING agonists in cancer immunotherapy
Wansang Cho, Seung Bum Park^{1,*}
Department of Chemistry, Seoul National University, Korea
¹*Department of Chemistry, Seoul National University, Korea*
- 09:12 **LIFE.O-2** A genetically encoded fluorescent sensor for protein Arg phosphorylation dynamics in live cells
Hoyoung Jung, Jung-Min Kee
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
- 09:24 **LIFE.O-3** Evolution of De Novo Designed Metal-dependent Glycosidases
WooJae Jeong, Woon Ju Song^{1,*}
Division of Chemistry, Seoul National University, Korea
¹*Department of Chemistry, Seoul National University, Korea*
- 09:36 **LIFE.O-4** Tris(catecholato) iron(III) complex formation with a nature-inspired cyclic peptoid ligand
Jinyoung Oh, Jiwon Seo^{1,*}
Department of Chemistry, Gwangju Institute of Science and Technology, Korea
¹*Gwangju Institute of Science and Technology, Korea*
- 09:48 **LIFE.O-5** Understanding the substrate recognition of the peptide macrocyclase PsnB by structural and biochemical studies
Inseok Song, Seokhee Kim^{1,*}
Department of Chemistry, Seoul National University, Korea
¹*Division of Chemistry, Seoul National University, Korea*
- 10:00 Coffee Break

Chair : Hak Joong Kim (Korea University)

<Award Lecture : Dae-Sill Lee Academic Excellence Prize for Young Researchers>

- 10:10 **LIFE.O-6** Generation of biomolecular diversity: molecular logic and application
Seokhee Kim
Division of Chemistry, Seoul National University, Korea

Organizer



Han yong Bae
Present Assistant Professor, Department of Chemistry, SUNGKYUNKWAN UNIVERSITY
2019 Assistant Professor, Department of Chemistry, UNIST
2015 Post-doc, Max-Planck-Institut für Kohlenforschung, Germany

38. Oral Presentation for Young Scholars in Organic Division

Organizer : Han yong Bae (Sungkyunkwan University)

Chair : Han yong Bae (Sungkyunkwan University)

- 09:00 **ORGN.O-1** Catalyst-Controlled Divergent C(sp³)—H/C(sp²)—H Bond Functionalization of Diazo Compounds
Yu Jim Lee, Kyuin Choi, Sang-gi Lee
Chemistry and Nanoscience, Ewha Womans University, Korea
- 09:12 **ORGN.O-2** Understanding the mechanisms of photo-activated [2 + 2] cycloadditions mediated by chiral organic and transition-metal photocatalysts
Jiyong Park¹, Hoimin Jung¹, Mu-Hyun Baik^{2,*}
Center for Catalytic Hydrocarbon Functionalization, Institute for Basic Science, Korea
¹*Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea*
²*Chemistry, Korea Advanced Institute of Science and Technology, Korea*
- 09:24 **ORGN.O-3** Naphthoquinolinedione-based probes with chromofluorogenic property for sensitive detection Hg²⁺ in aqueous solutions
Ashwani Kumar, Pil Seok Chae^{1,*}
Department of Bio Nano, Hanyang University, India
¹*Department of Bionano Engineering, Hanyang University, Korea*
- 09:36 **ORGN.O-4** Strategic Approach for Enhancing Sensitivity of Ammonia Gas Detection: Molecular Design Rule and Morphology Optimization for Stable Radical Anion Formation of Rylene Diimide Semiconductors
Byeong M. Oh, Jong Hyun Kim
Department of Molecular Science and Technology, Ajou University, Korea
- 09:48 **ORGN.O-5** Direct carboxylation of thiophene derivatives via Ag(I)-catalysis
Mijung Lee, Young Kyu Hwang, Jaesung Kwak^{1,*}
Korea Research Institute of Chemical Technology, Korea
¹*Infectious Diseases Therapeutic Research Center, Korea Research Institute of Chemical Technology, Korea*
- 10:00 **ORGN.O-6** Synthesis of dimeric high-oxidation state securiniga alkaloids
Gyumin Kang, Sunkyu Han
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- 10:12 **ORGN.O-7** Ligand-Controlled Regioselective C–H Alkenylation at Sterically Unhindered Sites of (Hetero)arenes
Eunsu Kang, Jung Min Joo^{1,*}

Department of chemistry, Pusan National University, Korea

¹*Department of Chemistry, Pusan National University, Korea*

- 10:24 **ORGN.O-8** Spatially Resolved Interactome Mapping through Intracellular Protein-specific Photo-crosslinking in Live Cells
Jung Seung Nam, Hyun-Woo Rhee^{1,*}, Tae-Hyuk Kwon
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
¹*Department of Chemistry, Seoul National University, Korea*
- 10:36 **ORGN.O-9** Water-Driven Biomimetic Catalytic Enantioselective Protonation: Physical Origin of On-Water Effect
Si Joon Park, Choong eui Song
Department of Chemistry, Sungkyunkwan University, Korea
- 10:48 **ORGN.O-10** Scyllo-inositol-derived amphiphilic saccharides for membrane protein study
Aiman Sadaf, Pil Seok Chae^{1,*}
Department of Bio-Nano Engineering, Hanyang University, Pakistan
¹*Department of Bionano Engineering, Hanyang University, Korea*

Organizer



Sang Min Lim
Present Principal Researcher, Brain
Science Institute, KIST, Korea
2013 Ph.D., Department of Chemistry
and Chemical Biology, Harvard
University, USA
2002 B.S., Department of Chemistry,
Seoul National University, Korea

39. Oral Presentation of Young Medicinal Chemists

Organizer : Sang Min Lim (KIST)

Chair : Sang Min Lim (KIST)

- 09:10 **MEDI.O-1** Identification of thieno[3,2-d]pyrimidine derivatives as dual inhibitors of focal adhesion kinase and FMS-like tyrosine kinase 3
Injae Shin, Taebo Sim
Severance Biomedical Science Institute, Yonsei University College of Medicine, Korea
- 09:20 **MEDI.O-2** Intracellular delivery of oxaliplatin conjugate *via* cell penetrating peptide for the treatment of colorectal carcinoma *in vitro* and *in vivo*
Tejinder Singh, Jungkyun Im^{1,*}
Department of Electronic Materials and Devices Engineering, Soonchunhyang University, Korea
¹ *Soonchunhyang University, Korea*
- 09:30 **MEDI.O-3** Peripheral Selective Oxadiazolylphenyl Alanine Derivatives as Tryptophan Hydroxylase 1 Inhibitors for Obesity and Fatty Liver Disease
Eunjung Bae, Jin hee Ahn
Department of Chemistry, Gwangju Institute of Science and Technology, Korea
- 09:40 **MEDI.O-4** Enantioselective Total Synthesis of (-)-Verrucarol for the Development of Anticancer Drug Against Triple-Negative Breast Cancer
Sang Jeon Chung[†], Eun Seok Choi¹, Wonyoung Jang¹, Seung Bin Park¹
College of Pharmacy, Sungkyunkwan University, Korea
¹ *College of Pharmacy, Sungkyunkwan University, Korea*
- 09:50 **MEDI.O-5** Discovery of Novel Sphingosine-1-Phosphate-1 (S1P₁) Receptor Agonists for the Treatment of Multiple Sclerosis
Sun Jun Park, Ki Duk Park^{1,*}
Convergence Research Center for Dementia, Division of Bio-Med Science & Technology, Korea Institute of Science and Technology, KIST School, UST, Korea
¹ *Convergence Research Center for Dementia, Korea Institute of Science and Technology, Korea*
- 10:00 **MEDI.O-6** Heterobivalent ligands targeting both PSMA and hepsin for prostate cancer diagnosis.
Hyunsoo Ha, Youngjoo Byun^{1,*}
Department of Pharmacy, Korea University Sejong Campus, Korea
¹ *Department of Pharmacy, Korea University, Korea*
- 10:10 **MEDI.O-7** Allosteric Inhibitors of Kidney Type Glutaminase for the Treatment of KEAP/NRF2 Genes Mutated Solid Tumors.
Krishna babu Duggirala, Kwangho Lee^{1,*}

Medicinal Chemistry and Pharmacology, KRICT, India

¹*Korea Research Institute of Chemical Technology, Korea*

- 10:20 **MEDI.O-8** Design and Synthesis of Unique Peptoid-Based Structures
Soomin Kim, Yong-Uk Kwon
Department of Chemistry and Nanoscience, Ewha Womans University, Korea
- 10:30 **MEDI.O-9** Design, Synthesis, and Biological Evaluation of New Peripheral 5HT2A Antagonists for Nonalcoholic Fatty Liver Disease
Minhee Kim, Jin hee Ahn^{1,*}
Department of Chemistry, Gwangju Institute of Science and Technology, Korea
¹*Department of Chemistry, Gwangju Institute of Science and Technology, Korea*
- 10:40 **MEDI.O-10** Design and characterization of cereblon-mediated androgen receptor proteolysis-targeting chimeras
Akshay Takwale, Jong Yeon Hwang^{1,*}
Medicinal chemistry and pharmacology, University of Science & Technology, India
¹*Center for Medicinal Chemistry, Korea Research Institute of Chemical Technology, Korea*

Organizer



Jaewon Lee
Present Assistant Professor,
Department of Chemical
Engineering and Applied
Chemistry, Chungnam
National University, Korea
2017.01- Postdoc, CPOS, University of
2020.02 California Santa Barbara

40. Oral Presentation for Young Material Chemists

Organizer : Jaewon Lee (Chungnam National University)

Chair : Jaewon Lee (Chungnam National University)

- 09:00 **MAT.O-1** An effective way of optimizing the photocatalyst functionality of semiconductor using co-hybridized conductive nanosheet
Namhee Kwon, Seong-Ju Hwang
Department of Materials Science and Engineering, Yonsei University, Korea
- 09:10 **MAT.O-2** Molecular-level control of the intersheet distance and electronic coupling between 2D nanosheets to establish design rules for hybrid photocatalysts
Tae-Ha Gu, Seong-Ju Hwang^{1,*}
Department of Chemistry and Nanoscience, Ewha Womans University, Korea
¹*Department of Materials Science and Engineering, Yonsei University, Korea*
- 09:20 **MAT.O-3** Highly affinitive metal-organic fragments torn from metal-organic frameworks for stabilizing catalysts
Won Ho Choi, Kyung Min Choi^{1,*}
Institute of Advanced Materials and Systems, Sookmyung Women's University, Korea
¹*Division of Chemical and Biomolecular Engineering, Sookmyung Women's University, Korea*
- 09:30 **MAT.O-4** Metal-free 2D C₃N₄-based nanoplatelets produced under humidified air gas for in vivo fluorescence imaging
Dawoon Jang, Sungjin Park
Department of Chemistry, Inha University, Korea
- 09:40 **MAT.O-5** Fabrication of Water-Repellent Platinum(II) Complex-Based Photon Downshifting Layers for Perovskite Solar Cells by Ultrasonic Spray Deposition
Eunhye Hwang, Chaiheon Lee, Sung-Yeon Jang^{1,*}, Kwanyong Seo¹, Tae-Hyuk Kwon
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
¹*School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology, Korea*
- 09:50 **MAT.O-6** Nanoreactors Carrying Atomically Conformal Metal Lamination on Plasmonic Nanocrystals for Efficient Catalysis
Anubhab Acharya, In Su Lee
Department of Chemistry, Pohang University of Science and Technology, Korea
- 10:00 **MAT.O-7** Crystal-Water-Free Potassium Vanadium Bronze (K_{0.5}V₂O₅) as a Cathode Material for Ca-Ion
Meladia Elok Purbarani
Energy Science and Engineering, DGIST, Indonesia

- 10:10 **MAT.O-8** Zeolite-templated nanoporous carbon material as iodine host for zinc-iodine battery-supercapacitor hybrid electrode
Hongjun Park, Ryong Ryoo
Center for Nanomaterials and Chemical Reactions, Institute for Basic Science, Korea
- 10:20 **MAT.O-9** An Introduction to ChemAI: Platform for Data-Driven Material Chemistry Research
Seunghun Jang^{*}, Gyoung S. Na, Hyunju Chang
Chemical Data-Driven Research Center, Korea Research Institute of Chemical Technology, Korea
- 10:30 **MAT.O-10** Size, morphology and surface charge determined biological behaviors of layered double hydroxide nanomaterials upon blood components
Tetsuo Yamaguchi, Jae-Min Oh^{1,*}
Department of Energy and Materials Engineering, Dongguk university, Korea
¹*Department of Energy and Materials Engineering, Dongguk University, Korea*
- 10:40 **MAT.O-11** Understanding the Origin of the Pressure-Induced Amorphization in metal halide perovskite CsPbI₃
Seho Yi
Computational Science Research Center, Korea Institute of Science and Technology, Korea
- 10:50 **MAT.O-12** Oxidative Coupling of Methane (OCM) using Mixed Ionic-Electronic Conducting (MIEC) Membrane
Bonjae Koo
School of Chemistry and Energy, Sungshin Women's University, Korea

Organizer



Jinho Chang
Present Assistant Professor, Department
of Chemistry, Hanyang
University, Korea

Speaker



Byung-Kwon Kim
Present Associate Professor, Department
of Chemistry and Nanoscience,
Ewha Womans University, Korea
2012 Ph.D. Department of Chemistry,
Korea Advanced Institute of
Science and Technology, Korea
2006 B.S. Department of Chemistry,
Pusan National University, Korea

41. Oral Presentation of Young Scholars in Electrochemistry

Organizer : Jinho Chang (Hanyang University)

Chair : Jinho Chang (Hanyang University)

- 09:00 **ELECO-1** Morphological effects of nanoporous Indium tin oxide electrodes towards electron transfer and its applications as bipolar electrode sensors
Minjee Seo
Department of Chemistry Education, Korea National University of Education, Korea
- 09:20 **ELECO-2** Hydrogen Production on Atomically Precise Metal Nanoclusters: Effects of Foreign Metal-doping and Surface Modification
Woojun Choi
Department of Chemistry and Medical Chemistry, Yonsei University, Korea
- 09:40 **ELECO-3** Interfacial Stabilization of All-Solid-State Batteries with Highly Concentrated Electrolytes
Minjeong Shin
Department of Chemistry and Energy, Sungshin Women's University, Korea
- 10:00 **ELECO-4** Structure and properties of a superprotonic solid acid, $\text{Cs}_2(\text{HSeO}_4)(\text{H}_2\text{PO}_4)$
Ara Jo, Sossina M. Haile^{1,*}
Department of Chemistry, Kangwon National University, Korea
¹*Materials Science and Engineering, Northwestern University, United States*
- 10:20 Coffee Break
- <Award Lecture: i-SENS Young Electrochemistry Award>
- 10:30 **ELECO-5** Expanding the research area of electroanalytical chemistry: single-entity electrochemistry and polymer analysis
Byung-Kwon Kim
Department of Chemistry and Nanoscience, Ewha Womans University, Korea

Organizer



Wooyul Kim

Present Associate Professor, Department of Chemical and Biological Engineering, Sookmyung Women's University
2016 Postdoc, Lawrence Berkeley National Laboratory
2012 Ph.D. Division of Environmental Science and Engineering, POSTECH

42. General Session

Organizer : Wooyul Kim (Sookmyung Women's University)

Chair : Wooyul Kim (Sookmyung Women's University)

- 09:30 **ENVR.O-1** Highly selective solar denitrification by *in situ* generated H₂ on TiO₂ modified with bimetals and reduced graphene oxide
Shinbi Lee, Wonyong Choi
Division of Environmental Science and Engineering, Pohang University of Science and Technology, Korea
- 09:45 **ENVR.O-2** Spontaneous reductive transformation of inorganic substances by Fe₂O₃ nanorods on carbon nanofibers under dark ambient aerated water
Chuhyung Kim, Wonyong Choi^{1,*}
Department of Chemical Engineering, Pohang University of Science and Technology, Korea
¹*Division of Environmental Science and Engineering, Pohang University of Science and Technology, Korea*
- 10:00 **ENVR.O-3** Research on Contaminants Originated from Chemical Combustion and Metabolome in Contaminated Soil Using LC-MS based Metabolomics and 16S rRNA Genome Sequencing
Jungman Jo, Jeongae Lee^{1,*}, Jaeyoung Choi^{2,*}
Environment, Health and Welfare Research Center, Korea Institute of Science and Technology / KOREA Univ, Korea
¹*Molecular Recognition Research Center, Korea Institute of Science and Technology, Korea*
²*Environment, Health and Welfare Research Center, Korea Institute of Science and Technology, Korea*
- 10:15 **ENVR.O-4** Oxidative conversion of rhodochrosite (MnCO₃) to groutite (α-MnOOH) in the presence of goethite (α-FeOOH) substrate
Seonyi Namgung, Giyeon Lee
Department of Earth System Sciences, Yonsei University, Korea
- 10:30 **ENVR.O-5** Single-atom Sn-Cu/C₃N₄ catalyst for selective solar synthesis of HCHO from CO₂
Bupmo Kim, Wooyul Kim^{1,*}, Wonyong Choi^{2,*}
Department of Chemical Engineering, Pohang University of Science and Technology, Korea
¹*Department of Chemical and Biological Engineering, Sookmyung Women's University, Korea*
²*Division of Environmental Science and Engineering, Pohang University of Science and Technology, Korea*
- 10:45 **ENVR.O-6** Water-compatible conjugated polymer photocatalysts by side-chain engineering
Jeehye Byun
Water Cycle Research Center, Korea Institute of Science and Technology, Korea

- POLY.P-1** Metal-Mediated Approach to Grafting Zwitterionic Polymers onto Solid Surfaces for Non-Biofouling Applications
Yohan Kim, Yejin Kim¹, Woo Kyung Cho², Joon Sig Choi³, Sung Min Kang^{4,*}, Minjin Seong²
chemistry, Chungbuk National University, Korea
¹*Chungbuk National University, Korea*
²*Department of Chemistry, Chungnam National University, Korea*
³*Department of Biochemistry, Chungnam National University, Korea*
⁴*Department of Chemistry, Chungbuk National University, Korea*
- POLY.P-2** Development and evaluate of genistein encapsulated polymeric micelle using biocompatibility polymer
나래(Narae) 박(Park)
New Drug Discovery and Development, Chungnam National University Graduate School of New Drug Discovery and Development, Korea
- POLY.P-3** Preparation of Organic-Inorganic Hybrid Biodegradable Polyesters Containing Fertilizer Ingredients
Hyun Ju Lee, Bun Yeoul Lee^{1,*}
Department of molecular science and technology, Ajou University, Korea
¹*Department of Molecular Science and Technology, Ajou University, Korea*
- POLY.P-4** Polymer-Metal-Composite-Type Electrodes for Flexible Solar Cell Applications
Jong Jin Park, Jong Hyun Kim
Department of Molecular Science and Technology, Ajou University, Korea
- POLY.P-5** Aluminium sensitive Rhodamine-bearing poly(2-isopropyl-2-oxazoline).
Chanho Shin, Woo-Dong Jang
Department of Chemistry, Yonsei University, Korea
- POLY.P-6** Structural Color Changes by Engineering Optical Rotation of Chiral Photonic Crystal
Wongi Park, Hyewon Park¹, Dong Ki Yoon¹
Graduate School of Nanoscience and Technology, Korea Advanced Institute of Science and Technology, Korea
¹*Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea*
- POLY.P-7** Supramolecular chemistry based porphyrin catalysts
Yeongchan Seo, Kyeong-Im Hong, Woo-Dong Jang
Department of Chemistry, Yonsei University, Korea
- POLY.P-8** Synthesis of Monodisperse Brush Polymer
Hyunji Ma, Kyoung Taek Kim
Division of Chemistry, Seoul National University, Korea
- POLY.P-9** Self-assembly of Oppositely Charged Ionic Block Copolymer Complex with Discrete Molecular Weight
Junyoung Kim, Mo Beom Koo, Kyoung Taek Kim^{1,*}
chemistry, Seoul National University, Korea
¹*Division of Chemistry, Seoul National University, Korea*
- POLY.P-10** Semi-automated synthesis of sequence-defined polymers for information storage and macromolecular engineering
Jeong Min Lee, SooJeong Lee¹, Kyoung Taek Kim^{2,*}
Seoul National University, Korea
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- POLY.P-11** On-demand shape transformation of polymer vesicles via site-specific isomerization of hydrazone photoswitches in monodisperse hydrophobic oligomers
Valene Wang, Kyoung Taek Kim^{1,*}
Seoul National University, Korea
¹*Division of Chemistry, Seoul National University, Korea*
- POLY.P-12** Surface-initiated RAFT terpolymerization under ambient conditions
Ji Hoon Lee, Hyun Ji Seo, Seung Yeon Lee¹, Woo Kyung Cho, Kyung-sun Son
Department of Chemistry, Chungnam National University, Korea
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- POLY.P-13** Sustained release of donepezil-loaded PLA microspheres containing lactic acid.
Jihyang Lim
Department of Applied Pharmacy, Chungbuk National University, Korea
- POLY.P-14** Study on Synthesis and Properties of Conjugated Copolymers Containing Aromatic Heterocyclic Compound with Trifluorocarbon and Chalcogens
Nam wook Kim, Intae Kim^{1,*}
Department of Chemistry, KWANG WOON university, Korea
¹*Department of Chemistry, Kwangwoon University, Korea*
- POLY.P-15** Synthesis of cyclic diblock copolymers with discrete molecular weights
Seul Woo Lee, Kyoung Taek Kim
Division of Chemistry, Seoul National University, Korea

- POLY.P-16** Polymer brush growth on various substrates using open-to-air RAFT polymerization
Minki Cho, Hyun Ji Seo, Ji Hoon Lee, Woo Kyung Cho, Kyung-sun Son
Department of Chemistry, Chungnam National University, Korea
- POLY.P-17** Effect of functional groups at hydrophilic block ends on the block copolymer self-assembly
Sungmin Ha, Kyoung Taek Kim^{1,*}
Chemistry, Seoul National University, Korea
¹*Division of Chemistry, Seoul National University, Korea*
- POLY.P-18** Preparation of monodisperse Eu-Labelled Polystyrene Particles by Nanoprecipitation Method
Yoolee Lee, Daewon Sohn
Department of Chemistry, Hanyang University, Korea
- POLY.P-19** Preparation and Characterization of a Solution-based TiO₂-Polyimide Composite for High-k Dielectric
Jae Kyung Lee, Taek Ahn
Department of Chemistry, Kyungsoong University, Korea
- POLY.P-20** Triazole Based Cross-linked Polyimide as Gate Dielectric for Low Temperature Processable Organic Thin Film Transistor
Jae Kyung Lee, Taek Ahn
Department of Chemistry, Kyungsoong University, Korea
- POLY.P-21** Applications and electropolymerization of a new thiazole derivative bearing thiophene
Joon Ho Yoon, Seunghyun Jeong, Intae Kim
Department of Chemistry, Kwangwoon University, Korea
- POLY.P-22** M²⁺-Urushiol Combination properties study
Jun Tae Kim, Jongok Won
Department of Chemistry, Sejong University, Korea
- POLY.P-23** Study on Synthesis and Properties of New Conjugated Chalcogenophene Monomer and Polymers Containing Fluorine
Soyeon Kim, Intae Kim
Department of Chemistry, Kwangwoon University, Korea
- POLY.P-24** A Study on the Adhesion Properties of Fe³⁺/Urushi/γ-Butyrolactone Organic Gel
Minseok Kim, Jongok Won^{1,*}
Chemistry, Sejong University, Korea
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- POLY.P-25** Electro-Mechano-Chemically Responsive Supramolecular Switches on Mesoporous Silica Nanoparticles and their Application for Controlled Cargo Release
Gyeonghyeon Choi, Chiyoung Park
Department of Energy Science and Engineering, Daegu Gyeongbuk Institute of Science & Technology, Korea
- POLY.P-26** Study on porous materials using chitosan with functional group of urushiol
Hyeongsu Kim, Jongok Won^{1,*}
Chemistry, Sejong University, Korea
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- POLY.P-27** Enhancement of Mechanical Strength and Osteoconductivity of Acrylic Bone Cement by Incorporation of Hypo-crystalline PMMA Powder and Bioactive Glass 45S5
Myung Soon Hwang, Youngjong Kang
Department of Chemistry, Hanyang University, Korea
- POLY.P-28** Ice recrystallization inhibition activity of Poly(L-Ala-co-L-Lys) (PAK)
Soyeon Park
Zhengyu Piao, Soyeon Kim, Soyeon Kim and Byeongmoon Jeong¹
Ewha Womans University, Korea
- POLY.P-29** Fabrication of Fe(III)-Dextran Layer for Enhanced Deposition of Fe(III)-Tannic Acid Nanofilm
Hyunjung Lee, Yehee Han, Ji Hun Park
Department of Science Education, Ewha Womans University, Korea
- POLY.P-30** Resveratrol-β-Lactoglobulin Complexes Nanocoating with Fe(III)-Tannic acid for Enhanced Chemostability
Yeon Seo Cho, Ji Hun Park^{1,*}
Department of Pharmaceutical Engineering, Dankook University, Korea
¹*Department of Science Education, Ewha Womans University, Korea*
- POLY.P-31** Light-Mediated Fabrication of Ionogel via Radical Based Thiol-Ene Click Reaction
Jiyeong Yeo, Myungwoong Kim^{1,*}
Chemistry, Inha University, Korea
¹*Department of Chemistry, Inha University, Korea*
- POLY.P-32** Photopatternable polymeric systems with controlled surface properties to understand the selective physical vapor deposition of an inorganic material
ChangLee Lee, Myungwoong Kim
Department of Chemistry, Inha University, Korea
- POLY.P-33** Stabilization of the Oil/Water Interface by Amphiphilic Miktoarm Core Cross-Linked polymers
Yunji Jung, Myungeun Seo
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- POLY.P-34** Substrate Independent Photoimageable Polymeric Systems with Chemical Versatility Allowing Post-patterning Modifications
Seung Yeon Choi, Sol An¹, Myungwoong Kim¹
Chemistry and Chemical Engineering, Inha University, Korea
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- POLY.P-35** Poly(HEMA) Grafting on Plastic Substrates with Low Chemical Reactivity and their Antibacterial Effects
Sang Jeong Park, Woo Kyung Cho^{1,*}
Chemistry, Chungnam National University, Korea
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- POLY.P-36** Aryl Azide-Based, Photochemical Reaction and Surface Zwitteration on Polymeric Substrates for Non-Biofouling Applications
Hyun Ji Seo, Woo Kyung Cho
Department of Chemistry, Chungnam National University, Korea
- POLY.P-37** Synthesis of Poly[(1,1-dialkyl-3,4-diphenyl-2,5-silolene)-co-(ethynylene)] by the Stille Coupling Reaction of 2,5-Dibromosiloles with Bis(tributylstanny)acetylene
Ji hun Lee, Young Tae Park, Se Yeon Park¹, Hyeong Rok Si¹
Department of Chemistry, Keimyung University, Korea
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- POLY.P-38** Fabricating Pure Polyvinylidene Fluoride with High β -phase Using Thermal Decomposable Additive
Jinwoo Choi, Youngjong Kang^{1,*}
Hanyang University, Korea
¹*Department of Chemistry, Hanyang University, Korea*
- POLY.P-39** Synthesis and characterization of liquid crystal epoxy thermosetting polymer based on phenyl benzoate
Arinola Isa Olamilekan, Hyeonuk Yeo^{1,*}
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¹*Department of Chemistry Education, Kyungpook National University, Korea*
- POLY.P-40** Synthesis of sequence defined polymer using passerine 3-component reaction
SooJeong Lee, Kyoung Taek Kim^{1,*}
Chemistry, Seoul National University, Korea
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- POLY.P-41** Controlling micropore size in hyper-cross-linked polymer via in-situ removal of porogenic templates
Wonjune Yeo, Myungeun Seo^{1,*}
Chemistry, Korea Advanced Institute of Science and Technology, Korea
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- POLY.P-42** one-pot synthetic route for simple cellulose nanocrystal functionalization
Bon-Jun Ku, Chiyoung Park^{1,*}
Energy Engineering Science, DGIST, Korea
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- POLY.P-43** Biodegradable and biocompatible polyurethanes nanoparticles as drug and DNA gene carriers
Soo-Yong Park, Ildoo Chung^{1,*}
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¹*Department of Polymer Science and Engineering, Pusan National University, Korea*
- POLY.P-44** Crystallization-Driven Self-Assembly of Block Copolymers having Monodisperse Poly(lactic acid)s with Defined Stereochemical Sequences
Kyoung Taek Kim^{*}, Yongbeom Kwon
Division of Chemistry, Seoul National University, Korea
- POLY.P-45** Mussel-Inspired Zwitterionic Copolyethers with Antifouling Effect
MinJung Kim, Byeong-Su Kim
Department of Chemistry, Yonsei University, Korea
- POLY.P-46** Mechanochemical Fabrication of Vitrimer-CNT Composites for Highly Sensitive Temperature-Resistance Sensor
Wansu Cho, Chiyoung Park
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- POLY.P-47** Generation of 2D DNA microstructure under topographic template and shear force
Soon Mo Park, Dong Ki Yoon^{1,*}
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- POLY.P-48** Synthesis and characterization of thermoresponsive hollow polymeric shell particles based on colloidal silica
Soo-Yong Park, Ildoo Chung
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- POLY.P-49** Enhanced catalytic glycolysis conditions for chemical recycling of glycol-modified poly(ethylene terephthalate)
Minh Dieu Ngo, Kyuwon Sim¹, Hyun Min Jung¹
Department of Applied chemistry, Kumoh National Institute of Technology, Korea
¹*Department of Applied Chemistry, Kumoh National Institute of Technology, Korea*
- POLY.P-50** Hydrogel-coated lateral flow strip platform for the rapid COVID-19 detection
Kwanwoo Shin^{*}, Nayoon Pyun¹, Eunjin Huh¹
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- POLY.P-51** Effective Synthesis of Polymer Catenanes Composed of Interlocked Discrete Cyclic Polymers
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- POLY.P-52 Lyotropic Bilayer-folded lamellar mesophase in an amphiphilic random copolymer hydrogel
Minjoong Shin, Myungeun Seo^{1,*}
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- POLY.P-53 Nucleation and Growth of Two-dimensional Gold Plates on DNA Film
Juri Kim, Dong Ki Yoon
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- POLY.P-54 Morphological stability of Cross-linkable polymers in organic solar cells
Minhun Jee, Ziang Wu, Han Young Woo
Department of Chemistry, Korea University, Korea
- POLY.P-55 Synthesis and Characterization of New Organic Semiconductor ITIC Acceptor
Ji Eun Lee, Yun Hi Kim^{1,*}
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- POLY.P-56 Fabrication of Physical Unclonable Function with self-assembled chiral liquid crystals via defect engineering
Dong Ki Yoon*, Geonhyeong Park¹
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- POLY.P-57 Homojunction Field-Effect Transistors with selectively doped conductive polymer electrode
Yoonjoo Lee, Han Young Woo^{1,*}
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- POLY.P-58 Development of Boron-Based Efficient and Pure Blue TADF Materials for Organic Light Emitting Diodes
Hyung Jin Cheon, Kim Jang-Joo¹, Soon-Ki Kwon², Yun Hi Kim
Chemistry, Gyeongsang National University, Korea
¹*Materials Science and Engineering, Seoul National University, Korea*
²*Materials Engineering and Convergence Technology, Gyeongsang National University, Korea*
- POLY.P-59 How to enhance the thermal stability of block-polymer templated nanoporous polymers
Taeseok Oh, Wonjune Yeo, Myungeun Seo
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- POLY.P-60 Templated Synthesis of ordered mesoporous carbons (OMCs) by using polymer cubosomes as

templates and their electrochemical applications.

