KCS 대한화학회 KOREAN CHEMICAL SOCIETY

Green Chemistry, Clean World!

132nd General Meeting

of the Korean Chemical Society

October 25~27, 2023, Kimdaejung Convention Center

※ This work was supported by the Korean Federation of Science and Technology Societies (KOFST) Grant funded by the Korean Government.

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132nd General Meeting
of the Korean Chemical Society

October 25~27, 2023
Kimdaejung Convention Center

KCS 대한화학회 KOREAN CHEMICAL SOCIETY

Welcome Message

On behalf of the organizing committee, it is my great honor and pleasure to welcome all my fellow chemists and participants to the 132nd General Meeting of the Korean Chemical Society (KCS) held at the Gwangju Kimdaejung Convention Center in Oct 25 (Wed) – 27 (Fri), 2023. As we are well into the post-pandemic era, I believe this KCS meeting will serve as a great opportunity for Korean and international scholars from all branches of chemistry to gather and discuss new advances and innovations made in the field of chemistry.

I am pleased to announce Professor Sukbok Chang's plenary lecture at the 132nd General Meeting of the KCS, entitled "Catalytic C-H Amination Reactions: Scope and Intermediacy of Metal Nitrenoids". In this lecture, I believe Professor Chang would share insights he attained serving as the Director of the IBS Center for Catalytic Hydrocarbon Functionalization for the last 10 years. In addition, Professor Cheol Ho Choi of Kyungpook National University will give an award lecture, entitled "MR-SF-TDDFT: A Breakthrough in the Study of Strongly Correlated Systems", as the recipient of this year's Ree Taikyue academic excellence award, the most prestigious award in the KCS.

In this KCS meeting, we have prepared five Chemistry Symposium for Future Innovation supported by Dongjin Semichem Co. These symposiums are our new attempts to foster cross-disciplinary research on convergence topics. There will also be a variety of special programs and social activities, which include KCS Special Symposium for Young Chemists and the IBS Symposium organized by the Center for Multidimensional Carbon Materials. In the KCS-ACS Applied Bio-Materials Research Publications Summit, 7 distinguished editors of ACS journals will give lectures and interact with participants of this meeting. Collaboration between KCS and the Royal Society of Chemistry (RSC) will be emphasized in the joint symposium entitled "Multidisciplinary Approach to Energy Science". I hope all participants get the most out of the fall KCS meeting.

I would like to take this opportunity to thank Dongwoo Fine-Chem, who has been a sponsor of the KCS for 12 years, and Bioneer, who has become a new official partner this year. I would also like to thank Shimadzu Scientific Korea and the Gwangju Tourism Organization for their financial support.

Finally, I would like to extend my gratitude to all KCS members and participants to this KCS meeting. I look forward to welcoming you all in Gwangju!

Seokmin Shin
President of the Korean Chemical Society

Chemistry for All, Dream for Future!
미래를 꿈꾸는 크루를 위한 초석!

KCS 대한화학회 KOREAN CHEMICAL SOCIETY

132nd General Meeting of the Korean Chemical Society

October 25-27, 2023
Kimdaejung Convention Center

PLENARY LECTURE

Sukbok Chang
KAIST / IBS

Catalytic C-H Amination Reactions: Scope and Intermediacy of Metal Nitrenoids

October 25 • • • Special Symposium

October 26 • • • Plenary Lecture
KCS General Assembly
Scientific Programs
(Poster & Oral Presentation)
Exhibition

October 27 • • • Scientific Programs
(Poster & Oral Presentation)
Exhibition

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ROYAL SOCIETY OF CHEMISTRY

KCS KOREAN CHEMICAL SOCIETY

27 October 2023, Gwangju, South Korea

KCS–RSC Joint Symposium

Multidisciplinary Approach to Energy Science

Speakers

James K McCusker Michigan State University

Lin X Chen Northwestern University

Martyn McLachlan Imperial College London

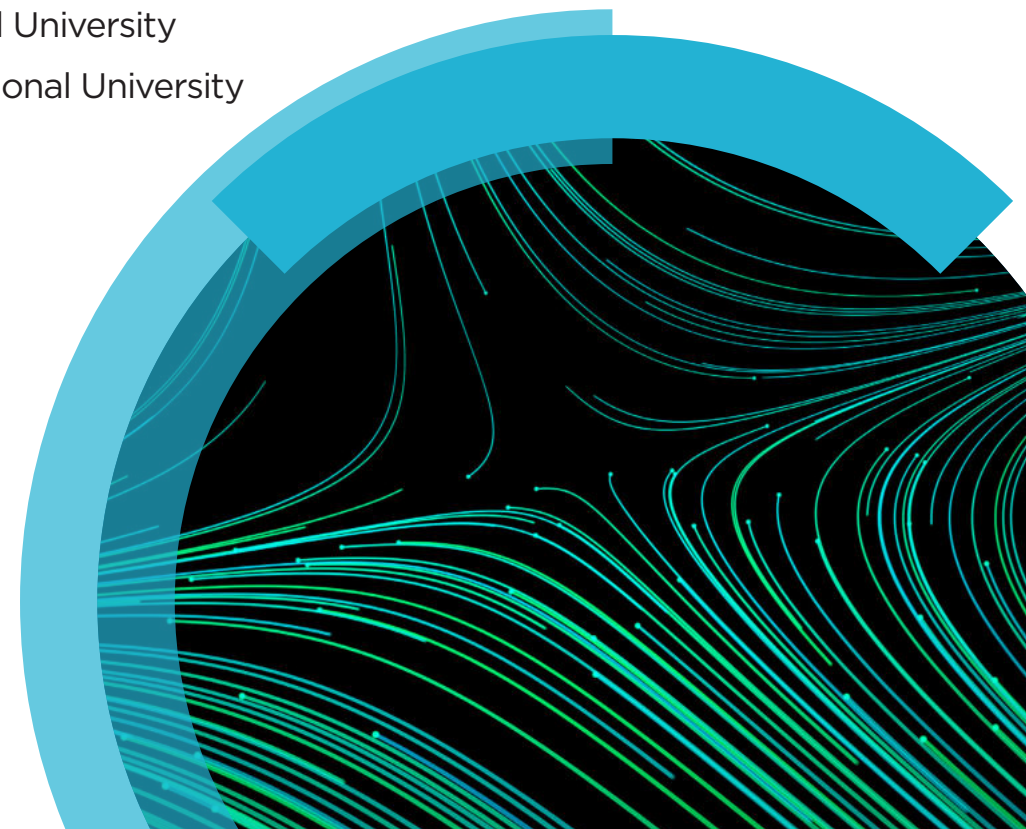
Michaela Muehlberg Royal Society of Chemistry

Natalie Stingelin Georgia Institute of Technology

Yousung Jung Seoul National University

Yun Jeong Hwang Seoul National University

rsc.li/kcs-rsc



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KCS General Assembly

Part 1. Plenary Lecture

- October 26 (THU), 13:30-14:20
- Multipurpose Hall 1 (1F)

Sukbok Chang

KAIST / IBS

Catalytic C-H Amination Reactions: Scope and Intermediacy of Metal Nitrenoids

Part 2. General Assembly

- October 26 (THU), 14:30-15:30
- Multipurpose Hall 1 (1F)

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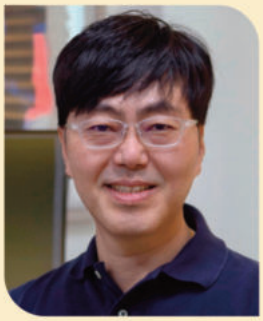
Award Lecture

2023 Taikyue Ree Academic Award

- October 27 (FRI), 13:30-14:20
- Multipurpose Hall 1 (1F)



Cheol Ho Choi

Kyungpook National University

MR-SF-TDDFT: A Breakthrough in the Study of Strongly Correlated Systems

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평의원회

지부장, 분과회장 연계회의

- October 25 (WED), 17:00
- 홀리데이인 광주 호텔 3F 컨벤션홀 3

① 주요 회무 및 회원 현황

② 총회 의결 안건 사전 심의

③ 기타 토의

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132nd General Meeting of the Korean Chemical Society

KCS-ACS Applied Bio Materials Research Publications Summit

Research Trends and Challenges in Nano-bio Chemistry

- October 25 (WED), 13:00-17:40
- Room 208+209+210

Kirk S. Schanze
Editor-in-Chief
ACS Applied Materials & Interfaces
University of Texas at San Antonio

Conjugated Polyelectrolytes in Biosensing and Disinfection

Shikha Nangia
Associate Editor
ACS Applied Bio Materials
Syracuse University

Challenges of Treating Alzheimer's Disease

Juyoung Yoon
Advisory Board
ACS Applied Bio Materials
Ewha Womans University

Recent Progress on Phototherapy and Photochemistry

Ashutosh Sharma
Associate Editor
ACS Applied Bio Materials
IIT Kanpur

Harnessing Self-organization in Confined Soft Materials for Micro/ Nanofabrication

Mi Hee Lim
Advisory Board
ACS Applied Bio Materials
KAIST

Chemical Strategies to Study Multiple Facets in Alzheimer's Disease

Elisabeth Engel
Associate Editor
ACS Applied Bio Materials
The Barcelona Institute of Science and Technology