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- POLY.P-61 Synthesis and drug-eluting behavior of biodegradable hydrogel beads
Jeewon Do, Wonmok Lee^{1,*}
Chemistry, Sejong University, Korea
¹*Department of Chemistry, Sejong University, Korea*
- POLY.P-62 Synthesis and Characterization of Orange Phosphorescent Emitting Material
Ji Hyun Lee, Yun Hi Kim, Hyung Jin Cheon
Department of Chemistry, Gyeongsang National University, Korea
- POLY.P-63 Organic phototransistors based on newly synthesized conjugated polymers
Hyunji Son, Chulyeon Lee^{1,*}, Hwajeong Kim¹, Youngkyoo Kim¹
응용화학부, Kyungpook National University, Korea
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- POLY.P-64 Simplified fabrication of EWOD-based chip using PES/PSU thin film
Hyuckjin Lee, Oh-Sun Kwon, Kwanwoo Shin
Department of Chemistry, Sogang University, Korea
- POLY.P-65 Conjugated Polyelectrolytes with Different Counterions as Hole-Transporting Layer for Sky Blue-Emissive Perovskite Light-Emitting Diodes
Amit Kumar Harit, Han Young Woo^{1,*}
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¹*Department of Chemistry, Korea University, Korea*
- POLY.P-66 Near-Infrared Organic Phototransistors with Conjugated Polymer
Yeonhwa Cho, Chulyeon Lee, Hwajeong Kim, Youngkyoo Kim
Department of Chemical Engineering, Kyungpook National University, Korea
- POLY.P-67 Synthesis and characterization of superabsorbent polymer using poly(itaconic acid) with high reswelling absorption capacity
Hyesun Choi, Jiwon Lee
Environment, Health and Welfare Research Center, Korea Institute of Science and Technology, Korea
- POLY.P-68 Enantiopure ω -Substituted Hydroxyalkanoates from Simple Epoxides and Alkenes as Building Blocks for Sequence-Defined Poly(hydroxyalkanoates)s
DoGyun Kim, Jeong Min Lee, Kyoung Taek Kim
Division of Chemistry, Seoul National University, Korea
- POLY.P-69 NONFULLERENE-FULLERENE HYBRID ACCEPTORS FOR ORGANIC SOLAR CELLS
Ziang Wu, Bumjoon Kim^{1,*}, Han Young Woo
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- POLY.P-70 Impact of Polar Side Chain Engineering of CDT-based p-type polymers on Thermoelectric Devices
Ayushi Tripathi, Han Young Woo
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- POLY.P-71 Low bandgap polymer-based near infrared organic photodetectors
WonJo Jeong, In Hwan Jung^{1,*}
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- POLY.P-72 Synthesis Method of Ladder-like Polysilsesquioxane of Trifluoropropyltrimethoxysilane with Controllable Molecular Weight
Jong-tak Lee, Jae Young Bae
Department of Chemistry, Keimyung University, Korea
- POLY.P-73 Thermal Response of Laponite-containing Poly(N-isopropylacrylamide) Nanocomposite Hydrogels
Daewon Sohn^{*}, Younhee Jeong
Department of Chemistry, Hanyang University, Korea
- POLY.P-74 Additive-Controlled Lyotropic Liquid Crystalline Phase Behavior of Amphiphilic Random Copolymer Solutions
Shaheen Pathan, Minjoong Shin¹, Myungeun Seo^{2,*}
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- POLY.P-75 Synthesis of A-A Type Conjugated Polymers with a Strong Electron-Accepting Distannylated Monomer
Sang Young Jeong, Han Young Woo^{1,*}
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- POLY.P-76 Develop of indacenodithiophene based non-fullerene acceptors for OPV
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- POLY.P-77 The enhanced gas adsorption capacity of hybrid composites of selectively modified clay nanotubes and metal-organic frameworks
HyeYeon Cho, Daewon Sohn
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- POLY.P-78 Investigation of Thiophene Spacer at Benzodithiophenedione(BDD) Based Polymer Donors for Non-Fullerene Organic Solar Cells

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- POLY.P-79 Achieving Blue-wavelength Selectivity with Porphyrin-based OPD Materials
Jaehye Park, In Hwan Jung
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- POLY.P-80 Formulation of photo-responsive 3D printable inks: gold nanorods-hydrogel nanocomposites for soft actuator fabrication
Monica Cahyaning Ratri, Jungju Ryu¹, Kwanwoo Shin^{2,*}
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- POLY.P-81 Tunable Wetting of Superomniphobic Surface Structures Based on Shape Memory Polymers
Anwoo Jeong, Seung Goo Lee
Department of Chemistry, University of Ulsan, Korea
- POLY.P-82 Characterization of catechol modified PEG gels controlled by crosslinking units
Jungju Ryu, Daewon Sohn^{1,*}
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¹Department of Chemistry, Hanyang University, Korea
- POLY.P-83 Alkyl-Side-Chain Engineering of Nonfused Nonfullerene Acceptors with Simultaneously Improved Material Solubility and Device Performance for Polymer Solar Cells
Guseon Kim, Eunhee Lim^{1,*}
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- POLY.P-84 Chemodegradable liquid crystalline epoxy thermoset based on azomethine mesogen core
En Trinh Thi, Hyeonuk Yeo^{1,*}
Department of Science Education, Kyungpook National University, Korea
¹Department of Chemistry Education, Kyungpook National University, Korea
- POLY.P-85 Hydrogen Bonding Effect on AIE-activity of Acylhydrazone-based Conjugated Microporous Polymers, and Their Application to Nitroaromatic Compounds Detection
Inhwan Cha, Seohyun Baek, Kyung-su Kim, Changsik Song
Department of Chemistry, Sungkyunkwan University, Korea
- POLY.P-86 Biocompatible Metal-Sensing Polymers Based on Terpyridine-Functionalized Polysuccinimides

- Ju-Young Choi, Hwi Hyun Moon, Changsik Song
Department of Chemistry, Sungkyunkwan University, Korea
- POLY.P-87** Photo-responsive, self-healable, fully bio-based polymers from a dimer acid and a cinnamic acid
Jiyun Kim, Hye Jin Cho, Changsik Song
Department of Chemistry, Sungkyunkwan University, Korea
- POLY.P-88** Supramolecular Polymerization with Hydrazone-based Molecular Building Blocks: Solvent-Switchable Chiral Platform
Hye Jin Cho, Changsik Song
Department of Chemistry, Sungkyunkwan University, Korea
- POLY.P-89** Topology effect on thiourea-based hyperbranched polymer electrolytes for lithium-ion battery
Hyejun Kim, Changsik Song, Kyung-su Kim
Department of Chemistry, Sungkyunkwan University, Korea
- POLY.P-90** Synthesis and characterization of ionic polymers containing bis-pyrrolidinium pendants
Jung Min Kim, Minjae Lee
Department of Chemistry, Kunsan National University, Korea
- POLY.P-91** Biomass-derived Furanic Dienes: Diels-Alder Reaction-mediated Supramolecular Gels
Byoungyun Kim, Juhyen Lee, Changsik Song
Department of Chemistry, Sungkyunkwan University, Korea
- POLY.P-92** Development of Biomass-derived Polyurethanes using a Versatile Polymer Platform towards Photodegradability and Non-flammability
Juhyen Lee, Seohyun Baek, Changsik Song
Department of Chemistry, Sungkyunkwan University, Korea
- POLY.P-93** Norbornene-based bottle-brush polymers with enhanced lubricating properties
Changsik Song¹, Hwi Hyun Moon
Department of Chemistry, Sungkyunkwan University, Korea
- POLY.P-94** Biomass-Derived, Carbon Dioxide-Immobilized Polyurethane Networks with Self-Healable and Reprocessable Properties
Seohyun Baek, Juhyen Lee¹, Inhwan Cha¹, Changsik Song¹
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- POLY.P-95** Flexible and Semi-Transparent Top-Contact Structure Organic Electrochemical Transistors based on Ultra-Thin Au/PEDOT:PSS Hybrid Electrode for Human Skin Electronics
Il-Young Jo, Myung-Han Yoon
Division of Advanced Materials Engineering, Gwangju Institute of Science and Technology, Korea
- POLY.P-96** Fabrication of compression bandage with trimethoprim-loaded polyvinyl alcohol nanofibers for preventing secondary infection
Sangwoo Lee, Myung-Han Yoon
Division of Advanced Materials Engineering, Gwangju Institute of Science and Technology, Korea
- POLY.P-97** Tris(4-(1-phenyl-1H-benzod[imidazole]phenyl)phosphine oxide for Enhanced Mobility and Restricted Traps in Photovoltaic Interlayers
Doyeong Choi, Yun Hi Kim^{1,*}
Department of Materials Engineering and Convergence Technology, Gyeongsang National University, Korea
¹*Department of Chemistry, Gyeongsang National University, Korea*
- POLY.P-98** Efficient, Thermally Stable, and Mechanically Robust AllPolymer Solar Cells Consisting of the Same Benzodithiophene Unit-Based Polymer Acceptor and Donor with High Molecular Compatibility
Cheng Sun, Yun Hi Kim^{1,*}, Soon-Ki Kwon^{2,*}, Taek-Soo Kim^{3,*}, Bumjoon Kim^{4,*}
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IND.P-1 Structure Effect of Thermal Initiator to Curing Behavior of Epoxy Resin via Cationic Polymerization
Kim Seungjun
Department of Chemistry and Chemical Engineering, Inha University, Korea

IND.P-2 Elucidation of Structure-Property Relationships in Phenylimidazolinato Ir(III) Complexes for Phosphorescence Color-Tuning
Sanghun Lee, Min Su Choe, Yunjeong Seo, Sang Ook Kang, Ho-Jin Son
Department of Advanced Materials Chemistry, Korea University, Korea

IND.P-3 Functionalization of Phosphorescent Ir Complexes by Incorporating Terphenyl Periphery Group for Blue PHOLED
Sanghun Lee, Yunjeong Seo, Daehan Lee, Sang Ook Kang, Ho-Jin Son
Department of Advanced Materials Chemistry, Korea

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IND.P-4 Electrospun chitosan-stabilized Prussian blue nanoparticles/poly(vinyl alcohol) nanofibers for reactive oxygen species scavenging and wound healing

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IND.P-5 Surface modification of nanocellulose through acetylation reaction

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- INOR.P-6 A novel colorimetric sensor containing anthraquinone derivative for detecting ClO^- and its paper application
Boeun Suh, Jae Sung Heo, Cheal Kim
Fine Chemistry, Seoul National University of Science & Technology, Korea
- INOR.P-7 A functional model for quercetin 2,4-dioxygenase: Geometric and electronic structures and reactivity of a nickel(II) flavonolate complex
Seungwon Sun, Donghyun Jeong¹, Dohyun Moon^{2*}, Jaeheung Cho^{3*}
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
¹*Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology, Korea*
²*Beam Operation Team, Pohang Accelerator Laboratory, Korea*
³*Department of Chemistry, UNIST, Korea*
- INOR.P-8 Hydride-Transfer Reaction to a Mononuclear Manganese(III) Iodosylarene Complex
Donghyun Jeong, Jaeheung Cho^{1*}
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¹*Department of Chemistry, UNIST, Korea*
- INOR.P-9 Preparation and characterization of multifunctional nanofibers containing metal-organic frameworks and Cu_2O nanoparticles: particulate matter capture and antibacterial activity
Sungwoo Jung, Kang Hyun Park
Department of Chemistry, Pusan National University, Korea
- INOR.P-10 Fluorescent-turn off chemosensor based on sulfonamide for detecting Hg^{2+}
Kim Gyeongjin, Donghwan Choe¹, Jiyoung Lee², Cheal Kim²
Department of Fine Chemistry, Seoul National University of Science & Technology, Korea
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- INOR.P-11 A novel fluorescent turn-on probe based on thiosemicarbazide-naphthalene for selectively detecting Zn^{2+}
Minji Lee, Hyeongjin Kim, Cheal Kim
Fine Chemistry, Seoul National University of Science & Technology, Korea
- INOR.P-12 The transition from Heterogeneous metals to Homogeneous metals in Metal-Organic Frameworks
Jung Heum Yoon, Giseong Lee¹, Woo Ram Lee^{2*}
Department of Chemistry, Hallym University, Korea
¹*Department of Chemistry, Kookmin University, Korea*
²*School of Future Convergence, Department of Chemistry and Institute of Applied Chemistry, Korea*
- INOR.P-13 Nonlinear Optical Properties of Rare-Earth Metal-Doped Layered Perovskites, $\text{Na}_{0.45}\text{Bi}_{2.5}\text{RE}_{0.05}\text{Nb}_2\text{O}_9$ (RE = Eu, Sm, and Pr)
Kisung Kim, Kang Min Ok
Department of Chemistry, Sogang University, Korea
- INOR.P-14 Chiral Zn- and Cd-coordination polymers with very strong second-harmonic generation
Joonhyuk Kee, Kang Min Ok
Department of Chemistry, Sogang University, Korea
- INOR.P-15 Synthesis, structure, and magnetic properties of a hexanuclear iron(III) complex
Hyejin Shin, Inseong Jung, Kil Sik Min^{1*}
Chemistry Education, Kyungpook National University, Korea
¹*Department of Chemistry Education, Kyungpook National University, Korea*
- INOR.P-16 Synthesis, Crystal Structure, and Characterizations of Polar d^{10} Metal Coordination Compounds
Woo young Seo, Kang Min Ok
Department of Chemistry, Sogang University, Korea
- INOR.P-17 Polar Niobium Oxyfluorides and Tantalum Fluorides Templated by Chiral Histidinium Cations
Heejung Choi, Kang Min Ok
Department of Chemistry, Sogang University, Korea
- INOR.P-18 Novel enantiomorphous lanthanide-based coordination polymers with optical properties
Yunseung Kuk, Kang Min Ok
Department of Chemistry, Sogang University, Korea
- INOR.P-19 Synthesis, Structures and Characterizations of homochiral coordination polymers constructed from a V-shaped Alanine derivative
Jihyun Lee, Kang Min Ok
Department of Chemistry, Sogang University, Korea
- INOR.P-20 New noncentrosymmetric niobium oxyfluorides templated by synthetic chiral amino acids
Jihyeon Moon, Kang Min Ok
Department of Chemistry, Sogang University, Korea
- INOR.P-21 Impact of sphingosine and acetylsphingosines on the aggregation and toxicity of metal-free and

- metal-treated amyloid- β
Yelim Yi, Mi Hee Lim
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- INOR.P-22 Photocatalytic Hydrogen Evolution from Plastoquinol Analogues with a Cobalt Complex and an Organic Photoredox Catalyst as a Photosystem I Functional Model
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¹*Research Institute for Basic Sciences, Ewha Womans University, Korea*
²*Faculty of Science and Engineering, Meijo University, Japan*
- INOR.P-23 Unprecedented High O-O Stretch and Electrophilic Reactivity of a Mononuclear Nonheme Iron(III)-Peroxo Complex
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- INOR.P-24 Dioxygen Activation at Mn(III) Corrole Center: Reversible O-O Bond Formation and Cleavage
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- INOR.P-25 Novel Palladium(II) Complexes with *N*-Substituted *N,N'*-Aminomethylquinolines and *N,N'*-Aminomethylpyridines: Synthesis, Structures, and Polymerization of Cyclic Olefins
Ahrim Jeong, Hyosun Lee
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- INOR.P-26 Cobalt(II) Complexes Containing *N*-Substituted 2-Iminomethylpyridine and 2-Iminomethylquinoline: Synthesis, Structure and Polymerization of Norbornene and Norbornene Derivatives
Kyeonghun Kim, Hyosun Lee
Department of Chemistry, Kyungpook National University, Korea
- INOR.P-27 Zinc(II) Complexes with *N*-Substituted *N,N'*-Aminomethylquinoline and *N,N'*-Aminomethylpyridine Derived Ligands: Synthesis, Structural Characterization and *rac*-Lactide Polymerization
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- INOR.P-28 Synthesis, Characterization and Polymerization of *rac*-Lactide by Copper(II) Complexes Containing *N,N'*-Bidentate Aminomethylquinolines and Aminomethylpyridines
Yerim Cho, Hyosun Lee
Department of Chemistry, Kyungpook National University, Korea
- INOR.P-29 Intriguing 'turn-on' emissive feature of carbazole-based *o*-carboranyl luminophore via deboronation reaction
Seok Ho Lee, Kang Mun Lee
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- INOR.P-30 Molecular Design of Fluorene based *closo-ortho*-Carboranyl Luminophores Manifesting Thermally Activated Delayed Fluorescence
Dong Kyun You, Kang Mun Lee
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- INOR.P-31 Relationship between Electronic Effect and Intramolecular-Charge-Transfer-Based Radiative Decay Efficiency in *o*-Carboranyl Carbazole Compounds
Sehee Im, Kang Mun Lee
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- INOR.P-32 Strategic Molecular Design of *o*-Carboranyl-Anthracene-Dyads to Enhance Intramolecular-Charge-Transfer-Based Emission
Ju Hyun Hong, Kang Mun Lee
Department of Chemistry, Kangwon National University, Korea
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Heekwon Park, Yong-Joo Kim
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- INOR.P-34 Pair of chiral 2D silver(I) enantiomers: recognition of chiral histidine via differential pulse voltammetry
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- INOR.P-35 Significant qualifications for an efficient catechol oxidation catalyst in terms of structural perspective
Do Heon Kim, Ok-Sang Jung
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Heehun Moon, Geon Woo Gwak, Ok-Sang Jung
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- INOR.P-41 Synthesis of Sterically Less Hindered Triazenyl Radical Stabilized by N-Heterocyclic Carbenes
Jaelim Kim, Eunsung Lee
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Mingeun Kim, Mi Hee Lim
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- INOR.P-43 Solvent-assisted Reversible Interpenetration of a Cu Paddlewheel-based Metal-organic Framework
Cheol Yeong Heo, Nak Cheon Jeong
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- INOR.P-44 Visible Light-driven Photochemical Conversion of CO₂ by Nickel Complexes with N4S₂ Coordination
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- INOR.P-45 A Golgi Apparatus-targeting Fluorescent Probe for the Selective Sensing of Formaldehyde
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- INOR.P-46 Spectroscopic Characterization and Reactivity of a Non-Heme Cobalt(IV)-Oxo
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- INOR.P-47 Single molecule tracking of PV1 reveals ever-changing structure of diaphragmed fenestrae induced by membrane curvature mediated PV1 multimerization
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- INOR.P-48 Interrelationships between Vitamins and Matrix Metalloproteinase-2
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- INOR.P-49 Steric Control of Linear Carbene-Au(I)-Amide Complexes for High-Efficiency Electroluminescence
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- INOR.P-50 Rotational dynamics of endocytic vesicle during intracellular transport
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- INOR.P-51 Optical microscopic revelation of hot-electron effect in plasmonic photocatalysts
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- INOR.P-52 Detection of Membrane Phase Separation by Long Term Single Molecule Observation
Jiseong Park, Daeha Seo
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- INOR.P-53 Effect of Cation and Transition Metal for Determining Crystal Structure and Electronic Properties on the Zintl phase $Ba_{1-x}Sr_xZn_{2-y}Cd_ySb_2$ System
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- INOR.P-54 Experimental and Theoretical Studies for the Zintl Thermoelectric $Ca_{3-x}Yb_xAlSb_3$ System
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- INOR.P-55 Effect of cations on substitution of double-one valence Rare-Earth-Metal for the Zintl Thermoelectric $Ca_{5-x}Yb_xEu_yAl_2Sb_6$ ($0 \leq x \leq 1.12(2)$; $0 \leq y \leq 0.63(2)$) System
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- INOR.P-56 Synthesis and Characterization of Single Atomic Rh Decoration of Pt Nanocubes and Application towards the Direct Ethanol Fuel Cells
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- INOR.P-57 Synthesis of Co catalysts derived from Zeolitic-imidazolate Framework-8 (ZIF-8) and their catalytic performances for the air electrodes in Zn-air batteries
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- INOR.P-58 Tip-to-Middle Anisotropic MOF-on-MOF Growth with a Structural Adjustment
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- INOR.P-59 ZIF Composite Incorporated with CoNi Nanoparticles for Efficient Catalytic Reaction
Sojin Oh, Sujeong Lee, Moonhyun Oh
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- INOR.P-60 Preparation of Metal-Organic Framework Papers and Their Selective Dye Separation
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- INOR.P-61 Enhancement of Catalytic Activity of MOF by Providing Structural Defects
Hyeji Jun, Sojin Oh, Gihyun Lee, Moonhyun Oh
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- INOR.P-62 Solid-state conversion of tetrathiafulvalene crystals for highly conductive mixed-valence crystals
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- INOR.P-63 Viscosity-dependent Concave and Branched Morphologies of Fullerene C_{70} Molecular Crystals
Kwangjin Song, Hee Cheul Choi
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- INOR.P-64 Formation of Highly Pure Pentacene Crystals through Efficient Suppression of Dihydropentacene Impurity during Physical Vapor Transport Process
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- INOR.P-65 Highly efficient TADF emitters based on boron-carbonyl hybrid acceptors with fast spin-flip process
Ina Nur Istiqomah, Young Hoon Lee, Hanif Mubarak, JuHyeong Kim, Min Hyung Lee
Department of Chemistry, University of Ulsan, Korea
- INOR.P-66 Synthesis and TADF properties of boron emitters comprising rigid donor and acceptor units linked by a carbon-carbon bond
Ki Hoon Shin, Nhi Nguyen Ngoc Tuyet, Jin Seon Cha, Min Hyung Lee
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- INOR.P-67 A rhenium isonitrile complex induces HSP60-mediated mitochondrial apoptosis.
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- INOR.P-68 Sunlight Activatable ROS Generator for Cell Death Using $TiO_2/c-Si$ Microwires
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- INOR.P-69 Water Induced Structural Change and Proton Motion Study in Crystalline Porous Materials
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- INOR.P-70 Supramolecular Polymerization Based on Porphyrin Metalation in Aqueous Media
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- INOR.P-71 Preparation of heterogeneous aryl-Pd(II)-oxo clusters via surface oxidation for C-H arylation
Minjun Kim, Hyunwoo Kim, Hyunjoon Song
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- INOR.P-72 Selective Photocatalytic Production of Benzyl Alcohol to Benzaldehyde or Deoxybenzoin by Ion exchanged CdS
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- INOR.P-73 Catalytic Reduction of Nitroarenes by Using Microporous Copper Silicate Supported Copper Nanoparticles
Seojin An, Yealin Tak, Yu Jin Jung, Yeojeong Jo, Hyun Sung Kim^{1,*}
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- INOR.P-74 Dinitrogen Activation by Penta-pyridyl Molybdenum Complex
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- INOR.P-75 Adsorptive Removal of Radionuclide Cs⁺ in Water using Acid Active Clay
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- INOR.P-76 Comparison of natural white clay and acid-activated white clay for removal of Cd(II) ion from aqueous solution
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- INOR.P-77 Study on the Morphological Change and Reduction of Nitrogen and Phosphorous in Litter and Compost of Cowshed
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- INOR.P-78 Fermentation Efficiency and Effect on Morphological Change of Nitrogen and Phosphorous by the Litter Types of Cowshed
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- INOR.P-79 Noble Metal-Based Bimetallic Alloy Nanocrystals in Mesoporous Silica for Catalytic Applications
Eunseo Hong, Won Seok Seo
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- INOR.P-80 Mn(II)-catalyzed Hydroboration with an SNS Ligand: A Metal Hydride-Free Pathway with Metal-Ligand Cooperativity in Action
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Hang Choi, Hyuck Jin Lee
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- INOR.P-82 Lewis Acid-Promoted Selective and Efficient Synthesis of Hydrazine
Seongyeon Kwon, Mu-Hyun Baik
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- INOR.P-83 Photocatalytic CO₂ Reduction by Half-Metallocene Ruthenium(II) Catalyst and Its Mechanistic Investigation
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- INOR.P-84 Optical responses of polymer-grafted anisotropic gold nanoparticles in different dimensional factors
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- INOR.P-85 Potent Application of Vermicide and Vitamins as regulators of the Activity of Neprilysin
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Synthesis and Purification of Sodium Pentazolate as Polynitrogenic Compounds

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Photosensitization Process of Organic Donor- π -Acceptor Dye in CO₂ Reduction by Re(I)-Complex-immobilized TiO₂ Hybrid Catalyst

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Selective CO₂-to-Formate Conversion Triggered by Effective Proton Shuttle of Pendant Brønsted Acid/Base Sites in the Photochemical CO₂ Reduction by Mono-Bipyridyl Ru(II) Catalysts

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Photosensitization Process of Porphyrinic Metal-Organic Frameworks (MOF) in CO₂ Reduction by a Re(I)-complex Doped MOF Hybrid Catalyst

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MOF-based adsorbents with high stability and reusability for CO₂ capture

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Control of Metal Composition in a Multimetallic Metal-Organic Framework via Mechanochemical Formation

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Hyper-crosslinked polymers for ethane/ethylene separation

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Double Post-Synthetic Modifications of Robust Metal-Organic Framework for Enhanced Gravimetric and Volumetric Ammonia Capacity

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Synthesis and Characterizations of 1,1-Dihexyl-2,5-diethynyl-3,4-diphenyl-silole

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Electrochemical morphology evolution of copper on single gold nanoparticles

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Post-synthetic Modification for Cyclization in Metal-Organic Frameworks

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Synthesis and Electrochemical Properties of 1,1-Dialkyl-2,5-bis(trimethylsilylethynyl)-3,4-diphenyl-siloles

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Quaternary Ammonium Group Installations into Zr-based Metal-Organic Frameworks

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Strategy on the Preparation of Tetrazole-Functionalized Metal-Organic Frameworks

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INOR.P-100

Extremely Active Ethylene Tetramerization Catalyst

Synthesis using PNP framework [iPrN(PAr)₂-CrCl₂]+[B(C₆F₅)₄]- (Ar = -C₆H₄- *p*-SiR₃)

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Covalent Functionalization of Metal-Graphite Core-Shell Nanocrystals

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- Department of Chemistry, Sogang University, Korea*
- INOR.P-102 Selective synthesis of Iridium Supramolecules by Precise Control of Binding/Chelating Modes of Tetrazolyl Ligands
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- INOR.P-103 Structural study through 1-D Zinc Tetrazole Coordination Polymer synthesis
Ga Hee Noh, Junseong Lee
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- INOR.P-104 Effects of Impurity and Functionalized Ligands on Ag Nanoparticles Embedment into Ligand Functionalized Silica Gels
Jeong Woo Hong, Hee-Jung Im
Department of Chemistry, Jeju National University, Korea
- INOR.P-105 A Stable Nickel Monocarbonyl Species Related to the CO Coordination at the Nickel Site of CODH Yunho Lee¹, Kunwoo Lee¹
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- INOR.P-106 Nickel coated rhenium oxide catalyst for hydrazine decomposition to evolve hydrogen gas
Gyeong Eun Hyun, Seok Min Yoon
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- INOR.P-107 Ancillary ligand effect on the radiative and non-radiative process in the cyclometalated heteroleptic iridium complex
Daehoon Kim, Kyung-Ryang Wee
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- INOR.P-108 Cyclometalated N³C Ligand Geometry Isomer Effects in the Pt(II) Complexes for Metal to Ligand Charge Transfer Control
Minjung Chae, Kyung-Ryang Wee
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- INOR.P-109 Ultrafast excited state relaxation dynamics in a heteroleptic Ir(III) complex, *fac*-Ir(ppy)₂(ppz), revealed by femtosecond X-ray transient absorption spectroscopy
Kyung-Ryang Wee^{*}, Mina Ahn
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- INOR.P-110 Inter-ligand energy transfer (ILET) process in an Ir-complex with expanding π-conjugated ligand
Mina Ahn, Kyung-Ryang Wee
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- INOR.P-111 Self-healable rhenium-poly(THF) composite for resilient metal electrode on flexible substrates
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- INOR.P-112 Photoluminescent characteristics of K₂SiF₆:Mn⁴⁺ phosphors according to the purity of Mn⁴⁺ activator
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- INOR.P-113 Development of ZIF-encapsulated gold nanorod assembly for molecular selective sensing
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- INOR.P-114 Cellular Senescence Control of 3T3/NIH Fibroblasts Using Replicative Stress and Reactive Oxygen Species
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- INOR.P-115 Fabrication of Dome-Shaped Porous Alumina Microstructures and Their Applications for Drug Delivery System
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- INOR.P-116 Investigation on Synergistic Effect of Ag Nanoparticles and Some Extracts to Increase the Efficiency of Dye-Sensitized Photocatalysts
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- INOR.P-117 Single-molecule tracking of organic reaction
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- INOR.P-118 Construction of Stable Metal-Organic Framework Platforms Embedding *N*-Heterocyclic Carbene Metal Complexes for Selective Catalysis
Hyunyoung Kim, Eunsung Lee
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- INOR.P-119 Catalytic approach to *in vivo* metabolism of atractylenolide III using biomimetic iron-porphyrin complexes
Hanae Lim, Hyeri Jeon, Hyungbin Park, Seungwoo Hong
Department of Chemistry, Sookmyung Women's University, Korea
- INOR.P-120 Membrane containing Eu-Coordination Polymer

- Nanoparticles for highly selective detection of phosphate ions
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- INOR.P-121 Reductive carbonylation of nitroarenes into carbamates using a heterogeneous Pd catalyst
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- INOR.P-122 Evaluation of Through-Space Electronic Coupling in the Cofacially Aligned π -Stacked Organic Mixed-Valence System
Eunji Im, Youn Kyung Kang
Department of Chemistry, Sangmyung University, Korea
- INOR.P-123 Guest Responsive Reversible Structural Flexibility and Selective Adsorption of C_8 Alkyl Aromatics in Zn-Based Metal-Organic Frameworks
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- INOR.P-124 Metal-Organic Nanowires for Energetic Application
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- INOR.P-125 New Aluminum-based catalysts for CO₂ conversion
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- INOR.P-126 Synthesis of Metal Complex Bearing Bidentate Cyclic (Alkyl)(Amino)Carbenes (cAACs)
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- INOR.P-127 Efficient Synthesis of Block, Gradient, and Random Copolymers via Ring-Opening Copolymerization of Caprolactone and Lactide Using Aluminum Catalyst
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- INOR.P-128 Highly Selective Sensing for Heavy Metal Ion by a NS₄-Macrocyclic Chemosensor
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- INOR.P-129 Flexible Cu(I)-2D MOF: Solvent dependent single crystal to single crystal (SC-SC) conformation change
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Department of Chemistry, Pohang University of Science and Technology, Korea
- INOR.P-130 Mixed Copper States of Anion-doped Cu₃N Nanocubes for Improved C₂, Selectivity in CO₂ Reduction Reaction
Duck Hyun Kim, Kwangyeol Lee
Department of Chemistry, Korea University, Korea
- INOR.P-131 Pt-Embedded Ruthenium Phosphosulfide Nanotubes as Enhanced Electrocatalysts toward the Hydrogen Evolution Reaction in Alkaline Media
Soo Beon Kim, Kwangyeol Lee
Department of Chemistry, Korea University, Korea
- INOR.P-132 Ternary Intermetallic Nanoframe as Oxygen Reduction Electrocatalyst
YunChang Son, Kwangyeol Lee
Department of Chemistry, Korea University, Korea
- INOR.P-133 Introducing Heteroatom into Cu₂O Nanocatalysts for Enhancing the NH₃ Selectivity during Electrochemical Nitrate Reduction
Hyoryung Choi, Kwangyeol Lee
Department of Chemistry, Korea University, Korea
- INOR.P-134 Synergistic Quantum Sieving Effects in Hofmann-type Metal-Organic Frameworks for Hydrogen Isotope Separation
Junsu Ha, Hyunchul Oh^{1,*}, Hoi Ri Moon
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
¹Department of Energy Engineering, Gyeongnam National University of Science and Techn, Korea
- INOR.P-135 Fluorescence Detection of Glutathione Using Au(I) Bis(*N*-heterocyclocarbene) Complex
Shinae Lee, Seunga Heo¹, Youngmin You^{2,*}
Chemical Engineering & Materials Science, Ewha Womans University, Korea
¹Ewha Womans University, Korea

²Chemical Engineering and Materials Science, Ewha Womans University, Korea

- INOR.P-136 Electromagnetically tunable cyclic(alkyl)(amino) carbene system: Indol-2-ylidene
Hyunho Kim, Minseop Kim¹, Hayoung Song, Eunsung Lee
Department of Chemistry, Pohang University of Science and Technology, Korea
¹Department of Chemistry, Pohang University of Science and Technology, Korea
- INOR.P-137 Proton conductivity on MOF using sulfonate groups
Seungjae Park, Eunsung Lee
Department of Chemistry, Pohang University of Science and Technology, Korea
- INOR.P-138 Mercury(II)-Selective and Anion-Controlled Macrocyclic Chemosensor
Joon Rae Kim, Yelim Lee, Eunji Lee
Department of Chemistry, Gangneung-Wonju National University, Korea
- INOR.P-139 Triple C–F Bond Activation of Fluoroarenes by N-heterocyclic Carbenes Generating Trisubstituted N-Heterocyclic Imidazoliums
Seoung Su Kim, Eunsung Lee^{1,*}
Department of Chemistry, Pohang University of Science and Technology, Korea
¹Department of Chemistry, Pohang University of Science and Technology, Korea
- INOR.P-140 **Stille Coupling-based Hollow Conjugated Microporous Photocatalysts for Visible Light-Induced Hydrogen Evolution**
Seung Uk Son¹, Sang Hyun Ryu
Department of Chemistry, Sungkyunkwan University, Korea
- INOR.P-141 Defective CeO₂ in a hollow carbon matrix as a hydroxide-assisted high performance pseudocapacitive material
Hyeonseok Jeong, Seung Uk Son
Department of Chemistry, Sungkyunkwan University, Korea
- INOR.P-142 Revisited reaction-path simulation of the paddle-wheel-like complex formation of tetrakisacetatodimolybdenum(II) from monomers
Hyo Weon Jang
Department of Chemistry, Suncheon National University, Korea
- INOR.P-143 Room Temperature Synthesis of Hollow Microporous Organic Polymer Bearing Activated Alkynes as IR probes for Post-Functionalization
June Young Jang, Seung Uk Son^{1,*}
Department of Chemistry, Sungkyunkwan University, Korea
¹Department of Chemistry, Sungkyunkwan University, Korea
- INOR.P-144 Pb-free highly stable and blue emitting perovskite film
Hyeongjin Lee, Sang Wook Park¹, Young rag Do^{2,*}
Department of Applied Chemistry, Kookmin University, Korea
¹Department of Chemistry, Kookmin University, Korea
²Department of Bionano Chemistry, Kookmin University, Korea
- INOR.P-145 Selective Synthesis of Iridium and Ruthenium Supramolecules Using Various Tetrazolyl Lignands
Jeonghyeon Park, Junseong Lee
Department of Chemistry, Chonnam National University, Korea
- INOR.P-146 Imidazolium-/Pyrrolinium-substituted Zwitterionic Cyclopentadienyl Derivatives
Hyeonjeong Choi, Hayoung Song¹, Eunsung Lee¹
Pohang University of Science and Technology, Korea
¹Department of Chemistry, Pohang University of Science and Technology, Korea
- INOR.P-147 Can N-heterocyclic carbene be used as a reducing agent?
Hayoung Song, Eunsung Lee
Department of Chemistry, Pohang University of Science and Technology, Korea
- INOR.P-148 Fabrication of Bright Green InP/ZnSeS/ZnS Quantum Dot Embedded Spherical Al₂O₃ Powders
Seonwoo Ahn, Minji Ko¹, Young rag Do¹
Department of Chemistry, Kookmin University, Korea
¹Department of Chemistry, Kookmin University, Korea
- INOR.P-149 Tunable Ambiphilic N-heterocyclic Carbene: Coumaraz-2-on-4-ylidene (CONY)
Hayoung Song, Hyunho Kim, Eunsung Lee
Department of Chemistry, Pohang University of Science and Technology, Korea
- INOR.P-150 The fabrication of GaN-based micro-light-emitting diode (LED) and chip individualization by dicing.
Selim Yun, SeungJe Lee, Yun Jae Eo¹, Eunha Hong, Young rag Do
Department of Chemistry, Kookmin University, Korea
¹Department of Chemistry, Kookmin University, Korea
- INOR.P-151 Enhanced efficiency of Molybdenum Cu-In-Ga-Se (CIGS) Solar Cells according to Direct or Indirect Patterning
Hyengjin Kim, SeungJe Lee, Young rag Do^{1,*}
Department of Chemistry, Kookmin University, Korea
¹Department of Bionano Chemistry, Kookmin University, Korea
- INOR.P-152 Hydrochromic application of Diphylleia grayi-inspired PDMS film
SeungJe Lee, Minji Ko, Hyengjin Kim¹, Young rag Do^{2,*}
Department of Chemistry, Kookmin University, Korea
¹applied chemistry, Kookmin University, Korea
²Department of Bionano Chemistry, Kookmin University, Korea

Korea

INOR.P-153

Synthesis of Cs₃MnBr₅ phosphor through solid state method

Sang wook Park, Keyong Nam Lee, Young rag Do^{1,*}
Department of Chemistry, Kookmin University, Korea
¹*Department of Bionano Chemistry, Kookmin University, Korea*

INOR.P-154

Synthesis and Structural Analysis of Heteroleptic Molybdenum Complex using *N*-Alkoxy Carboxamide Ligands

Sung Kwang Lee, Bo Keun Park, Seung Uk Son¹, Taek-Mo Chung^{2,*}
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²*Advanced Materials Division, Korea Research Institute of Chemical Technology, Korea*

INOR.P-155

Synthesis Method of Mesoporous Silica with High Specific Surface Area through Room Temperature Process using Sodium Silicate Solution

MinKyoung Kim, Jae Young Bae^{1,*}
Keimyung University, Korea
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INOR.P-156

Coordinative Equilibrium at Open Metal Sites in Metal-Organic Framework

Sun Ho Park, Nak Cheon Jeong
Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology, Korea

INOR.P-157

Synthesis and Characterization of New Nickel-Bismuth Pincer Complexes

Dagyum Yoo, Yunho Lee
Department of Chemistry, Seoul National University, Korea

INOR.P-158

Suppressing thermal conductivity of SnTe by fluidic interstitial Cu atoms

Jaeho Lee, Chung In^{1,*}
Seoul National University, Korea
¹*School of Chemical & Biological Engineering, Seoul National University, Korea*

INOR.P-159

A Diphenyl-Substituted Acridane PNP Ligand Platform for Small Molecule Activation

Lecita Bowen, Yunho Lee^{1,*}
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¹*Department of Chemistry, Seoul National University, Korea*

INOR.P-160

Synthesis, characterization and catalytic activity of a mononuclear nonheme copper(II)-iodosylbenzene adduct

Hyeri Jeon, Hanae Lim, Hyungbin Park, Seungwoo Hong
Department of Chemistry, Sookmyung Women's University, Korea

INOR.P-161

Extending photoluminescence lifetime of long lived exciton in organic-inorganic hybrid materials by triplet energy transfer

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INOR.P-162

A Zintl Analogue of 2D Materials with High Carrier Mobility

Weiqun Lu, Chung In^{1,*}
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INOR.P-163

Deciphering Ancillary Ligand Effects on the O₂-Activation by Nonheme Iron Enzyme Model Complexes

Hyungbin Park, Hyeri Jeon¹, Hanae Lim¹, Seungwoo Hong¹
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¹*Department of Chemistry, Sookmyung Women's University, Korea*

INOR.P-164

Preparation of core-shell Fe₃O₄@Polydopamine@UiO-66 and its catalytic properties in the degradation of chemical warfare agent simulant with IR irradiation.

Woon Jin Jang, Suk Joong Lee
Department of Chemistry, Korea University, Korea

INOR.P-165

Photothermally Enhanced Catalytic Activity of Metal Oxide Composites for Detoxification of Chemical Warfare Agent (CWA) Simulant

Ye Ji Kim, Suk Joong Lee
Department of Chemistry, Korea University, Korea

INOR.P-166

Differences in fraction and reactivity between Au precursors govern the synthetic mechanism of thiolate-protected Au nanoclusters

Ji Soo Kim, Sungsu Kang, Jungwon Park
School of Chemical & Biological Engineering, Seoul National University, Korea

INOR.P-167

Graphitization of amorphous carbon enabled by Magnesiothermic Reduction of SiO₂@C to Si@C

Hyun Choi, Min Seok Kang¹, Chanyoung Lee, Won Cheol Yoo^{2,*}
Department of Applied Chemistry, Hanyang University, Korea
¹*Department of Applied Chemistry, Hanyang University, Korea*
²*Department of Chemical and Molecular Engineering, Hanyang University (ERICA), Korea*

- INOR.P-168 Ge(β -diketonate)(N-alkoxy carboxamide) Complexes for Thin Film Application
Heenang Choi, Bo Keun Park¹, Seung Uk Son², Taek-Mo Chung^{3,*}
Thin Film Materials Research Group, Korea Research Institute of Chemical Technology, Korea
¹Thin Film Materials Research Center, Korea Research Institute of Chemical Technology, Korea
²Department of Chemistry, Sungkyunkwan University, Korea
³Advanced Materials Division, Korea Research Institute of Chemical Technology, Korea
- INOR.P-169 Copper-based zeolitic imidazolate frameworks and their gas sorption properties
CheolWon Jung, Geonryong Kim¹, Jaheon Kim
Department of Chemistry, Soongsil University, Korea
¹chemistry, Soongsil University, Korea
- INOR.P-170 Synthesis, crystal structures, and porosity of three-dimensional zinc-imidazolate-sulfate frameworks
Kyungkyou Noh, Yujin Kim¹, You Jin Oh¹, Jaheon Kim¹
Department of Information Communication Convergence Technology, Soongsil University, Korea
¹Department of Chemistry, Soongsil University, Korea
- INOR.P-171 Synthesis and structural analysis of unsymmetry heteroleptic strontium complexes
Chanwoo Park, Taek-Mo Chung^{1,*}
Korea University, Korea
¹Advanced Materials Division, Korea Research Institute of Chemical Technology, Korea
- INOR.P-172 Fragmented Ligand Installation for Covalent Modification of MOF-74
Jaewoong Lim, Min Kim¹, Myoung Soo Lah
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
¹Department of Chemistry, Chungbuk National University, Korea
- INOR.P-173 N-heterocyclic carbene difluoride sulfurane
Solhye Choe, Eunsung Lee
Department of Chemistry, Pohang University of Science and Technology, Korea
- INOR.P-174 Superprotonic Conductivity of MOF-808 Achieved by Controlling the Binding Mode of Grafted Sulfamate.
Amitosh Sharma, Jaewoong Lim¹, Yung sam Kim¹, Myoung Soo Lah¹
Chemistry, Ulsan National Institute of Science and Technology, Korea
¹Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
- INOR.P-175 Tailoring extrinsic porosity of a metal-organic polyhedron
Kangwoo Jin, Jinhee Park
Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology, Korea
- INOR.P-176 Crystal structure and thermal stability of a new proton conducting material HTa₂PO₈
Junho Ha, Heeyoun Kim¹, Seung-Joo Kim^{2,*}
Department of Energy Systems Research, Ajou University, Korea
¹Department of Chemistry, Ajou University, Korea
²Department of Energy System, Ajou University, Korea
- INOR.P-177 Synthesis, thermal redox reaction and catalytic activity of δ -CaCr₂O₄
Yewon Yoon, Fouzia Khefif, Seung-Joo Kim
Department of Energy Systems Research, Ajou University, Korea
- INOR.P-178 Construction of Plm-COFs as metal-free heterogeneous organocatalysts for chemical fixation of CO₂ under mild conditions
Congxue Liu, Eunsung Lee^{1,*}
Chemistry, Pohang University of Science and Technology, Korea
¹Department of Chemistry, Pohang University of Science and Technology, Korea
- INOR.P-179 Electronic-Delocalization-driven Conductivity of Radical Anionic Ligand Stacks in Metal-Organic Frameworks
Seonghun Park, Jinhee Park
Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology, Korea
- INOR.P-180 Preparation of Fe-HKUST-1 via Mixing Metals *de novo* and Post-Synthetic Metal Metathesis
Asong Byun, Jinhee Park
Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology, Korea
- INOR.P-181 Interpenetration of UiO-Type Metal-Organic Frameworks for Effective Catalysis
Sanghyeop Lee, Jinhee Park^{1,*}
Emerging materials science, Daegu Gyeongbuk Institute of Science & Technology, Korea
¹Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology, Korea
- INOR.P-182 Bridging and Fixing Metal-Organic Polyhedra
Byeongchan Lee, Jinhee Park
Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology, Korea
- INOR.P-183 Dimeric Radical Anionic Naphthalene Diimides in a Metal-Organic Framework
Bongkyeom Kim, Jinhee Park
Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology, Korea
- INOR.P-184 Nitrosyl Complexes at N-Heterocyclic Carbene Center
Junbeom Park, Eunsung Lee
Department of Chemistry, Pohang University of Science and Technology, Korea

and Technology, Korea

- INOR.P-185 NADH Regeneration Catalyzed by Hydride Species Induced from Bis-Carbene Rhodium Complex
Jennifer Juhyun Kim, Sungho Yoon
Department of Chemistry, Chung-Ang University, Korea
- INOR.P-186 Synthesis and characterization of nitrogen donor ligand and construction of 3D
Lee Hyemin, Haeri Lee^{1,*}
Chemistry department, Hannam University, Korea
¹*Department of Chemistry, Hannam University, Korea*
- INOR.P-187 Syntheses of New Cu(II) and Cu(I) Complexes for Direct Etherification Catalysts
Eun su Chae, Jang Hoon Cho, Hong In Lee
Department of Chemistry, Kyungpook National University, Korea
- INOR.P-188 Iron- Catalyzed Carbon–Oxygen Bond Borylation of Aryl Methoxides
Jongheon Jeong, Eunsung Lee
Department of Chemistry, Pohang University of Science

and Technology, Korea

- INOR.P-189 Supramolecular polymerization of Pt²⁺ complex with terpyridine-based ligand possessing in non-polar solvent
Minkyong Hwang, Jong Hwa Jung^{1,*}
chemistry, Gyeongsang National University, Korea
¹*Department of Chemistry, Gyeongsang National University, Korea*
- INOR.P-190 **[Withdrawal]** Controllable synthesis of porous NiCo₂O₄/NiO nanostructures with tunable morphologies for lithium-ion batteries
Sudhakaran Moopri singer pandiyarajan, Hyun Choi¹, InCheol Heo¹, Won Cheol Yoo^{2,*}
Chemical and Molecular Engineering, Hanyang University, India
¹*Department of Applied chemistry, Hanyang University, Korea*
²*Department of Chemical and Molecular Engineering, Hanyang University (ERICA), Korea*

Poster Presentation

Physical Chemistry Poster Presentation

October 14 (Thu) , Exhibition Hall 1

- PHYS.P-99 Photo-physics of BODIPY
Sang Hak Lee*, One Heo
Department of Chemistry, Pusan National University, Korea
- PHYS.P-100 Linker Effects on Phase Separation Propensity of Multi-Domain Protein
Da-Eun Hwang, Jeong-Mo Choi
Department of Chemistry, Pusan National University, Korea
- PHYS.P-101 Structures of o-Toluidine-Water (oTW_n) Cluster Cation (n <= 3)
Bong Gyu Jeong, Jae Kyu Song, Seung Min Park
Department of Chemistry, Kyung Hee University, Korea
- PHYS.P-102 Investigation of the Effect of the Form of Hafnium Zirconium Oxide (Hf_{0.6}Zr_{0.4}O₂) Co-Catalyst on the Photoelectrochemical Water Oxidation Efficiency of Hematite (α-Fe₂O₃)Photoanode
Hee Won Kim, Woon Yong Sohn
Department of Chemistry, Chungbuk National University, Korea
- PHYS.P-103 Calculation of dielectric constant of polymers using DFTB-MD and DFT method
Kihwan Yoon, Hyuna Shin, Dakyeung Oh, Joonghan Kim
Department of Chemistry, The Catholic University of Korea, Korea
- PHYS.P-104 Z-scheme W₁₈O₄₉/ZnIn₂S₄ Nanohybrid Catalyst for Enhanced Photocatalytic CO₂ Reduction
Jehee Lee, Tae Kyu Kim
Department of Chemistry, Yonsei University, Korea
- PHYS.P-105 Attainability of planar tetracoordinate fluorine atoms in FIn₄⁺, FTl₄⁺, FGaln₃⁺, Fln₂Tl₂⁺, Fln₃Tl⁺, and FlnTl₃⁺.
Dakyeung Oh, Hyuna Shin, Kihwan Yoon, Joonghan Kim
Department of Chemistry, The Catholic University of Korea, Korea
- PHYS.P-106 Adsorption and bulk diffusion of hydrogen on electrochemically-fabricated ZnO nanowires of various diameters
Sher Ali Khan, Chang Min Kim^{1,*}
Chemistry, Kyungpook National University, Korea
¹*Department of Chemistry, Kyungpook National University, Korea*
- PHYS.P-107 Inductive effects of ortho-Trifluoromethyl Substituent on Benzoyl Chloride in Solvolysis Mechanisms
Seoyeon Jang, YongGun Kim¹, Kyoung-Ho Park^{2,*}, Hoshik Won¹, Jin Burm Kyong¹, Dennis N. Kevill^{3,*}
Applied chemistry, Hanyang University, Korea
¹*Department of Applied Chemistry, Hanyang University, Korea*
²*Department of Chemical Molecular Engineering, Hanyang University ERICA, Korea*
³*Chemistry & Biochemistry, Northern Illinois University, United States*
- PHYS.P-108 Ligand Chain Length Determines the Charge Transport and Energy Transfer Efficiency in InP/ZnSe/ZnS Quantum Dots
Jumi Park, Dongho Kim^{1,*}
Chemistry, Yonsei University, Korea
¹*Department of Chemistry, Yonsei University, Korea*
- PHYS.P-109 Solid-to-Solid Transition of Organic Ionic Plastic Crystal under Shear
Chung Bin Park, Bong June Sung
Department of Chemistry, Sogang University, Korea
- PHYS.P-110 Influence of Defects on the Dynamics and the Coordination Structure of Li⁺ Ion in Organic Ionic Plastic Crystals
Hyungshick Park, Bong June Sung
Department of Chemistry, Sogang University, Korea
- PHYS.P-111 Reversibly photo-switchable hydrogel for re-writable device and drug delivery
Eunchae Kim, Namdo Kim
Division of Chemistry, Kongju National University, Korea
- PHYS.P-112 Substituents Effects of Corrole Derivatives to Generate Singlet Oxygen
Jun Yong Shin, Won-Sik Han^{1,*}, Kang-Kyun Wang^{2,*}
Research Center, BI Bio-photonics Co., Ltd., Korea
¹*Department of Chemistry, Seoul Women's University, Korea*
²*BI bio-photonics Co., Ltd., Korea*
- PHYS.P-113 The Inter-Domain Exchange and the Flip-Flop of Cholesterol in Tertiary Component Lipid Membranes and their Effects on Heterogeneous Cholesterol Diffusion
Eun sub Song, Bong June Sung
Department of Chemistry, Sogang University, Korea
- PHYS.P-114 Transient Reflectance Setup for Exciton Dynamics in 2D Molecular Crystals
Myeong in Song, Sunmin Ryu
Department of Chemistry, Pohang University of Science and Technology, Korea

- PHYS.P-115 Study of poly(alkylene carbonate) based solid polymer electrolytes using FTIR and 2DIR spectroscopies
Seo-eun Shin, Chaiho Lim, Kyungwon Kwak, Minhaeng Cho
Department of Chemistry, Korea University, Korea
- PHYS.P-116 Revealing the Reaction Mechanism of Nickel-Catalyzed Cross-Coupling Reaction by Using Time-Resolved X-ray Absorption Spectroscopy
Yeseul Han, Sangmin Jeong, Kyung Hwan Kim
Department of Chemistry, Pohang University of Science and Technology, Korea
- PHYS.P-117 The Effect of Relative Flexibility of a Single Ring Chain in Linear Polymer Films on Its Spatial Arrangement and the Diffusion
Jong Ho Choi, Bong June Sung
Department of Chemistry, Sogang University, Korea
- PHYS.P-118 Revealing the structure of I atom - benzene charge transfer complex by time-resolved X-ray solution scattering
Seonju You, Kyung Hwan Kim
Department of Chemistry, Pohang University of Science and Technology, Korea
- PHYS.P-119 CsCu_xPb_{1-x}Br₃@SiO_x Core-shell Perovskite Quantum Dots: Development of Synthetic Strategy under Ambient Condition at Room Temperature and their Cu Doping Induced Photophysical Properties.
Sumi Seo, Soo Jeong Lee, YouJeong Lee, Seog Joon Yoon^{1,*}
department of chemistry, Yeungnam University, Korea
¹*Department of Chemistry, Yeungnam University, Korea*
- PHYS.P-120 Adsorption structures of organic molecules with propyl moiety containing different electronegative atom on Ge(100)
Jeong-Woo Nam, Young-Sang Youn
Department of Chemistry, Yeungnam University, Korea
- PHYS.P-121 Translational Normal Mode Decoupling of Poly(ethylene oxide) melts; Breakdown of Time-Temperature Superposition
Hye Sol Kim, Bong June Sung^{1,*}
Department of chemistry, Sogang University, Korea
¹*Department of Chemistry, Sogang University, Korea*
- PHYS.P-122 The Translation-Rotation Decoupling of Tracers Reflects Medium-Range Crystalline Order in Two Dimensional Colloid Glasses
Dong Jae Chun, Bong June Sung^{1,*}
Chemistry, Sogang University, Korea
¹*Department of Chemistry, Sogang University, Korea*
- PHYS.P-123 Generation of deeply supercooled water droplets for revealing a hypothetical fragile to strong transition of liquid water
MyeongSik Shin, Kyung Hwan Kim
Department of Chemistry, Pohang University of Science and Technology, Korea
- PHYS.P-124 Jet-cooled spectroscopy of the isomeric chloro-xylyl radicals in a coronaexcited supersonic expansion
Changsoo Huh^{*}, Jaehyuck Kim
Applied Chemistry, Dong-Eui University, Korea
- PHYS.P-125 Full Three-Dimensional Non-Adiabatic Quantum Dynamics of The Bidirectional Proton-Coupled Electron-Transfer Process in FHCl System
Pinit Ariyaveadsaku, Kyoung-Koo Baeck
Department of Chemistry, Gangneung-Wonju National University, Korea
- PHYS.P-126 Nf/PVP/rGO/CuInS₂ Hybrid Composite Photocathode for Efficient Photoelectrochemical CO₂ Reduction into Formaldehyde
Hyun Ho Jung, Young soo Kang
Department of Chemistry, Sogang University, Korea
- PHYS.P-127 Tailoring the functionality of single crystalline InP tetrapod nanocrystals
Taehee Kim, Youngsik Kim¹, Dongho Kim, Sohee Jeong¹
Department of Chemistry, Yonsei University, Korea
¹*Department of Energy Science, Sungkyunkwan University, Korea*
- PHYS.P-128 Distribution Functions of Energy Barrier for Agglomeration of Magnetic Nanoparticles
Hackjin Kim
Department of Chemistry, Chungnam National University, Korea
- PHYS.P-129 Conformational stability of tetrahydrofuran revealed by IR resonant VUV-PI/MATI spectroscopy
Sung Man Park, Taeung Eom¹, Chan Ho Kwon¹
Department of Chemistry and Institute for Molecular Science and Fusion Technology, Kangwon National University, Korea
¹*Department of Chemistry, Kangwon National University, Korea*
- PHYS.P-130 Enhanced Chemical Reactivity Induced by the Strong Coupling of Optical Cavity and a Molecular Vibration
Danbi Lee, Hankyul Lee, Zee Hwan Kim
Department of Chemistry, Seoul National University, Korea
- PHYS.P-131 Comprehensive computational study on the surface of oxygenated di-nickel di-selenide for hydrogen evolution reaction
Prabhakaran Sampath, Do hwan Kim^{1,*}
Department of Nano Convergence Engineering, Jeonbuk National University, Korea
¹*Department of Chemistry Education, Jeonbuk National*

- University, Korea
- PHYS.P-132 Solar fuel production via CO₂ Reduction on the ZnO@ZnTe Photoelectrodes in a Photoelectrochemical System
Vaibhav Trivedi, Young soo Kang^{1,*}
Department of Chemistry, Graduate Student, Korea
¹*Department of Chemistry, Sogang University, Korea*
- PHYS.P-133 Photoelectrochemical Study of Copper Doped Hematite Thin Film
 Young soo Kang¹, Thomi Hawari¹
Department of Chemistry, Sogang University, Korea
¹*Chemistry, Sogang University, Korea*
- PHYS.P-134 In Vitro Cellular Cytotoxicity and Relaxometric properties of Chitosan Oligosaccharide Lactate-coated Gadolinium Oxide Nanoparticles
Mohammad Yaseen Ahmad, Gang Ho Lee^{1,*}
Kyungpook National University, Korea
¹*Department of Chemistry, Kyungpook National University, Korea*
- PHYS.P-135 Revealing the Reaction Mechanism of the Enyne Metathesis Reaction Catalyzed by the Grubbs Ru Complex
Sangmin Jeong, Seonju You, Kyung Hwan Kim
Department of Chemistry, Pohang University of Science and Technology, Korea
- PHYS.P-136 Simple Synthesis of Side-by-Side Ag-AuNPs/Y 2 SiO 5 : Pr 3+ Up-conversion Nanophosphors for Photochromic Applications
Hieu Minh Ngo, Young soo Kang^{1,*}
Chemistry, Sogang University, Vietnam
¹*Department of Chemistry, Sogang University, Korea*
- PHYS.P-137 Silica-Coated Core-Satellite Nanoassembly as a Stable, Sensitive, and Multiplex SERS Probe
Hoa Duc Trinh, Sangwoon Yoon^{1,*}
Chemistry, Chung-Ang University, Korea
¹*Department of Chemistry, Chung-Ang University, Korea*
- PHYS.P-138 X-ray Attenuation Properties of Poly-(acrylic acid) and Poly-(acrylic acid-co-maleic acid)-coated Cerium Oxide CeO₂ Nanoparticles as a High-Performance CT Contrast Agent
Abdullah Al saidi, Gang Ho Lee^{1,*}
Department of Chemistry, Kyungpook National University, Oman
¹*Department of Chemistry, Kyungpook National University, Korea*
- PHYS.P-139 Magnetic Properties, Water Proton Relaxivities, and Fluorescence Properties of D-Glucuronic Acid-Coated Ultrasmall Ln₂O₃ (Ln = Dy, Tb, and Ho) Nanoparticles
Deiun Zhao, Gang Ho Lee^{1,*}
Department of Chemistry, Kyungpook National University, China
- ¹*Department of Chemistry, Kyungpook National University, Korea*
- PHYS.P-140 Synthesis and characterization of blue fluorescent carbon nanoparticles
Tirusew Tegafaw, Gang Ho Lee
Department of Chemistry, Kyungpook National University, Korea
- PHYS.P-141 Ligand size and functional groups hydrophilicity effects on enhancement of Ho₂O₃ nanoparticles as T₂ MRI contrast agent
Shuwen Liu, Gang Ho Lee^{1,*}
Department of Chemistry, Kyungpook National University, China
¹*Department of Chemistry, Kyungpook National University, Korea*
- PHYS.P-142 Synthesis, characterizations and applications of ultrasmall carbon coated Gd₂O₃ nanoparticles
Ying Liu, Gang Ho Lee^{1,*}
Department of Chemistry, Kyungpook National University, China
¹*Department of Chemistry, Kyungpook National University, Korea*
- PHYS.P-143 Carbon-coated dysprosium oxide (Dy₂O₃@C) nanoparticles were synthesized as a new type of high-efficiency T₂ MRI contrast agent
Huan Yue, Gang Ho Lee^{1,*}
Department of Chemistry, Kyungpook National University, China
¹*Department of Chemistry, Kyungpook National University, Korea*
- PHYS.P-144 Effect of the enhanced solvent-solute interaction in the deeply supercooled regime on the structure of triiodide ion
Kyeongmin Nam, Seonju You, Kyung Hwan Kim
Department of Chemistry, Pohang University of Science and Technology, Korea
- PHYS.P-145 Aggregation of Hyperphosphorylated tau with Polyamines
Jinmin Lee, Sang Hak Lee^{1,*}
Chemistry, Pusan National University, Korea
¹*Department of Chemistry, Pusan National University, Korea*
- PHYS.P-146 Studies of photo-reversible fluorescent hydrogel with pdDronpa: Synthesis and characterization
Yeonji Kim, Namdo Kim^{1,*}
Department of Chemistry, Kongju National University, Korea
¹*Division of Chemistry, Kongju National University, Korea*
- PHYS.P-147 Domain-Transfer Exploration of Perovskite Synthesizability with Positive and Unlabeled Learning
Geun Ho Gu, Juhwan Noh¹, Yousung Jung¹
Department of chemical and biomolecular engineering,

- Korea Advanced Institute of Science and Technology, Korea*
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Jeong Min Ha, Young-Sang Youn
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- PHYS.P-149 On line Time-of-flight Mass Analyzer for Fast Monitoring of Process Gases in Semiconductor/Display Device Production
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- PHYS.P-150 Characterization of photo-reversible hydrogel using photo-dissociable dimeric Dronpa
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- PHYS.P-154 The dynamics of probe molecules in polymer thin films and interfacial dynamic length scales
Taejin Kwon, Bong June Sung
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- PHYS.P-155 Effects of Polarizability of Ions on their Rotational Diffusion in Organic Ionic Plastic Crystals
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Department of Chemistry, Chung-Ang University, Korea
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- PHYS.P-159 A-site Ion Exchange Mechanism in FAPbI₃/CsPbI₃ Perovskite Quantum dot thin films with applied voltage
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- PHYS.P-162 Label-Free SERS Strategy for detecting Amyloid beta-42 on Silver Nanoshells
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- PHYS.P-163 Role of Electric Field for Formamidinium Lead Halide Hybrid Perovskite Quantum Dots
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- PHYS.P-164 Hot Carriers Create a Highly Non-Thermal Vibrational State Distribution of Reactants During the Plasmon-Catalyzed Chemical Reaction
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- PHYS.P-165 Cryogenic Ultra-low Frequency Raman Spectroscopy of Size-controlled $\text{CH}_3\text{NH}_3\text{PbI}_3$ Perovskite Quantum Dots
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- PHYS.P-166 Recovering of the Amplitude and Phase Spectra of a Single Nanoparticle Scattering
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- PHYS.P-167 Laser-aided synthesis of Zn@ZnO and ZnO for the effective electrochemical sensing of hydroquinone
Juhyeon Park, Ahreum Min, Jiwon Kim, Cheol Joo Moon, Myong Yong Choi
Department of Chemistry, Gyeongsang National University, Korea
- PHYS.P-168 Effect of shell composition and interface engineering on Auger recombination in InP/ZnSeS/ZnS Quantum Dots
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- PHYS.P-169 Development and verification of conformer-specific vibrational spectroscopy
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- PHYS.P-170 Individual conformers in $\text{C}_4\text{H}_6\text{O}$ isomers by conformer-specific vibrational spectroscopy
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- PHYS.P-171 Enhanced electrochemical performance of Nanoalloys Using Pulsed Laser Irradiation
Yiseul Yu, Theerthagiri Jayaraman, Seung Jun Lee, Myong Yong Choi
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- PHYS.P-172 Modulations of a Metal-Ligand Geometry and Photochemical Reactions by Hückel-Möbius Aromatic Switching
Jinseok Kim, Dongho Kim
Department of Chemistry, Yonsei University, Korea
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Hyun-Hang Shin, Jaeyoung Jeong, Zee Hwan Kim
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- PHYS.P-174 Mathematical model of microbial consortia with genetic circuit for improved biochemical production
Jaehyuk Won, Ji-Hyun Kim, Jaeyoung Sung
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- PHYS.P-175 Investigation of the effect of dsDNA bending on Z-DNA by single-molecule FRET
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- PHYS.P-176 Spectroscopic Characterization of Selenium Quantum Dots (SeQDs) at Ultralow Temperature
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- PHYS.P-177 Enhanced Photoelectrochemical Water Oxidation of BiVO_4 Photoanode with Co-incorporated Hydroxyapatite Nanoarchitecture as Efficient Oxygen Evolution Cocatalyst
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- PHYS.P-178 Chiral and Isomeric Discrimination of Chiral Molecular Ions by Cold Ion Circular Dichroism Spectroscopy
HanJun Eun, Nam Joon Kim
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- PHYS.P-179 Analysis of bi-exciton annihilation in emitting layers in OLEDs
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- PHYS.P-180 Numerical simulation of the external quantum efficiency of OLEDs
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- PHYS.P-181 Forward and backward intermolecular charge transfer description using density functional theory
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- PHYS.P-182 One-pot laser assisted Synthesis of M-BTC (M: Cu, Co, Ni) MOF as highly active and structurally robust electrocatalyst for overall water splitting in alkaline

- condition.
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 Seung Jun Lee¹, Myong Yong Choi¹
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- PHYS.P-183 Single molecule microscopy with high localization precision in a temperature-controlled vacuum setup for studying translational diffusion of polymer
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Department of Chemistry, Sungkyunkwan University, Korea
- PHYS.P-184 Janus spherical Pt@MXene composite by using pulsed laser irradiation in Aqueous Media
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- PHYS.P-185 Shape- and Size-Controlled Palladium Nanocrystals and Their Electrocatalytic Properties in the Oxidation of Ethanol
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- PHYS.P-186 Active Site Rich Multifunctional Ni-CuO Nanocomposites by Pulsed Laser Ablation for Boosting Methanol Electro-Oxidation and Overall Water Splitting
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Department of Chemistry, Gyeongsang National University, Korea
- PHYS.P-187 Recent Study on the Topology of Vitamin K Epoxide Reductase
 Sangwook Wu^{*}, Suhyun Park
Department of Physics, Pukyong National University, Korea
- PHYS.P-188 Two-photon Absorption Cross-section Study of pyrazino[2,3-g]quinoxaline derivatives by using Z-scan technique
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- PHYS.P-189 Photoconversion of Cyanine5 to Cyanine3 and its application high-density single-particle tracking
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- PHYS.P-190 Gel-sol transition and material transfer using optical switch hydrogels.
Sanghyeuk Son, Namdo Kim
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- PHYS.P-191 On Internal Conversion between Bright (11B+u) and Dark (21A-g) States in s-trans-Butadiene and s-trans-Hexatriene
Woojin Park, Cheol Ho Choi
Department of Chemistry, Kyungpook National University, Korea
- PHYS.P-192 Mixed-Reference Spin-Flip Time-Dependent Density Functional Theory (MRSF-TDDFT) as a Simple yet Accurate Method for Diradicals and Diradicaloids
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Chemistry Department, Kyungpook National University, Pakistan
- PHYS.P-193 Emission Enhancements of Dyes with Dipole and Quadrupole Surface Plasmons of Composite Silver Nanosubstrates
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Department of Chemistry, Gwangju Institute of Science and Technology, Korea
- PHYS.P-194 Excited-state aromaticity in dihydroazulene
Svetlana Shostak, Cheol Ho Choi^{1,*}
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- PHYS.P-195 RetroTRAE: retrosynthetic translation of atomic environments with Transformer
Umit Volkan Ucak, Juyong Lee^{1,*}
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- PHYS.P-196 Insights into a Molar-Dependent Electrocatalytic Methanol Oxidation Reaction of Au-Pd alloy nanospheres synthesis by Pulsed laser irradiation
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- PHYS.P-197 Li growth dynamics in Lithium metal battery by in situ liquid cell optical microscopy and transmission electron microscopy
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- PHYS.P-198 Compound Identification in Electron-Ionization

- Mass Spectra via Neural Machine Translation.
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- PHYS.P-199 The Study on SERS Spectral Changes of Reporter Molecules by Enzyme Reaction
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- PHYS.P-200 Characterization of Multi-Stimuli Responsive P(NIPAAm-co-AAc) Hydrogel during the Heating and Cooling Processes
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- PHYS.P-201 Effect of structure-mediated exciton transition behavior on SERS activity of layered structure of semiconductor
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- PHYS.P-202 Rational design and photochemical characterization of novel fluorescent compound through computational study
Ji Hye Lee, Hyonseok Hwang
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- PHYS.P-203 Second-Harmonic Generation and Photoluminescence Imaging of Few-Layer Hexagonal Boron Nitride
Yeri Lee, Juseung Oh, Hyeon Suk Shin¹, Sunmin Ryu
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- PHYS.P-204 Time-Resolved Emission and Reflectance Spectroscopy Study of Excitonic Behaviors in 2D CrCl₃
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- PHYS.P-205 Redox and Magnetic Properties of Organic Photoredox Catalysts in Excited States
Jivoon Choi, Hyungjun Kim
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- PHYS.P-206 Intramolecular Charge Transfer of Michler's Ketone Studied by Femtosecond Stimulated Raman Spectroscopy
Gisang Lee, Myungsam Jen, Taehyung Jang, Yoonsoo Pang
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- PHYS.P-207 Structural Insights of Lactamase-like Esterase with *para*-Nitrophenyl Acetate (*p*NPA) and Nitrocefin (NCF): Molecular Dynamics Simulation Studies
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- PHYS.P-208 Intramolecular Charge Transfer Dynamics of Anthraquinone Derivatives Confined in the Reverse Micelles
Taehyung Jang, Gisang Lee, Yoonsoo Pang
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- PHYS.P-209 Synergic effects of the surface hardening agent and cement materials on photocatalytic activity of Fe-loaded TiO₂ particles towards NO oxidation
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- PHYS.P-210 Iridium doped electrospun Co₃V₂O₈ nanofibers and their electrochemical properties
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- PHYS.P-211 Formation of Graphene Nanochannel and Nanoballoon using Laser Induced Vaporization of Entrapped Water
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- PHYS.P-212 pH-Dependent Optical Properties of Chemical Vapor Deposition-Grown MoS₂ via Reflection Imaging
Sungmin Bong, Sang-Yong Ju
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- PHYS.P-213 The electrochemical properties of electrospun CaRuO₃ nanofibers synthesized by electrospinning method
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- PHYS.P-214 Synthesis of Iridium diphosphide(IrP₂) nanoparticles and its application for Amperometric Sensing of H₂S
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- PHYS.P-215 Alignment of symmetric top molecules by photoexcitation with linearly and circularly polarized light
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- PHYS.P-216 Electrospun SrIrO₃ nanofibers as highly stable pH universal OER catalyst
Minju Kim, Seungsun Shin, Youngmi Lee, Myung Hwa Kim
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- PHYS.P-217 ZnV₂O₆ and CrVO₄ nanostructures driven by a simple acid-base reaction with the thermal annealing process
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- PHYS.P-218 Direct Observation of Electron Coupling Effect with Monitoring Hot Electron Behavior on Au@Pd Core-Shell Nanocatalysts
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- PHYS.P-219 Single-molecule Stimulated Raman Excited Fluorescence Spectroscopy of Visible Dyes
Jaeyoon Lee, Sang-Hee Shim
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- PHYS.P-220 Construction of 1D TiO₂ nanotube on ultrathin 2D ZnIn₂S₂ nanosheets Heterostructure for Photocatalytic CO₂ Reduction
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- PHYS.P-221 Multiphoton photofragmentation dynamics of cis and trans isomers of 1,2-dibromoethylene
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- PHYS.P-222 Novel quasi-exact solution for Michaelis-Menten kinetics
Kyungwoo Kim, Jaeyoung Sung
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- PHYS.P-223 Electronic structure of 2-azaallenyl radical cation
Daniel Yim, Hyungjun Kim
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- PHYS.P-224 In-Situ Visualization of Surface Plasmon-Driven Hot Carrier Generation With Photoconductive AFM
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- PHYS.P-225 The stabilization mechanism of self-assembled low symmetry structure in charged block copolymer comprising ionic liquids
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- PHYS.P-226 Molecular Evidence for the Formation of Real Active Metalloporphyrin-based Au Catalyst Revealed with Electrochemical Scanning Tunneling Microscopy
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- PHYS.P-227 Bimetallic NiPd alloy nanoparticles as electrocatalysts by pulsed laser reduction method
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- PHYS.P-228 *In-situ* observation of the Pt-CoO interface in PtCo bimetallic nanoparticle for the CO oxidation
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- Science and Technology, Korea*
- PHYS.P-229 Effect of Support Oxidation State on Catalytic Activity of Pt/TiO_x Catalysts
Gyuhoo Han, Jeong Young Park
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- PHYS.P-230 Nanoscale Friction of Intercalated Water Layers Between Exfoliated MoS₂ and Mica
Dooho Lee, Jeong Young Park
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- PHYS.P-231 Effects of Water Vapor on Oxidation Process of Cu(111) Surface and Sublayer
Youngjae Kim, Jeong Young Park
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- PHYS.P-232 Atomic-Scale Gliding On Hydrophilic Surfaces at High Humidity Observed by Friction Force Microscopy
Tae Won Go, Jeong Young Park
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- PHYS.P-233 Formation of catalytically active Au-CuO_x heterostructure by oxygen-induced atomic restructuring
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- PHYS.P-234 Detection of thiram via Cl⁻ ion adsorbed light-induced growth of AgNPs-cellophane substrate
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- PHYS.P-235 Computational study on the photophysical properties of thermally activated delayed fluorescent molecules due to regiochemical configuration
Taehwan Lee, Young Hoon Lee, Min Hyung Lee, Jaehoon Jung
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- PHYS.P-236 Excited state reaction dynamics of dye-aggregates on TiO₂ particle probed by ultrafast time-resolved fluorescence
Yun Jeong Na, HyunJae Lee, Ho-Jin Son, Chul Hoon Kim
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- PHYS.P-237 Active Transport Dynamics in Neuron Cells: Order and Disorder
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- PHYS.P-238 Pt/Ag/TiO₂ Plasmonic Nanodiodes for Extraction of Surface Plasmon-driven Chemicurrent
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- PHYS.P-239 Impact of Hot Hole Transport on Photocatalytic Activity in Au Nanoprism/p-GaN under Water Splitting Reaction
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- PHYS.P-240 Facet-dependent strong metal-support interaction of Pt nanoparticle on morphology controlled Cu₂O for CO oxidation
Seunghwa Hong, Jeong Young Park
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- PHYS.P-241 Operando investigation of strong metal-support interaction at the interface of Pt-Co₃O₄ during CO oxidation
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- PHYS.P-242 Highly-sensitive quantification of metal chelating activity
Sangmin Ji, Hye Ran Koh
Department of Chemistry, Chung-Ang University, Korea
- PHYS.P-243 Ultrasensitive detection of single base substitution mutation by combining CRISPR-Cas system and single-molecule fluorescence detection
Seohyun Kim, Hye Ran Koh
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- PHYS.P-244 Role of plasmonic hot carriers in photoelectrochemical water splitting using antenna-reactor Pt/Ag/TiO₂ Schottky nanodiodes
Heeyoung Kim, Jeong Young Park
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- PHYS.P-245 Adsorption and reaction mechanism of O₂, CO₂ and NO₂ over TiB₂ monolayer
Mahbubul Alam Shoaib, Jaehoon Jung