Unlocking the Potential of Calcium Nanoparticles: From Bone Repair to Beyond

Jong Seung Kim
Associate Editor
ACS Applied Bio Materials
Korea University

Small Molecule-based Drug Delivery System and Its Bioimaging

Deeksha Gupta
ACS Publications

Resources at ACS for Career Advancement of South Korean STEM Professionals

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KCS-RSC Joint Symposium

Multidisciplinary Approach to Energy Science

- October 27 (FRI), 10:00-12:15/14:30-16:45
- Multipurpose Hall 1 (1F)

James K. McCusker
Associate Editor
Chemical Science
Michigan State University

Tailoring the Photophysics of First-row Transition Metal-based Chromophores for Applications in Light-to-Chemical Energy Conversion: Challenges and Opportunities

Yousung Jung
Editorial Advisory Board
Chemical Science
Seoul National University

Accelerated Chemical Science Using AI

Lin X. Chen
Associate Editor
Chemical Science
Northwestern University

Excited State Trajectories in Photoactive Transition Metal Complexes Probed by Ultrafast Laser and X-ray Spectroscopies and Scattering

Martyn A. McLachlan
Associate Editor
Journal of Materials Chemistry C
Imperial College London

Facile Methods for Engineering Performance Improvements in Perovskite Photovoltaics

Natalie Stingelin
Editor-in-Chief
Journal of Materials Chemistry C,
Georgia Institute of Technology

Deciphering Structure/Property Interrelations for Functional Polymer Systems Using Thermal Analysis

Yun Jeong Hwang
Associate Editor
Journal of Materials Chemistry A
Seoul National University

Understanding Catalyst-electrolyte Interfaces for Electrochemical CO_2 Conversion

Michaela Muehlberg
Executive Editor
Journal of Materials Chemistry A, B, C
Royal Society of Chemistry

Publishing with the RSC

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IBS Symposium

Carbon and Related Materials

- October 25 (WED), 13:00-18:00
- Room 211+212+213

Rodney S. Ruoff
Institute for Basic Science/UNIST

How's Your Interface?

Yung Doug Suh
UNIST

MINE-based (Molecular Integration NanoscopE-based) Closer Look into Materials and Beyond

Hyeon Suk Shin
UNIST

Hexagonal and Amorphous Boron Nitride Thin Films

Seung Kyu Min
UNIST

Computational/Theoretical Analysis of Various Carbon-related Materials

Geunsik Lee
UNIST

DFT Modeling of Carbon Transformation through Dissolution in Metal

Won Kyung Seong
Institute for Basic Science

Fractionation of Carbon Isotopes Using Electromigration in High Carbon Solubility Metals

Da Luo
Institute for Basic Science

Interfacial Properties about Single Crystal Graphene Grown on Cu(111) Surfaces

Benjamin V. Cunning
Institute for Basic Science

Putty-like Gallium: A Simple Approach to Forming Gallium Composites

Meihui Wang
Institute for Basic Science

The Growth Kinetics of Graphene Islands on Cu(111) Foils Using C_2H_2, C_2H_4, C_2H_6, and CH_4 as Reagents

Co-organized by

ibs Institute for Basic Science

CMCM Center for Multidimensional Carbon Materials

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KCS Symposium

Special Symposium for Young Chemists

- October 25 (WED), 13:00-17:55
- Room 302+303

Physical Chemistry

Chang Yun Son
POSTECH

Controlling Charged Interfaces for Energy/Bio Applications: Insights from Predictive Molecular Simulations

Analytical Chemistry

Sungju Yu
Ajou University

Manipulating Light, Matter, and Energy for Carbon Fixation

Electrochemistry

Jongwoo Lim
Seoul National University

How Interfaces Control Lithium (de)Insertion Pathway: Liquid Electrolyte and Solid Electrolyte

Material Chemistry

Munseok S. Chae
Pukyong National University

Crystallographic/Electrochemical Mechanism Analysis of Cathode Materials for Sodium-ion Batteries

Environmental Energy

Choonsoo Kim
Kongju National University

Redox Flow Deionization (RFD): Principles, Progress, and Future Directions

Chemistry Education

Byeong-Seon Kim
Gyeongsang National University

Digital Era in Chemistry Classes and Laboratories

Inorganic Chemistry

Hyunchul Oh
UNIST

A Study on the Reduction of H_2 Boil-off of Liquefied Hydrogen for Long-Range Hydrogen Transportation

Life Chemistry

Yong Woong Jun
KAIST

Elucidating DNA Damage and Repair in Cells, and Harnessing Them with In Situ Enzymatic Chemical Modification of DNA

Polymer Chemistry

Yongju Kim
Korea University

Supramolecular Chemistry for Functional Two-dimensional Materials

Organic Chemistry

Han-Yong Bae
Sungkyunkwan University

Water-Accelerated Sustainable and High-Turnover Organocatalysis for SuFEx Chemistry

Medicinal Chemistry

Hye-Jin Kim
KRICT

Harnessing Innate Immune Modulators for Therapeutic Innovation

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Chemistry Symposium for Future Innovation & BKCS Symposium

The Story of Our Lives Fashioned by Chemistry

- October 25 (WED), 13:00-17:55
- Room 201+202+203

In Su Lee
POSTECH

Crafting Designer Nanoreactors for Bio-orthogonal Catalysis in Living Systems

Mi Hee Lim
KAIST

Bioinorganic Strategies to Understand Multiple Facets in Neurodegenerative Disorders

Jaeheung Cho
UNIST

A Photo-responsive Iron-nitrosyl Complex in Acute Vascular Occlusion Disease

Soo Bong Han
KRICT

Lessons from COVID-19 for the Development of Antiviral Drugs

Ki Duk Park
KIST

Discovery of Potent and Selective Keap1/Nrf2 Modulators for the Treatment of Alzheimer's Disease

Soong-Hyun Kim
K-MEDIhub

Development of Prokaryotic UMP Kinase (pyrH) Inhibitor Towards the Novel Class of Broad-Spectrum Antibiotics

Kara L. Bren
University of Rochester

Cytochrome C-based Systems for Artificial Photosynthesis

Todd C. Harrop
University of Georgia

Metal Nitrosyls That Mimic Global Nitrogen Cycle Transformations: Generation of Reduced NO_x Species

Abhishek Dey
Indian Association for the Cultivation of Science

Catalytic Oxidation of C-H Bonds with O_2 in Aqueous Solvents

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Chemistry Symposium for Future Innovation

Introduction of Recent Chemistry for the Advancement of Chemistry Education in the New Era of the 4th Industrial Revolution

- October 25 (WED), 14:25-17:15
- Room 206+207

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Seung Jae Lee
Jeonbuk National University

A Multi-disciplinary Approach to the Elucidation of Protein Activities

Sun Hee Kim
Korea Basic Science Institute (KBSI)

The Contribution of Magnetic Resonance Spectroscopy for Future Innovation

Kiyoung Park
KAIST

Lessons from Nature and Electronic Structures: Light and O_2 Utilization for Organonickel Chemistry

Hyuck Jin Lee
Kongju National University

Vitamins as Potent Anticancer Agents Targeting Matrix Metalloproteinase-2/9

Jin Yeong Kim
Seoul National University

Recent Trends in Nanoporous Crystalline Materials, Metal-organic Frameworks

Hyun Kyung Kim
Jeonbuk National University

Research Trends and Directions in Chemistry Education in the Era of the 4th Industrial Revolution

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Chemistry Symposium for Future Innovation

The Role of Chemistry in Materials Innovation for Sub-nm Semiconductors

- October 25 (WED), 13:00-15:40
- Room 214

Sang-Jun Choi
Chempole

Advancements and State-of-the-Art Trends in Semiconductor Photoresist Materials

Jung Hyung Kim
KRISS

Development of Selective Dissociating PECVD Process for Ultra Low-k Film

Hyo Jae Yoon
Korea University

Molecules for Electronics Applications

Chan-Cuk Hwang
Pohang Accelerator Laboratory

Optical Properties of Materials and Components Used in EUVL Materials

Hyun-Dam Jeong
Chonnam National University

Development of Materials Based on Electron-driven Chemistry for Sub-nm Node Semiconductors

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Chemistry Symposium for Future Innovation

High-performance Multicomponent Macromolecular Materials with an Entropy Approach

- October 25 (WED), 14:00-17:50
- Room 301

Keewook Paeng
Sungkyunkwan University

Segmental Dynamics of a Component Polymer in Multicomponent Polymer Mixtures

Sung-Soo Kim
KIST

Understanding Chemical Reactions of Cellulose at High Temperatures and Employing Pretreatments for Carbon Fiber Production

Bong June Sung
Sogang University

Simulation Studies on Mechanical Properties of Elastomers for Various Applications

Youngjong Kang
Hanyang University

Entropy Engineering for Polymers

Doo-Hyun Ko
Sungkyunkwan University

Entropy-driven Strategy to Suppress Organic Phase Separation

Du Yeol Ryu
Yonsei University

Apex-dependent Supramolecular Assemblies from 2G Dendron Mesocrystals

Chang Yun Son
POSTECH

Ion Transport in Advanced Polymer Electrolytes: Role of Morphology and Interface

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Chemistry for All, Dream for Future!