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- PHYS.P-246 Molecular Dynamics Simulation Studies for the Membrane Structure of Glycerolipid and Chlorosulfolipid Mixtures
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- PHYS.P-247 Concentration Effects of Polyhexamethylene Guanidine (PHMG) on Lung Surfactant Membranes: Molecular Dynamics Simulation Studies
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- PHYS.P-248 Ultrafast Dynamics of Optical Kerr Effect in Liquid Acetonitrile Probed by Time-Resolved X-ray Liquidography
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- PHYS.P-249 Role of the film thickness on the structural and electronic properties of ultrathin rutile TiO₂ film supported by a metal substrate
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- PHYS.P-250 Prolonged Lifetime and Enhanced Flow of Hot Electrons on a Perovskite Combined Plasmonic Nanodiode
Yujin Park, Hyotcherl Ihee, Jeong Young Park
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- PHYS.P-251 Photoluminescence blinking and photostability of perovskite quantum dots in a single nanoparticle level
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Daegu Center, Korea Basic Science Institute, Korea
- PHYS.P-252 Characterization of Gas Separation Amorphous Polymers Using Molecular Dynamics: Impact of Spacer on Gas Separation Performance
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- PHYS.P-253 Ligand Field Effect at Oxide-Metal Interface on the Dissociation of an O₂ Molecule on Ultrathin MgO/Ag(100) Surface
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- PHYS.P-254 Local mapping of ultrafast carrier/exciton dynamics with transient absorption microscopy
Won-Woo Park, Oh-Hoon Kwon
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- PHYS.P-255 Dry plasma reduction to fabricate gold nanoparticle on cellulose paper as broadband plasmonic absorber
Trinh Ba Thong, Kwanghyeon Jo, Deun Chan Lee, Ilsun Yoon
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- PHYS.P-256 A facile synthesis and time-resolved fluorescence studies of P3HT crystalline particles
MinHee Lee, Seung Jin Jung, YouMin Park, Jaehong Park
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- PHYS.P-257 Photoinduced carrier-dynamics of non-fullerene acceptor-based P3HT-NDI block copolymer self-assembly
YouMin Park, So-Jung Park, Jaehong Park
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- PHYS.P-258 Real-time observation of nucleic acid unwinding process by SARS-Coronavirus Nsp13 at single-molecule level
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- PHYS.P-259 FTIR, 2D IR, and computational studies of two coupled C=O stretching modes of xanthine and its derivatives in aqueous solution
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- PHYS.P-260 DFT/TD-DFT study of benzothiazole derivative chemosensors for the detection of Zn²⁺ via intramolecular charge transfer sensing strategies
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- PHYS.P-261 Effect of the abolition of intersubunit salt bridges on allosteric protein structural dynamics
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Chemistry, Korea Advanced Institute of Science and Technology, Korea
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- PHYS.P-262 Molecular dynamics study of anomaly in nano-confined water
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- and Technology, Korea*
- PHYS.P-263 Plasma induced AuNP reduction on cellulose paper and SERS application
Kwanghyeon Jo, Rashida Akter, Trinh Ba Thong, Ilsun Yoon
Department of Chemistry, Chungnam National University, Korea
- PHYS.P-264 Observation of the charge transfer induced structural dynamics at the photoexcited gold-TiO₂ bilayer thin film
Jun Heo, Hyotcherl Ihee
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- PHYS.P-265 Reactive laser ablation of Ti in oxygen atmosphere
Dong Hun Hwang, Jae Kyu Song, Seung Min Park
Department of Chemistry, Kyung Hee University, Korea
- PHYS.P-266 Quantum Chemical Calculations of binding energy of MnCl₂ with Cyclodextrin/graphene using B3LYP-D3 functional
Hwiseo Kim, Jong-Won Song
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- PHYS.P-267 Active site fortification in Dual-Phase Nickel Sulfide Nanospheres by Cation Modulation using Pulsed Laser Irradiation: Overall Water Splitting and Methanol Oxidation Reaction evaluation
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- PHYS.P-268 Building a Miniature Digital Rectilinear Ion Trap Mass Spectrometer
Md Musleh Uddin Munshi^{*}, Han Bin Oh
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- PHYS.P-269 Wettability of multi-layered graphene and interfacial water structure revealed by VSFG
Eunchan Kim, Minhaeng Cho
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- PHYS.P-270 Wavefront controlled coherent anti-Stokes Raman scattering microscopy
Youngjin Choi, Jong Min Lim^{1,*}, Minhaeng Cho¹
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- PHYS.P-271 Substituent Effects on the Vibrational Properties of the CN Stretch Mode of Aromatic Nitriles: IR Probes Useful for Time-resolved IR Spectroscopy
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- PHYS.P-272 Accurate prediction of optical properties of organic molecules by deep learning optical spectroscopy
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- PHYS.P-273 DFT Functional Dependency on Graphene-Related Materials
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- PHYS.P-274 Constrained Unrestricted Hartree-Fock Based Double-Hybrid Density Functional Approximation: cuBL1p
Hayoung Yu, Suhwan Song, Eunji Sim
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- PHYS.P-275 Structural transformation of N-doped graphene sheet adsorbed at Metal surface
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- PHYS.P-276 Comprehensive computational study on the surface of oxygenated di-nickel di-selenide for hydrogen evolution reaction
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- PHYS.P-277 Machine-Learned XC Functional with Decomposed Error Target
Sechan Lee, Suhwan Song, Eunji Sim
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- PHYS.P-278 Kinetic Study of Chain-linked Electron Acceptor / Donor System in Non-polar Solvent
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- PHYS.P-279 Long-range corrected exchange-correlation functional including a two-Gaussian Hartree-Fock attenuation for core-excited-state calculations of second-and third-row atoms (LC2gau-BOP)
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- ANAL.P-191 Analytical method for parabens in water using LC-MS/MS and GC-MS/MS
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- ANAL.P-192 Identification of tire road wear particles generated from passenger vehicles
Eunji Chae, Sung-Seen Choi
Department of Chemistry, Sejong University, Korea
- ANAL.P-193 Determination of inorganic arsenics by capillary ion column
Seon-jin Yang, Sang-Ho Nam, DongChan Lee, Yonghoon Lee
Department of Chemistry, Mokpo National University, Korea
- ANAL.P-194 Characteristic analysis of natural rubber wear particles depending on the particle size by the shapes and pyrolysis products
Uijeong Jung, Sung-Seen Choi
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- ANAL.P-195 Ionization behaviors of amino nitrotoluene in atmospheric pressure chemical ionization
He-Ryun Choi, Sung-Seen Choi
Department of Chemistry, Sejong University, Korea
- ANAL.P-196 SERS-based serodiagnosis of acute febrile diseases using nanopopcorn microarray platforms
Kihyun Kim, Jaebum Choo
Department of Chemistry, Chung-Ang University, Korea
- ANAL.P-197 SERS-LFA strip for rapid classification of Influenza A and SARS-CoV-2
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- ANAL.P-198 An NIR emissive two-photon absorbing ratiometric nitroreductase probe for studying hypoxia susceptibility of organ tissues
Sourav Sarkar, Kyo Han Ahn^{1,*}
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- ANAL.P-199 SERS-PCR Assays of SARS-CoV-2 using Au nanoparticles-inserted Au nanodimple substrates
Yixuan Wu, Jaebum Choo^{1,*}
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- ANAL.P-200 Rapid and sensitive detection of SARS-CoV-2 using SERS-based microdroplet sensor
Sohyun Park, Jaebum Choo
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- ANAL.P-201 Structural Characterization of Non-human Glycan Antigens in a Xenograft Model using Nano PGC LC/MS/MS and Exoglycosidase Digestion
Ji Eun Park, Dongtan Yin, Hyun Joo An
Graduate School of Analytical Science and Technology, Chungnam National University, Korea
- ANAL.P-202 Simultaneous Identification of Structural Analogs of Cyclic Imines in Marine Biotoxins Using LC-MRM/MS
Hee Young Jo, Sanggil Lee, Hyun Joo An
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- ANAL.P-203 Simple fluorescence detection of spermine based on paper-based analytical device
Nguyen ngoc Nghia
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- ANAL.P-204 Fast and visual folic acid detection using paper-based analytical devices
DaeHyun Kwon
Department of Materials Convergence and System Engineering, Changwon National University, Korea
- ANAL.P-205 Paper-based analytical devices for quercetin detection
Sonexai Phommachith
Department of Materials Convergence and System Engineering, Changwon National University, Laos
- ANAL.P-206 A smart approach for selective rutin detection utilizing bovine serum albumin
Le thi cam Huong
Department of Chemistry, Changwon National University, Vietnam
- ANAL.P-207 Improve SERS using silver on chitosan nano-wrinkles substrate
Pham khanh Linh
Department of Chemistry, Changwon National University, Vietnam
- ANAL.P-208 Mineralization of Indigo Carmine Using ZnBi₂O₄-Bi₂S₃ Composites in Visible light
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- ANAL.P-209 Synthesis and characterization of $\text{LiFeBO}_{3-x}\text{F}_{2x}/\text{C}$ nanocomposite as cathode material for Li-ion batteries
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- ANAL.P-210 Synthesis and characterization of iodine-doped LiFeBO_3 as cathode for lithium-ion battery
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- ANAL.P-211 A Study on the Effect of Ammonium ions on Yb/Lu Separation Efficiency
Aran Kim, Kang Hyuk Choi
Radioisotope Research Division, Korea Atomic Energy Research Institute, Korea
- ANAL.P-212 Synthesis of $\text{LiFe}_{1-x}\text{Mn}_x\text{BO}_{2.7}\text{F}_{0.6}$ as a cathode material for Li-ion battery
Da Eun Han, Youngil Lee
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- ANAL.P-213 Characterizing Mercury Amalgamation on Single Mesoporous Silica Coated Gold Nanorods Using Spectroelectrochemistry
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- ANAL.P-214 Synthesis and characterization studies of Mn and Co composite as a cathode material for lithium secondary batteries
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- ANAL.P-215 Capture of microplastics and subsequent quantitative analysis using Raman spectroscopy
Yunjung Kim, Hoeil Chung
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- ANAL.P-216 Metabolite Profiling of Korean Chestnut (*Castanea crenata* S. et Z.) fruits using UPLC-MS Analyses
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Food Analysis Research Center, Korea Food Research Institute, Korea
- ANAL.P-217 Rare earth doped Magnetoplasmonic nanoparticles for the detection of heavy metal ions in water
Huu-Quang Nguyen, My-Chi Thi Nguyen, Jaebeom Lee
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- ANAL.P-218 Adsorption of Organic Dyes on Zeolitic Imidazolate Framework-8 Coated with Silica(ZIF-8@ SiO_2)
Jian Choi, Seyeon Yang¹, Seog Woo Rhee¹
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- ANAL.P-219 Recognition of bile components in bile using Au nanodendrite substrates modified with various alkanethiols as a tool for Raman spectroscopic identification of gall bladder cancer
Thu Thuy Bui, Hoeil Chung
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- ANAL.P-220 Optically tunable plasmonic chiral superstructure
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- ANAL.P-221 Analysis of Body Odor using GO/PANI/ZNRs/ZIF-8 adsorbent followed by GC/MS
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- ANAL.P-222 Identification of Secondary Organosiloxane Aerosol (SOSA) Using Aerosol Mass Spectrometry
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- ANAL.P-223 Fabrication of highly acid-resistant coating material using keratin
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- ANAL.P-224 Nanomechanical identification of the mutated EGFR signaling systems on the living lung cancer cells and their extracellular vesicles
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- ANAL.P-225 Formation of Wrinkling Patterns for Flexible Electrodes by Using Direct Printing
Yeeun Jo, SeungYeon Lee, Kwanwoo Shin, Oh-Sun Kwon
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- ANAL.P-226 Formation of Two-Dimensional Au/MoO₃ Hybrid Nanostructures by Growth and Exfoliation
Jihoon Park, Youngsoo Kim
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- ANAL.P-227 Magneto-Plasmonic Metasurface sensor for Circulating Tumor Cell Molecular Beacon at Terahertz regime
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- ANAL.P-228 The effect of water and heavy water on fibrillation dynamics of intrinsically disordered proteins
MyungKook Son, Chae Ri Park, Sooyeon Chae, Dongjoon Im, Hugh I. Kim
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- ANAL.P-229 Plasmonic Au Nanoparticles Catalyzed Photodegradation of Lignin Derivatives
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- ANAL.P-230 Fabrication of Polymer-Au Hybrid Nanocomposite by Interaction of Gold Nanoparticles and Visible Light
Jeonghyeon Lee, Youngsoo Kim
Department of Chemistry, Yeungnam University, Korea
- ANAL.P-231 Comparing equilibrium structures of the Amyloid- β (1-42) dimers and assembly properties *in vitro*
Dongjoon Im, MyungKook Son, Chae Ri Park, Sooyeon Chae, Hugh I. Kim
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- ANAL.P-232 Sensing chiral analytes with chiral structure
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- ANAL.P-233 Multifunctional Optical Probes in Dynamic Biological Environments Using Mesoporous Silica Shell Coated Single Gold Nanorods
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- ANAL.P-234 Synthesis and characterization of hollow nanostructures
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- ANAL.P-235 A disposable capillary-driven electrodynamic microfluidic channel sensor for the separation detection of saccharides in whole blood sample
Mohammad Mozammel Hossain, Kyeong-Deok Seo, Yoon Bo Shim
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- ANAL.P-236 Colorimetric tensile Sensor from an array of plasmonic magnetic photo-crystal on a flexible substrate
Dajeong Hwang, Seonghwan Jung, Jaebeom Lee
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- ANAL.P-237 Investigation of TPT-VCR multidrug mechanisms in 3D spheroids human neuroblastoma cells
Sooyeon Chae, Chae Ri Park, MyungKook Son, Dongjoon Im, Hugh I. Kim
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- ANAL.P-238 Development and validation of saliva collection and extraction method for metabolite profiling using UPLC-QTOF-MS
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- ANAL.P-239 Signal processing for a real-time handheld biological monitoring system using an UV LED as a light source
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- ANAL.P-240 Recent research trends in direct identification of microorganisms by MALDI-TOF MS
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- ANAL.P-241 Structural Studies of P143 in group C derived from IgG antigen Apo B-100 by NMR spectroscopy
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- ANAL.P-242 Analysis of the effects of NO gas in cancer cells based on NO-generating electrochemical system
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- ANAL.P-243 Innovative mass spectrometer for high-resolution ion spectroscopy
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- ANAL.P-244 One-pot synthesized FeSe quantum dots in an organic phase
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- ANAL.P-245 Structural Characteristics of Functional Polysaccharides by Negative Tandem Mass Spectrometry
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- ANAL.P-246 Identification and Analysis of Biomarkers from Novichok-inhibited Human Plasma
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- ANAL.P-247 Assessment of health risk under exposure of airborne particulate matter in mouse by LC-MS based metabolomics
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- ANAL.P-248 Synthesis of ultrathin Ni-Fe LDH nanosheets for efficient electrochemical water oxidation
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- ANAL.P-249 Synthesis of graphene oxide with highly preserved sp² carbon network as an efficient matrix for Laser Desorption/Ionization Time-of-Flight Mass Spectrometry
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- ANAL.P-250 A Study on the Development of Reference Materials for Quantitative Analysis of MIT/CMIT in Living Chemicals
Jimin Park, Nu Ri Seong, Woo Seok Choe, DeogJun Gwon, Yonghyeon Lee, Wonpyo Hong, Seung Hwan Lee, Harin Jeong, Tae Ho Yeom
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- ANAL.P-251 Characterizing the Optical Properties of Hollow Gold Nanoshells with Plasmonic Effect
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- ANAL.P-252 The Effects of Chemisorption on Refractive Index Sensitivity in Mesoporous Silica Coated Gold Nanorod
Seongeun Heo, Ji Won Ha
Department of Chemistry, University of Ulsan, Korea
- ANAL.P-253 A Study on the development of polyethylene certified reference material for bromine quantitative analysis
DeogJun Gwon, Yangseok Bhang, Kiyoung Heo, Yonghyeon Lee, Wonpyo Hong, HeeJin Lee, Tae Ho Yeom, Jimin Park, Jung Ae Park
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- ANAL.P-254 Study on the mechanism and structure of LPCin analogs, antimicrobial peptides
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- ANAL.P-255 Dynamic Nuclear Polarization of Selectively 29Si Isotope-Enriched Silica Nanoparticles
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- ANAL.P-256 Optimization of expression and structural studies of tIK peptides with anti-inflammatory activity
Jinhee Jeong, Minseon Kim, Yongae Kim
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- ANAL.P-257 Investigation of the structure of transmembrane protein syndecan-4 using NMR spectroscopy
Hyunjin Ko, Minseon Kim¹, Yongae Kim¹
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- ANAL.P-258 Fabrication of Home-built NMR Probes for Structural Studies of Various Samples
Jihong Wang, Minseon Kim, Yongae Kim
Department of Chemistry, Hankuk University of Foreign Studies, Korea
- ANAL.P-259 A Simple and Selective Detection of Microbial Toxin by Using Personal Glucose Meter for Point-of-care Testing
Junghun Park
Advanced Mechatronics R&D Group, Korea Institute of Industrial Technology, Korea
- ANAL.P-260 Identification and separation study of MGO trapping components from Volcanic rock processed green tea (VGT) using off-line HPLC
Kang Hyuk Kim, Soon Sung Lim
Hallym University, Korea
- ANAL.P-261 Investigation of Oxygen Plasma Treatment Effect on Au@AuHg alloy Nanoparticles

- Jaeran Lee, Ji Won Ha
Department of Chemistry, University of Ulsan, Korea
- ANAL.P-262 Pilot study for biomarker discovery of prostate cancer using proteomics
Miseon Jeong, Wonryeon Cho
Department of Chemistry, Wonkwang University, Korea
- ANAL.P-263 Liquid Chromatography-Tandem Mass Spectrometric Analysis of Toxicants in Household Chemical Products
Hyeonjeon Cha, Woo Young Song, Tae-Young Kim
School of Earth Sciences and Environmental Engineering, Gwangju Institute of Science and Technology, Korea
- ANAL.P-264 Efficacy of Natural Antibacterial Feed in Paralichthys Olivaceus using Proteomics
Junghoon Kang, Youngjin Kim, Wonryeon Cho
Department of Chemistry, Wonkwang University, Korea
- ANAL.P-265 Diabetes Type Distinction Based on Integrated Nanogap
Aejin Lee, Jong Kwan Park, Dong Hun Kim, Cho Yeon Lee, Wan Soo Yun
Department of Chemistry, Sungkyunkwan University, Korea
- ANAL.P-266 Electrochemical Detection of Creatinine for Calibration of Urine Sample Concentration
Dong Hun Kim, Jong Kwan Park, Aejin Lee, Wan Soo Yun
Department of Chemistry, Sungkyunkwan University, Korea
- ANAL.P-267 **[Withdrawal]** PCR-Free Detection of BKV DNA Using Integrated Nanogap Sensor
Park So yeon
chemistry, Sungkyunkwan University, Korea
- ANAL.P-268 Electrochemical biosensor for Influenza A H1N1 with multiple amplification strategy
Jonghwan Lim, Sanghyeon Park, Seunghun Kim, Eun Bin Kang, Wan Soo Yun
Department of Chemistry, Sungkyunkwan University, Korea
- ANAL.P-269 PCR-Free Detection of BKV DNA Using Integrated Nanogap Sensor
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- ANAL.P-270 Electrochemical Sensor for Aspergillus niger Based on Extracellular Protein
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- ANAL.P-271 Long-term Effects of Exposure to Microplastics at Environmentally Relevant Concentrations on Lipidome of the Mouse Heart and Brain
Jonghyun Kim, Tae-Young Kim
School of Earth Sciences and Environmental Engineering, Gwangju Institute of Science and Technology, Korea
- ANAL.P-272 Reusable Electrochemical Microgap Sensors for Detection of Influenza A Virus Nucleoprotein
Sanghyeon Park, Jonghwan Lim, Eun Bin Kang, Seunghun Kim, Wan Soo Yun
Department of Chemistry, Sungkyunkwan University, Korea
- ANAL.P-273 Integrated Nanogap Sensors for Electrical Quantitation of Pathogenic Antigen
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- ANAL.P-274 Quantitative Detection of BKV Virus Using Toehold-Mediated Strand Displacement Reaction Based on Integrated Nanogap Sensor
Gyeongyeon Byeon, Seokcheol Kim, Park So Yeon, Wan Soo Yun
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- ANAL.P-275 Quantitative analysis of phospholipid in Krill Oil using 31P-qNMR
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- ANAL.P-276 Comparison of volatile compounds in domestic Doenjang and imported Doenjang samples using headspace GC-MS
Hanbyeol Jang, Jeongkwon Kim, Jina Lim
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- ANAL.P-277 Exploring Site-specific Glyco-heterogeneity on Horseradish Peroxidase by Multi-dimensional Approach using LC-MS/MS
Jaeho Kim, Hyun Joo An
Graduate school of Analytical Science and Technology, Chungnam National University, Korea
- ANAL.P-278 A global and phosphoproteomic analysis of IDH1 mutated cell-line for investigation of the role of IDH1 mutation in GBM progression
Jiwon Hong, Sang-Won Lee, Chaewon Kang¹, Su-Jin Kim
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- ANAL.P-279 Colorimetric Detection for Receptor Binding Domain of SARS-CoV-2 virus for Developing Paper-based Immunoassay
Xiaoyue Xu, In Geol Choi^{1,*}
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ANAL.P-280

Quantum Dot Detection Probe of Nano-Biochip for Highly Sensitive Detection of Biomolecules by Total Internal Reflection Spectroscopy

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ANAL.P-281

Engineering and Identification of Marine Bioactive Peptide to Enhance the Properties of Antioxidant and Anti-inflammatory

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ANAL.P-282

Maximization of chiral chromatography efficiency through temperature control

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ANAL.P-283

GC-MS analysis of the metabolites in Doenjang samples

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ANAL.P-284

Quantitative proteomic analysis of VPA chemical mouse ASD model reveals enrichment of RNF146 and Wnt/ β -catenin signaling

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ANAL.P-285

Lipidomic profiling in serum and liver tissue of mice with nonalcoholic steatohepatitis (NASH)

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ANAL.P-286

Lipidomic analysis to evaluate effects of AMPK activation in diet-induced NASH mice

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ANAL.P-287

Determination of the Seed Contents of Red Pepper Powders by ¹H NMR and FT-IR Spectroscopy

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ANAL.P-288

Efficient and High-throughput proteomic analysis by fully automated Dual online reverse-phase liquid chromatography

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ANAL.P-289

Effect of Glutathione Injection on Thermal stress in Olive flounder Based on the Metabolomics

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ANAL.P-290

Wavelength-dependent light-sheet-based non-fluorescence super-resolution microscopy for three-dimensional superlocalization and real-time single-particle tracking

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ANAL.P-291

The risk of dermal exposure of BPA-free materials

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ANAL.P-292

¹H NMR-based metabolomics approach to elucidate tissue-specific effects of RBIV infection in *Oplegnathus fasciatus*

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ANAL.P-293

Size Determination of Iron Oxide Nanoparticles Using Modified Single Particle ICP-MS

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- LIFE.P-280 Metal-Mediated Protein Assembly Using a Genetically Incorporated Metal-Chelating Amino Acid
Soojin Kim, Hyunsoo Lee
Department of Chemistry, Sogang University, Korea
- LIFE.P-281 Conversion of Racemic Unnatural Amino Acids to Optically Pure Forms by a Coupled Enzymatic Reaction
Soojin Kim, Hyunsoo Lee
Department of Chemistry, Sogang University, Korea
- LIFE.P-282 Distinct Impact of Glycation towards the Aggregation and Toxicity of Murine and Human Amyloid- β
Eunju Nam, Mi Hee Lim
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- LIFE.P-283 A Preliminary Structure-Activity Relationship Study of NSAID Dimers as Multi-Acting Ligands for Neuroinflammation inhibition in Alzheimer's disease (AD)
Hyerim Ju, Sungwoon Choi
Chungnam National University, Korea
- LIFE.P-284 Development of Artificial Intelligence Model For Prediction of Drug Metabolite Site
Jee-Young Lee*, Minwoo Han¹, Yuna Ha¹, Seungju Lee²
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¹New Drug Development Center, Daegu Gyeongbuk Medical Innovation Foundation, Korea
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- LIFE.P-285 Efficient shRNA delivery to breast cancer overexpressing HER1 through multimeric rolling circle transcription products containing alternating HER1-against RNA aptamer and HER1-against shRNA units
Juhyun Jo, Sang Soo Hah
Department of Chemistry, Kyung Hee University, Korea
- LIFE.P-286 Supramolecular polymerization using the host-guest interaction for the cancer therapy
Haewon Ok
오희원, Ulsan National Institute of Science and Technology, Korea
- LIFE.P-287 Liposomal Coronavirus model, combined with recombinant spike proteins
Hyun Park, Huong Thanh Nguyen, Kwanwoo Shin^{1,*}
Chemistry, Sogang University, Korea
¹Institute of Biological Interfaces, Sogang University, Korea
- LIFE.P-288 RIG-I Mediated Innate Immune Stimulation by Chemically Synthesized Long Double-Stranded RNAs Is Structure- and Sequence-Dependent
Younggyu Kang, Jaejin Kim¹, Kyeongmin Lee¹, Dong-ki Lee¹
Platform Technology Unit 2, Olix Pharmaceuticals, Korea
¹Department of Chemistry, Sungkyunkwan University, Korea
- LIFE.P-289 Collagen Fibrils Formation from Collagen-encapsulated Nanoliposomes using Electrical Stimulation
Albertus Ivan Brilian, Chang Ho Kim, Agustina Setiawati¹, Kwanwoo Shin
Department of Chemistry & Institute of Biological Interfaces, Sogang University, Korea
¹Department of Life Science, Sogang University, Korea
- LIFE.P-290 Visualization of mRNA transcription in Artificial Cell using click-chemistry
SeonMin Jeon, Hyun Kyung Choi¹, Kwanwoo Shin
Department of Chemistry, Sogang University, Korea
¹Department of Chemistry, Sogang University, Korea
- LIFE.P-291 Artificial cellular model for cytoskeletal-membrane interaction with artificial photosynthetic organelle
Sungwoo Jeong, Seohyeon Min¹, Sungwoo Lee², Hyun Park¹, SeonMin Jeon², Chang Ho Kim³, Kwanwoo Shin²
Research Institute for Basic Science, Sogang University, Korea
¹Chemistry, Sogang University, Korea
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³Institute of Biological Interfaces, Sogang University, Korea
- LIFE.P-292 DNA Visualization Using Streptavidin-Fluorescent Protein
Yu Jin, Kyubong Jo
Department of Chemistry, Sogang University, Korea
- LIFE.P-293 Imaging the Binding between Chemical Drugs and Its Target Proteins inside Living Cells
Mi-Hee Jun, Yang Hoon Huh, Kyung-Bok Lee
Center for Research Equipment, Korea Basic Science Institute, Korea
- LIFE.P-294 The crystal structure of L-leucine dehydrogenase from *Pseudomonas aeruginosa*
Seheon Kim, Seri Koh, Jin Kuk Yang

Department of Chemistry, Soongsil University, Korea

- LIFE.P-295 The efficiency of transmembrane protein reconstitution into artificial cellular vesicles
Seohyeon Min, Sungwoo Jeong¹, Hyun Park, SeonMin Jeon, Kwanwoo Shin
Department of Chemistry, Sogang University, Korea
¹Research Institute for Basic Science, Sogang University, Korea
- LIFE.P-296 Observing Anisotropic Mechanics of Human Dermal Fibroblasts Using Confocal and STED Microscopy
Sang Ho Lee, Agustina Setiawati, Dayoung Jang, Chang Ho Kim¹, Kwanwoo Shin
Department of Chemistry, Sogang University, Korea
¹Institute of Biological Interfaces, Sogang University, Korea
- LIFE.P-297 Physion promotes melanin production in melanoma cells through the modulation of MSRA and TRP-2
Ah In Jo, Moon-Moo Kim
Department of Applied Chemistry, Dong-Eui University, Korea
- LIFE.P-298 Hybridization of Multi Composite Extracellular Matrix for Specific Tissue Engineering
Agustina Setiawati, Sungwoo Jeong¹, Albertus Ivan Brilian², Sang Ho Lee³, Kwanwoo Shin³
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¹Research Institute for Basic Science, Sogang University, Korea
²Chemistry, Sogang University, Korea
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- LIFE.P-299 Characterization of intracellular protein-protein interactions by FRET imaging in living cells
Soojung Yi, Nam Ki Lee^{1,*}
Department of Chemistry, Seoul National University, Korea
¹Division of Chemistry, Seoul National University, Korea
- LIFE.P-300 Cell Lysate-based Cell-free Protein Synthesis in a Lipid Phase Separated Giant Unilamellar Vesicle
Sungwoo Lee, Hyun Park, Sungwoo Jeong¹, Kwanwoo Shin
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- LIFE.P-301 Effect of molybdenum disulfide on silver doped zinc oxide for antibacterial activity
Joonho Shin, Kwang-sun Kim
Chemistry, Pusan National University, Korea
- LIFE.P-302 Design and fabrication of pump-free microfluidic PCR devices for fast and point-of-care diagnostics
Eunjin Huh, So Jung Kim¹, Nayoon Pyun, Hyuckjin Lee, Oh-Sun Kwon, Kwanwoo Shin
Department of Chemistry, Sogang University, Korea
¹Biomedical Engineering, University of British Columbia,

Canada

- LIFE.P-303 Decellularized ECM-hydrogel for 3D-printing fabrication of ear cartilage scaffold with improved biocompatibility
Jaeeun Kim^{*}, Agustina Setiawati¹, Albertus Ivan Brilian, Kwanwoo Shin^{2,*}
Chemistry, Sogang University, Korea
¹Sogang University, Korea
²Department of Chemistry, Sogang University, Korea
- LIFE.P-304 Structural and functional characterization of N⁶-adenine methyltransferase YfiC
Hyeonju Jeong, Jungwook Kim^{1,*}
Department of chemistry, Gwangju Institute of Science and Technology, Korea
¹Department of Chemistry, Gwangju Institute of Science and Technology, Korea
- LIFE.P-305 Effect of hydrophobicity and cationic charge to the activity of mitochondria-targeting peptoids
Soyoung Kim, Jiyou Lee¹, Jiwon Seo, Jiyoun Lee^{2,*}
Department of chemistry, Gwangju Institute of Science and Technology, Korea
¹Department of Next-Generation Applied Science, Sungshin University, Korea
²Global Medical Science, Sungshin University, Korea
- LIFE.P-306 Backbone Dynamics of Thermophile single-stranded binding protein from Sulfolobus solfataricus at room temperature and high temperature
Min June Yang, Chin-ju Park^{1,*}
Department of chemistry, Gwangju Institute of Science and Technology, Korea
¹Department of Chemistry, Gwangju Institute of Science and Technology, Korea
- LIFE.P-307 A Simple Protein Histidine Kinase Activity Assay for High-throughput Inhibitor Screening
Su min Choi, Shin Hyeon Lee, Jung-Min Kee^{1,*}
Chemistry, Ulsan National Institute of Science and Technology, Korea
¹Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
- LIFE.P-308 Discovery of PHPT1 inhibitors and elucidation of inhibition mechanism
Hyeong Jun Kim, Hoyoung Jung, Jung-Min Kee
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
- LIFE.P-309 Analysis of differentially expressed genes using RNA-Seq data of long-tailed chickens
Yunjeong Noh, Han-ha Chai
National institute of animal science, Rural Development Administration, Korea
- LIFE.P-310 Synthesis of A/T Specific DNA Stains with Enhanced Optical Properties
Jaeyoung Bae, Kyubong Jo

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LIFE.P-311

Fluorometric detection of SARS-CoV-2 variants using ligation-coupled rolling circle amplification of viral RNA

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LIFE.P-312

Fluorometric detection of SARS-CoV-2 viral RNA using tandem isothermal gene amplification

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LIFE.P-313

Uncovering different roles of two acinetobactin isomers in fighting against nutritional immunity

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LIFE.P-314

Spliceosomal recycling factor Sart3 RRM recognition of U6 snRNA investigated by NMR
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LIFE.P-315

NMR study of ligand & metal dependent riboswitch folding

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- ORG.N.P-294 Terpyridine-Strapped Calix[4]pyrrole: An Ion Pair Receptor for the Recognition of Lithium Chloride
Nam Jung Heo, Sung Kuk Kim
Department of Chemistry, Gyeongsang National University, Korea
- ORG.N.P-295 Calix[4]pyrrole biscrowns having a deep cavity and their ion pair recognition properties
Juho Yang, Sung Kuk Kim
Department of Chemistry, Gyeongsang National University, Korea
- ORG.N.P-296 Calix[4]pyrrole with extended indole as highly selective receptor for the phosphate anion
Ju hyun Oh, Sung Kuk Kim
Department of Chemistry, Gyeongsang National University, Korea
- ORG.N.P-297 Synthesis of Dipyrrolic-N-aryl-Naphalimide as Building blocks for Construction of Macrocyclic Aromatic Compounds and Their Anion Binding Features
Jaehyeon Kim, Sung Kuk Kim
Department of Chemistry, Gyeongsang National University, Korea
- ORG.N.P-298 A Calix[4]pyrrole-Based Fluorescent Sensor for Trinitroaromatic Explosives
Areum Lee, Sung Kuk Kim
Department of Chemistry, Gyeongsang National University, Korea
- ORG.N.P-299 Calix[4]arene tetra-Indole-2-Carboxamide: An Ion-pair Receptor for the Recognition of Lithium Chloride
Sung Kuk Kim*, Seung Hyeon Kim
Department of Chemistry, Gyeongsang National University, Korea
- ORG.N.P-300 Ratiometric Detection of Hypochlorous Acid in Brain Tissues of Neuroinflammation and Maternal Immune Activation Models with a Deep-Red/Near-Infrared Emitting Probe
Kyeong Hwan Kim, Kyo Han Ahn^{1,*}
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- ORG.N.P-301 Direct Access of Dihydrofuro [3',2':4,5]furo[2,3-b]indole via Isatine and 2-Cyanoacetophenone
Maruti Yadav, Yeon Tae Jeong, Hoon Heo, Byung-Gwon Cho
Department of Display Engineering, Pukyong National University, Korea
- ORG.N.P-302 Catalyst Based Divergent Reaction of Benzoylacetone with acenaphthylene-1, 2-Dione: Access to Spiro-dihydrofurofuran and dihydrofurofuran Derivatives.
Maruti Yadav, Yeon Tae Jeong, Hoon Heo, Byung-Gwon Cho
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- ORG.N.P-303 Pd-Catalyzed Cyclization of Alkynyl Norbornene Derivatives for the Synthesis of Benzofused Heteroarenes
Hayeon Kwak, Jung Min Joo
Department of Chemistry and Chemistry Institute for Functional Materials, Pusan National University, Korea
- ORG.N.P-304 Mechanistic Study of Cobalt-Catalysed C-O Bond Activation
Ewa Pietrasiak, Eunsung Lee^{1,*}
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- ORG.N.P-305 Synthesis of Skullcapflavone II, a polymethoxylated flavone isolated from *Scutellaria baicalensis*
Jisu Yoo, Sangku Lee^{1,*}
Chungbuk National University, Korea
¹*KRIBB, Korea*
- ORG.N.P-306 Rhodamine based fluorescent probe as acid sensor
Jinsung Tae*, Yoon Jeong Lee
Department of Chemistry, Yonsei University, Korea
- ORG.N.P-307 Linear-Shaped High-Efficiency Thermally Activated Delayed Fluorescence Emitters with Deep-Blue Color Coordinates
Youngnam Lee, Jong-in Hong
Division of Chemistry, Seoul National University, Korea
- ORG.N.P-308 Practical Synthesis of Norbixin and Its Ethyl Ester using Bromoacetate and Julia-Kocienski Olefination Protocol
Aleksei Golikov, Sangho Koo
Department of Chemistry, Myongji University, Korea
- ORG.N.P-309 Heterocycle Compounds Generation by using Mn(III)/Co(II)Catalyzed Oxidative Deacetylation
Yifan Zheng, Sangho Koo^{1,*}
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- ORGN.P-310 A Study on the Synthesis of Phytofluene Using Julia-Koicinski Olefination and Wittig reaction
Hyein Kim, Chanyoung Boo, Sangho Koo
Department of Chemistry, Myongji University, Korea
- ORGN.P-311 Fast Assembly and High-Throughput Screening of Structure and Antioxidant Relationship of Carotenoids
Gaosheng Shi, Sangho Koo^{1,*}
Department of Energy Science and Technology, Myungji University, Korea
¹*Department of Chemistry, Myongji University, Korea*
- ORGN.P-312 Mechanism and Governing Factors of the Sequential Photon-Electron-Photon Catalytic Borylation of Aryl Bromides
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²*Chemical Engineering and Materials Science, Ewha Womans University, Korea*
- ORGN.P-313 Site-Selective Alkylation and Acylation of Benzoxazinones with 1,4-Dihydropyridines
Yujung Byun, In Su Kim
College of Pharmacy / Department of Pharmacy, Sungkyunkwan University, Korea
- ORGN.P-314 Annulation of Azobenzenes using Vinylene Carbonate to Synthesize (2H)-Indazoles and Dihydrocinnolinones with Rh(III) Catalysis
Minseo Park, In Su Kim
College of Pharmacy / Department of Pharmacy, Sungkyunkwan University, Korea
- ORGN.P-315 C-H Hydroxyalkylation and Oxidative cyclization of Quinazolinone moiety under Ruthenium(II) Catalyst
Junghyea Moon, In Su Kim
College of Pharmacy / Department of Pharmacy, Sungkyunkwan University, Korea
- ORGN.P-316 C-H Amidation of Phthalazinone with Dioxazolones under Rh(III)-Catalysis
Suho Kim, In Su Kim
College of Pharmacy / Department of Pharmacy, Sungkyunkwan University, Korea
- ORGN.P-317 Highly Selective Electrogenerated Chemiluminescence Chemodosimeter for Sulfide Enabled by Hierarchical Reactivity
Kyoung-Rok Kim, Jong-in Hong
Division of Chemistry, Seoul National University, Korea
- ORGN.P-318 Synthesis of TKX-50 via a Protected Diazidoglyoxime Intermediate
Heun-Jong Ha, Sugyeong Kim, Kuktae Kwon¹, SeungHee Kim¹, Chang-Woo Cho
Department of Chemistry, Kyungpook National University, Korea
- ORGN.P-319 An electrochemiluminescent sensor based on cyclometalated-iridium(III) complex bearing Cu-DPA for selective turn-on detection of homocysteine
Ching-Chun Su, Jong-in Hong^{1,*}
Department of Chemistry, Seoul National University, Taiwan
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- ORGN.P-320 Copper-Catalyzed Enantiotopic-Group-Selective Allylation of *gem*-Diborylalkanes
Seung Hwan Cho^{*}, MinJae Kim¹
Department of Chemistry, Pohang University of Science and Technology, Korea
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- ORGN.P-321 Kinetic Resolution of α -Silyl-Substituted Allylboronate Esters via Chemo- and Stereoselective Allylboration of Aldehydes
Yongsuk Jung, Seung Hwan Cho
Department of Chemistry, Pohang University of Science and Technology, Korea
- ORGN.P-322 Carbaporphyrin Dimers that Bear a Rigid Naphthalene Motif as an Internal Strap
Jung-Ho Hong, Dong-gyu Cho
Department of Chemistry, Inha University, Korea
- ORGN.P-323 Tuned Cd²⁺ Selectivity: Showcase of Electronic and Regio-Effect of π -Extended Di-2-Picolylamine-Substituted Quinoline-Based Tolans
Min-Sung Ko, Dong-gyu Cho
Department of Chemistry, Inha University, Korea
- ORGN.P-324 Highly Selective, Sensitive and Reusable Colorimetric Chemosensor for Naked-eye Detection of Hydrogen Sulfide under Versatile Conditions
Na Young Cho, Byeong M. Oh, Jong Hyun Kim
Department of Molecular Science and Technology, Ajou University, Korea
- ORGN.P-325 CuPC-based Synergist for Blue Color Photoresist
Eun Hye Lee, Byeong M. Oh, Na Young Cho, Jong Hyun Kim
Department of Molecular Science and Technology, Ajou University, Korea
- ORGN.P-326 Room Temperature *N*-Formylation of Secondary Amines using Methanol as a C₁ Source Catalyzed by Reusable Bimetallic AuPd-Fe₃O₄ Nanoparticles
Sabyuk Yang, Byeong Moon Kim
Department of Chemistry, Seoul National University, Korea
- ORGN.P-327 pH-sensitive Organic Dye and its Application as Security Ink for Information Encryption on Paper
Won-Sik Han^{*}, Yeeun Lee
Department of Chemistry, Seoul Women's University, Korea
- ORGN.P-328 Adducts of perfluorohexyl ethanol with ethylene oxide were characterized by spectroscopic methods

- and the interfacial tensions of the adducts were measured in terms of the number of EO units.
Myoung-Hoon Kim, Eun Sil Kim¹, Surk-Sik Moon^{2,*},
 Byeong Jo Kim³, Hyun-chul Kang⁴, Chan Kyu Kwak⁴,
 Won-Jun Jeong⁴
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- ORG.N.P-329 Effects of Subtle Receptor Modifications on the Affinities and Selectivities for Binding Chiral Guests
Geunmo Song, Kyu-Sung Jeong
Department of Chemistry, Yonsei University, Korea
- ORG.N.P-330 Liquid Phase Synthesis of Peptide Nucleic Acid Trimers and their Assembly on MBHA resin of Purine Rich gamma PNA Oligomer Sequence
Alagarsamy Periyalagan, In seok Hong^{1,*}
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- ORG.N.P-331 Pd-Catalyzed Aerobic Benzannulation of Furans and Pyrroles with Alkynes
Jia Seo, Jung Min Joo^{1,*}
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- ORG.N.P-332 Helix-to-Helix Interactions between Carbazole-Pyridine Hybrid Foldamers
Hye Jin Jang, Kyu-Sung Jeong
Department of Chemistry, Yonsei University, Korea
- ORG.N.P-333 Study for Synthesis and Degradation of Photo-Cleavable Polymers via ROMP from Structurally Different *ortho*-Nitrobenzyl Esters
Bon Woo Koo, Dopil Kim, Min Kim, Cheoljae Kim
Department of Chemistry, Chungbuk National University, Korea
- ORG.N.P-334 Renewable Catalytic Reaction: Conversion of Carbohydrates to 2,5-Diformylfuran
Kihyuk Sung, Hye-Young Jang^{1,*}
Department of Energy Systems Research, Ajou University, Korea
¹*Department of Chemistry, Ajou University, Korea*
- ORG.N.P-335 Synthesis and photophysical properties of thiophen-modified methyl salicylate derivatives
Nam wook Kim, Intae Kim^{1,*}, Jun-Gill Kang^{2,*}
Department of Chemistry, KWANG WOON university, Korea
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- ORG.N.P-336 A study on the characteristics of peptide coupling reaction using Bts-based gamma PNA monomers
Jiseon Kim, Seonjin Kim¹, In seok Hong^{2,*}
Chemistry, Kongju National University, Korea
¹*Kongju National University, Korea*
²*Department of Chemistry, Kongju National University, Korea*
- ORG.N.P-337 ZnMe₂-Mediated, Direct Alkylation of Electron-Deficient N-Heteroarenes with 1,1-Diborylalkanes: Scope and Mechanism
Woohyun Jo, Seung Hwan Cho
Department of Chemistry, Pohang University of Science and Technology, Korea
- ORG.N.P-338 Methoxide as Metal-free Catalyst for the Synthesis of Pyrido[1,2-*a*]indolones
Sun-a Park, Juhyun Kim
Department of Chemistry, Gyeongsang National University, BK 21 FOUR, Research Institute of Natural Science, Korea
- ORG.N.P-339 Access to Fused Pyrrolidines bearing a Quaternary Carbon via Pd-Catalyzed [3+2] Cycloaddition of Sulfamate-derived Ketimines with Trimethylenemethanes
Seoung-Mi Choi, Juhyun Kim
Department of Chemistry, Gyeongsang National University, BK21 FOUR, Research Institute of Natural Science, Korea
- ORG.N.P-340 Co^{III}-Catalyzed C-H Alkenylation and Allylation with Cyclopropenes via Sequential C-H/C-C Bond Activation
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- ORG.N.P-341 Simple and fast colorimetric detection for amphetamine type illicit drugs
Siyoung Cho, Youngmi Kim^{1,*}
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- ORG.N.P-342 Organocatalytic Asymmetric Michael Addition in Aqueous Media by a Hydrogen-Bonding Catalyst and Application for Inhibitors of GABAB Receptor: Computational DFT study for mechanism and structure.
Jae Ho Shim^{*}, Byung Kook Ahn¹, Deok-Chan Ha²
Department of Anatomy, Korea University, Korea
¹*Health and Environmental Science, Korea University, Korea*
²*Department of Chemistry, Korea University, Korea*
- ORG.N.P-343 Development of the isothiuronium salt type organic catalyst for Efficient Synthesis of Various 3,4-dihydro-2H-1,4-benzoxazines

- Sungmin Kang, Taek Hyeon Kim
School of Chemical Engineering, Chonnam National University, Korea
- ORGN.P-344 Cerium(III) triflate-catalyzed ring opening of epoxides : Synthesis of vesamicol and benzovesamicol
Min Ju Yun, Eunae Kim
Therapeutics & Biotechnology Division, Korea Research Institute of Chemical Technology, Korea
- ORGN.P-345 Mechanistic studies of the hydrolysis of carboxylic ester using Tris(2-pyridylmethyl)amine-based catalytic zinc complexes
Ji Yoon Lim, Soo Suk Lee
Department of pharmaceutical engineering, Soonchunhyang University, Korea
- ORGN.P-346 Detection of cyanide ion using novel fluorescein-containing copper(II) complex
Min Ji Kim, Ji Yoon Lim, Soo Suk Lee
Department of pharmaceutical engineering, Soonchunhyang University, Korea
- ORGN.P-347 Blue Organic Light-Emitting Diodes using 11,11-dimethyl-10-(phenylanthracen-9-yl)-11H-indeno[1,2-b]quinoline derivatives
Giwoong Han, Seung Soo Yoon^{1,*}
Chemistry, Sungkyunkwan University, Korea
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- ORGN.P-348 A Strategy for Photodynamic/Chemo Synergistic Therapy through Combination of Photosensitizer and Prodrug
Seongman Lee, Songyi Lee^{1,*}
Industry 4.0 Convergence Bionics Engineering, Pukyong National University, Korea
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- ORGN.P-349 Design and development of benzimidazole-based fluorescent probe and portable fluorescence spectrometer device for the detection of cysteine in human urine
Gyu Seong Yeom, In-ho Song, Su Jeong Park, Satish Balasaheb Nimse
Institute of Applied Chemistry and Department of Chemistry, Hallym University, Korea
- ORGN.P-350 Understanding [1,3]- and [3,3]-Sigmatropic Rearrangement of Chrysanthenol Core Toward the Synthesis of Xishacorene B
Bohyun Park, Kerry E. Jones¹, Nicolle A. Doering¹, Richmond Sarpong¹, Mu-Hyun Baik
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- ORGN.P-351 One-pot Synthesis of 2,5-Dimethyl-3,4-diphenylcyclopent-2-en-1-one from 3-Pentanone and Benzaldehyde in Deep Eutectic Solvents
Jeong Seob Byeon, Yeong-Joon Kim
Department of Chemistry, Chungnam National University, Korea
- ORGN.P-352 Boron-containing Multi-Cyclic Fluorescent Materials : Synthesis and Photophysical properties
Jinyeong Heo, Hyein Jung, Seung Soo Yoon
Department of Chemistry, Sungkyunkwan University, Korea
- ORGN.P-353 Development of Intramolecular Charge Transfer Fluorescent Sensor for Cu²⁺ based on Naphthalimide Containing Aza-Crown Ether
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- ORGN.P-354 S-Alkylation and N-Alkylation of 2-Mercapto-5-methyl-1,3,4-thiadiazole
Jeong Seob Byeon, Haena Kim, Jaehee Song¹, Yeong-Joon Kim
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- ORGN.P-355 Mechanistic Study of Gigantic Porphyrinic Cages Formation Using Mass-Spectrometry
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- ORGN.P-356 Audible Sound Controlled Pattern Generation in Blue Bottle Experiment
Ilbong Lee, Ilha Hwang^{1,*}, Kimoon Kim
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- ORGN.P-357 A fluorescent hybrid complex with a dipolar fluorophore, peptide and serum albumin: Visualization of human glioblastoma
Jong Min An, Dokyoung Kim^{1,*}
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¹*College of Medicine, Kyung Hee University, Korea*
- ORGN.P-358 Control of Cascade Reactions via Audible Sound Induced Transient Membraneless Compartments
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- ORG.N.P-359 Audible Sound-driven Transient Segregation and Patterning of Functional Supramolecular Aggregates
Shovan Kumar Sen, Seoyeon Choi¹, Ilha Hwang^{2,*}, Kimoon Kim^{3,*}
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- ORG.N.P-360 Highly Chemoselective Deoxygenation of Amine *N*-Oxides Using Hantzsch Esters as Mild Reducing
Juhyeon An, Jun Hee Lee^{1,*}
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- ORG.N.P-361 Mechanistic Investigation of Brønsted-Acid Catalyzed Diastereoselective [2 + 2] Photocycloadditions
Hyoju Choi, Bohyun Park, Matthew J. Genzink¹, Tehshik P. Yoon¹, Mu-Hyun Baik
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- ORG.N.P-362 Structural modulation of short peptides by hydrazone photoswitches
Myeongsu Jeong, Kwonjung Lee, Sangdoon Ahn^{1,*}, Sunbum Kwon¹
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- ORG.N.P-363 Highly Chemoselective Deoxygenation of *N*-Heterocyclic *N*-Oxides Under Transition Metal-Free Conditions
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- ORG.N.P-364 Diversification of quinazoline derivatives by microwave-assisted coupling reactions.
Jeong Eun Park, Jeong Seob Byeon, Eul Kgun Yum
Department of Chemistry, Chungnam National University, Korea
- ORG.N.P-365 Mechanistic Study of Ruthenium(II)-Catalyzed Regioselective C4- and C5-diamidation of Indoles
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- ORG.N.P-366 Control of Chemoselectivity of SET-Promoted Photoaddition Reactions of Fullerene C₆₀ with α -Trimethylsilyl Group-Containing *N*-Alkylglycinates Yielding Aminomethyl-1,2-dihydrofullerenes or Fulleropyrrolidines
Hannara Jang, Dae won Cho^{1,*}
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- ORG.N.P-367 Asymmetric amino acid derivative Michael Addition with Dimeric Cinchona-Based Phase Transfer Catalysts
 Keehyung Nahm^{*}, Hyunsoo Oh
Department of Chemistry, Yeungnam University, Korea
- ORG.N.P-368 1,8-Diazabicyclo[5.4.0]undec-7-ene and POCl₃ Mediated Reaction of Allyl-protected Amines for Formation of *N*-aryl-substituted Azacycles
Van Hieu Tran, Hee-Kwon Kim
Department of Nuclear Medicine, Jeonbuk National University, Korea
- ORG.N.P-369 Eugenol derived fluorescence 'turn-on' chemosensor for the nanomolar detection of Zn²⁺ ions in solution and in the live cells
Su Jeong Park, Gyu Seong Yeom, In-ho Song, Satish Balasaheb Nimse
Institute of Applied Chemistry and Department of Chemistry, Hallym University, Korea
- ORG.N.P-370 Direct Transformation of *N*-Boc-protected Amines to Amides via Isocyanate Intermediate
Van Hieu Tran, Hee-Kwon Kim
Department of Nuclear Medicine, Jeonbuk National University, Korea
- ORG.N.P-371 Synthesis and Evaluation of Novel TSPO-Hypoxia Fluorescent Probe for Detection of Glioma Tumor
Van Hieu Tran, Hee-Kwon Kim
Department of Nuclear Medicine, Jeonbuk National University, Korea
- ORG.N.P-372 Highly efficient Synthesis of Azepane-Derived β -Amino Acid
Ingyu Han, Soo Hyuk Choi^{1,*}
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- ORG.N.P-373 Iridium(NHC)-catalyzed Intramolecular Transfer Hydrogenation using Glycerol Carbonate
Yeon Joo Cheong, Mi-hyun Lee, Hee Min Byeon¹, Hye-Young Jang^{2,*}
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- ORGN.P-374 Complex Effects of Various Terminal Groups on the 12/10-helix Structure of Unnatural β -Peptides
Junyeong Jeong, Soo Hyuk Choi^{1,*}
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¹Department of Chemistry, Yonsei University, Korea
- ORGN.P-375 Photoinitiated Free-Radical Polymerization of Methyl Fluorescein Derivatives under Visible Light
Joseph Nganga, Young Jae Jung¹, JungKyu Lee^{2,*}
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- ORGN.P-376 Synthesis of Imines and Ketones via Palladium-Catalyzed Reverse-Polarity Chemistry
Seungmi Lee, Inji Shin
Department of Fine Chemistry, Seoul National University of Science & Technology, Korea
- ORGN.P-377 Generation and utilization of iodo-containing methylolithiums via continuous-flow system
Nayoung Kim, Hyune-Jea Lee, Heejin Kim
Department of Chemistry, Korea University, Korea
- ORGN.P-378 Flow Synthesis of Multi-Substituted Silanes Through Potassium *tert*-Butoxide Catalyzed Reaction of Functional Aryllithiums with Hydrosilanes
Changmo Kwak, Hyune-Jea Lee, Dong Pyo Kim^{1,*}, Heejin Kim
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¹Department of Chemical Engineering, Pohang University of Science and Technology, Korea
- ORGN.P-379 Development of Selective Electrooxidation method for Sulfoxide and Sulfone Synthesis using Solvent Effect
Jin Kyu Park, Sunwoo Lee
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- ORGN.P-380 Synthesis of beta-ketonitriles via the condensation of amide and acetonitrile
Myeong Seong Park, Jonghoon Oh, Sunwoo Lee
Department of Chemistry, Chonnam National University, Korea
- ORGN.P-381 Enantioselective Epoxidation of Aldehyde with Aryl Diazo Ester: Synthesis of Chiral Tri-Substituted Epoxide
Dong Guk Nam, Hye-Min Jeong, Do Hyun Ryu
Department of Chemistry, Sungkyunkwan University, Korea
- ORGN.P-382 Cysteine-Fluorescent Probe for Visualization of Glioblastoma
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- Korea
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- ORGN.P-383 Enantioselective Friedel-Craft Reaction of Heteroaryl Compounds with *ortho*-Quinone Methide.
Yoon Sung Cho, Do Hyun Ryu
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- ORGN.P-384 Visible-Light Initiated Enantioselective Addition of α -Aminoalkyl Radical to α , β -Unsaturated Carbonyl Compounds
Yea Suel Lee, Do Hyun Ryu^{1,*}
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- ORGN.P-385 Iridium(III)-Catalyzed Cage B(4)-Amidation Reaction of α -Carboranes with Dioxazolones: Selective Synthesis of Amidated α -Carboranes and Amidated and Methoxycarbonylated *nido*-Carboranes
Kyungsup Lee, Gi Uk Han, Phil Ho Lee
Department of Chemistry, Kangwon National University, Korea
- ORGN.P-386 Vinyl Sulfone Synthesis via Three-Component Copper-Catalyzed Decarboxylative Addition
An Seunghwan, Sunwoo Lee, Jonghoon Oh
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- ORGN.P-387 Rational design and Synthesis of a Near-infrared Probe for In Situ Imaging of OGA
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²Department of Chemistry, Korea University, Korea
³Center for Neuro-Medicine Brain Science Institute, Korea Institute of Science and Technology, Korea
- ORGN.P-388 Synthesis of 3,4-Functionalized Benzothiazines through C–H Activation
Hee Chan Noh, Chanyoung Maeng, Phil Ho Lee
Department of Chemistry, Kangwon National University, Korea
- ORGN.P-389 Investigation and Discovery of Schiff Base Derived Anticancer Prodrug in Biological Imaging and its Target Delivery
Lavanva Gopala, Min Hee Lee^{1,*}
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- ORGN.P-390 Flow-Assisted Green Synthesis of [6,4]CPPy through Serial Microreactions
Yongju Jeon, Hyune-Jea Lee¹, Heejin Kim¹
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- ORG.N.P-391 (Iminopyridine)Pd(II)-catalyzed polymerization of carbon monoxide and olefins
Yongmoon Yang, Hye-Young Jang^{1,*}
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- ORG.N.P-392 Rh(II)-Catalyzed N-H Bond Insertion Using Ene-Yne-Ketones with N-H Imines
Hojun Cho, Juhyun Kim
Department of Chemistry, Gyeongsang National University, BK21 FOUR, Research Institute of Natural Science, Korea
- ORG.N.P-393 Efficient synthesis of bicyclic benzoxaphosphole oxide heterocycles via three-component coupling reaction involving arynes, phosphites, and ketones
HeeJin Jeong, Hyo Jae Yoon, Junwon Choi^{1,*}, Seojung Han^{2,*}
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²*Chemical Kinomics Research Center, Korea Institute of Science and Technology, Korea*
- ORG.N.P-394 Supramolecular Nanomaterial Based on Redox-responsive Intracellular Assembly of Ferrocene-peptides Bioconjugates to Control Cell Fate
Gaëun Park, Ja-Hyoung Ryu
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
- ORG.N.P-395 Microwave-assisted metal-catalyzed diversification of pyrrolo[3,2-d]pyrimidines.
Jeong Seob Byeon, Yeong-Joon Kim, Eul Kgun Yum
Department of Chemistry, Chungnam National University, Korea
- ORG.N.P-396 Fluorescent probes targeting specific cellular organelle for simultaneous monitoring of viscosity and nitric oxide
Sun Young Park, Min Hee Lee
Department of Chemistry, Sookmyung Women's University, Korea
- ORG.N.P-397 Development of NAD(P)H-activable fluorescent probes for real-time monitoring in living cells
Yujin Cha, Sun Young Park, Min Hee Lee
Department of Chemistry, Sookmyung Women's University, Korea
- ORG.N.P-398 Rh(III)-Catalyzed Sequential C-H Activation and Cyclization from *N*-Methoxyarylamides and 3-Diazooindoles for the Synthesis of Isochromenoindolones
Hee Chan Noh, Gi Hoon Ko, Phil Ho Lee
Department of Chemistry, Kangwon National University, Korea
- ORG.N.P-399 Strategies for ¹⁸F Radiolabeling of Covalent Organic Frameworks (COFs) for Multimodality Imaging
Wonhyeok Yun, Ju Gyeong Jeong¹, Kyo Chul Lee^{2,*}, Dong Wook Kim
Department of Chemistry, Inha University, Korea
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- ORG.N.P-400 Development of endogenous H₂S-mediated cancer cell-specific gemcitabine activation fluorescent probe and its application
Shin A Yoon, Yujin Cha¹, Min Hee Lee
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- ORG.N.P-401 Pd(II)-Catalyzed *N*-Carbonylative Cross-Coupling Reaction of Sulfonimines with Aryl, Heteroaryl, and Alkenyl Halides Using Tungsten Hexacarbonyl as Carbon Monoxide Source
Hee Jin Yang, Gi Uk Han, Phil Ho Lee
Department of Chemistry, Kangwon National University, Korea
- ORG.N.P-402 Selective B(5,8,9)-Triarylation Reaction of *o*-Carboranes via Determination of the Sequence of Introduction of Aryl Groups into B(4)-Acylamino-*o*-carboranes
Tae Hyeon Kim, Kyungsup Lee, Phil Ho Lee
Department of Chemistry, Kangwon National University, Korea
- ORG.N.P-403 Sequential *N*-Arylation and Intramolecular Imine Addition Reaction of Arynes with Indoloazomethine Ylides for the Synthesis of Thiadiazepine Derivatives
Tae Hyeon Kim, Kyungsup Lee, Phil Ho Lee
Department of Chemistry, Kangwon National University, Korea
- ORG.N.P-404 Pinched Tube Flow Reactor with In-Line mixing for Applicable to Mass Production
Yea seul Jang, Chan Pil Park
Graduate School of Analytical Science and Technology, Chungnam National University, Korea
- ORG.N.P-405 *gem*-Dichlorocyclopropane Synthesis using Inorganic Salt Powder
Seula Yun, Chan Pil Park
Graduate School of Analytical Science and Technology, Chungnam National University, Korea
- ORG.N.P-406 Metal-transition catalyzed cyclization reaction leading to oxacyclic ring systems with ester functional group
Juhui Lee, Le Thuy Quynh¹, Chang Ho Oh
Department of Chemistry, Hanyang University, Korea
¹*Chemistry department, Hanyang University, Korea*
- ORG.N.P-407 **[Withdrawal]** Cobalt-Catalyzed Intermolecular

- C(sp³)-H Amidation of Unactivated Hydrocarbons
Jeonghyo Lee, Seongho Jin¹, Dongwook Kim²,
 Soon Hyeok Hong¹, Sukbok Chang¹
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- ORGN.P-408 Generation and functionalization of α -anionic tetrahydropyran in flow
Dongyong Kim, Hyune-Jea Lee, Heejin Kim
Department of Chemistry, Korea University, Korea
- ORGN.P-409 Electrochemical Oxidation of 5-Hydroxymethylfurfural (HMF)
Kookhee Kang, Jong Min Park, Chan Pil Park
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 Chungnam National University, Korea*
- ORGN.P-410 Synthesis of various benzofuran-2,3-diones and its derivatives
Seunghwan Ham, Chang Ho Oh
Department of Chemistry, Hanyang University, Korea
- ORGN.P-411 Phenotype-based Screening Discovered a Benzopyran-embedded Microtubule Inhibitor as an Anti-neuroinflammatory Agent
Jaeseok Lee, Jongmin Park, Seung Bum Park^{1,*}
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 Korea*
¹*Division of Chemistry, Seoul National University, Korea*
- ORGN.P-412 Continuous Flow Reaction Based on Silica Gel and Magnetic Bead Catalyst
Jong Min Park, Yea Seul Jang, Chan Pil Park
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 Chungnam National University, Korea*
- ORGN.P-413 Ir(NHC) catalyzed Intermolecular Cross-Coupling and intramolecular cyclization of alcohols
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 Korea*
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- ORGN.P-414 Merging NiH Catalysis and Inner-Sphere Metal-Nitrenoid Transfer for Hydroamidation of Alkynes
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 Institute for Basic Science, Korea*
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 Science and Technology, Korea*
- ORGN.P-415 Synthetic optimization for N-nitration reaction of Pyrazole
Kuktae Kwon^{*}, Hae-Wook Yoo, So Jung Lee,
 SeungHee Kim
Agency for Defense Development, Korea
- ORGN.P-416 Synthesis and Characterization of Stable Ni(II) Radical Cation of Diazatriphenylene Embedded Corrole Analogue
Chang Hee Lee^{*}, Srinivas Samala¹
*Department of Chemistry & Biochemistry, Kangwon
 National University, Korea*
¹*Chemistry, Kangwon National University, Korea*
- ORGN.P-417 Regioselective and Chemodivergent Synthesis of Azulenolactones and Azulenolactams from Rh-Catalyzed Reactions of Azulenecarboxamides with Sulfoxonium Ylides
Hanjoong Kim, Hee Chan Noh, Phil Ho Lee
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 Korea*
- ORGN.P-418 Synthesis of Quinolizinones from Rh-Catalyzed C-H Activation Reaction of 2-(1-Cycloalkenyl)pyridines with Diazo Meldrum's Acids
Hanjoong Kim, Kyungsup Lee, Phil Ho Lee
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 Korea*
- ORGN.P-419 Synthesis of diversely meta-substituted 3-(2-aminoaryl)pyridine via remodelling of (aza)indoles
Sihyeong Yi, Seung Bum Park
Division of Chemistry, Seoul National University, Korea
- ORGN.P-420 Ionic Liquid Functionalized Calix Arene as a Phase Transfer Catalyst for Nucleophilic Fluorination
Minji Nam, Su Jin Park, Geunhyuck Bak, Dong Wook Kim
Department of Chemistry, Inha University, Korea
- ORGN.P-421 Lysosome localised lipid and protein oxidation to perturb autophagy after dysfunction of lysosome and its fusion
Mingyu Park, Jung Seung Nam, Taehyun Kim¹,
 Duyoung Min, Taiho Park¹, Tae-Hyuk Kwon
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 Science and Technology, Korea*
¹*Department of Chemical Engineering, Pohang University
 of Science and Technology, Korea*
- ORGN.P-422 Relief of Excited-State Antiaromaticity Enables Single-Benzene White Emitters
Younghun Kim, Heechan Kim, Dongwhan Lee
Department of Chemistry, Seoul National University, Korea
- ORGN.P-423 Tricationic Pyrrolidinium Salts and Their Thermal Properties
Jongchan Shin, Minjae Lee
*Department of Chemistry, Kunsan National University,
 Korea*
- ORGN.P-424 Cu(NHC)-catalyzed cyclization of propargyl amines and CO₂
Seong Eon Kim, Hye-Young Jang^{1,*}

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- ORG.N.P-425 Intermolecular double aza-Prins cyclization: stereoselective synthesis of 1,6-diazecanes
Gyeongun Kim, Jaekyun Lee¹, Hwasun Yang², Sun-Joon Min^{3,*}, Taek Kang^{4,*}, Yong Seo Cho⁴
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- ORG.N.P-426 π -bridge effect by adjusting the location and number of thiophenes.
Jinhan Lee, Won Ki Lee¹, Youngeup Jin
Engineering Chemistry, Pukyong National University, Korea
¹Polymer Engineering, Pukyong National University, Korea
- ORG.N.P-427 A Straightforward Synthesis of 2-Azetidinyl Pyridine Using Borane as a Protecting Group for Pyridine
Hwasun Yang, Taek Kang^{1,*}
Department of Chemistry, Korea University, Korea
¹Brain Science Institute, Korea Institute of Science and Technology, Korea
- ORG.N.P-428 Mechanochemical Fluorination of Unactivated C(sp³)-H Bond
Sehye Min, Soon Hyeok Hong
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- ORG.N.P-429 Deep HOMO using Cyano group instead of Fluoro group in OSCs.
Jinhan Lee, Won Ki Lee¹, Youngeup Jin
Engineering Chemistry, Pukyong National University, Korea
¹Department of Polymer Engineering, Pukyong National University, Korea
- ORG.N.P-430 Development of N⁴-Phenyl quinazoline-4,6-diamine as a fluorophore and its application for the formaldehyde detection and cellular bioimaging
Woojeong Lim, Eunha Kim^{1,*}, Jongmin Park^{2,*}
Department of Chemistry, Kangwon National University, Korea
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²Department of Chemistry, Kangwon National University, Korea
- ORG.N.P-431 Stereoselective Dehydroxylative Cross Coupling via α -Aziridinyl Intermediates.
Hyun-Joon Ha¹, Jala Ranjith¹
Department of Chemistry, Hankuk University of Foreign Studies, Korea
¹Department of chemistry, Hankuk University of Foreign Studies, India
- ORG.N.P-432 Outpacing Intramolecular Rearrangement through Enhanced Mixing in High-Resolution 3D-Printed Metal Flow Microreactor
Hyun-Jea Lee, Heejin Kim, Dong Pyo Kim^{1,*}
Department of Chemistry, Korea University, Korea
¹Department of Chemical Engineering, Pohang University of Science and Technology, Korea
- ORG.N.P-433 Highly Efficient and Robust Iron Catalytic System for Intramolecular C(sp₃)-H Amidation Leading to γ -Lactams
Jeonguk Kweon, Sukbok Chang
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- ORG.N.P-434 Visible-Light Photocatalysis of Hydroxamates for Intramolecular C-H Amidation
Hoimin Jung, Hyejun Keum, Jeonguk Kweon, Sukbok Chang
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- ORG.N.P-435 Catalytic Enantioselective 1,3-Dipolar Cycloadditions : Synthesis of 2-Pyrazolines Using Chiral Boron-Based Lewis Acid
Kyung Yee Park, Do Hyun Ryu^{1,*}
Chemistry, Sungkyunkwan University, Korea
¹Department of Chemistry, Sungkyunkwan University, Korea
- ORG.N.P-436 Modular Tuning of Electrophilic Reactivity of Iridium Nitrenoids for the Intermolecular Selective α -Amidation of β -Keto Esters: A New Way to Make α -Aminocarbonyls
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Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
¹Center for Catalytic Hydrocarbon Functionalization, Institute for Basic Science, Korea
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- ORG.N.P-437 Synthetic Studies on Functionalized Bridged Oxabicycles via Prin-type Cyclization
Do Hoon Cha, Sun-Joon Min^{1,*}
Department of Applied chemistry, Hanyang University, Korea
¹Dept of Chemical & Molecular Eng/Applied Chemistry, Hanyang University, Korea
- ORG.N.P-438 Design and synthesis of battery electrolyte additives with dioxolone derivatives for lithium-ion batteries
SeoYoung Jeong, Sung You Hong
Chemistry, Ulsan National Institute of Science and Technology, Korea
- ORG.N.P-439 A Benzorazol-Based Dual-Excitation and Dual-Emission Probe: Quantitative Fluorescence Imaging of NAD(P)H Quinone Oxidoreductase-1 in Organ

and Tumor Tissues

Yun Jae Yang, Kyo Han Ahn
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ORGN.P-440 Borane-Catalyzed C-N Bond Cleavage Enabled by Silylium-Induced beta-Nitrogen Elimination

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ORGN.P-441 A ratiometric fluorescent sensor based on host-guest interaction of self-assembled pyrenyl-nanofibrils with γ -cyclodextrin for detection of α -amylase activity in urine

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ORGN.P-442 Protamine-induced supramolecular self-assembly of TPE derivatives for sensitive detection of trypsin activity

HyeBin Song, Haemin Choi, Seoung Ho Lee
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ORGN.P-443 Economical route to 2-amido-3-bromobenzo[b]thiophenes via ynamide formation and Selectfluor-mediated oxidative bromocyclization

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ORGN.P-444 Conformation and Permeability Study of Hydroxyl Side Chain-containing Cyclosporin O Derivatives

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ORGN.P-445 Synthesis and Revision of Stereochemistry for Xyloglactone B and C through Asymmetric Allenolate Gamma-addition

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ORGN.P-446 Enantioselective Synthesis of (-)-Avenaciolide from Allenyl Glyoxylate via Direct and Stepwise Cyclocarbonylation

Zhang Aimin, Sehui Yang, Suh Young Yu, Jimin Kim
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ORGN.P-447 The Lightest Red Emitter: Electronic Origin of Large Spectral Shift and Structural Diversification into Full-Color Single-Benzene Fluorophores

Heechan Kim, Younghun Kim, Woojin Park¹, Cheol Ho Choi¹, Dongwhan Lee
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ORGN.P-448 Site-selective C-H Functionalization of Heteroarene N-Oxides using a Traceless Nucleophile

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ORGN.P-449 A Highly Stable Red-Emissive Ratiometric Sensor for Monitoring of β -galactosidase Activity in Cancer Models

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ORGN.P-450 Cancer selective azo dyes using two-photon photodynamic therapy in human colon tissue

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ORGN.P-451 Silyloxymethanesulfinate as a sulfoxylate equivalent for the modular synthesis of sulfones and sulfonyl derivatives

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ORGN.P-452 A two-photon mitochondrial sodium ion sensor for live tissue imaging

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ORGN.P-453 Dithiolane containing amino acid as a reversible labeling handle

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ORGN.P-454 Synthesis of Cyanofornates via DAST-mediated Beckmann Fragmentation

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ORGN.P-455 Amide-bond formation by activation of ester with hypervalent iodine(III) reagent