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Chemistry Symposium for Future Innovation

Convergent Understanding of Phase Transition Behaviors

- October 25 (WED), 14:00-17:50
- Room 304+305+306

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Jaeyoung Sung
Chung-Ang University

Statistical Thermodynamics and Chemical Dynamics of Nucleus Seed Formation and Ensuing Phase Transitions in Complex Biological and Material Systems

Yongdae Shin
Seoul National University

The Organization and Function of Biomolecular Condensates Centered around RNA

Jeong-Mo Choi
Pusan National University

Network Structure and Dynamics of Biomolecular Condensates

Jae Kyoo Lee
Seoul National University

Microdroplet Chemistry: Chemical Reactions at Heterogenous Phase Interfaces

Tuomas Knowles
University of Cambridge

Kinetics of Protein Phase Transitions

Kyeong Kyu Kim
Sungkyunkwan University

Molecular Basis for SOX2-dependent Regulation of Super-enhancer Activity

Joonkyung Jang
Pusan National University

Phase Transitions of Confined Water at the Nanoscale

Yongwon Jung
KAIST

Protein Models to Study Biomolecular Phase Separation

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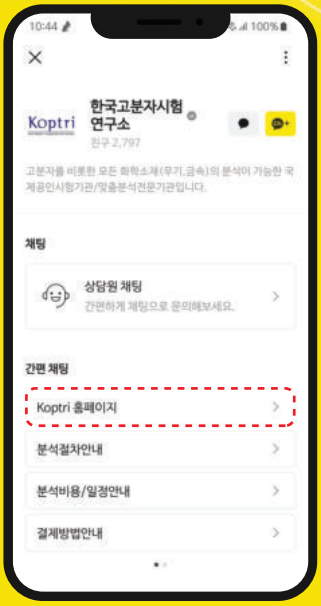

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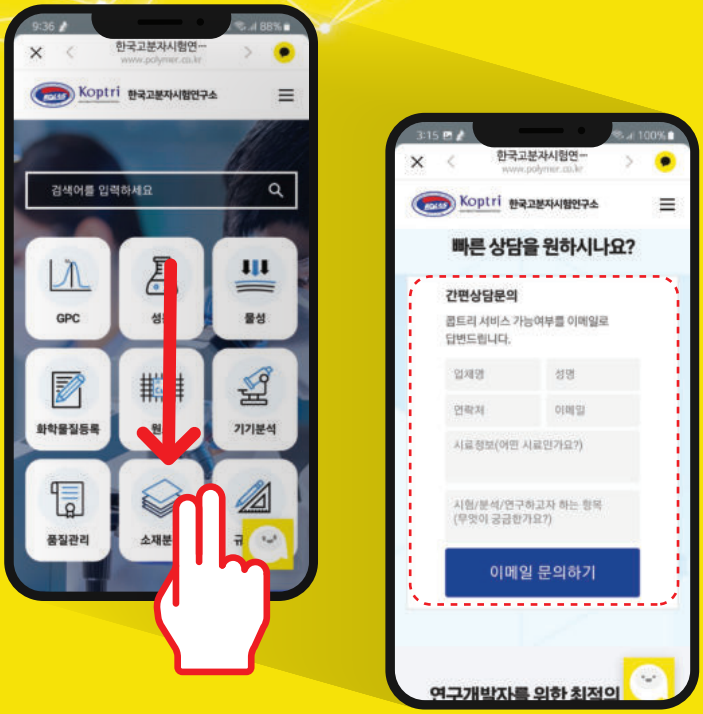

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132nd General Meeting of the Korean Chemical Society

October 25~27, 2023, Kimdaejung Convention Center

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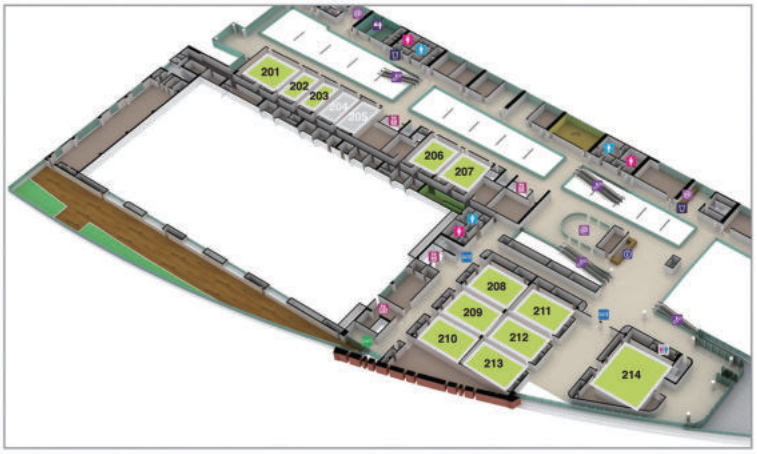
Registration | Program book | Luggage Keeping | Cafeteria | Escalator | Elevator | Toilet

2F Room 201~214

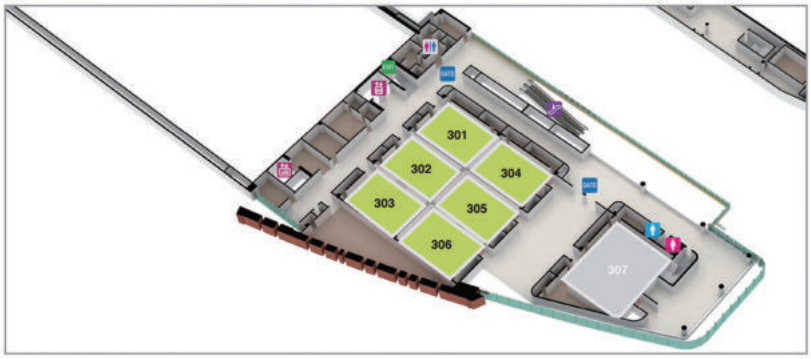


October 25 (WED)	
201+202+203	[Chemistry Symposium for Future Innovation & BKCS Symposium] The Story of Our Lives Fashioned by Chemistry
206+207	[Chemistry Symposium for Future Innovation] Introduction of Recent Chemistry for the Advancement of Chemistry Education in the New Era of the 4th Industrial Revolution
208+209+210	[KCS-ACS Applied Bio Materials Research Publications Summit] Research Trends and Challenges in Nano-bio Chemistry
211+212+213	[IBS Symposium] Carbon and Related Materials

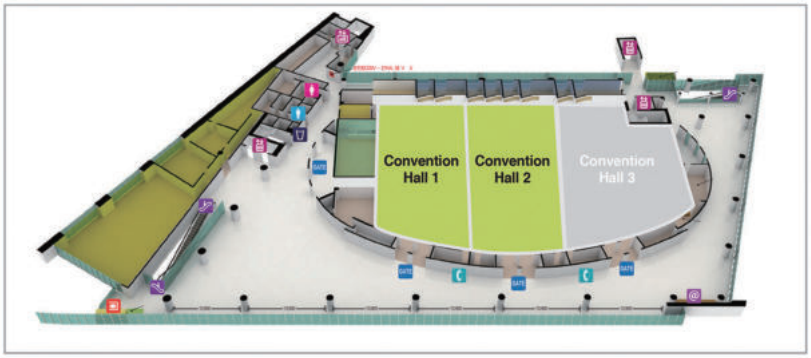
October 25 (WED)	
214	[Chemistry Symposium for Future Innovation] The Role of Chemistry in Materials Innovation for Sub-nm Semiconductors
301	[Chemistry Symposium for Future Innovation] High-performance Multicomponent Macromolecular Materials with an Entropy Approach
302+303	[KCS Symposium] Special Symposium for Young Chemists
304+305+306	[Chemistry Symposium for Future Innovation] Convergent Understanding of Phase Transition Behaviors

Guide Map

3F Room 301~306



4F Convention Hall 1,2



October 26 (THU)	
201+202+203	Material Chemistry
206+207	Electrochemistry
208+209+210	Physical Chemistry
211+212+213	Inorganic Chemistry
214	Analytical Chemistry
301	Environmental Energy
302+303	Polymer Chemistry
304+305+306	Life Chemistry
Convention Hall 1	Medicinal Chemistry
Convention Hall 2	Organic Chemistry
Multipurpose Hall 1	Plenary Lecture
	KCS General Assembly
Exhibition Hall C	Poster Presentation 1
	Exhibition

October 27 (FRI)	
201+202+203	Material Chemistry
206+207	Electrochemistry
208+209+210	Physical Chemistry
211+212+213	Inorganic Chemistry
214	Analytical Chemistry
301	Environmental Energy
302+303	Polymer Chemistry
304	Chemistry Education
305+306	Life Chemistry
Convention Hall 1	Medicinal Chemistry
Convention Hall 2	Organic Chemistry
Multipurpose Hall 1	[Award Lecture] 2023 Taikyue Ree Academic Award
	[KCS-RSC Joint Symposium] Multidisciplinary Approach to Energy Science
Exhibition Hall C	Poster Presentation 2
	Exhibition

General Information

▪ Date: October 25~27, 2023
▪ Venue: Kimdaejung Convention Center, Gwangju, Korea

1. Membership and Registration Fees

Category		Membership Fees	On-site Registration Fees	
			A	B (Membership fees included)
KCS Members	Regular Members (Lifetime)*	-	KRW 120,000	-
	Regular Members (Annual)	KRW 70,000	KRW 120,000	KRW 190,000
	Educational Members	KRW 50,000	KRW 70,000	KRW 120,000
	Student Members	KRW 50,000	KRW 70,000	KRW 120,000
General Participants (Non-member)		-	KRW 250,000	

※ Registration fee waivers for undergraduate students are available. Please bring your student ID card to prove your student status.
(But, all authors and presenters of abstracts are required to register and pay the appropriate registration fees.)
* Regular Members (Lifetime): KRW 1,400,000 (20 years of annual regular membership fee at the time of joining)

2. Poster Presentations

▣ Schedules

Venue	Presentation Date & Time	Division (Topic)	Mounting	Demounting
Exhibition Hall C (1F)	October 26 (THU) 11:00~13:00	Industrial Chemistry, Inorganic Chemistry, Physical Chemistry, Analytical Chemistry, Electrochemistry, Environmental Energy	09:00~11:00	15:00~16:00
	October 27 (FRI) 11:00~13:00	Polymer Chemistry, Life Chemistry, Organic Chemistry, Medicinal Chemistry, Material Chemistry, Chemistry Education,	09:00~11:00	15:00~16:00

▣ Presentations

- Presenters should be in attendance at their poster board during the assigned time of their poster presentation.

Time & Activity	from 11 a.m. to 12 p.m.	from 12 p.m. to 1 p.m.
Poster Presentation	Even Numbers	Odd numbers
Research Exchanges with Other Presenters	Odd numbers	Even Numbers

- A poster presenter is required to stand by the poster during the scheduled poster presentation to answer questions from attendees.
- If your posters are not hung on board during all your presentation time, you will be considered as not to have attended and your name will be included in the lists of absent presenters.

▣ Poster Presentation Area

- Poster board locations and allocated codes will be available on the bulletin board outside of the Exhibition Hall C (1F).
- A poster board number on poster display board indicates the location of assigned poster display. Please do NOT remove the number.

▣ Setting up and Taking down

- Please follow the schedule outlining times for mounting and demounting your poster.
- Each poster should be placed on the numbered board assigned to each presenter.
- Material to pin up your poster will be provided at the venue.
- You are responsible for setting-up and taking down of your own poster. Unclaimed posters are not the responsibility of the organizers or KCS. And they will be disposed following your day without notice.

▣ Poster Prizes

- BIONEER Poster Award
- Dongwoo Fine-Chem Poster Award
- BKCS Poster Award
- ACS Poster Award
- KCS Poster Award
- KCS Official Partner Poster Award (Selected by Student Members)

3. KCS General Assembly and General Meetings of Divisions

▣ KCS General Assembly

October 26 (THU) 13:30~15:30, Multipurpose Hall 1 (1F)
(Part 1. Plenary Lecture 13:30~14:20, Part 2. General Assembly 14:30~15:30)

■ KCS Awards

- Taikyue Ree Academic Award: Cheol Ho Choi (Kyungpook National University)
- Award for the Advancement of Industry: Kyu Young Hwang (Samsung Electronics Co., Ltd. SAIT)
- Award for Excellent Chemistry Teachers: Jihun Park (Busan Science High School)
- Award for Doctoral Dissertation: Taehee Kim (Yonsei University/ETH Zurich),
  Gyeong-Geon Lee (Seoul National University), So Yeon Chun (Korea University), Jisu Choe (DGIST)
- Award for CEO in Chemistry: Chun Hyuk Lee (Dongjin Semichem Co., Ltd.)
- KCS-Wiley Young Scholar Award: Jongwoo Lim (Seoul National University), Sarah Yunmi Lee (Yonsei University)
- KCS/Sigma-Aldrich Excellent Chemist Award:
  Doo-Hyun Ko (Sungkyunkwan University), Byeong-Su Kim (Yonsei University)
- i-SENS Female Chemist Award: Jaesook Yun (Sungkyunkwan University)
- Award for Excellent Regional Chapter: Ulsan Regional Chapter

■ General Meetings of Divisions

- Polymer Chemistry: October 26 (THU) 17:30~18:00, Room 302+303
- Inorganic Chemistry: October 26 (THU) 17:35~18:00, Room 211+212+213
- Analytical Chemistry: October 26 (THU) 17:20~17:40, Room 214
- Materials Chemistry: October 26 (THU) 17:30~18:00, Room 201+202+203
- Electrochemistry: October 26 (THU) 17:45~18:00, Room 206+207

4. Notice

■ KCS No Recording Policy

The use of any device to capture images (e.g., cameras and camera phones) or sound (e.g., tape and digital recorders) or stream, upload or rebroadcast speakers or presentations is strictly prohibited at all official KCS meetings and events without express written consent from the KCS.

5. Lucky Draw & Best Posters Awards Ceremony

Draw Date	October 26 (THU), 18:00 at 1F Lobby
	October 27 (FRI), 16:30 at 1F Lobby

* Please check the notice board on-site.

Scientific Programs and Poster Presentations

Type	Division	No.	Subject	Schedule	Code	Room No.
Plenary Lecture	KCS	1	Plenary Lecture - Sukbok Chang (KAIST / IBS)	26 (THU) 13:30-14:20	PLEN	Multipurpose Hall 1
Award Lecture	KCS	2	2023 Taikyue Ree Academic Award - Cheol Ho Choi (Kyungpook National University)	27 (FRI) 13:30-14:20	AWARD	Multipurpose Hall 1
Symposium	KCS	3	[Chemistry Symposium for Future Innovation & BKCS Symposium] The Story of Our Lives Fashioned by Chemistry	25 (Wed) 13:00-17:55	KCS1	201+202+203
		4	[Chemistry Symposium for Future Innovation] Introduction of Recent Chemistry for the Advancement of Chemistry Education in the New Era of the 4th Industrial Revolution	25 (Wed) 14:25-17:15	KCS2	206+207
		5	[KCS-ACS Applied Bio Materials Research Publications Summit] Research Trends and Challenges in Nano-bio Chemistry	25 (Wed) 13:00-17:40	KCS3	208+209+210
		6	[IBS Symposium] Carbon and Related Materials	25 (Wed) 13:00-18:00	KCS4	211+212+213
		7	[Chemistry Symposium for Future Innovation] The Role of Chemistry in Materials Innovation for Sub-nm Semiconductors	25 (Wed) 13:00-15:40	KCS5	214
		8	[Chemistry Symposium for Future Innovation] High-performance Multicomponent Macromolecular Materials with an Entropy Approach	25 (Wed) 14:00-17:50	KCS6	301
		9	[KCS] Special Symposium for Young Chemists	25 (Wed) 13:00-17:55	KCS7	302+303
		10	[Chemistry Symposium for Future Innovation] Convergent Understanding of Phase Transition Behaviors	25 (Wed) 14:00-17:50	KCS8	304+305+306
		11	[KCS-RSC Joint Symposium] Multidisciplinary Approach to Energy Science	27 (FRI) 10:00-12:15/ 14:30-16:45	KCS9	Multipurpose Hall 1
	Polymer Chemistry	12	Recent Trends in Polymer Synthesis	26 (THU) 15:40-18:00	POLY1	302+303
		13	Special Symposium by Mid-Career Polymer Chemists	27 (FRI) 9:00-10:50	POLY2	302+303
		14	Recent Advances in Sustainable Polymer Materials	27 (FRI) 14:30-16:20	POLY3	302+303
	Inorganic Chemistry	15	Recent Trends in Inorganic Materials Chemistry	26 (THU) 15:40-18:00	INOR1	211+212+213
		16	Recent Advances in Organometallic Chemistry and Coordination Chemistry	27 (FRI) 9:00-10:55	INOR2	211+212+213
		17	Recent Trends in Nanochemistry Research	27 (FRI) 14:30-16:30	INOR3	211+212+213
	Physical Chemistry	18	Recent Physical Chemistry Studies on Photo/Electrochemistry	26 (THU) 15:40-17:30	PHYS1	208+209+210
		19	Computers and Chemistry: Recent Research Trends	27 (FRI) 9:00-11:00	PHYS2	208+209+210
		20	Recent Advances in Physical Chemistry for Energy Science	27 (FRI) 14:20-16:20	PHYS3	208+209+210
	Analytical Chemistry	21	Recent Trends in Analytical Chemistry Research for Industrial Applications	26 (THU) 15:40-17:40	ANAL1	214
		22	Recent Trends in Advanced Analytical Chemistry	27 (FRI) 14:30-16:30	ANAL2	214
	Life Chemistry	23	Recent Advances in Biomolecular Condensation	26 (THU) 15:40-17:40	LIFE1	304+305+306
		24	Recent Advances in Biosystems Engineering	27 (FRI) 9:00-11:00	LIFE2	305+306
	Organic Chemistry	25	International Organic Chemists Symposium	26 (THU) 15:40-17:55	ORGN1	Convention Hall 2
		26	Recent Trends in Organic Chemistry	27 (FRI) 9:30-11:10	ORGN2	Convention Hall 2
		27	Recent Trends in New Catalytic Reaction	27 (FRI) 14:30-16:10	ORGN3	Convention Hall 2
	Medicinal Chemistry	28	Award Lecture: Excellence in Medicinal Chemistry	26 (THU) 15:40-17:40	MEDI1	Convention Hall 1
		29	Recent Trends in Drug Discovery Using DNA Encoded Library Technology	27 (FRI) 9:00-11:00	MEDI2	Convention Hall 1