Eunsol Choi, Hyo-Jun Lee
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- Korea
- ORG.N.P-456 Synthesis and biological activity of N2-Arylindazol-3-one derivatives.
Sumin Kim, Hakwon Kim, Kyungmin Kim, Heejae Choi
Department of Applied Chemistry, Kyung Hee University, Korea
- ORG.N.P-457 Improvement of the reactivity of the acyl azides to synthesize the cyclic acyl amidines
Dong Geun Jo, Seewon Joung
Department of Chemistry, Mokpo National University, Korea
- ORG.N.P-458 Direct Access to Carbamates via Catalytic Reductive Amination
Woohee Kim, Han Yong Bae
Department of Chemistry, Sungkyunkwan University, Korea
- ORG.N.P-459 Beta-Sulfido-SuFEx Hubs via Superbase Catalysis "on-Water"
Sunbu Lee, Jin Hyun Park, Han Yong Bae
Department of Chemistry, Sungkyunkwan University, Korea
- ORG.N.P-460 Organic Photoredox Catalysis for Deaminative Coupling Reactions
Byeong Jun Koo, Han Yong Bae
Department of Chemistry, Sungkyunkwan University, Korea
- ORG.N.P-461 Ni-catalyzed stereospecific substitution to form quaternary stereocenters
Seo Yeon Kim, Da Seul Lee¹, Eun Jin Cho¹
Chemistry, Chung-Ang University, Korea
¹*Department of Chemistry, Chung-Ang University, Korea*
- ORG.N.P-462 Visible-Light-Induced 1,3-Difunctionalization of [1.1.1]Propellane: Pyridylation with N, P centered and CF₃ Radicals Using N-Aminopyridinium Salts
Wonjun Choi, Sungwoo Hong
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- ORG.N.P-463 Synergistic Effects of Boron and Oxygen Interaction Enabling Nickel-Catalyzed Exogenous Base-Free Stereoselective Arylvinylation of Alkynes through Vinyl Transposition
Da Seul Lee, Hoimin Jung¹, Eun Jin Cho
Department of Chemistry, Chung-Ang University, Korea
¹*Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea*
- ORG.N.P-464 Ni-Catalyzed trans-Carboamination across Internal Alkynes to Access Multi-Functionalized Indoles
Shrikant Tambe, Eun Jin Cho^{1,*}
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- ORG.N.P-465 Cu-Catalyzed Diastereoselective Reductive Cyclization of Allene-Tethered Ketoamines
Ashraf Awaiz, Cheol Hyeon Ka¹, Shrikant Tambe², Eun Jin Cho¹
Department of Chemistry, Chung-Ang University, Pakistan
¹*Department of Chemistry, Chung-Ang University, Korea*
²*Department of Chemistry, Chung-Ang University, India*
- ORG.N.P-466 Synthesis of Carbamoyl Fluorides via a Selective Fluorinative Beckmann Fragmentation
Jinwoo Song, Hee Nam Lim^{1,*}
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¹*Department of Chemistry and Biochemistry, Yeungnam University, Korea*
- ORG.N.P-467 The effects of molecular weight and cross-linking density on hardness of PEG hydrogel
HyeonBi Jung, Se Won Bae
Department of Chemistry, Jeju National University, Korea
- ORG.N.P-468 Total Syntheses of Iheyamines A and B via Cyanide-Catalyzed Imino-Stetter Reaction
Jiye Jeon, Jeongmin Jeon, Cheol-Hong Cheon
Department of Chemistry, Korea University, Korea
- ORG.N.P-469 Total Syntheses of 5,8'-Coupled Naphthylisoquinoline Alkaloids via Atroposelective Coupling Reaction Using an Internal Central Chirality
Young-In Jo, Cheol-Hong Cheon
Department of Chemistry, Korea University, Korea
- ORG.N.P-470 Synthetic Studies towards Yohimbine Alkaloids
Jihyun Kang, Eunjoon Park¹, Myunghoon Jeong¹, Cheol-Hong Cheon¹
Chemistry, Korea University, Korea
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- ORG.N.P-471 Total Synthesis of Ngouniensine via Base-Catalyzed Indolization
Jinjae Park, Taewook Kim¹, Cheol-Hong Cheon
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- ORG.N.P-472 Atroposelective Total syntheses of 7,8'-Coupled Naphthylisoquinoline Alkaloids
Taelyn Kim, Young-In Jo, Cheol-Hong Cheon
Department of Chemistry, Korea University, Korea
- ORG.N.P-473 Base-Catalyzed Synthesis of 2-(2-Nitroaryl)indole-3-Acetic Acid Derivatives
Juhyeon Park, Cheol-Hong Cheon
Department of Chemistry, Korea University, Korea
- ORG.N.P-474 The characterization of the PEG hydrogels in various buffer solutions
Jiyun Kim, Se Won Bae^{1,*}
Department of Chemistry, Jeju National University, Korea
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- ORG.N.P-475 Efficient Synthesis of Acetaminophen Using

- Continuous Flow Chemistry
Yoona Kang, Se Won Bae
Department of Chemistry, Jeju National University, Korea
- ORGN.P-476 Platinum-catalyzed ipso-Aryl Migration: Kinetic Evidence and Computational Analysis for the Occurrence of Diels-Alder Reaction
Alina Dzhaparova, Jin Kyoong Park
Department of Chemistry, Pusan National University, Korea
- ORGN.P-477 Divergent Electrochemical [2+2+2] Cyclotrimerizations: Electron-mediated or Ni-catalyzed Cyclotrimerization?
Sagar Arepally, Jin Kyoong Park^{1,*}
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- ORGN.P-478 Design and synthesis of malononitrile-based fluorescent nucleosides and application to fluorogenic labeling of 5-formyluracil
Hayeon Choi, Ki Tae Kim
Department of Chemistry, Chungbuk National University, Korea
- ORGN.P-479 Heterogeneous photocatalysis with graphitic carbon nitride for rearrangement of *N*-alkoxypyridinium salts
Minwoo Choi, Gyu-Yong Song, Hyunjin Kim^{1,*}
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- ORGN.P-480 Photoinduced Pd-Catalyzed Formal Mizoroki–Heck Coupling of Unactivated Alkyl Chlorides
Geun Seok Lee, Soon Hyeok Hong
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- ORGN.P-481 Selective Total Syntheses of Attenols A and B via Gold catalyzed spiroketalization.
Ji Soo Shin, Hee-Yoon Lee
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- ORGN.P-482 Fluorescent sensor array based on Kaleidoscopic indolizine skeleton for glucose level monitoring in tears assisted by machine learning algorithm
Hyungi Kim, Eunha Kim
Department of Molecular Science and Technology, Ajou University, Korea
- ORGN.P-483 Synthesis and anti-inflammatory activity of $\Delta^{7(8)}$ -5 α -cholesten-3-ol and $\Delta^{7(8)}$ -5 β -cholesten-3-ol
Dowon Yoon, Jung Woong Kim, Hakwon Kim^{1,*}
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- ORGN.P-484 Substrate-controlled chemo-/enantioselective synthesis of α -benzylated enals and chiral cyclopropane-fused 2-chromanone derivatives
Sunghyeon Ryu, Jung Woon Yang
Department of Energy Science, Sungkyunkwan University, Korea
- ORGN.P-485 Total synthesis of Conidiogenones
Hee-Yoon Lee^{*}, Jiheon Kim
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- ORGN.P-486 Silaborative Assembly of Allenamides and Alkynes: Highly Regio- and Stereoselective Access to Trimetallic Skipped Dienes
Tapas Ranjan Pradhan, Jin Kyoong Park^{1,*}
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- ORGN.P-487 Mitochondrial Targeting H₂S_n-Mediated Theranostic Agent for Inflammatory Disease
Ilwha Kim, Jungyun Kim, Yuvin Noh, Byungkook Kim, Saehee Rha, Zehra Zunbul, Minhyeok Choi, Youmi Choe, Jongseung Kim
Department of Chemistry, Korea University, Korea
- ORGN.P-488 Visible-Light Induced C(sp²)-H Amidation with an Aryl-Alkyl σ -Bond Relocation by Redox-Neutral Radical-Polar Crossover
HyeYun Keum, Hoimin Jung, Jiwoo Jeong, Dongwook Kim¹, Sukbok Chang
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- ORGN.P-489 Radical Hydrodifluoromethylation of Alkenes via an Electroreductively Triggered Two-Pronged Approach
Seonyoung Kim, Hyunwoo Kim
Department of Chemistry and Nanoscience, Ewha Womans University, Korea
- ORGN.P-490 An 1,3-C-(sp²)-to-N silyl migration of aniline derivatives for the generation of 3-aminobenzynes intermediate
Young-Kyo Jeon, Won-SuK Kim^{1,*}
Department of Chemistry and Nano Science, Ewha Womans University, Korea
¹*Chemistry Department of Nano-Science, Ewha Womans University, Korea*
- ORGN.P-491 A highly selective fluorescent chemosensor using isothiocyanate functionality to detect H₂S
Jaekyong Kim, Doo OK Jang
Department of Chemistry, Yonsei University, Korea
- ORGN.P-492 Complementary Reactivity in Selective Radical Processes: Electro-chemistry of Oxadiazolines to Quinazolinones
Ho Seong Hwang, Eun Jin Cho

- Department of Chemistry, Chung-Ang University, Korea*
- ORG.N.P-493 α -L-fucosidase triggered cellular senescence imaging in vivo
Zehra Zunbul, Ilwha Kim¹, Yuvin Noh¹, Byungkook Kim¹, Jungryun Kim¹, Youmi Choe¹, Minhyeok Choi¹, Saehee Rha¹, Jongseung Kim¹
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- ORG.N.P-494 Copper-Catalyzed Direct C–H Alkylation of Polyfluoroarenes by Using Hydrocarbons as an Alkylating Source
Weilong Xie, Joon Heo¹, Dongwook Kim², Sukbok Chang¹
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¹Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
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- ORG.N.P-495 Electrolytic C–H Oxygenation via Oxidatively Induced Reductive Elimination in Rh Catalysis
Seongho Jin, Jinwoo Kim¹, Dongwook Kim¹, Jung-Woo Park¹, Sukbok Chang
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¹Center for Catalytic Hydrocarbon Functionalizations, Institute for Basic Science, Korea
- ORG.N.P-496 Visible-light Photoredox Catalyzed Pinacol coupling in the Water
Hyunho Huh, Sang Kook Woo^{1,*}, Yejin Lee²
Organic chemistry, University of Ulsan, Korea
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- ORG.N.P-497 Photoredox-Catalyzed Hydroalkoxymethylation of Various Michael acceptors and Alkoxyethyl Radicals
Ran Hui Kim, Sang Kook Woo
Department of Chemistry, University of Ulsan, Korea
- ORG.N.P-498 Helical structures of nylon-like oligomers containing 1,2-diamine and 1,2-dicarboxylic acid residues with a five-membered ring constraint
Soo Hyuk Choi^{*}, Sunglim Choi
Department of Chemistry, Yonsei University, Korea
- ORG.N.P-499 A Novel Bifunctional Turn-ON Fluorogenic Molecular Rotor for Lifetime Imaging of the Endoplasmic Reticulum Microviscosity during Reticulophagy
Yuvin Noh, Ilwha Kim, Jungryun Kim, Youmi Choe, Saehee Rha, Byungkook Kim, Minhyeok Choi, Zehra Zunbul, Jongseung Kim
Department of Chemistry, Korea University, Korea
- ORG.N.P-500 NiH-Catalyzed Alkene Isomerization-Hydroamination: A Strategy for Remote C(sp³)-H Amination with μ -Selectivity
Huiyeong Seo, Sungwoo Hong
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- ORG.N.P-501 Divergent Synthetic Approach of Sulfinates with Pyridinium Salts Based on Radical versus Ionic Pathways
Euna You, Sungwoo Hong
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- ORG.N.P-502 MDM2-Related Cellular Apoptosis Provoked by Clusterization-Triggered Emission Spiropolymer Therapeutics
Youmi Choe, Zehra Zunbul, Minhyeok Choi, Byungkook Kim, Yuvin Noh, Ilwha Kim, Jungryun Kim, Saehee Rha, Jongseung Kim
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- ORG.N.P-503 Synthesis and characterizations benzimidazolium salts and their thermal properties
Seunghwan Kim, Minjae Lee^{1,2}
Kunsan National University, Korea
¹Department of Chemistry, Kunsan National University, Korea
- ORG.N.P-504 Selective tumor imaging by combining viscosity-restricted intramolecular motion and mitochondrial targeting
Jungryun Kim, Ilwha Kim, Yuvin Noh, Saehee Rha, Minhyeok Choi, Byungkook Kim, Zehra Zunbul, Youmi Choe, Jongseung Kim
Department of Chemistry, Korea University, Korea
- ORG.N.P-505 Riboflavin-Catalyzed Fluorogenic Photooxidation for Nucleic Acid Sensing
Hokyung Kim, Ki Tae Kim^{1,*}
Chemistry, Chungbuk National University, Korea
¹Department of Chemistry, Chungbuk National University, Korea
- ORG.N.P-506 Acidochromic and Photochromic Reaction of Some Spiropyran-sulfonate Derivatives
Go Eun Choi, Eun Ju Shin
Department of Chemistry, Suncheon National University, Korea
- ORG.N.P-507 Synthesis of Unsymmetrical 3,5-Disubstituted-2-Pyridones via Protecting Group-Controlled Regioselective Functionalization in Batch and Flow Chemistry
Yong-Ju Kwon, Won-SuK Kim^{1,*}
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¹Chemistry Department of Nanoscience, Ewha Womans

- University, Korea
- ORGN.P-508 Targeting VEGFR associated glioblastoma tumor models using ultrasound activatable anti-angiogenic sonosensitizer
Saehee Rha, Youmi Choe, Ilwha Kim, Jungryun Kim, Yuvin Noh, Byungkook Kim, Minhyeok Choi, Zehra Zunbul, Jongseung Kim
Department of Chemistry, Korea University, Korea
- ORGN.P-509 Weak Base-Promoted Selective Rearrangement of Oxaziridines to Amides via Visible-Light Photoredox Catalysis
Sehoon Park, Ran Hui Kim, Jaehoon Jung, Sang Kook Woo
Department of Chemistry, University of Ulsan, Korea
- ORGN.P-510 Nanoliposome-encapsulated ratiometric fluorescent probe for detecting peroxynitrite flux
Minhyeok Choi, Youmi Choe, Ilwha Kim, Jungryun Kim, Yuvin Noh, Byungkook Kim, Saehee Rha, Zehra Zunbul, Jongseung Kim
Department of Chemistry, Korea University, Korea
- ORGN.P-511 Synthesis and stability of the luminescent europium chelates-based silica nanoparticles
Byeungjun Gong, Hoe In Kim, Chung-Min Park
Chemistry, Gangneung-Wonju National University, Korea
- ORGN.P-512 Amine-Functionalized Fullerene-Sensitized Selective C-C Bond Cleavage Reactions of Lignin Model Substrates.
Suk Hyun Lim, Dae won Cho
Department of Chemistry, Yeungnam University, Korea
- ORGN.P-513 Cobalt-catalyzed Regioselective Migratory Hydrofunctionalization of 2-Alkynes to Access α -Vinylsilanes and α -Vinylgermanes
Manoj Kumar Sahoo, Dongwook Kim¹, Sukbok Chang², Jung-Woo Park
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²Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- ORGN.P-514 A simple and efficient *in situ* generated copper nanocatalyst for stereoselective semihydrogenation of alkynes
ByoungYong Park, Min Su Han^{1,*}
Chemistry, Gwangju Institute of Science and Technology, Korea
¹Department of Chemistry, Gwangju Institute of Science and Technology, Korea
- ORGN.P-515 Synthesis and Characterization of Indolizine Derivatives for Treatment of Cancer via synergistic STING activation
- Eunsu Kim, Seulbi Lee, Sanghee Lee^{1,*}, Eunha Kim
Department of Molecular Science and Technology, Ajou University, Korea
¹Neuromedicin department, Korea Institute of Science and Technology, Korea
- ORGN.P-516 An analyte-triggered artificial peroxidase system based on dimanganese complex for a versatile enzyme assay
Suji Lee, Min Su Han
Department of Chemistry, Gwangju Institute of Science and Technology, Korea
- ORGN.P-517 A β -Amyloid Selective Two-Photon Fluorescent Probe for Enhancing Signal-to-Noise Ratio via Twisted Intramolecular Charge Transfer
Byungkook Kim, Ilwha Kim, Yuvin Noh, Minhyeok Choi, Zehra Zunbul, Youmi Choe, Jungryun Kim, Saehee Rha, Jongseung Kim
Department of Chemistry, Korea University, Korea
- ORGN.P-518 Synthesis of 2-alkoxyppyrimidines via Copper-mediated Oxidative Dehydrosulfurative Carbon-oxygen Cross-coupling of 3,4-Dihydropyrimidine-2-thiones with alcohols
Jihong Lee, Youjung Kwon^{1,*}, Jeong-Hun Sohn
Department of Chemistry, Chungnam National University, Korea
¹Chemistry department, Chungnam National University, Korea
- ORGN.P-519 Formation of Metal-peptide frameworks through conformational adaptation of β -peptide foldamers
Seoneun Jeong, Jaewook Kim, Jintaek Gong¹, Yunho Lee², Kang Min Ok³, Sunbum Kwon^{4,*}, Hee-Seung Lee
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²Department of Chemistry, Seoul National University, Korea
³Department of Chemistry, Sogang University, Korea
⁴Department of Chemistry, Chung-Ang University, Korea
- ORGN.P-520 Maximizing the formation of strongly reducing radical anions for highly efficient purely organic photoredox catalysis and multiphoton excitation catalysis
Yonghwan Kwon, Min Sang Kwon^{1,*}
Department of Materials Science and Engineering, Ulsan National Institute of Science and Technology, Korea
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- ORGN.P-521 Helix Unwinding Property of β -Thiopeptide
Jungwoo Hong, Jintaek Gong¹, Jaewook Kim, Hee-Seung Lee
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¹Center for Multiscale Chiral Architectures, Korea Advanced

- Institute of Science and Technology, Korea*
- ORG.N.P-522 Accelerated Cu-catalyzed Amidation of Alkynyl Bromide by Synergy of Solvent and Microwave : Rapid Synthesis of Sulfonamide substituted Ynamides
SuJeong Hong, Hyun-Suk Yeom
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- ORG.N.P-523 Synthesis of amphiphilic POSS (polyhedral oligomeric silsesquioxanes)-porphyrin nanomaterials for antimicrobial applications
 Eunhee Jeoung¹, Dongjin Kim¹, Minjae Seo¹, Hungyu Kang¹
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¹chemistry, Gangneung-Wonju National University, Korea
- ORG.N.P-524 Total Syntheses of Fimsbactin B-Cefaclor Conjugates and Evaluation of Antimicrobial Activity
Do Young Kim, Hak Joong Kim
Department of Chemistry, Korea University, Korea
- ORG.N.P-525 Antiviral effects of phenolic amides derivatives from tobacco leaves
Seokyun Sa, Jeong Tae Lee
Chemistry, Hallym University, Korea
- ORG.N.P-526 Synthesis of Novel Tetracyclic Pyrazolidinones from [3 + 2] Cycloaddition of N-Silyl Enamines and Azomethine Imines.
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- ORG.N.P-527 Ligand Modifications Enable Catalytic Diastereo- and Enantioselective Olefin Difunctionalizations
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²Department of Chemistry, Massachusetts Institute of Technology, United States
- ORG.N.P-528 Disengaging Aromatics with Triazole-Fused Iptycenes.
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¹Division of Chemistry, Seoul National University, Korea
- ORG.N.P-529 Total Synthesis of Furo[3,2-a]carbazole Alkaloids
Shafrizal Rasyid Atriardi, Sang Kook Woo
Department of Chemistry, University of Ulsan, Korea
- ORG.N.P-530 Regio- and Stereoselective Addition of Secondary Phosphine Oxides to Allenates Catalyzed by Main Group Lewis Pairs
Soojin Kwak, Sarah Yunmi Lee
Department of Chemistry, Yonsei University, Korea
- ORG.N.P-531 Enantioselective Total Synthesis of (+)-Garsubellin A
Minchul Choi, Chulbom Lee
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- ORG.N.P-532 Design, synthesis, and analysis of pH-responsive surfactant: α -hydroxy sulfonate-based non-phospholipid
Minseo Kang, Bongjin Moon
Department of Chemistry, Sogang University, Korea
- ORG.N.P-533 Allosterically Gated Molecular Actuator Built on Canopied Calix[4]arene
Taewon Kang, Dongwhan Lee
Division of Chemistry, Seoul National University, Korea
- ORG.N.P-534 Substituent effect of O-(benzylcarbamoyl)benzohydroxamtes on their fragmentation-recombination pathways
Youngchan Bang, Bongjin Moon^{1,*}
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- ORG.N.P-535 Enhancing the Cytotoxicity of Reactive Oxygen Species in Hypoxic Tumor by conjugating An Ethacrynic Acid with BODIPY-Based Photosensitizer
Jieun Lee, Jungyun Kim, Ilwha Kim, Yubin Noh, Saehee Rha, Zehra Zunbul, Minhyeok Choi, Byungkook Kim, Youmi Choe, Jongseung Kim
Department of Chemistry, Korea University, Korea
- ORG.N.P-536 Alkoxide-Promoted Selective Hydroboration of *N*-Heteroarenes: Pivotal Roles of *in situ* Generated BH₃ in the Dearomatization Process
Eunchan Jeong, Joon Heo, Sukbok Chang
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- ORG.N.P-537 C-H Sulfenylation of Umpoled Indoles under Photocatalytic condition.
Chul yong Lee, Seunghoon Shin^{1,*}
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- ORG.N.P-538 Enantioselective Access to Spirolactams via Nitrenoid Transfer Enabled by Enhanced Noncovalent Interactions
Euijae Lee, Yeongyu Hwang¹, Yeong Bum Kim, Dongwook Kim¹, Sukbok Chang¹
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- ORG.N.P-539 Studies for sulfur containing detergents

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ORGN.P-540

Hydrophosphorylation of *N*-Heteroaryl-Substituted Alkenes by Boron-Lewis Acid Catalysis

- MEDI.P-541 Cholinesterase inhibitory activity of alpha-lipoic acid-piperidine thioacetal compounds
Ji Hyun Hwang^{*}, Jiyeon Lee, GaHyun Park, Eunseo Jeon, Yeonsoo Kim, Jeong Ho Park, Byong Wook Choi¹, Bong Ho Lee²
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- MEDI.P-542 Intracellular delivery of oxaliplatin conjugate *via* cell penetrating peptide for the treatment of colorectal carcinoma *in vitro* and *in vivo*
Tejinder Singh, Jungkyun Im^{1,*}
Department of Electronic Materials and Devices Engineering, Soonchunhyang University, Korea
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- MEDI.P-543 Efficient cannabinoid processing using microwave.
Haneul Ju, Jiyool Kim¹, Pilju Choi², Taejung Kim³, Chung-Min Park⁴, Sang Il Jeon⁵, Jungyeob Ham³
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- MEDI.P-544 Novel Synthesis of *N,N*-Dimethylbenzamide via Photo Induced Friedel-Crafts Reaction
Myeonggeuk Kim, Liu-lan Shen¹, Jin-Hyun Jeong
College of Pharmacy, Yonsei Institute of Pharmaceutical Sciences, Yonsei University, Korea
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- MEDI.P-545 Investigation of the Neuroinflammation Effects of Diosgenin Derivatives
Young Hun Yoo, Byungsun Jeon, Sanghee Lee, Jeong Tae Lee¹
Research Operations for Brain Science, Korea Institute of Science and Technology, Korea
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- MEDI.P-546 CAIX-Targeting Self-Assembly of Peptide Amphiphile in Low Therapeutic Range Inducing Cellular Apoptosis
Dohyun Kim, Ja-Hyoung Ryu, Sangpil Kim¹, Huyeon Choi
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
¹*Department of Molecular Science, Ulsan National Institute of Science and Technology, Korea*
- MEDI.P-547 Design, synthesis and biological evaluation of 2-aminoquinazolin-4-(3H)-one derivatives as potential SARS-CoV-2 and MERS-CoV treatments
Jun Young Lee, Chul Min Park^{1,*}
CEVI, Korea Research Institute of Chemical Technology, Korea
¹*Center for Medicinal Chemistry, Korea Research Institute of Chemical Technology, Korea*
- MEDI.P-548 Chiral resolution, absolute configuration and biological evaluation of racemic 3,4-dihydroquinazoline derivative
JunSeong Ahn, Gwang Hyun Moon, Seyoung Yang¹, Jiwon Woo¹, Jae Yeol Lee¹
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¹*Department of Chemistry, Kyung Hee University, Korea*
- MEDI.P-549 Design and synthesis of *N*-alkyl-1'-(substituted sulfonyl)spiro[chromene-2,4'-piperidin]-6-amine derivatives as anti-inflammatory targeting inhibitors
Lee Hwasung, Young Dae Gong^{1,*}
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¹*Department of Chemistry, Dongguk University, Korea*
- MEDI.P-550 Synthesis and evaluation of 2-Aryl-1H-benzo[d]imidazole derivatives as potential microtubule targeting agents
In-ho Song, Gyu Seong Yeom, Su Jeong Park, Satish Balasaheb Nimse
Institute of Applied Chemistry and Department of Chemistry, Hallym University, Korea
- MEDI.P-551 Antiviral effects of triazinoindole derivative that inhibits the interaction between ACE2 receptor and spike protein in SARS-CoV-2 infection
Dongwan Kang, Soong-Hyun Kim, Jee-Young Lee¹, Jiyoum Lim², Ha-Yeon Lee³, Sejin Jung
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- MEDI.P-552 Regioselective Synthesis of 3-Deazaneplanocin A Derivatives and their Antiviral Activity against

- Influenza A Virus
SeMyeong Choi, Yeon Jin An, Yeeun Nam, EunRang Choi, Eunwoo Seo, Jong Hyun Cho
Department of Health Sciences, Dong-A University, Korea
- MEDI.P-553 Efficient Synthesis of D-Nucleoside Phosphonate Prodrugs using Cross Metathesis
Yeeun Nam, SeMyeong Choi, Choi EunRang, Eunwoo Seo, Yeon Jin An, Jong Hyun Cho
Health science, Dong-A University, Korea
- MEDI.P-554 Synthesis and evaluation of β -D-N⁶-hydroxycytidine (NHC) prodrugs against SARS-CoV-2 in vitro
Yeon Jin An, SeMyeong Choi, Yeeun Nam, Eunwoo Seo, EunRang Choi, Jong Hyun Cho^{1,*}
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¹*Medicinal Biotechnology, Dong-A University, Korea*
- MEDI.P-555 Synthesis and Evaluation of Acyclic five-membered base nucleoside derivatives
EunRang Choi, Eunwoo Seo, Yeeun Nam, SeMyeong Choi, Yeon Jin An, Jong Hyun Cho
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- MEDI.P-556 Development of new target protein catalyst compounds as a novel class of H₂O₂ scavenger for treatment of Alzheimer's Disease
Elijah Lee, Ki Duk Park^{1,*}
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- MEDI.P-557 Mitochondrial Targeting Cationic Purpurinimide-Polyoxometalate Supramolecular Complexes for Enhanced Photodynamic Therapy with Reduced Dark Toxicity
Il Yoon
Center for Nano Manufacturing and Department of Nanoscience and Engineering, Inje University, Korea
- MEDI.P-558 Identification of Highly Selective Type II Kinase Inhibitors with Chiral Peptidomimetic Tails
Jae-eun Jung, HeeJin Jeong, Duck-Hyung Lee¹, Taebo Sim^{2,*}, Seojung Han
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²*Severance Biomedical Science, Yonsei University, Korea*
- MEDI.P-559 Purpurinimide Derivative-Graphene Oxide Nanoparticles for Enhanced Photodynamic Therapy
Hyerim Kim, Il Yoon^{1,*}
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¹*Center for Nano Manufacturing and Department of Nanoscience and Engineering, Inje University, Korea*
- MEDI.P-560 Highly potent and selective PPAR δ agonist reverses memory deficits and can be novel therapeutic agent in Alzheimer's disease
Hyeon Jeong Kim, Jungwook Chin^{1,*}, Ki Duk Park
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¹*New Drug Development Center, Daegu-Gyeongbuk Medical Innovation Foundation, Korea*
- MEDI.P-561 Discovery of Novel Sphingosine-1-Phosphate-1 (S1P₁) Receptor Agonists for the Treatment of Multiple Sclerosis
Ki Duk Park*, Yoowon Kim¹
Convergence Research Center for Dementia, Korea Institute of Science and Technology, Korea
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- MEDI.P-562 Discovery of a potent and novel small molecular ENPP1 inhibitor
HeeJin Jeong, Chan Sun Park¹, Hyo Jae Yoon, Duck-Hyung Lee², Sanghee Lee^{3,*}, Seojung Han^{4,*}
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²*Department of Chemistry, Sogang University, Korea*
³*Neuromedicine department, Korea Institute of Science and Technology, Korea*
⁴*Chemical Kinomics Research Center, Korea Institute of Science and Technology, Korea*
- MEDI.P-563 A Synthetic Study of Novel Drug-like Thieno pyrazine Derivatives as DNA Base Biomimetics
Dana Kim, Young Dae Gong
Department of Chemistry, Dongguk University, Korea
- MEDI.P-564 2-Thioxothiazolidin-4-one Analogs as Pan-PIM Kinase Inhibitors
Seungik Jeong, Jinho Lee, Victor Sukbong Hong, Hyeonseong Choo¹
Department of Chemistry, Keimyung University, Korea
¹*Chemistry, Keimyung University, Korea*
- MEDI.P-565 Effective Photodynamic Therapy Overcoming Hypoxia by Protein Coated Metal-Organic-Framework
Youjung Sim, Huyeon Choi, Myoung Soo Lah, Ja-Hyoung Ryu
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
- MEDI.P-566 Inhibition of ACE2-Spike interaction by an ACE2 allosteric binder suppresses SARS-CoV-2 entry
Kiyoung Jeong, Jonghoon Kim¹, Seung Bum Park
Division of Chemistry, Seoul National University, Korea
¹*Department of Chemistry, Soongsil University, Korea*
- MEDI.P-567 N-(2,7-Dimethyl-2-alkyl-2H-chromen-6-yl)sulfonamide derivatives as selective serotonin 5-HT₆ receptor antagonists: design, synthesis, and biological evaluation
Young Dae Gong*, Young-Chang Kim
Department of Chemistry, Dongguk University, Korea

- MEDI.P-568 A Comparison Study of Photothermal Effect Between Gold Nanoparticles and Ultrasmall Copper Nanoparticles under NIR Stimuli
Hyojin Cho, Sang Eun Hong, Mi Jin Park, Kuk Ro Yoon
Department of Chemistry, Hannam University, Korea
- MEDI.P-569 Development of Bioorthogonal Linkers for Surface Modification of Silica Nanoparticles
Jeunghwan Kim, Jaewoon Lee, InCheol Heo¹, Won Cheol Yoo², Sun-Joon Min^{3*}
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²*Department of Chemical and Molecular Engineering, Hanyang University (ERICA), Korea*
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- MEDI.P-570 Antioxidative and anti-inflammatory activity of psiguadial B and its halogenated analogues as potential neuroprotective agents
Kyungjin Jung, Jungwook Chin
New Drug Development Center, Daegu Gyeongbuk Medical Innovation Foundation, Korea
- MEDI.P-571 Antioxidative and Tyrosinase Inhibitory Activities of mixed Ishige okamurae extract and Wolfiporia extensa extract
Seonyeong Ahn*, Mingyeong Kim^{1*}, Byong Wook Choi², Bong Ho Lee¹
Chemical & Biological engineering, Hanbat National University, Korea
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- MEDI.P-572 Selenocyanation of Aryl Methyl Ketones for novel selenazolamine compounds
Il Park, Liu-lan Shen¹, Jin-Hyun Jeong
College of Pharmacy, Yonsei Institute of Pharmaceutical Sciences, Yonsei University, Korea
¹*College of Pharmacy, Yonsei University, Korea*
- MEDI.P-573 Design and Synthesis of Novel MAO-B PET Probe Candidate for Diagnosis of Reactive Astrocyte
Byungeun Kim, Ki Duk Park^{1,*}
Bio-Medical Science & Technology, University of Science and Technology, Korea
¹*Convergence Research Center for Dementia, Korea Institute of Science and Technology, Korea*
- MEDI.P-574 Synthesis and evaluation of a novel series of vinyl sulfone derivatives from Veda-1209 as promising Nrf2 activators
Rium Kim, Ki Duk Park^{1,*}
Convergence Research Center for Dementia, University of Science & Technology, Korea
- MEDI.P-575 Discovery of harmala alkaloid analogs as anticancer agents
Yunha Choi, Vineetkumar Bapusaheb Patil¹, Seong Hwan Kim², Pilho Kim^{3,*}
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¹*Medicinal Chemistry, University of Science & Technology / KRICT, Korea*
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- MEDI.P-576 Discovery of cyclic sulfonamide derivatives as potent inhibitors of SARS-CoV-2
Chul Min Park*, Young Sup Shin¹
Center for Medicinal Chemistry, Korea Research Institute of Chemical Technology, Korea
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- MEDI.P-577 Discovery of a novel, selective small molecule as SNF1/AMPK-related kinase (NUAK2) inhibitor for antitumor activity
Ga-young Choi*, Yikyung Ko, Nam Doo Kim¹, Eunhwa Ko², Ikyon Kim, Youngsoo Kim, Hwan Geun Choi²
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¹*VORONOI BIO INC, Korea*
²*B2SBio, Korea*
- MEDI.P-578 Structure and activity relationship of pyrazolo[3,4-d]pyrimidin-1-yl piperidine derivatives as Bruton's tyrosine kinase inhibitors
Hyesu Yeom, Pilho Kim¹, Jong Yeon Hwang², Hyunjin Kim³, Jae du Ha⁴, Do Hyun Ryu^{5,*}, Sung Yun Cho⁴
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- MEDI.P-579 Anti-inflammatory Effect of Phloroglucinol Derivatives Attenuates Cognitive Impairment in a LPS-Induced Mouse Model
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Institute of Science and Technology, Korea

MEDI.P-580

Synthesis and Evaluation of Imidazoisoindole Derivatives as Idoleamine 2,3-Dioxygenase 1(IDO1) Inhibitors

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MEDI.P-581

Discovery of Highly Potent Bruton's Tyrosine Kinase Degraducers

Vineetkumar bapusaheb Patil, Ye Seul Lim¹, Hoyeong Park², Santosh Shivanand Raikar³, Yunha Choi⁴, Hyesu Yeom⁵, Hyunjin Kim⁶, Jae du Ha⁷, Sung Yun Cho⁷, Jong Yeon Hwang⁸, Song Hee Lee¹, Pilho Kim^{9,*}
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MEDI.P-582

Development of pH-sensitive fluorescent probes based on reduced rhodol for imaging of lysosomes

Kunal More, Dong-Jo Chang
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MEDI.P-583

Neuroprotective Effect of Dithiolethione-peptide Hybrids on Glutamate-induced Neurotoxicity in HT22

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MEDI.P-584

Study of fluorescence platform for the development of cleavable linkers using activatable fluorescent probes for leucine aminopeptidase

Dong-Jo Chang
Department of Pharmacy, Suncheon National University, Korea

MEDI.P-585

Discovery of novel GSPT1 degrader based on benzotriazinone scaffold

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MEDI.P-586

Discovery of first-in-class imidazothiazole-based potent and selective ErbB4 (HER4) kinase inhibitors
Sayed omar Zareei, Chang Hyun Oh
Biomedical science and technology, Korea Institute of Science and Technology, Korea

MEDI.P-587

A Concise Synthetic Pathway for Almorexant Analogs

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MEDI.P-588

Current efforts for the identification of an Hsp90-selective degrader

Sehee Cha, Mingi Kim, Doyoung Kim, Hak Joong Kim
Department of Chemistry, Korea University, Korea

MEDI.P-589

Synthesis and antibacterial activity of novel hybrid 1,4-dialkoxynaphthalenacyl imidazolium salts
Chaeyun Kim, Haena Lee, Hyejin Moon, Hakwon Kim^{1,*}

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Department of Applied Chemistry, Kyung Hee University, Korea