Symposium	Material Chemistry	30	2023 Selection of BKCS-Materials Chemistry	26 (THU) 15:40-18:00	MAT1	201+202+203
		31	Recent Trends in Materials Chemistry for Next-generation Battery	27 (FRI) 9:00-10:55	MAT2	201+202+203
		32	From Synthesis to Application of Nanomaterials with Quantum Properties	27 (FRI) 14:30-16:10	MAT3	201+202+203
	Electrochemistry	33	Electrochemical Organic Synthesis: Electrochemistry and Organic Chemistry	26 (THU) 15:40-18:00	ELEC1	206+207
		34	Electrocatalytic Reactions for Carbon Neutrality	27 (FRI) 9:00-11:00	ELEC2	206+207
		35	Emerging Trends in Fundamental Electrochemistry	27 (FRI) 14:30-16:10	ELEC3	206+207
	Chemistry Education	36	Current Issues and Research in Chemistry Education	27 (FRI) 9:00-11:00	EDU1	304
		37	Chemistry Education for the Science Gifted Students	27 (FRI) 14:30-16:30	EDU2	304
	Environmental Energy	38	Micro- and Nanoplastics: Up-to-date Knowledge on Detection and Toxicity	26 (THU) 15:40-17:40	ENVR1	301
		39	CCU Alchemist Technologies: Carbon-to-Liquid	27 (FRI) 9:00-11:00	ENVR2	301
Oral Presentation	Polymer Chemistry	40	Oral Presentation for Young Polymer Scientists	26 (THU) 9:00-11:00	POLY.O	302+303
	Inorganic Chemistry	41	Oral Presentation for Young Inorganic Chemists	26 (THU) 9:00-11:00	INOR.O	211+212+213
	Physical Chemistry	42	Oral Presentation for Young Physical Chemist	26 (THU) 9:00-11:00	PHYS.O	208+209+210
	Analytical Chemistry	43	Oral Presentation of Young Analytical Chemists	26 (THU) 9:00-11:00	ANAL1.O	214
	Analytical Chemistry	44	Oral Presentation of Early-career Analytical Chemists	27 (FRI) 9:00-11:00	ANAL2.O	214
	Life Chemistry	45	Oral Presentation for Young Scientists in Biochemistry and Chemical Biology	26 (THU) 9:00-11:00	LIFE.O	304+305+306
	Organic Chemistry	46	Oral Presentations for Young Scholars in Organic Division	26 (THU) 9:00-11:00	ORGN.O	Convention Hall 2
	Medicinal Chemistry	47	Oral Presentation of Young Medicinal Chemists	26 (THU) 9:00-11:00	MEDI.O	Convention Hall 1
	Material Chemistry	48	Oral Presentation for Young Material Chemists	26 (THU) 9:00-11:00	MAT.O	201+202+203
	Electrochemistry	49	Oral Presentation for Young Electrochemists	26 (THU) 9:00-11:00	ELEC.O	206+207
	Environmental Energy	50	General Session	26 (THU) 9:20-11:00	ENVR.O	301

Award Lecture in Division

Polymer Chemistry	Polymer Chemistry Excellence Award - BongSoo Kim (UNIST) : 27 (FRI) 10:25-10:50, Rm 302+202
Inorganic Chemistry	Young Inorganic Chemist Award 1 - Daeha Seo (DGIST) : 26 (THU) 09:00-09:25, Rm 211+212+213 Young Inorganic Chemist Award 2 - Min Kim (Chungbuk Nat'l Univ.) : 26 (THU) 09:25-09:50, Rm 211+212+213 Si-Joong Kim Academic Award - Ok-Sang Jung (Pusan Nat'l Univ.) : 26 (THU) 10:30-11:00, Rm 211+212+213
Physical Chemistry	Kim Myung Soo Award - Sangwoon Yoon (Chung-Ang Univ.) : 26 (THU) 15:40-16:10, Rm 208+209+210 Young Physical Chemist 1 - Sang Hak Lee (Pusan Nat'l Univ.) : 27 (FRI) 14:20-14:45, Rm 208+209+210 Young Physical Chemist 2 - Jung Ho Lee (Seoul Nat'l Univ.) : 27 (FRI) 14:45-15:10, Rm 208+209+210
Analytical Chemistry	Young In Outstanding Analytical Chemistry Research Award - Jaebeom Lee (Chungnam Nat'l Univ.) : 26 (THU) 17:00-17:20, Rm 214
Life Chemistry	Dae-Sill Lee Academic Excellence Prize for Young Researchers - YoungSoo Kim (Yonsei Univ.) : 26 (THU) 10:20-11:00, Rm 304+305+306
Organic Chemistry	Sehi Jang Award - Ja-Hyoung Ryu (UNIST) : 26 (THU) 15:40-16:10, Convention Hall 2
Material Chemistry	Jin-Ho Choy Academic Award - Nam Hwi Hur (Sogang Univ.) : 26 (THU) 17:00-17:30, Rm 201+202+203 Young Material Chemist Award - Jae-Seung Lee (Korea Univ.) : 27 (FRI) 10:25-10:55, Rm 201+202+203
Electrochemistry	i-SENS Young Electrochemist Award - Jinho Chang (Hanyang Univ.) : 26 (THU) 10:31-11:00, Rm 206+207 Q. Won Choi Academic Award - Hye Jin Lee (Kyungpook Nat'l Univ.) : 27 (FRI) 10:40-11:00, Rm 206+207

Scientific Programs and Poster Presentations

Poster Presentations

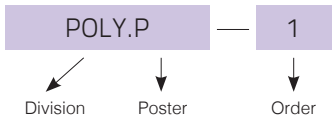
- Presenters should be in attendance at their poster board during the assigned time of their poster presentation.
- Posters Presentations: Two hours on Thursday and Friday
- Poster presenters need to check their presenting numbers.

Time & Activity	from 11 a.m. to 12 p.m.	from 12 p.m. to 13 p.m.
Poster Presentation	Even Numbers	Odd numbers
Research Exchanges with Other Presenters	Odd numbers	Even Numbers

October 26 (THU) - 27 (FRI) 11:00-13:00, Exhibition Hall C (1F)

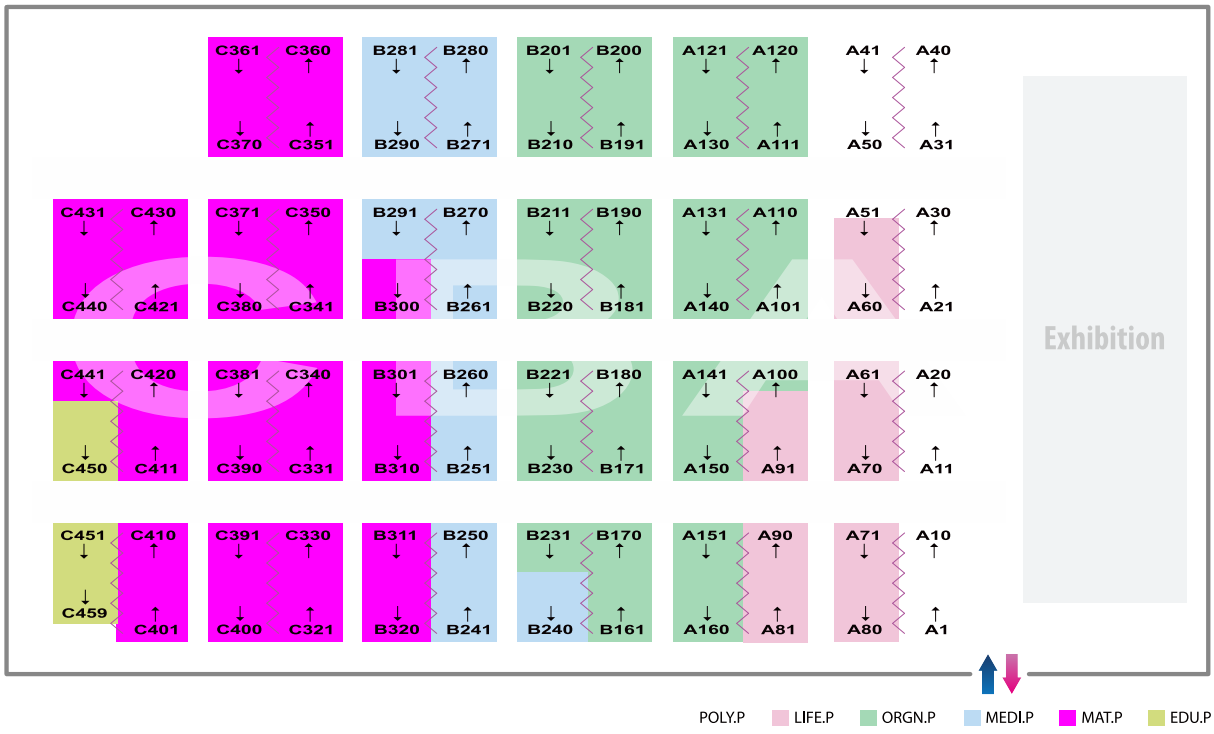
Division	No.	Code	Date
Polymer Chemistry	51	POLY.P	27 (FRI) 11:00-13:00
Industrial Chemistry	52	IND.P	26 (THU) 11:00-13:00
Inorganic Chemistry	53	INOR.P	26 (THU) 11:00-13:00
Physical Chemistry	54	PHYS.P	26 (THU) 11:00-13:00
Analytical Chemistry	55	ANAL.P	26 (THU) 11:00-13:00
Life Chemistry	56	LIFE.P	27 (FRI) 11:00-13:00
Organic Chemistry	57	ORGN.P	27 (FRI) 11:00-13:00
Medicinal Chemistry	58	MEDI.P	27 (FRI) 11:00-13:00
Material Chemistry	59	MAT.P	27 (FRI) 11:00-13:00
Electrochemistry	60	ELEC.P	26 (THU) 11:00-13:00
Chemistry Education	61	EDU.P	27 (FRI) 11:00-13:00
Environmental Energy	62	ENVR.P	26 (THU) 11:00-13:00

How to read

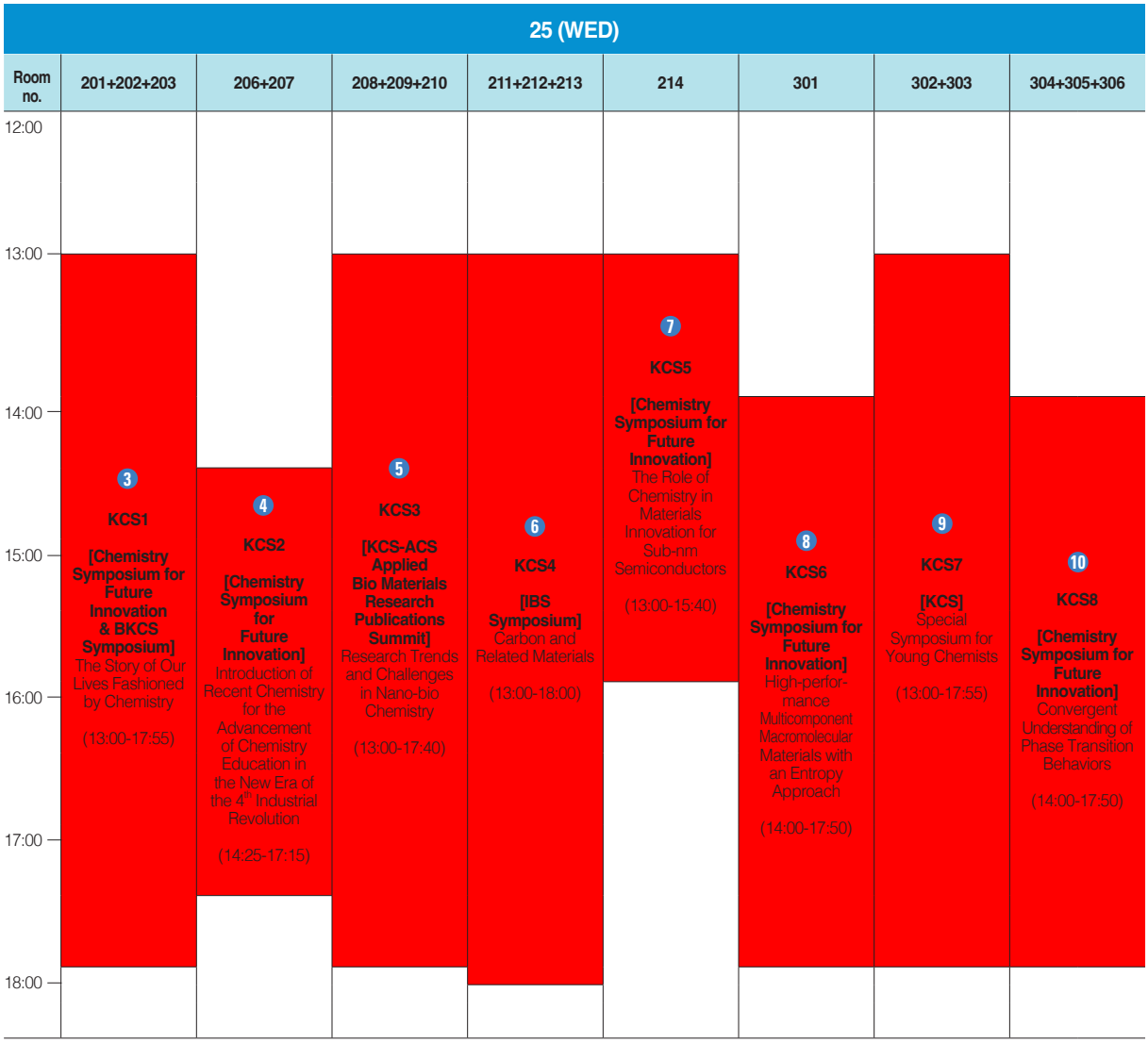


October 26 (THU) 11:00-13:00, Exhibition Hall C (1F)

October 27 (FRI) 11:00-13:00, Exhibition Hall C (1F)



Program Overview - October 25 (WED)



Program Overview - October 26 (THU)

26 (THU)

Room no.	201+202+203	206+207	208+209+210	211+212+213	214	301	302+303	304+305+306	Convention Hall 1	Convention Hall 2	Exhibition Hall C
9:00				**Award Lecture: Young Inorganic Chemist Award** Daeha Seo (DGIST), Min Kim (Chungbuk Nat'l Univ.) (09:00-09:50)							
9:30	**48 MAT.O** Oral Presentation for Young Material Chemists (09:00-11:00)	**49 ELEC.O** Oral Presentation for Young Electrochemists (09:00-10:31)	**42 PHYS.O** Oral Presentation for Young Physical Chemist (09:00-11:00)	**41 INOR.O** Oral Presentation for Young Inorganic Chemists (09:50-10:30)	**43 ANAL1.O** Oral Presentation of Young Analytical Chemists (09:00-11:00)	**50 ENVR.O** General Session (09:20-11:00)	**40 POLY.O** Oral Presentation for Young Polymer Scientists (09:00-11:00)	**45 LIFE.O** Oral Presentation for Young Scientists in Biochemistry and Chemical Biology (09:00-10:20)	**47 MEDI.O** Oral Presentation of Young Medicinal Chemists (09:00-11:00)	**46 ORGN.O** Oral Presentations for Young Scholars in Organic Division (09:00-11:00)	
10:00											
10:30		**Award Lecture: i-SENS Young Electrochemist Award** Jinho Chang (Hanyang Univ.) (10:31-11:00)		**Award Lecture: Si-Joong Kim Academic Award** Ok-Sang Jung (Pusan Nat'l Univ.) (10:30-11:00)				**Award Lecture: Dae-Sill Lee Academic Excellence Prize for Young Researchers** YoungSoo Kim (Yonsei Univ.) (10:20-11:00)			
11:00	**Poster Presentation 1 (11:00-13:00) - Exhibition Hall C** IND / INOR / PHYS / ANAL / ELEC / ENVR										
13:00	**Lunch Break (13:00-13:30)**										
13:30	**KCS General Assembly - Multipurpose Hall 1** **1 Part 1. Plenary Lecture (13:30-14:20) - Sukbok Chang : KAIST / IBS** **Part 2. General Assembly (14:30-15:30)**										Exhibition
15:30			**Award Lecture: Kim Myung Soo Award** Sangwoon Yoon (Chung-Ang Univ.) (15:40-16:10)							**Award Lecture: Sehi Jang Award** Ja-Hyoung Ryu (UNIST) (15:40-16:10)	
16:30	**30 MAT1** 2023 Selection of BKCS-Materials Chemistry (15:40-17:00)	**33 ELEC1** Electrochemical Organic Synthesis: Electrochemistry and Organic Chemistry (15:40-17:45)	**18 PHYS1** Recent Physical Chemistry Studies on Photo/ Electrochemistry (16:10-17:30)	**15 INOR1** Recent Trends in Inorganic Materials Chemistry (15:40-17:35)	**21 ANAL1** Recent Trends in Analytical Chemistry Research for Industrial Applications (15:40-17:00)	**38 ENVR1** Micro- and Nanoplastics: Up-to-date Knowledge on Detection and Toxicity (15:40-17:40)	**12 POLY1** Recent Trends in Polymer Synthesis (15:40-17:30)	**23 LIFE1** Recent Advances in Biomolecular Condensation (15:40-17:40)	**28 MEDI1** Award Lecture: Excellence in Medicinal Chemistry (15:40-17:40)	**25 ORGN1** International Organic Chemists Symposium (16:10-17:55)	
17:00	**Award Lecture: Jin-Ho Choy Academic Award** Nam Hwi Hur (Sogang Univ.) (17:00-17:30)				**Award Lecture: Young In Outstanding Analytical Chemistry Research Award** Jaebeom Lee (Chungnam Nat'l Univ.) (17:00-17:20)						
17:30	General Meeting of Materials Chemistry Division (17:30-18:00)	Electrochemistry Division General Meeting (17:45-18:00)		Inorganic Chemistry Division General Meeting (17:35-18:00)	Analytical Chemistry Division General Meeting (17:20-17:40)		Polymer Chemistry Division General Meeting (17:30-18:00)				
18:00											