MEDI.P-590

Study on cytoplasmic antibiotic delivery using simple bidentate siderophore mimetics

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¹*Department of Chemistry, Korea University, Korea*

MEDI.P-591

Protein membrane coated nanocomposite with medical radioisotope Zr-89 for tumor diagnosis
Jeong hoon Park, Jun Young Lee
Accelerator Radioisotope Development, Korea Atomic Energy Research Institute, Korea

MEDI.P-592

Identification of highly potent and selective inhibitor, TIPTP, interfering the interaction of p22phox-Rubicon for treatment of rheumatoid arthritis

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- MEDI.P-593 Development of small molecule compounds as activation for STING
Min jae Jeon, Hyejin Kim
Infectious Diseases Therapeutic Research Center; Korea Research Institute of Chemical Technology, Korea
- MEDI.P-594 Optimization of baicalein's activity against *Leishmania donovani*
Ahmed Helmy Ebraheem Hassan, Suyeon Moon¹, Yeonwoo Choi¹, Yong sup Lee^{2,*}
Medicinal Chemistry, Mansoura University - Faculty of Pharmacy, Egypt
¹*Kyung Hee University, Korea*
²*Department of Pharmacy, Kyung Hee University, Korea*
- MEDI.P-595 Discovery and SAR optimization of non-electrophilic antioxidant response element (ARE) activating bis-sulfones
Moonsang Yoon, Jinsook Kwak, Hwayoung Yun
College of Pharmacy, Pusan National University, Korea

- MEDI.P-596 SAR studies of novel 3-benzyl-*N*-phenyl-1*H*-pyrazole-5-carboxamide derivatives as dual-acting antidiabetic agents
Jisu Kim, Jinsook Kwak, Hwayoung Yun
College of Pharmacy, Pusan National University, Korea
- MEDI.P-597 Discovery of novel squaramide derivatives as anti-proliferative agents via activation of eIF2 α phosphorylation
Jinsook Kwak, Jisu Kim, Moonsang Yoon, Hwayoung Yun
College of Pharmacy, Pusan National University, Korea
- MEDI.P-598 Lateral flow assay for multiplexed nucleic acid detection using a combination of nested PCR amplicons: a new approach to combine with gold nanoparticles of LFA
Hayeon Lee
Chemistry, Incheon National University, Korea

- MAT.P-316** Effect of Backbone, Length, Spacer, Substituent, Anchor, and Electrode on Thermopower of SAM
Sohyun Park, Hyo Jae Yoon
Department of Chemistry, Korea University, Korea
- MAT.P-317** **[Withdrawal]** Regeneration of Ag-M bimetallic Nanocatalysts Poisoned by Silver Halide Byproducts
Han-Jung Ryu, Jae-Seung Lee^{1,*}
Material Science and Engineering, Korea University, Korea
¹*Department of Materials Science and Engineering, Korea University, Korea*
- MAT.P-318** **[Withdrawal]** One-pot Large-scale Synthesis of Polymer-capped Plasmonic Nanoparticles in Deep Eutectic Solvent
Yoon Hyuck Kim, Jae-Seung Lee^{1,*}
Division of Advanced Materials Engineering, Korea University, Korea
¹*Department of Materials Science and Engineering, Korea University, Korea*
- MAT.P-319** Solar-induced seawater desalination using evaporators with asymmetric characteristics
Yejin Kim, Won san Choi^{1,*}
Chemical and Biological Engineering, Hanbat National University, Korea
¹*Department of Chemical & Biological Engineering, Hanbat National University, Korea*
- MAT.P-320** Crescent-shaped amphiprotic vapor generators for seawater desalination
Yujin Seo, Won san Choi^{1,*}
Chemical and Biological Engineering, Hanbat National University, Korea
¹*Department of Chemical & Biological Engineering, Hanbat National University, Korea*
- MAT.P-321** Exploration of rigid ancillary ligand effect for robust deep red emission in iridium(III) complexes
Taehyun Kim, Dasol Chung, Taiho Park
Department of Chemical Engineering, Pohang University of Science and Technology, Korea
- MAT.P-322** Study of Burn-in loss in Ternary Organic Photovoltaic System Composed of Semiconducting Polymers and Non-fullerene Acceptor Processed with Eco-friendly Solvent
Dasol Chung, Sunhee Yun, Taiho Park
Department of Chemical Engineering, Pohang University of Science and Technology, Korea
- MAT.P-323** Design of Highly Active Carbon-Based H₂O₂ Production Electrocatalysts via Active Site Elucidation
June Sung Lim, Young Jin Sa¹, Sang Hoon Joo^{2,*}
School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology, Korea
¹*Department of Chemistry, Kwangwoon University, Korea*
²*Department of Chemistry, Ulsan National Institute of Science and Technology, Korea*
- MAT.P-324** Controlling the Coordination Environments of Atomically Dispersed Catalysts via Reversible Ligand Exchange for Oxygen Reduction Reaction
Jinjong Kim, June Sung Lim¹, Sang Hoon Joo
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
¹*School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology, Korea*
- MAT.P-325** A glycopeptide enrichment strategy based on water-soluble gold nanoclusters functionalized with boronic acids
Soomin Ahn, Hongmei Xu, Dongil Lee
Department of Chemistry, Yonsei University, Korea
- MAT.P-326** Enhancement of optical gain of MAPbI₃ thin films passivated by 4-Fluorobenzylammonium iodide surface treatment
Hoonil Yang, Yoon-Kyu Song^{1,*}
Department of Nanoscience and Technology, Seoul National University, Korea
¹*Applied Bioengineering, Seoul National University, Korea*
- MAT.P-327** Synthesis and Characterization of Nanocrystalline Ni(OH)₂ and NiO_x by Temperature-Controlled NH₃ Precipitation Method
Young Hee Jung, Yeong Il Kim^{1,*}
Research & development center, Adchra, Korea
¹*Department of Chemistry, Pukyong National University, Korea*
- MAT.P-328** Enhance Performance in Eco-Friendly Colloidal Nanocrystal-based Photovoltaics through Ligand Modification and Architecture Engineering
Sung Yong Bae, Hyosung Choi^{1,*}
Chemistry, Hanyang University, Korea
¹*Department of Chemistry, Hanyang University, Korea*
- MAT.P-329** Solvent Engineering of Colloidal Quantum Dot Inks for Scalable Fabrication of Photovoltaics
Jonghee Yang, Whikun Yi, Hyosung Choi
Department of Chemistry, Hanyang University, Korea
- MAT.P-330** A Development of New Polymer Donor for Semi-transparent Ternary Organic Photovoltaics with High-Performance

- Jung Won Yoon, Hyosung Choi
Department of Chemistry, Hanyang University, Korea
- MAT.P-331 Coordination of ligands to transition metal complex with intermetallic bond via vapor diffusion in large scale
Jumin Park, Intek Song
Department of Applied Chemistry, Andong National University, Korea
- MAT.P-332 Synthesis of metal-decorated NaLuGdF₄:Yb³⁺/Er³⁺ upconversion nanoparticle and its application
Bui The Huy
Department of Chemistry, Changwon National University, Korea
- MAT.P-333 Electrowetting Properties of Whatman Filter Paper Decorated with Silver Nanoparticles and PVDF-HFP Film
Sharipov Mirkomil
Department of Chemistry, Changwon National University, Korea
- MAT.P-334 A Series of Difluoroboron Dibenzoylmethane Complexes for Nitro Explosive Chemosensor
Sunhee Lee, Won-Sik Han
Department of Chemistry, Seoul Women's University, Korea
- MAT.P-335 Improvement of Near-Infrared Phosphorescence of Iridium(III) Complex by Intermolecular Charge Transfer Mechanism
Hae Un Kim, Sangah Park, Taiho Park
Department of Chemical Engineering, Pohang University of Science and Technology, Korea
- MAT.P-336 Modification of Carbon materials for Shuttle Effect by Introducing Porosity and Loading Metal Nanoparticles
Yelim Kwon, Su Jin Kim, Jung-ho Lee, Ji Man Kim
Department of Chemistry, Sungkyunkwan University, Korea
- MAT.P-337 Novel Design of Non-fused Ring Acceptors based-on Pyrido- or Benzo-thiadiazole with the bandgap tuning for Organic Solar Cells
Mohammed Waseem Hussain, Hyosung Choi
Chemistry, Hanyang University, Korea
- MAT.P-338 Synergistic effects of Fe₂O₃ nanotube/polyaniline composites for electrochemical supercapacitor with enhanced capacitance
Farkhod Azimov, Jin Seok Lee¹, Subin Park¹, Hyun Min Jung^{2,*}
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²Department of Applied Chemistry, Kumoh National Institute of Technology, Korea
- MAT.P-339 Synthesis and Characterization of Dimeric Triphenylmethane Water-soluble Dyes for High-speed Inkjet Printing
Seong Hyun Jang, Geonho Lee, Sang Yoon Lee, Jun Choi
Material & Component Convergence R&D Department, Korea Institute of Industrial Technology, Korea
- MAT.P-340 Fast and effective synthesis of MXenes at high temperatures
Seungjun Lee, Taegon Oh¹, Chong Min Koo¹
KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea
¹Materials Architecturing Research Center, Korea Institute of Science and Technology, Korea
- MAT.P-341 Upconversion Nanoparticle Hybrid with Anisotropic Gold Nanostructures for Photonic Cancer Therapy
Subin Yu, Dong Ha Kim
Department of Chemistry and Nano Science, Ewha Womans University, Korea
- MAT.P-342 Fast and facile fabrication of MoS₂-based field-effect transistor prototype devices
Woongrae Cho, Intek Song^{1,*}
Department of Chemistry, Andong National University, Korea
¹Department of Applied Chemistry, Andong National University, Korea
- MAT.P-343 Substituent effects on colour, aggregation, and photo-responses of trigonal molecules
Pyae myat Phyo thu, Mina Han^{1,*}, Longhai Piao^{2,*}
Chemistry Department, Kongju National University, Korea
¹Department of Chemical Education, Kongju National University, Korea
²Department of Chemistry, Kongju National University, Korea
- MAT.P-344 Preparation of red-emitting Ca(Y_{1-x}Eu_x)₂(MoO₄)₄ nanophosphors for a use of transparent displays
Eung-Dab Kim, Young-Duk Huh^{1,*}
Dankook University, Korea
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- MAT.P-345 Discovery of Argyrodite-type novel solid state electrolyte using a metaheuristic algorithm
Sunggeun Shim, Sangwon Park¹, Woon Bae Park¹, Kee-sun Sohn, Myoung-ho Pyo¹
Department of Nanotechnology and Advanced Materials Engineering, Sejong University, Korea
¹Department of Printed Electronics Engineering, Suncheon National University, Korea
- MAT.P-346 Near-infrared reflective dark-tone bilayer paint system for automatic LiDAR technic
TaeHo Lim, Sangho Cho
Materials Architecturing Research Center, Korea Institute of Science and Technology, Korea
- MAT.P-347 Red-emitting Single-benzene-based fluorophore-Silica Hybrid (SSH) Material

- Jaehoon Kim, Dokyoung Kim^{1*}
Department of Biomedical Science, Graduate School, Kyung Hee University, Korea
¹*Department of Anatomy and Neurobiology, College of Medicine, Kyung Hee University, Korea*
- MAT.P-348 Metal nanocatalyst-loaded bulk catalytic filters for decomposition and conversion of organic pollutants
 Won san Choi¹, HeeJu Kim¹
Department of Chemical & Biological Engineering, Hanbat National University, Korea
¹*Chemical & Biological Engineering, Hanbat National University, Korea*
- MAT.P-349 A Janus separator for continuous and rapid oil/water separation and purification
JiHee Choi, Won san Choi^{1,*}
Chemical & Biological Engineering, Hanbat National University, Korea
¹*Department of Chemical & Biological Engineering, Hanbat National University, Korea*
- MAT.P-350 Preparation of chitosan/PEO nanofibers containing carvacrol for food packaging application
Dong Hee Kim, Sang Eun Hong, Kuk Ro Yoon
Department of Chemistry, Hannam University, Korea
- MAT.P-351 Effect of Ti-doping amount on electrochromic performance of sol-gel derived WO₃
Hee Sung Park, Chi-Hwan Han^{1*}, Sungjun Hong^{2,*}, Seok In Lee³
Department of Energy Science and Technology, Chungnam National University, Korea
¹*Renewable Energy Institute, Korea Institute of Energy Research, Korea*
²*Korea Institute of Energy Research, Korea*
³*Department of Chemistry, Korea University, Korea*
- MAT.P-352 Fabrication of dual-band electrochromic film using oxygen deficient tungsten oxide nanoparticle synthesized by solvothermal method
Sunghyeok Park, Chi-Hwan Han, Sungjun Hong, Hee Sung Park¹, Seok In Lee²
Korea Institute of Energy Research, Korea
¹*Department of Energy Science and Technology, Chungnam National University, Korea*
²*Department of Chemistry, Korea University, Korea*
- MAT.P-353 Latent Fingerprint Development; Using Fluorescent Nanodiamonds to Suppress Background Fluorescence
Haksung Jung, Kyung-Jin Cho¹, Seung-Jin Ryu², Yasuharu Takagi³, Paul Roche¹, Jeong Hyun Shim, Keir Neuman^{4,*}
Quantum Technology Institute, Korea Research Institute of Standards and Science, Korea
¹*National Cancer Institute, National Institutes of Health, United States*
²*Department of Law, Forensic Science Research Center, Korean National Police University, Korea*
³*National Heart, Lung, and Blood Institute, National Institutes of Health, United States*
⁴*National Heart, Lung and Blood Institute, National Institutes of Health, United States*
- MAT.P-354 Novel Ti redox-based 3D polyanion type cathode material with unprecedented cyclic stability for Ca-ion batteries
Richard Prabakar, Woon Bae Park^{1,*}
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- MAT.P-355 PREVENTING DEGRADATION AND DESORPTION OF PHOTOSENSITIZER IN AQUEOUS CONDITION FOR VARIOUS APPLICATIONS
 Tae-Hyuk Kwon¹, JeongKyeong Lee
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
- MAT.P-356 Selective adsorption of 1-octene from binary liquid n-octane/1-octene mixtures using zeolite adsorbents
Ja Yeon Kim, Chung-Yul Yoo
Department of Chemistry, Mokpo National University, Korea
- MAT.P-357 N-containing Porous Aromatic Framework 41 for Improving Lithium-Sulfur Battery Performances
Qian Wang, Ji Man Kim
Department of Chemistry, Sungkyunkwan University, Korea
- MAT.P-358 Intramolecular Coupling via Coupling of Au Nanoparticles and Light
Juhee Ha, Youngsoo Kim
Department of Chemistry, Yeungnam University, Korea
- MAT.P-359 Plasmon Coupling on Au Nanoparticles with a Polymeric Capping Ligand
Hyeonji Kim, Youngsoo Kim
Department of Chemistry, Yeungnam University, Korea
- MAT.P-360 Fabrication of titanium dioxide with hollow nanostructure by electrostatic layer-by-layer self-assembly for advanced anode materials in sodium-ion batteries
Minseop Lee, Seung-Min Paek^{1,*}
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¹*Department of Chemistry, Kyungpook National University, Korea*
- MAT.P-361 Nanoparticle grooving with sublimable liquid crystal for anti-glare film
Wantae Kim, Dong Ki Yoon
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- MAT.P-362 MOFs derived CeO₂-MnO₂ catalysts towards CO oxidation
Lianghao Song, Ji Man Kim

- Department of Chemistry, Sungkyunkwan University, Korea
- MAT.P-363 Quercetin-Based Coating Using Amino-Quinone Networks
Sunhee Kim, Eunjung Lee, Yejin Lee, Woo Kyung Cho
Department of Chemistry, Chungnam National University, Korea
- MAT.P-364 Enhanced gas sensing in drop casted Ti3C2Tx MXene sensors induced by intercalant additives
Juyun Lee, Chong Min Koo, Seon Joon Kim
Materials Architecturing Research Center, Korea Institute of Science and Technology, Korea
- MAT.P-365 Oxidative modification of metal-organic framework-derived carbon: an effective strategy for adsorptive elimination of carbazole and benzonitrile
Gyudong Lee
Chemistry, Kyungpook National University, Korea
- MAT.P-366 Ionic salts@metal-organic frameworks: remarkable component to improve performance of fabric filters to remove particulate matters from air
Dong kyu Yoo
Department of Chemistry, Kyungpook National University, Korea
- MAT.P-367 Na_{3-x}Sb_{1-x}W_xSe₄ as sodium-ion solid electrolytes with higher ionic conductivity
Jungyong Seo, Suyeon Han¹, Woon Bae Park¹
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¹Department of Advanced Components and Materials Engineering, Suncheon National University, Korea
- MAT.P-368 Effect of SnO₂/SiO₂ impregnation on OMC as an anode for lithium ion battery
Su Jin Kim, Yun Seok Choi, Ji Man Kim
Department of Chemistry, Sungkyunkwan University, Korea
- MAT.P-369 Highly Luminescent and Thermally Stable All-Inorganic Perovskite Nanocrystals with an Effective Defect Passivation
Geonho Lee, Sang Yoon Lee¹, Seong Hyun Jang, Jun Choi
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¹Material & Component Convergence R&D Department, Korea Institute of Industrial Technology(KITECH), Korea
- MAT.P-370 Terphenyl Backbone-based Geometric Isomer for Efficient Electron Transporting Material
Sanghyun Kim, Kyung-Ryang Wee
Department of Chemistry, Daegu University, Korea
- MAT.P-371 Facile Intra- and Intermolecular Charge Transfer Control for Efficient Mechanofluorochromic Material
Min-ji Kim, Kyung-Ryang Wee
Department of Chemistry, Daegu University, Korea
- MAT.P-372 meta-Terphenyl Linked Donor-π-Acceptor Dyads: Intramolecular Charge Transfer Controlled by Electron Acceptor Group Tuning
Min-ji Kim, Kyung-Ryang Wee
Department of Chemistry, Daegu University, Korea
- MAT.P-373 Ammonolytic growth of molybdenum nitride layer on Mo foil and capacitor property
Dong Hyun Lim, Young-il Kim^{1*}
Department of chemistry, Yungnam University, Korea
¹Department of Chemistry, Yeungnam University, Korea
- MAT.P-374 Investigation of Ge-Sb substitution chemistry toward enhanced ionic conductivity for All-Solid-State Li-ion Battery.
Jihun Roh, Seung-Tae Hong^{1*}
Energy Science and Engineering, DGIST (Daegu Gyeongbuk Institute of Science & Technology), Korea
¹Energy Science and Engineering, DGIST (Daegu Gyeongbuk Institute of Science and Technology), Korea
- MAT.P-375 Nano Mo₂N embedded nitrogen-doped porous carbon, derived from phosphomolybdic acid loaded metal-azolate framework-6: an effective oxidative desulfurization catalyst
Md Mahmudul Hassan Mondol, Sung Hwa Jung^{1*}
Department of Chemistry, Kyungpook National University, Korea
¹Department of Chemistry, Kyungpook National University, Korea
- MAT.P-376 Nano-forensic application of latent fingerprints development using surface modified hydrophobic/fluorescent Quantum dot materials
SangJae Oh, Seung-Jin Ryu^{1*}
Investigation, Graduate School of Police Studies, Korea
¹Department of Law, Forensic Science Research Center, Korean National Police University, Korea
- MAT.P-377 Ionic conductivity of rock-salt Li₃TaO₄ depending on polymorphism and defect type
Chaeun Kim, Young-il Kim
Department of Chemistry, Yeungnam University, Korea
- MAT.P-378 Molecular Layer Deposition Behavior depending on the Crystalline Lattices of Substrate
Sung Ho Kim, Jin Seok Lee
Department of Chemistry, Hanyang University, Korea
- MAT.P-379 Fiber Arrangement in Electrospinning Dependent on Electric Field
Ha Yun Jeong, Jin Seok Lee^{1*}
Chemistry, Hanyang University, Korea
¹Department of Chemistry, Hanyang University, Korea
- MAT.P-380 Uncovering The Intercalation Mechanism in Vanadium Oxide Cathode for Non-aqueous Magnesium Batteries
Dedy Setiawan, Seung-Tae Hong^{1*}
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- MAT.P-381 Doped spinel cobalt oxide thin film on carbon fiber paper electrode as highly active oxygen evolution electrocatalysts
Tae Ho Kim, Soo Yeon Kim, Jong Hyeon Lee
Department of Chemistry, The Catholic University of Korea, Korea
- MAT.P-382 Naringenin-Based, Substrate-Independent Nanocoatings
Minjin Seong, Woo Kyung Cho
Department of Chemistry, Chungnam National University, Korea
- MAT.P-383 Enhancement in CO Oxidation reactivity from the Charge Transfer through the Interface between Spinel Oxide and Ceria
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¹Division of Chemical & Biological Engineering, Seoul National University, Korea
- MAT.P-384 Selective CO₂ adsorption over functionalized Zr-based metal organic framework under atmospheric or lower pressure: contribution of functional groups to adsorption
HyeokJoon Jun
Department of Chemistry, Kyungpook National University, Korea
- MAT.P-385 Platform technology for fabrication of various inorganic inverse opal photonic balls
Wonmok Lee^{*}, Sin Geon Park
Department of Chemistry, Sejong University, Korea
- MAT.P-386 Preparation of Magnetic Silica Nanotubes with Protease inside for Reusable and Sustainable Enzymatic Hydrolysis
Jieun Kim
chemistry, Gachon University Global Campus, Korea
- MAT.P-387 Room Temperature Synthesis of Anion-Stabilized Cubic Bismuth Oxide
Hee Sun Park, Hee Jung Yang, Jaeyeon Kim, Nam hwi Hur
Department of Chemistry, Sogang University, Korea
- MAT.P-388 Unprecedented Calcium Vanadium Bronze as a Cathode Material for Calcium-Ion Batteries
Hyeri Bu, Seung-Tae Hong^{1,*}
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¹Energy Science and Engineering, DGIST (Daegu Gyeongbuk Institute of Science and Technology), Korea
- MAT.P-389 Synthesis and Characterization of Phosphorus-Doped Mesoporous Carbon and its Application on Lithium ion Battery

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- MAT.P-390 Direct Investigation into Catalytic Performances of Different Active Sites on Rhombic Dodecahedral Pd Nanocrystal Catalysts
Bon Seung Goo, Jong Wook Hong^{1,*}, Sang Woo Han
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
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- MAT.P-391 Ag-CdS Yolk-Shell Heteronanostructures with Spectral Overlap for Photocatalytic Hydrogen Evolution Reaction
Youngjoo Whang, Sang Woo Han^{1,*}
Chemistry, Korea Advanced Institute of Science and Technology, Korea
¹Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- MAT.P-392 Electrochemical and Structural studies of sodium solid electrolytes in the new substitution series. Seung-Tae Hong^{*}, Dongyeon Yun¹
Energy Science and Engineering, DGIST (Daegu Gyeongbuk Institute of Science and Technology), Korea
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- MAT.P-393 A potassium vanadium phosphate as a cathode material for Ca batteries
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- MAT.P-394 Optimized Ultrasonication Method for Synthesizing Highly Luminescent Cesium Lead Halide Perovskite Nanocrystals
Sang Yoon Lee, Geonho Lee, Seong Hyun Jang, Jun Choi
Material & Component Convergence R&D Department, Korea Institute of Industrial Technology, Korea
- MAT.P-395 High thermoelectric properties of hole doped-polycrystalline Sn_{1-x}Ge_xSe
Taeshik Kim, Chung In^{1,*}
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- MAT.P-396 Realizing unusual low thermal conductivity of chalcopyrite In-doped CuFeS₂ system by local structure manipulation

- Hyungseok Lee, Bangzhi Ge¹, Chung In
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- MAT.P-397 Matrix composted nanoparticle inks for paper-based thermoelectric thermocouple using ballpoint pen printing
Eunjin Huh, Nayoon Pyun, So Jung Kim¹, Hyuckjin Lee, Oh-Sun Kwon, Kwanwoo Shin
Department of Chemistry, Sogang University, Korea
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- MAT.P-398 Adsorptive removal of nitro- or sulfonate-containing dyes by a functional metal-organic framework: Quantitative contribution of hydrogen bonding
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Department of Chemistry, Kyungpook National University, Bangladesh
- MAT.P-399 Molecular Design Strategy for Realizing Vectorial Electron Transfer in Photoelectrodes
Deok-Ho Roh, Tae-Hyuk Kwon
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
- MAT.P-400 Ni@N-Doped Carbon Shell as Ni-N-C Nanostructured Materials for Electrocatalytic Oxygen Evolution
Juheon Han, Minseon Choi, Yunseok Shin, Jinyoung Son, Hyeju Park, Sungjin Park
Department of Chemistry, Inha University, Korea
- MAT.P-401 Photocatalytic degradation of organic dyes by CuO Nanoparticles supported on functionalized carbon nanotubes
Ji Dang Kim, Hyun Chul Choi
Department of Chemistry, Chonnam National University, Korea
- MAT.P-402 Na₃SbSe₄ based solid electrolytes for All-Solid-State Sodium Batteries
Aarthi Uthayakumar, Woon Bae Park^{1,*}
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- MAT.P-403 Cost-effective Superionic Halide Solid Electrolytes for All-Solid-State Li-Ion Batteries
Seung-Tae Hong*, Jaehee Won¹
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¹*Energy Science & Engineering, Daegu Gyeongbuk Institute of Science & Technology, Korea*
- MAT.P-404 Anisotropic Gold Nanobipyramids Decorated with Anatase TiO₂ for NIR-triggered Synergistic Photothermal and Photodynamic Cancer Therapy
Dohyub Jang, Dong Ha Kim^{1,*}
Department of Biomicrosystem Technology, Korea University, Korea
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- MAT.P-405 High thermoelectric performance of n-type Bi₂Te_{2.7}Se_{0.3} by incorporating excess monovalent cations
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¹*Center for Correlated Electron Systems (IBS) and School of Chemical and Biological Engineering, Seoul National University, Korea*
- MAT.P-406 Synthesis and Photophysical Properties of Light-Harvesting Gold Nanoclusters Fully Functionalized with Antenna Chromophores
Hongmei Xu, Kyunglim Pyo¹, SangMyeong Han, Dongil Lee
Department of Chemistry, Yonsei University, Korea
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- MAT.P-407 Synergetic strategy of the surface polarity and crystal defect of conductive substrate to optimize electrocatalytic activity of metal nanocluster
Xiaoyan Jin, Seong-Ju Hwang
Department of Materials Science and Engineering, Yonsei University, Korea
- MAT.P-408 Tunable structural colors of crystalline colloidal array of core-shell Iron oxide nanoparticles in non-polar medium
Jungmin Kim, Wonmok Lee^{1,*}
Chemistry, Sejong University, Korea
¹*Department of Chemistry, Sejong University, Korea*
- MAT.P-409 Enhancement of Thermoelectric Properties by Multiple Carrier Scattering by Superparamagnetism in Cu₂SnS₃
Sujin Kim, Sung-Jin Kim^{1,*}, Junphil Hwang²
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- MAT.P-410 Synthesis and Electrochemical Characterization of Vanadium Niobium Phosphate as a New Cathode Material for Rechargeable Calcium-ion Batteries
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- MAT.P-411** Hierarchically Interconnected Porous Carbons from Metal-Organic Frameworks for Stretchable Ionogel-based Supercapacitors
InCheol Heo, Min Seok Kang¹, Won Cheol Yoo^{2,7}
Department of Applied Chemistry, Hanyang University, Korea
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- MAT.P-412** V-doped MoSe₂ Nanosheets as Excellent Hydrogen Evolution Reaction Catalyst
Seungjae Lee, Ik Seon Kwon¹, In Hye Kwak², Doyeon Kim¹, Surjeet Chahal³, Jeunghee Park^{4,*}
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³*Department of Advanced Materials Chemistry, Korea University, Sejong Campus, Korea*
⁴*Department of Materials Chemistry, Korea University, Korea*
- MAT.P-413** Phase Transition of Mo_{1-x}V_xSe₂ Alloy Nanosheets with Rich V-Se Vacancies
In Hye Kwak, Ik Seon Kwon¹, Doyeon Kim¹, Seungjae Lee², Surjeet Chahal³, Jeunghee Park^{4,*}
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- MAT.P-414** Effects of cerium on Ni-based catalysts for dry reforming of methane
Jung-ho Lee, Su Jin Kim¹, Jae Ik Lee¹, Ji Man Kim
Department of Chemistry, Sungkyunkwan University, Korea
¹*Chemistry, Sungkyunkwan University, Korea*
- MAT.P-415** Defect Diamond-like Structure Semiconductors for Solid-state Electrolyte
Yuna Kim, Sung-Jin Kim^{1,*}
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- MAT.P-416** Fabrication of Ecofriendly Transparent Nanofibrous Sheet Containing Nanocellulose Extracted from Tunicate
Jimo Yang, Seonho Choi, Sang Eun Hong, Kuk Ro Yoon
Department of Chemistry, Hannam University, Korea
- MAT.P-417** 4H-2H-1T Phase Coexistence of Nb_{1-x}V_xSe₂ Alloy Nanosheets to Enhance Catalytic Activity Toward Hydrogen Evolution Reaction
Ik Seon Kwon, In Hye Kwak¹, Doyeon Kim, Seungjae Lee², Surjeet Chahal³, Jeunghee Park
Advanced Materials Chemistry, Korea University, Korea
¹*Micro Device Engineering / Microdevices, Korea University, Korea*
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- MAT.P-418** Controllable synthesis of single-layer graphene over cobalt nanoparticles and insight into active sites for efficient oxygen evolution
Gisang Park, Jong-Sung Yu
Department of Energy Science and Engineering, Daegu Gyeongbuk Institute of Science & Technology, Korea
- MAT.P-419** Phase Transition of Polytypic Ga₂S₃ Nanowires and Their High Performance in UV Photodetection
Doyeon Kim, Surjeet Chahal¹, Ik Seon Kwon, In Hye Kwak², Seung Jae Lee³, Jeunghee Park^{4,*}
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- MAT.P-420** Fabrication of AAO-based Heterodimer Nanoparticle Pea-Pod Nanostructures for SERS Applications
Jung-a Lee
chemistry, Gachon University Global Campus, Korea
- MAT.P-421** Fabrication and Characterization of Poly(dimethyl sulfoxide-co-acrylic acid) (PDMSO-AA) Nanofibers for Surface Wettability Controlled: Synthesis of PDMSO-AA using Steglich Esterification
Seonho Choi, Sang Eun Hong, Kuk Ro Yoon
Department of Chemistry, Hannam University, Korea
- MAT.P-422** Cerium oxide based photocatalysts with controlled morphology and vacancy defects
Surjeet Chahal¹, Ik Seon Kwon¹, In Hye Kwak², Doyeon Kim¹, Seungjae Lee³, Jeunghee Park⁴
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²*Micro Device Engineering / Microdevices, Korea University, Korea*
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⁴*Department of Materials Chemistry, Korea University, Korea*
- MAT.P-423** Halogenated Low Bandgap Polymer Donor for Semi-Transparent Organic Solar Cells (ST-OSCs)

- Hyeemin Bae, Hyosung Choi^{1,*}
Advanced Materials Division, Korea Research Institute of Chemical Technology, Korea
¹*Department of Chemistry, Hanyang University, Korea*
- MAT.P-424 Preparation and Characterization of Collagen and Lecithin Contained Starch Scaffold with Improved Biocompatibility
Mi Jeong Son, Seonho Choi, Sang Eun Hong, Kuk Ro Yoon
Department of Chemistry, Hannam University, Korea
- MAT.P-425 Enhanced Hydrogen Evolution Reaction Catalysis by Ni-Co Bimetallic Metal Organic Frameworks/Carbon Nanotubes Composites
Min Sung, Min Hyung Lee
Department of Applied Chemistry, Kyung Hee University, Korea
- MAT.P-426 Fabrication of Acetalated-Dextran Nanofibers by Solution Blow Spinning for Hemostasis Effect
Mi Jin Park, Seonho Choi, Sang Eun Hong, Kuk Ro Yoon
Department of Chemistry, Hannam University, Korea
- MAT.P-427 Enhancing n-type thermoelectric performances of polycrystalline SnSe via PbSe alloying and Cadmium doping
Sejin Byun, Chung In
Center for Correlated Electron System (IBS) and School of Chemical & Biological Engineering, Seoul National University, Korea
- MAT.P-428 Synthesis of NiCo Layered double hydroxide with polyethylene glycol template
Jing Xie, Jae-Min Oh^{1,*}
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- MAT.P-429 Co(II) incorporation into drug-layered double hydroxide hybrid with cancer targeting ligands on particle surface
Chandrabose Vidya, Jae-Min Oh^{1,*}
Energy And Materials Engineering, Dongguk University, Korea
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- MAT.P-430 Transparent luminescent solar concentrator assisted by energy transfer between quantum dots and hexarhenium cluster dyes
Jun Choi, Sung-Jin Kim^{1,*}
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- MAT.P-431 Laser induced Co-Ni/rGO composites for enhanced Micro-Supercapacitor
Jae Ryeol Jeong, Dakyung Jung, Min Hyung Lee
Department of Applied Chemistry, Kyung Hee University, Korea
- MAT.P-432 Enhanced catalytic performance of bimetallic dual ligand MOF for oxygen evolution reaction
Jungjun Lee, Min Hyung Lee
Department of Applied Chemistry, Kyung Hee University, Korea
- MAT.P-433 Enhanced Oxygen Evolution Reaction Catalysis by Fe-doped NiSe
Sun Mi Kim, Min Hyung Lee
Department of Applied Chemistry, Kyung Hee University, Korea
- MAT.P-434 Enhanced Electrochemical Performance of Self-Assembled NiFe LDH@rGO
Hye Yeon Yoo, Min Hyung Lee
Department of Applied Chemistry, Kyung Hee University, Korea
- MAT.P-435 Surface structure investigation of colloidal quantum dot nanoparticle by advanced transmission electron microscopy
Haveon Baek, Sungsu Kang¹, Jungwon Park¹
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- MAT.P-436 Integrated Material and Process Investigation of Metal-organic Frameworks Database for Energy-efficient SF₆/N₂ Separation
Jaehoon Cha, Yongchul Chung
School of Chemical Engineering, Pusan National University, Korea
- MAT.P-437 Mo-based/CNT/C Composite as Anode Material for the Li-ion Battery
Cu Dang van, Jae Ryeol Jeong, Min Hyung Lee
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- MAT.P-438 Should We use Argon Isotherms to Characterize the Surface Area of Nanoporous Materials?
Seungyun Han, Yongchul Chung
School of Chemical Engineering, Pusan National University, Korea
- MAT.P-439 Time-resolved 3D structures of inorganic nanocrystals in oxidative environment revealed by deep-learning assisted one-particle reconstruction
Sungsu Kang, Kim Dongjun, Jungwon Park
Chemical and Biological Engineering, Seoul National University, Korea
- MAT.P-440 An efficient numerical method for constructing heterojunctions between two crystal lattices using a

- complex plain
Weon Gyu Lee
Computational Science Research Center, Korea Institute of Science and Technology, Korea
- MAT.P-441 Limitation of model-based estimations of the hydrogen adsorption capacities of metal-organic frameworks: a molecular simulation study
SungHyun Yun, Yongchul Chung
School of Chemical Engineering, Pusan National University, Korea
- MAT.P-442 Time-resolved crystallization dynamics of ferritin molecules observed by cryo-EM and liquid-phase TEM
Minyoung Lee, Jungwon Park
School of Chemical and Biological Engineering, Seoul National University, Korea
- MAT.P-443 Computational investigation of nanoporous materials for highly efficient Xe/Kr separation
Zhao Guobin, Yongchul Chung
School of Chemical Engineering, Pusan National University, Korea
- MAT.P-444 Enhanced photocatalytic degradation of methyl orange on AgBr-SnO₂-carbon nanotube nanocomposites
Seon Jeong Jo, Hyun Chul Choi^{1,*}
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- MAT.P-445 Perform Accurate Prediction of Pore Size Distribution Properties in Nanoporous Materials Using Machine Learning
Yu Chen, Seungyun Han, Yongchul Chung
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- MAT.P-446 Highly Electrically Conductive Polyamide 6-based Nanocomposite *via* Decomposed Flavin Mediated Hierarchical Monoclinic Multi-walled Carbon Nanotube Structure
Minsuk Park, Sang-Yong Ju
Department of Chemistry, Yonsei University, Korea
- MAT.P-447 Fabrication of a strong graphene oxide composite films through tannic acid based multimodal interactions.
Yoo-Bin Kwon, Young-Kwan Kim
Department of Chemistry, Dongguk University, Korea
- MAT.P-448 Eggshell membrane hydrolysate as a eco-friendly reduction agent for synthesis of graphene analogue and its nanocomposite for catalytic application
Junmo Jeon, Young-Kwan Kim^{1,*}, Ji Hun Park^{2,*}
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- MAT.P-449 Hydrothermal synthesis of TiO₂ nanorods with various aspect ratio and their application to electron transporting material of solar cell
You Jin Park, Wan-In Lee^{1,*}
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¹*Department of Chemistry, Inha University, Korea*
- MAT.P-450 Composite of Graphite Template and Lithium Iron Phosphate as a Cathode Material for Lithium Ion Battery
KyooSeung Han
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- MAT.P-451 Porous silicate obtained from industrial waste and its adsorption property in gaseous and aqueous state
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- MAT.P-452 Synthesis of solid solutions of CuCrO₂ and CuGaO₂ and their application to hole transport material of perovskite solar cell
Hyunsue Choo, Woo Seok Suh, Wan-In Lee^{1,*}
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- MAT.P-453 Arc discharge synthesis of graphene with enhanced boron doping levels for electrochemical applications
Chunghun Kim, Myung Jong Kim^{1,*}
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- MAT.P-454 Single-crystalline InP tetrapod nanocrystals using surface energy-driven growth
Youngsik Kim, Sohee Jeong^{1,*}
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- MAT.P-455 Rational Design Based on Monomer Diffusion Flux Control for Monodisperse and Size-Extended Colloidal InAs Nanocrystals
Seongmin Park, Sohee Jeong
Department of Energy Science, Sungkyunkwan University, Korea
- MAT.P-456 Dispersion of Carbon Nanotubes by Helical Flavin Surfactants: Solubility Parameter induced Stability and Chirality Enrichment, and Solvatochromism in

- various solvents
Inseung Choi, Minsuk Park¹, Sang-Yong Ju¹
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- MAT.P-457 Diameter-Selective Two Phase Extraction of Carbon Nanotubes by an Amphiphilic Poly(2-ethylloxazoline)
Seokhyeon Son, Inseung Choi, Sang-Yong Ju
Department of Chemistry, Yonsei University, Korea
- MAT.P-458 Rapid preparation of cobalt based mono- and bi-metallic oxide nanoparticles; highly efficient catalysts for the degradation of organic dyes
Dong-yun Yoon, Hye On Yoon, Ha-Jin Lee^{1,*}
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- MAT.P-459 Detection of fast and sensitive target molecules by aptamer-based TFT bio-sensor that can be reused through real-time detection.
Yong Wan Kim, Young-Geun Ha^{1,*}
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¹*Department of Chemistry, Kyonggi University, Korea*
- MAT.P-460 Preparation of robust, self-healing superhydrophobic fabrics through simple solution process at room temperature
Su Yeon Jeong, Young-Geun Ha^{1,*}
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¹*Department of Chemistry, Kyonggi University, Korea*
- MAT.P-461 Cancer Theragnostics by Rhodamine B-loaded Mesoporous Silica-coated Gold Nanorods
Yu Ra Lim, Hyowon Han, Ara Joe, Eue-Soon Jang
Department of Applied Chemistry, Kumoh National Institute of Technology, Korea
- MAT.P-462 Synthesis of Zn-doped InAs colloidal quantum dots with p-type polarity
Hyojin Kim, Sohee Jeong
Department of Energy Science, Sungkyunkwan University, Korea
- MAT.P-463 Tuning Energy Level of Indium Phosphide Films Through the Ligand Modification
Eunhye Cho, Mahnmin Choi, Sohee Jeong
Department of Energy Science, Sungkyunkwan University, Korea
- MAT.P-464 Aptamer activated-multiwall carbon nanotube network on filter paper to detect beta-amyloid for Alzheimer's disease diagnosis.
Jeong Eun Kim, JiHyeon Mun, Sumin Kim, Jiyeong Park, Don Kim
Department of Chemistry, Pukyong National University, Korea
- MAT.P-465 EFFICIENT IR PHOTOVOLTAICS USING INDIUM ARSENIDE COLLOIDAL QUANTUM DOT AS ELECTRON TRANSPORT LAYER
Daekwon Shin, Sohee Jeong
Department of Energy Science, Sungkyunkwan University, Korea
- MAT.P-466 Evaluation of size effect on layered double hydroxide for phosphate removal to wastewater
Tae-Hyun Kim
Department of Environmental Engineering, Seoul National University of Science & Technology, Korea
- MAT.P-467 Fabrication of biosensor based on amorphous oxide semiconductor IGZO
Jihyeon Kim, Young-Geun Ha^{1,*}
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- MAT.P-468 Easy access to arylboron dichloride from arylboronic acid with tetrachlorosilane
Soyeon Cheon, Young S. Park
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- MAT.P-469 Effects of Heteroatom-Doping in Tetraphenylnaphthalenes
Jupil Park, Young S. Park
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- MAT.P-470 Efforts toward synthesis of BN-doped hexa-peri-hexabenzocoronene
Kidal Kwon, Young S. Park
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
- MAT.P-471 MXsorption of mercury: Exceptional reductive behavior of titanium carbonitride MXene
Asif Shahzad^a, Jae-Min Oh
Department of Energy and Materials Engineering, Dongguk University, Korea
- MAT.P-472 Toward the synthesis of isomeric ixene derivatives
Seongrok Shin, Young S. Park
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
- MAT.P-473 Gap Hydrothermal Synthesis for Conformal Deposition of Nanostructured Hematite Thin Films for Efficient Photoelectrochemical Water Oxidation
Heejeung Kong
Department of Physics, Kyungpook National University, Korea
- MAT.P-474 Dehydrated Hydrotalcite-Niclosamide Nanohybrid as Drug Delivery Strategy towards SARS-CoV-2 Viral Infections
Sieun Park, Goeun Choi^{1,*}, Huiyan Piao², Sanoj Rejinold Nirichan², Seungjin Yu, Geunwoo Jin³, Jin-Ho Choy^{4,*}
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MAT.P-475

Direct-labeling Synthesis of TiO₂@MnO₂ Nanoparticles with Zirconium-89 for Cancer Cell Treatment.

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MAT.P-476

Improving quantum dot solar cell performance by reducing open-circuit voltage deficit of PbS QD.

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MAT.P-477

Bio-material based adsorbent for heavy metal ion trapping

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MAT.P-478

Layered Double Hydroxide-Nicotinic Acid Nanohybrids for Controlled Drug Delivery System
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MAT.P-479

Niclosamide loaded in mesoporous silica and aluminosilicate; potential drug delivery systems for COVID-19

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MAT.P-480

Injectable Niclosamide Hybrid Nanoparticles Towards SARS-CoV-2 Therapy
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MAT.P-481

Photoelectron Yield Spectroscopic Studies on Band Edge Position of Insulating QD Films

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MAT.P-482

Study on InAs amorphous cluster and magic-sized cluster: characteristics as a precursor

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MAT.P-483

Controlling molecular arrangement of deoxycholic acid utilizing 2-dimensional layered double hydroxide

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MAT.P-484

Organic Solvent Dispersible Silica Nanoparticles Bearing Linkers for Conjugation with Polymer Matrix
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MAT.P-485

Selective or nonselective formation regarding numerous tiny-sized CNFs in carbon-based

nonwoven fabrics and their electromagnetic
shielding effectiveness

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MAT.P-486

Electrically conducting two-dimensional polymers

with band transport

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- ELECP-487** Self-organized hierarchically porous carbon coated on carbon cloth for high-performance freestanding supercapacitor electrodes
Myeongseok Jang, Yuanzhe Piao^{1,*}
Graduate School of Convergence Science and Technology, Seoul National University, Korea
¹*Graduate School of Convergence Science and Technology, Seoul National University, Korea*
- ELECP-488** Molecular design for water-soluble polymer binder from nature-inspired molecules for high-performance silicon anodes in Lithium-ion batteries
Rajeev K K, Tae-Hyun Kim^{1,*}
Department of chemistry, Incheon National University, Korea
¹*Department of Chemistry, Incheon National University, Korea*
- ELECP-489** Polymer Binder Materials in Conjunction with Ionic Liquid and Ceramic-based Flexible Sheet Electrolytes for All-Solid-State Batteries
Gaurav Thorat, Tae-Hyun Kim^{1,*}, Wonseok Jang²
Department of chemistry, Incheon National University, Korea
¹*Department of Chemistry, Incheon National University, Korea*
²*Chemistry, Incheon National University, Korea*
- ELECP-490** Carrageenan-based Polymer Binder for Si anode in Lithium Ion Battery
Wonseok Jang, Tae-Hyun Kim^{1,*}, Rajeev K K²
Chemistry, Incheon National University, Korea
¹*Department of Chemistry, Incheon National University, Korea*
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- ELECP-491** Synthetic Generality of Atomically Dispersed Pt Catalysts and Their Electrochemical Kinetics for the Chlorine Evolution Reaction
Taejung Lim, Jinjong Kim¹, Sang Hoon Joo¹
School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology, Korea
¹*Department of Chemistry, Ulsan National Institute of Science and Technology, Korea*
- ELECP-492** Preparation of TEMPOL and Amino-TEMPO Derivatives: Tempol and Amino-tempo Adsorbed Li-TFSI Film for Fiber-Shaped Dye-Sensitized Solar cell.
Dongwook Jung, Myeonghwan Shin, Chuljin Ahn^{1,*}
Chemistry, Changwon National University, Korea
¹*Department of Biology and Chemistry, Changwon National University, Korea*
- ELECP-493** Preparation of Oxo-TEMPO Derivatives : Oxo-TEMPO Adsorbed Li-TFSI Film for Fiber-Shaped Dye-Sensitized Solar Cell.
Myeonghwan Shin, Dongwook Jung¹, Chuljin Ahn^{2,*}
chemistry, Changwon National University, Korea
¹*Chemistry, Changwon National University, Korea*
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- ELECP-494** In situ synthesis of Ni single atom catalyst on glassy carbon electrode for enhanced electrochemical CO₂ reduction reaction
Dongho Seo, Ki Min Nam
Department of Chemistry, Pusan National University, Korea
- ELECP-495** Optimizing Mg²⁺/Al³⁺-Doping of NCM811 Cathode for Enhanced Electrochemical and Structural Stability
Haein Jeong, Hyun Deog Yoo^{1,*}
Chemistry, Pusan National University, Korea
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- ELECP-496** Electrochemically Generated Mesopores and Residual Oxygen for Improved Activity of Silver Electrocatalysts
Sangram Keshari Mohanty, Hyun Deog Yoo^{1,*}
Chemistry, Pusan National University, Korea
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- ELECP-497** Synthesis of hollow columnar nanostructures of bimetallic phosphides as electrocatalysts for oxygen evolution reaction
Jihye Son, Siva Kumar Ramesh, Jinkwon Kim
Department of Chemistry, Kongju National University, Korea
- ELECP-498** LiX Electrolyte Additive for High-Performance Anode-free Lithium Metal Battery
Amol Bhairuba Ikhe, Myoungho Pyo
Department of Printed Electronics Engineering, Suncheon National University, Korea
- ELECP-499** Metal-Organic Framework-Derived NiSe₂-FeSe Double-Shelled Hollow Polyhedrons for Efficient Electrocatalytic Oxygen Evolution Reaction
Siva kumar Ramesh, Jinkwon Kim^{1,*}
Chemistry, Kongju National University, Korea
¹*Department of Chemistry, Kongju National University, Korea*
- ELECP-500** Preparation of Porous Carbon Nanofibers with

- Cobalt for Electrochemical Performance
Jiheee Choi, Donghee Kim, Sang Eun Hong, Kuk Ro Yoon
Chemistry, Hannam University, Korea
- ELEC.P-501 Study of photoelectrochromic device performance comparing different methyl group positioning on salicylic acid sensitizers
Seok In Lee, Chi-Hwan Han^{1,*}
Department of Chemistry, Korea University, Korea
¹*New and Renewable Energy Division, Korea Institute of Energy Research, Korea*
- ELEC.P-502 Reverse Engineering Applied to the study on MoS₂'s redox property.
Kyunghwan Chaj, Mijeong Kang^{1,*}
Department of Nano Mechatronics Engineering, Pusan National University, Korea
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- ELEC.P-503 Water-in-salt electrolyte enabled molecular anion-shuttling battery
Arpan Samanta, Myoung-ho Pyo^{1,*}
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¹*Department of Printed Electronics Engineering, Suncheon National University, Korea*
- ELEC.P-504 Development of Ion-Selective Electrodes for Soil Nutrients
SeongJun Hong, Seonghyun Hong, Yang-Rae Kim
Department of Chemistry, Kwangwoon University, Korea
- ELEC.P-505 Effects of Shape and Hydriding for Palladium Nanocatalyst toward Oxygen Electroreduction Reaction
Mrinal kanti Kabiraj, Jeonghyeon Kim, Sang-Il Choi^{1,*}
Department of Chemistry and Green-Nano Materials Research Center, Kyungpook National University, Korea
¹*Department of Chemistry, Kyungpook National University, Korea*
- ELEC.P-506 Simple Electrochemical Detection of Porphyromonas gingivalis in Saliva for Initial Diagnosis of Periodontitis
Seonhwa Park, Haesik Yang
Department of Chemistry, Pusan National University, Korea
- ELEC.P-507 Simple β -Galactosidase-Induction-Based Electrochemical Detection of *Escherichia coli*
Jungwook Kwon, Haesik Yang
Department of Chemistry, Pusan National University, Korea
- ELEC.P-508 Boosting Electrochemical Immunosensing Performance by Employing Acetaminophen as a Peroxidase Substrate
Jihyeon Kim, Haesik Yang^{1,*}
Department of chemistry, Pusan National University, Korea
- ¹*Department of Chemistry, Pusan National University, Korea*
- ELEC.P-509 Methionine assisted electrodeposition of copper cobalt bi-metallic nanostructures: A stable electrode material for highly sensitive glucose detection
Jiwon Kim, Viswanathan Perumal¹, Kyuwon Kim¹
Chemistry, Incheon National University, Korea
¹*Department of Chemistry, Incheon National University, Korea*
- ELEC.P-510 Magneto-Plasmonic Nano-Heterostructures Based on Prussian Blue-Silver Composite: An Efficient Electrochemical Probe for the Identification of Nitrite Milk-Tainting
Viswanathan Perumal, Dohun Lee¹, Kyuwon Kim
Department of Chemistry, Incheon National University, Korea
¹*Incheon National University, Korea*
- ELEC.P-511 Diaphorase-Catalyzed Formation of a Formazan Precipitate and Its Electrodisolution for Sensitive Parathyroid Hormone Detection
Gyeongho Kim, Haesik Yang
Department of Chemistry, Pusan National University, Korea
- ELEC.P-512 Cellulose nanofiber derived carbon and reduced graphene oxide co-supported LiFePO₄ nanocomposite for high-performance lithium-ion battery cathode
Seungman Park, Yuanzhe Piao^{1,*}
Seoul National University, Korea
¹*Graduate School of Convergence Science and Technol, Seoul National University, Korea*
- ELEC.P-513 Synthesis and electrochemical performance of (100-x)Li₆PS₅Cl-xLiNbO₃ solid electrolyte for all solid state lithium batteries
Ji un Cho, Kwang Sun Ryu
Department of Chemistry, University of Ulsan, Korea
- ELEC.P-514 Facile one-step synthesis of trimetallic N-doped CoNiFe amorphous with excellent oxygen evolution reaction
Anh.T.N Nguyen, Min-ji Kim¹, Jun Ho Shim¹
Department of Chemistry, Daegu University, Vietnam
¹*Department of Chemistry, Daegu University, Korea*
- ELEC.P-515 MoS₂@FeNC Nanospheres for Oxygen Reduction, Hydrogen Evolution Reaction and Detection of H₂O₂ from Living Cells
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Molecular Science Technology, Pusan National University, Bangladesh
¹*Biophysio Sensor Technology, Pusan National University, Korea*
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- ELEC.P-516 N-doped Carbon Framework-based Electrocatalysts

- for Oxygen Reduction Reaction by NH_3 Activation
Sungjun Heo, Je Seung Lee, Sung Yul Lim
Department of Chemistry, Kyung Hee University, Korea
- ELEC.P-517 Modified the Morphology of One-dimensional Au and Fe Complex Photoanode with Ni doping for Enhancing the Efficient Oxygen Evolution Reaction
Sohyun Kang, Jaebeom Lee
Chemistry, Chungnam National University, Korea
- ELEC.P-518 Microwave irradiation-assisted facile preparation of carbon coating layer on raspberry-shaped iron oxide particles for lithium-ion battery anodes
Youngseul Cho, Yuanzhe Piao^{1,*}
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¹*Graduate School of Convergence Science and Technology, Seoul National University, Korea*
- ELEC.P-519 Nb5+ Doped Core-shell Layered High Nickel Cathodes For Rapid Charging And Dramatic Cycling Performance
Eui Jeong Park, Jong-Tae Son
Department of Nano-Polymer Science & Engineering, Korea National University of Transportation, Korea
- ELEC.P-520 Heteroatom Doped Carbon Supported Low Content of Pt as An Efficient Catalyst for Hydrogen Evolution Reaction in Both Acidic and Alkaline media
Yuan hui Huang, Kyeong-Deok Seo¹, Deog Su Park², Yoon Bo Shim¹
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¹*Department of Chemistry, Pusan National University, Korea*
²*Pusan National University, Korea*
- ELEC.P-521 Development of H₂O₂ sensor using bimetallic nanocatalysts
baby Nimisha, Kyeong-Deok Seo¹, Deog Su Park², Yoon Bo Shim¹
Chemistry of material, Pusan National University, India
¹*Department of Chemistry, Pusan National University, Korea*
²*Pusan National University, Korea*
- ELEC.P-522 Sandwich-like $\text{Na}_2\text{Ti}_6\text{O}_{13}/\text{rGO}$ Composite as an Anode Material for High Performance Sodium-Ion Batteries
Jungwook Song, Jongsik Kim
Department of Chemistry, Dong-A University, Korea
- ELEC.P-523 Enhanced Redox Reversibility of FeF_2 Coated by Electron-Rich N-Doped Graphitic Carbon as Cathode Material for Sodium-Ion Batteries
Achmad Yanuar Maulana, Jongsik Kim
Department of Chemistry, Dong-A University, Korea
- ELEC.P-524 $\text{Na}_{0.8}\text{Ti}_4\text{O}_8/\text{C}$ Composite Prepared with Resorcinol as an Anode Material for Sodium-Ion Batteries
Chaeun Lee, Hyunjeong Gim, Jongsik Kim
Department of Chemistry, Dong-A University, Korea
- ELEC.P-525 The Effect of Ni doping in FeOF as a Cathode Material for Enhanced Electrochemical Performances for Sodium-Ion Batteries
Da won Lee, Boram Yun, Jongsik Kim
Department of Chemistry, Dong-A University, Korea
- ELEC.P-526 Development of Single Atomic Fe-N₄ anchored Ti₃C₂T_x MXene for Highly Superior ORR Electrocatalyst : Based on Plasma Induced strong Metal – Metal Interaction
Seonghee Kim, Oi Lun Helena Li
School of Materials Science and Engineering, Pusan National University, Korea
- ELEC.P-527 Al-doped Co₉S₈ encapsulated by nitrogen-graphene for solid-state asymmetric supercapacitors
Emad S. Goda, Sang Eun Hong, Kuk Ro Yoon
Department of Chemistry, Hannam University, Korea
- ELEC.P-528 A hybrid CuO/N-CD/CNTs catalyst with high activity and durability for oxygen reduction reaction in alkaline solution
Jaemun Kim, Jun Ho Shim
Department of Chemistry, Daegu University, Korea
- ELEC.P-529 FeMo-MIL-88B nanorod derived 3D rod-shaped porous iron-molybdenum oxynitride for overall water splitting reaction
Tianyu Chen
Department of Applied Bioengineering, Graduate School of Convergence Science and Technology, Seoul National University, Korea
- ELEC.P-530 Colorimetric and Electrochemical Detection of Glucose Using a Novel Fe-complexed Conducting Polymer
Golam Mahmudunnabi, Khatun A Jannath, Yoon Bo Shim^{1,*}
Molecular Science Technology, Pusan National University, Korea
¹*Department of Chemistry, Pusan National University, Korea*
- ELEC.P-531 Entropymetry for detecting micro-cracks of high-nickel layered oxide cathodes
Minsoo Kim, Jang Wook Choi
Seoul National University, Korea
- ELEC.P-532 Nano/Microscale Integrated Mushroom-Shaped Hydrophilic CoP@Ni-CoP with Optimized Gas Bubble Release for High-Performance Water Splitting Catalysis
Xinyu Qin

- Department of Transdisciplinary Studies, Seoul National University, Korea*
- ELEC.P-533** Hierarchically constructed Hollow Ag-Au Nanospheres Covered with Pt Nanoclusters for Methanol Oxidation Reaction
Bingyi Yan
Department of Transdisciplinary Studies, Seoul National University, Korea
- ELEC.P-534** Incorporation of Many Structural Features into a PtCo@Pt Nanowire as a Bifunctional and Durable Electrocatalyst for PEMFC and Water Electrolyzer
Gyan-Barimah Caleb, Jong-Sung Yu^{1,*}
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¹*Department of Energy Science and Engineering, Daegu Gyeongbuk Institute of Science & Technology, Korea*
- ELEC.P-535** Temperature Engineering of Copper Surface for Selective CO₂ Electroreduction
Seongwoo Jo, Hyun Seo Ahn^{1,*}
Department of chemistry, Yonsei University, Korea
¹*Department of Chemistry, Yonsei University, Korea*
- ELEC.P-536** Unraveling the source of irreversibility in Zn electro-deposition
Sunwoo Park, Jinho Chang
Department of Chemistry, Hanyang University, Korea
- ELEC.P-537** Triiodide-in-iodine network: accelerant for iodide transport in quaternary ammonium iodide-iodine solution
Hyeonmin Kim, Jinho Chang
Department of Chemistry, Hanyang University, Korea
- ELEC.P-538** Characteristic of metal/electrolyte interface at water-in-salt electrolyte (WISE): chloride oxidation mechanism in WISE
Sungjun Son
Department of chemistry, Hanyang University, Korea
- ELEC.P-539** Flexible Li-ion battery via one-pot synthesis
Hun Seong Kim, Hyunyoung Jung^{1,*}, Senthil Chenrayan, SunSik Kim²
Energy Engineering, Gyeongsang National University, Korea
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²*Gyeongsang National University, Korea*
- ELEC.P-540** Graphene based nano-architected conversion type SnO₂ anode for long-life Li-ion battery
SunSik Kim, Hyunyoung Jung, Senthil Chenrayan
Energy Engineering, Gyeongsang National University, Korea
- ELEC.P-541** Polymeric binders for the post Li-ion battery era
Senthil Chenrayan, Hyunyoung Jung^{1,*}
Energy Engineering, Gyeongsang National University, India
¹*Department of Energy Engineering, Gyeongsang National University, Korea*
- ELEC.P-542** Attachable micropseudocapacitors based on highly swollen laser-induced-graphene
Yeong a Lee, Kyuyeon Jang¹, Hana Yoon^{2,*}
Graduate school of energy science and technology, Chungnam National University, Korea
¹*University of Science & Technology, Korea*
²*Separation and Conversion Materials Research, Korea Institute of Energy Research, Korea*
- ELEC.P-543** Highly stable and active PtP₂-based electrocatalyst for oxygen reduction in high temperature polymer electrolyte membrane fuel cell
Jeong-Hoon Yu, Jong-Sung Yu
Department of Energy Science and Engineering, Daegu Gyeongbuk Institute of Science & Technology, Korea
- ELEC.P-544** MoS₂-graphene composite with mixed phase of MoS₂ and their application for lithium ion battery
Kyuyeon Jang, Yeong A Lee¹, Hana Yoon^{2,*}
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¹*Graduate School of energy science and technology, Chungnam National University, Korea*
²*Separation and Conversion Materials Research, Korea Institute of Energy Research, Korea*
- ELEC.P-545** One-pot synthesis of Mo-based catalysts for electrochemical nitrogen reduction reaction
Jihyun Kim, Yun Hwi Seong, Jun Ho Shim
Department of Chemistry, Daegu University, Korea
- ELEC.P-546** Highly efficient and stable g C₃N₄ decorated Ta₃N₅ nanotube on n-Si substrate for solar water oxidation
Pran Krisna Das, Soon Hyung Kang^{1,*}
Advanced Chemicals & Engineering, Chonnam National University, Bangladesh
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- ELEC.P-547** A Spin-Equilibrium Fe Complex for Aqueous Redox Flow Batteries
Donghwi Ko, Hye Ryung Byon
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea
- ELEC.P-548** Electrodeposited Copper for Electrochemical Nitrate Reduction Reaction
Shim Minyoung, Hye Ryung Byon^{1,*}
Chemistry, Korea Advanced Institute of Science and Technology, Korea
¹*Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea*
- ELEC.P-549** The effect of a high binding affinity with oxygen on anion redox reactions in Li-rich layered oxides
Seung Gu Kim, Hye Ryung Byon
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ELEC.P-550 Electrochemistry in CO₂-containing lithium-oxygen cells

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ELEC.P-551 Effect of precursor on the formation of Ni-rich NCM material in lithium ion batteries

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ELEC.P-552 Influence of Conductive Carbon Additives in Lithium Organic Batteries

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ELEC.P-553 Synthesis of new electron transfer mediators and polymer backbone for application to glucose

sensing system

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ELEC.P-554 Copper Oxide Catalyst used for Electrochemical CO₂ Reduction Reaction

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ELEC.P-555 Systematic and feasible surface engineering promotes significant photostability to GaN photoanode for solar water splitting reactions

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- EDU.P-556 Development and effectiveness of education program to improve meta-modeling knowledge level for chemistry teachers
Yunji Nam, Seounghey Paik
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- EDU.P-557 Analysis of the Inscriptions in the Basic Subject Textbooks for the Chemical Engineering Course in Specialized High School
Jin-Ju Rho¹, JaeYoung Han¹
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- EDU.P-558 The effects of semantic mapping strategy on the inferential comprehension of high school students in reading scientific texts
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- EDU.P-559 The Effects of Collaborative Problem-solving for Character Competence (CoProC) instruction model on character competence of elementary school students
Jaekyoung Jun, Jihun Park, Jiaeng Park, Geonu Kim, Jeonghee Nam^{1,*}
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- EDU.P-560 The Analysis of Character Competency Change in Elementary School Students through Collaborative Problem-solving for Character Competence (CoProc) instruction model
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- EDU.P-561 Development of STEAM program for pre-service teachers based on analytical chemistry module - Observation of fine dust concentration in Jinju city using a portable fine dust meter (IV)-
Young Tae Kong
Science Education, Chinju National University of Education, Korea
- EDU.P-562 On the characteristics of the new high school chemistry curriculum in Japan (I)
Young Tae Kong
Science Education, Chinju National University of Education, Korea
- EDU.P-563 The Effect and Disturbance Factors of Practical-Based Teacher Education Program for the Development of TPACK in Pre-service Chemistry Teachers
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- ENVR.P-564 Photoelectrochemical Activation of Reactive Bromine Species for Conversion of Ammonium to Dinitrogen
Seungmok Han, Wonyong Choi
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- ENVR.P-565 The Synthesis of Non-PFOA Typed Surfactant and Evaluation for Their Physical/Chemical Properties
Soo Youl Park
CI Gas & Carbon Convergent Research Center, Korea Research Institute of Chemical Technology, Korea
- ENVR.P-566 Solid-Solvent Hybrid Additive for Control of Morphology in Organic Solar Cells
Daehwan Lee, Taehyun Kim¹, Taiho Park¹
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- ENVR.P-567 Thermally Stable and Efficient Planar Perovskite Solar Cells by Introducing Novel IDTT-Based Small Molecule Additive
Hyuntae Choi, Seyeong Lim, Taiho Park^{1,}*
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- ENVR.P-568 Highly Stable and Efficient CsPbI₃ Perovskite Quantum Dot Solar Cells with Chloride-Passivated SnO₂ Quantum Dots ETL
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- ENVR.P-569 Highly efficient perovskite solar cells with green-solvent processable, dopant-free and lead-capturable hole transport polymers
Wooteak Jung, Kyoungwon Choi, Hae Un Kim, Taiho Park
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- ENVR.P-570 Reduction in Polydispersity of Perovskite Quantum Dots Enables Highly Efficient Solar Cells
Seyeong Lim, Daehwan Lee, Taiho Park
Department of Chemical Engineering, Pohang University of Science and Technology, Korea
- ENVR.P-571 High conductive crusty composite of Cu@NiCo/C for anode catalyst of alkaline fuel cell
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¹School of Earth Sciences and Environmental Enginee, Gwangju Institute of Science and Technology, Korea
- ENVR.P-572 Photoelectrochemical CO₂ Reduction into Liquid Solar Fuels on Cu-Sn Alloy with Reduced Graphene Oxide, Poly(4-vinylpyridine), and Nafion Layers as Cathode and BiVO₄ as Photoanode
Stephanie restu Pratiwi, Ignasia Handipta Mahardika, Hieu Minh Ngo, Young soo Kang^{1,}*
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¹Department of Chemistry, Sogang University, Korea
- ENVR.P-573 Activation and Reduction of CO₂ for Solar Fuel Generation in Photoelectrochemical System with Hybrid Composite Ni_xFe_y Alloy and BiVO₄ Photoanode
Ignasia Handipta Mahardika, Stephanie Restu Pratiwi^{1,}, Young soo Kang^{2,*}*
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- ENVR.P-574 Ppy@rGO@CuFeO₂-CuO@FTO multi-layer photocathode for photoelectrochemical(PEC) CO₂ reduction.
Sangmun Han, Young soo Kang^{1,}*
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¹Department of Chemistry, Sogang University, Korea
- ENVR.P-575 Mixing behaviors and seasonal dynamics of total and methylated mercury in a shallow microtidal estuary: Hyeongsan River Estuary
Sangwoo Eom, Seunghee Han^{1,}*
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- ENVR.P-576 A strategy for improving the adsorption capacity of odor gaseous using thermal dried activated carbons
Sooyeol Phyo, Jiwon Lee
Health and Welfare Research, Korea Institute of Science and Technology (KIST) / Division of Energy & Environment Technology, Korea University of Science and Technology (UST), Korea
- ENVR.P-577 Highly sensitive gas sensor using graphene doped with ZnO nanosheets and SnO₂ nano particles Centrifugated with CTAB for detection of NO₂ gas

- Lee Soyoung, Kang-Bong Lee^{1*}, Yun Sik Nam²
Health and Welfare Research, Korea Institute of Science and Technology, Korea
¹*Green City Technology Institute, Korea Institute of Science and Technology, Korea*
²*Advanced Analysis Center, Korea Institute of Science and Technology, Korea*
- ENVR.P-578 Development of an ultrasensitive colorimetric detection method of dichromate ions with a colorimetric sensor based on gold nano flower particles
Sujin Yoon, Yun Sik Nam¹, Kang-Bong Lee
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¹*Advanced Analysis Center, Korea Institute of Science and Technology, Korea*
- ENVR.P-579 Highly selective detection of Iodine based on gold nano-dahlia
Hana Park, Yun Sik Nam¹, Kang-Bong Lee
Health and Welfare Research, Korea Institute of Science and Technology, Korea
¹*Advanced Analysis Center, Korea Institute of Science and Technology, Korea*
- ENVR.P-580 Photocatalytic and electrocatalytic properties of Eu(III)-doped perovskite ZnGa₂O₄ nanoparticles with dopant level approaches
Hye Ji Jang, Youngku Sohn
Department of Chemistry, Chungnam National University, Korea
- ENVR.P-581 Electrochemical CO₂ conversion over brass substrates
Hong Sung-min, Youngku Sohn^{1*}
Department of Chemical Engineering and Applied Chemistry, Chungnam National University, Korea
¹*Department of Chemistry, Chungnam National University, Korea*
- ENVR.P-582 Synergistic effects of nanoclay and hydrolysis on performance of polyacrylonitrile membrane for pervaporative desalination of brine
Hasan Fareed, Ghulam Hussain Qasim¹, Seunghee Han^{2*}
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- ENVR.P-583 Improvement of the Mechanical Properties of Recast Perfluorinated Polymer Electrolyte Membranes by Annealing
Mahamuda Akter, Beom-Seok Kim¹, Jong-Hyeok Park², Jin-Soo Park¹
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¹*Department of Green Chemical Engineering, Sangmyung University, Korea*
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- ENVR.P-584 Correlation of Thickness of Ionomer Film with the Performance of PEMFCs
Jong-Hyeok Park, Beom-Seok Kim¹, Jin-Soo Park¹
Department of Civil, Environmental, and Biomedical Engineering, Sangmyung University, Korea
¹*Department of Green Chemical Engineering, Sangmyung University, Korea*
- ENVR.P-585 Effect of Property of Ionomer Dispersion on Catalyst Layers for Hydrogen Evolution Reaction in PEMWE
Jong-Hyeok Park, Beom-Seok Kim¹, Jin-Soo Park¹
Department of Civil, Environmental, and Biomedical Engineering, Sangmyung University, Korea
¹*Department of Green Chemical Engineering, Sangmyung University, Korea*
- ENVR.P-586 Visible activation of humic acid-TiO₂ complex mediated via ligand-to-metal charge transfer
Hoang Tran Bui, EunJu Kim^{1*}, Wooyul Kim^{2*}
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- ENVR.P-587 Electrocatalytic CO₂ reduction over perovskite oxide catalysts
Ju Hyun Yang, Youngku Sohn^{1*}
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¹*Department of Chemistry, Chungnam National University, Korea*
- ENVR.P-588 Removal of aqueous cesium by prussian blue embedded pectin beads synthesized from steel slag
Sunho Yoon, Sungjun Bae^{1*}
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- ENVR.P-589 Various synthesis method and comparison of photoelectrochemical efficiency for BiVO₄ / Spaced TiO₂ nanotubes heterojunction
Taewan Kim, Kiyoung Lee
Department of Chemistry and Chemical Engineering, Inha University, Korea
- ENVR.P-590 High-Performance Small-Molecule Based Organic Photovoltaics through Strategic Halogenation
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- ENVR.P-591 Formation of Ni-Fe Heterostructures through the one-step electro deposition method to improve water electrolysis performance

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ENVR.P-592 Removal behavior of microplastics in drinking water treatment processes

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ENVR.P-593 Study on Photoelectrochemical Hydrogen Evolution of (1 0 1) Facet Single Crystalline TiO₂ onto WO₃/BiVO₄ Heterojunction

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ENVR.P-594 Electrochemical CO₂ reduction over modified CuS electrodes

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ENVR.P-595 Noble Metal Sensitized Invasive Porous Bioelectrodes: Advanced Medical Device for Enhanced Neuronal Activity and Chronic Alcohol therapy

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ENVR.P-596 Noble metal free photocatalyst: TiO₂ NTs covered with rGO

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ENVR.P-597 Design and Fabrication of the Dye-sensitized Betavoltaic Cell using Isotope Carbon Nanoparticle

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ENVR.P-598 Application of Re-use Graphite Recycled from the Spent Lithium-Ion Batteries for Highly Stable Lithium-Sulfur batteries

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