Program Overview - October 27 (FRI)

27 (FRI)

Room no.	201+202+203	206+207	208+209+210	211+212+213	214	301	302+303	304	305+306	Convention Hall 1	Convention Hall 2	Multipurpose Hall 1	Exhibition Hall C
9:00													
9:30	31 **MAT2** Recent Trends in Materials Chemistry for Next-generation Battery (09:00-10:25)	34 **ELEC2** Electrocatalytic Reactions for Carbon Neutrality (09:00-10:40)	19 **PHYS2** Computers and Chemistry: Recent Research Trends (09:00-11:00)	16 **INOR2** Recent Advances in Organometallic Chemistry and Coordination Chemistry (09:00-10:55)	44 **ANAL2.O** **Oral Presentation of Early-career Analytical Chemists** (09:00-11:00)	39 **ENVR2** CCU Alchemist Technologies: Carbon-to-Liquid (09:00-11:00)	13 **POLY2** Special Symposium by Mid-Career Polymer Chemists (09:00-10:25)	36 **EDU1** Current Issues and Research in Chemistry Education (09:00-11:00)	24 **LIFE2** Recent Advances in Biosystems Engineering (09:00-11:00)	29 **MEDI2** Recent Trends in Drug Discovery Using DNA Encoded Library Technology (09:00-11:00)	26 **ORGN2** Recent Trends in Organic Chemistry (09:30-11:10)		
10:00												11 **KCS9** **[KCS-RSC Joint Symposium]** Multidisciplinary Approach to Energy Science (10:00-12:15) (Continued)	
10:30	**Award Lecture: Young Material Chemist Award** Jae-Seung Lee (Korea Univ.) (10:25-10:55)	**Award Lecture: Q. Won Choi Academic Award** Hye Jin Lee (Kyungpook Nat'l Univ.) (10:40-11:00)					**Award Lecture:** Polymer Chemistry Excellence Award BongSoo Kim (UNIST) (10:25-10:50)						
11:00	**Poster Presentation 2 (11:00-13:00) - Exhibition Hall C** POLY / LIFE / ORGN / MEDI / MAT / EDU												
13:00			**Lunch Break (13:00-13:30)**										
13:30	**KCS Chem Research Presentation of High School Students (13:00-14:30) - 2F LOBBY**		2 **Award Lecture - 2023 Taikyue Ree Academic Award (13:30-14:20) - Multipurpose Hall 1** Cheol Ho Choi (Kyungpook National University)										Exhibition
14:30	32 **MAT3** From Synthesis to Application of Nanomaterials with Quantum Properties (14:30-16:10)	35 **ELEC3** Emerging Trends in Fundamental Electrochemistry (14:30-16:10)	**Award Lecture: Young Physical Chemist** Sang Hak Lee (Pusan Nat'l Univ.), Jung Ho Lee (Seoul Nat'l Univ.) (14:20-15:10)	17 **INOR3** Recent Trends in Nanochemistry Research (14:30-16:30)	22 **ANAL2** Recent Trends in Advanced Analytical Chemistry (14:30-16:30)		14 **POLY3** Recent Advances in Sustainable Polymer Materials (14:30-16:20)	37 **EDU2** Chemistry Education for the Science Gifted Students (14:30-16:30)			27 **ORGN3** Recent Trends in New Catalytic Reaction (14:30-16:10)	11 **KCS9** **[KCS-RSC Joint Symposium]** Multidisciplinary Approach to Energy Science (14:30-16:45)	
15:30			20 **PHYS3** Recent Advances in Physical Chemistry for Energy Science (15:10-16:30)										
16:00													
16:30									**Special Lecture for Gwangju Middle & High School Student** (16:30-18:00)				
17:00													
18:00													

Plenary Lecture

October 26 (Thu), 13:30-14:20, Multipurpose Hall 1

Catalytic C-H Amination Reactions: Scope and Intermediacy of Metal Nitrenoids

Chair : Chulbom Lee (Seoul National University)

Sukbok Chang

Department of Chemistry, Korea Advanced Institute Science and Technology (KAIST) / Institute for Basic Science (IBS)

Brief Profiles

Present / Distinguished Professor, Department of Chemistry, Korea Advanced Institute Science and Technology (KAIST)
Director, Center for Catalytic Hydrocarbon Functionalizations, Institute for Basic Science (IBS)

1996 / Ph.D, Harvard University (Prof. Eric N. Jacobsen), USA

1985 / B.S, Department of Chemistry, Korea University, Korea

Direct amination of C–H bonds is a highly desirable reaction due to the significant utility of aminated products in total synthesis, medicinal chemistry and materials science. Despite substantial research efforts, particularly in recent years, the current status of achieving C–H amination reactions with high stereoselectivity and turnover numbers remains still limited. In this context, we have developed a series of novel methodologies that employ tailor-made transition metal catalysts in combination with dioxazolones as robust nitrenoid precursors. We explored applicable substrates, including a wide range of readily available compounds such carboxylic acids and hydrocarbons, for both intra- and intermolecular amination reactions. By optimizing the individual chiral catalyst system, we subsequently developed asymmetric transformations, achieving an excellent level of enantioselectivity to produce chiral azacyclic compounds (β-, γ-, and δ-lactams). Furthermore, we successfully validated, for the first time, the intermediacy of the presumed but highly elusive metal acylnitrenoid through a photocrystallographic approach, thus addressing long-standing challenges in this field.

Award Lecture

2023 Taikyue Ree Academic Award

October 27 (Fri), 13:30-14:20, Multipurpose Hall 1

MR-SF-TDDFT: A Breakthrough in the Study of Strongly Correlated Systems

Chair : Zee Hwan Kim (Seoul National University)

Cheol Ho Choi

Department of Chemistry,
Kyungpook National University

Brief Profiles

Present / Professor, Department of Chemistry, Kyungpook National University, Korea

1998 / Ph.D, Department of Chemistry, Georgetown University, USA

1992 / B.S./M.S., Department of Chemistry, Seoul National University, Korea

A new quantum theory, MRSF-TDDFT (Mixed-Reference Spin-Flip Time-Dependent Density Functional Theory) has been developed*, which introduces the multi-reference advantages within the linear response formalism. The density functional theory (DFT) and linear response (LR) time-dependent (TD)-DFT are of utmost importance for routine computations. However, the single reference formulation of DFT is suffering from the description of open-shell singlet systems such as diradicals and bond-breaking. LR-TDDFT, on the other hand, finds difficulties in the modeling of conical intersections, doubly excited states, and core-level excitations. Many of these limitations can be overcome by MRSF-TDDFT, providing an alternative yet accurate route for such challenging situations. Empowered by the practicality of LR formalism, it is anticipated that MRSF-TDDFT can become one of the major workhorses in general routine tasks. Now the theory is combined with NAMD, QM/MM, Spin-Orbit Couplings, and Extended Koopman Theorem. Here, we highlight its performances by presenting our recent results by MRSF-TDDFT especially focusing on nonadiabatic molecular dynamics.

(a) Lee, S., Filatov, M., Lee, S., & Choi, C. H. (2018). J. Chem. Phys., 149(10), 104101.
(b) Lee, S., Kim, E., Nakata, H., Lee, S. & Choi, C. H. (2019). J Chem. Phys., 150(18), 184111.

Scientific Programs

Symposium

KCS Symposium 1

October 25 (Wed), Room 201+202+203

Organizer

Jaeheung Cho

Present Professor & Chair, Department of Chemistry, UNIST, Korea
2020 Assistant & Associate Professor, DGIST, Korea
2005 Ph.D Department of Chemistry, Kanazawa University, Japan

Chair

Mi Hee Lim

Present Professor, Department of Chemistry, KAIST, Korea
2008 Caltech, Department of Chemistry, Postdoc.
2006 MIT, Department of Chemistry, Ph.D.

Inji Shin

Present Associate Professor, Department of Fine Chemistry, Seoul National University of Science and Technology, Korea
2016 Postdoc, Department of Chemistry, University of Texas at Austin, USA
2013 Ph.D, Department of Chemistry, University of Pennsylvania, USA

Sun-Joon Min

Present Professor, Department of Chemical & Molecular Engineering, Hanyang University, Korea
2008 Postdoctor, Department of Chemistry, Columbia University, USA
2005 Ph.D, Department of Chemistry, UCLA, USA

Speaker

In Su Lee

Present Professor, Dept. Chem., POSTECH, Korea
Present Director, Center for Nanospace-Confined Chemical Reactions (NCCR)
2000 Ph.D. (Inorg. Chem.), Dept. Chem., Seoul Nat. Univ., Korea

Soo Bong Han

Present Head of Infectiou Diseases Therapeutic Research Centers, KRICT, Korea
2011 Postdoc, Department of Chemistry, Princeton University, USA
2010 Ph.D, Department of Chemistry, the University of Texas at Austin, USA

3. [Chemistry Symposium for Future Innovation & BKCS Symposium] The Story of Our Lives Fashioned by Chemistry

Organizer : Jaeheung Cho (UNIST)

Chair : Mi Hee Lim (KAIST)

13:00 **Opening Remark I**
Kang Min Ok / *Sogang University*

13:05 **Opening Remark II**
Gyochang Keum / *KIST*

<Session 1>

13:10 **KCS1-1** Crafting Designer Nanoreactors for Bio-orthogonal Catalysis in Living Systems
In Su Lee
Department of Chemistry, Pohang University of Science and Technology, Korea

13:30 **KCS1-2** Bioinorganic Strategies to Understand Multiple Facets in Neurodegenerative Disorders
Mi Hee Lim
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

13:50 **KCS1-3** A photo-responsive iron-nitrosyl complex in acute vascular occlusion disease
Jaeheung Cho
Department of Chemistry, UNIST, Korea

14:10 Coffee Break

Chair : Inji Shin (Seoul National University of Science and Technology)

<Session 2>

14:30 **KCS1-4** Lessons from COVID-19 for the development of antiviral drugs
Soo Bong Han
Bio & Drug Discovery Division, Korea Research Institute of Chemical Technology, Korea

Ki Duk Park

Present	Head, Center for Brain Disorders, Brain Science Institute, KIST
Present	Professor, Division of Bio-Med Science & Technology, KIST School, UST

Soong-Hyun Kim

2015 to Present	Principal Research Scientist, New Drug Development Center, K-MEDI hub, Korea
2010 to 2014	Postdoc, Department of Chemistry, Texas A&M University/Purdue University, USA
2003 to 2010	Ph.D, Department of Chemistry, Michigan State University, USA

Kara L. Bren

Present	Richard S. Eisenberg Professor & Chair, Department of Chemistry, University of Rochester, NY, USA
1996-1997	Postdoc, University of California, Davis
1991-1996	Ph.D Department of Chemistry, Caltech, Pasadena, CA

Todd C. Harrop

2007-Present	Assistant, Associate, Professor & Graduate Coordinator, Department of Chemistry and Center for Metalloenzyme Studies, University of Georgia, U.S.A.
2005-2007	NIH Postdoctoral Fellow, Department of Chemistry, MIT, U.S.A.
2004	Ph.D, Department of Chemistry and Biochemistry, University of California Santa Cruz, U.S.A.

Abhishek Dey

Present	Professor & Chair, School of Chemical Science, IACS, Kolkata, India
2009-2018	Assistant & Associate Professor, IACS, Kolkata
2007	Ph.D Department of Chemistry, Stanford University, USA

14:50 **KCS1-5** Discovery of potent and selective Keap1/Nrf2 modulators for the treatment of Alzheimer's disease
Ki Duk Park
Center for Brain Disorders, Korea Institute of Science and Technology, Korea

15:10 **KCS1-6** Development of Prokaryotic UMP Kinase (pyrH) Inhibitor Towards the Novel Class of Broad-Spectrum Antibiotics
Soong-Hyun Kim
New Drug Development Center, K-MEDI hub, Korea

15:30 Coffee Break

Chair : Sun-Joon Min (Hanyang University)

<Session 3>

15:50 **KCS1-7** Cytochrome c-based systems for artificial photosynthesis
Kara L. Bren
Department of Chemistry, University of Rochester, United States

16:30 **KCS1-8** Metal Nitrosyls That Mimic Global Nitrogen Cycle Transformations: Generation of Reduced NO_x Species
Todd C. Harrop
Department of Chemistry and Center for Metalloenzyme Studies, The University of Georgia, United States

17:10 **KCS1-9** Catalytic Oxidation of C-H Bonds with O_2 in aqueous solvents
Abhishek Dey
School of Chemical Science, IACS, India

17:50 **Closing Remark**
Wonwoo Nam / *Ewha Womens University*

Organizer

Hyuck Jin Lee

2019-Present	Assistant/Associate Professor, Department of Chemistry Education, Kongju National University, Korea
2018-2019	Postdoc, Department of Chemistry, KAIST, Korea
2015-2018	Postdoc, Department of Chemistry, UNIST, Korea

Speaker

Seung Jae Lee

Present	Professor, Dept. of Chemistry, Jeonbuk National University, Korea
2013	Postdoc, Dept. of Chemistry, MIT, USA
2010	Ph.D. University of Maryland, Baltimore, School of Pharmacy, USA

Sun Hee Kim

2009 Postdoc	Department of Chemistry, Northwestern University
2003 Ph.D.	Department of Chemistry, University of California, Davis

Kiyoung Park

2020 - Present	Associate Professor, Department of Chemistry, KAIST, Korea
2014 - 2020	Assistant Professor, Department of Chemistry, KAIST, Korea
2010 - 2014	Postdoctoral Fellow, Department of Chemistry, Stanford University, USA

Jin Yeong Kim

2021.03-Present	Assistant Professor, Department of Chemistry Education, Seoul National University, Korea

Hyun Kyung Kim

Present	Vice present, Educational Innovation Office
Present	Director, Jeonbuk regional Center (UDEC)
Present	Professor, Division of Science Education

4. [Chemistry Symposium for Future Innovation] Introduction of Recent Chemistry for the Advancement of Chemistry Education in the New Era of the 4th Industrial Revolution

Organizer : Hyuck Jin Lee (Kongju National University)

Chair : Hyuck Jin Lee (Kongju National University)

14:25 **Opening Remarks**
Kang Min Ok / *Sogang University*

14:30 **KCS2-1** A multi-disciplinary approach to the elucidation of protein activities
Seung Jae Lee
Department of Chemistry, Jeonbuk National University, Korea

14:55 **KCS2-2** The Contribution of Magnetic Resonance Spectroscopy for Future Innovation
Sun Hee Kim
Western Seoul Center, Korea Basic Science Institute, Korea

15:20 **KCS2-3** Lessons from Nature and Electronic Structures: Light and O_2 Utilization for Organonickel Chemistry
Kiyoung Park
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

15:45 Coffee Break

15:55 **KCS2-4** Vitamins as Potent Anticancer Agents Targeting Matrix Metalloproteinase-2/9
Hyuck Jin Lee
Department of Chemistry Education, Kongju National University, Korea

16:20 **KCS2-5** Recent trends in nanoporous crystalline materials, metal-organic frameworks.
Jin Yeong Kim
Department of Chemistry Education, Seoul National University, Korea

16:45 **KCS2-6** Research trends and directions in chemistry education in the era of the 4th Industrial Revolution
Hyun Kyung Kim[*], Dong-Heon Lee[1,*]
Chemistry Education, Jeonbuk National University, Korea
[1]*Department of Chemistry, Jeonbuk National University, Korea*

17:10 **Closing Remarks**
Seoung-Hey Paik / *Korea National University of Education*

Organizer

Jong Seung Kim

2007-Present	Professor, Department of Chemistry, Korea University, Korea
2003-2007	Professor, Department of Chemistry, Dankook University, Korea
1994-2003	Associate Professor, Department of Chemistry, Konyang University, Korea

Chair

Zee Hwan Kim

Present	Professor, Dept. of Chemistry, Seoul Nat'l Univ. (Seoul, KR)
2005-2013	Assistant and Associate Professor, Dept. of Chemistry, Korea Univ. (Seoul, KR)
2002-2005	Postdoctoral Associate, UC Berkeley (PI: Stephen R. Leone)

Songyi Lee

Present	Associate Professor, Department of Chemistry, Pukyong National University, Korea
2016	Ph. D., Department of Chemistry and Nanoscience, Ewha Womans University, Korea
2011	B.S., Department of Chemistry, Ewha Womans University, Korea

Min Hee Lee

Present	Associate Professor, Department of Chemistry, Sookmyung Women's University, Seoul, Korea
2015	Postdoctoral Fellow, Department of Chemistry, The University of Texas at Austin, USA
2012	Ph.D. Department of Chemistry, Korea University, Seoul, Korea

Speaker

Kirk S. Schanze

Present	Robert A Welch Distinguished University Professor at the University of Texas at San Antonio, USA
2016	University Distinguished Professor and Prominski Professor of Chemistry at the University of Florida, USA
2000-2008	Senior Editor of the ACS journal Langmuir

Shikha Nangia

Present	Professor, Department of Biomedical and Chemical Engineering, Syracuse University, Syracuse NY, USA
2006	Ph.D., Department of Chemistry, University of Minnesota, MN, USA
2000	MS, Department of Chemistry, Indian Institute of Technology, New Delhi, India

5. [KCS-ACS Applied Bio Materials Research Publications Summit] Research Trends and Challenges in Nano-bio Chemistry

Organizer : Jong Seung Kim (Associate Editor, ACS Applied Bio Materials; Korea University)

Chair : Zee Hwan Kim (Vice President of KCS; Seoul National University)

13:00 **Opening Remark**
Seokmin Shin / *President of the KCS; Seoul National University*

Chair : Songyi Lee (Pukyung National University)

13:10 **KCS3-1** Conjugated Polyelectrolytes in Biosensing and Disinfection
Kirk S. Schanze
Editor-in-Chief, ACS Applied Materials & Interfaces; University of Texas at San Antonio

13:40 **KCS3-2** Challenges of treating Alzheimer's disease
Shikha Nangia
Associate Editor, ACS Applied Bio Materials; Syracuse University

14:05 **KCS3-3** Recent Progress on Phototherapy and Photochemistry
Juyoung Yoon
Advisory Board, ACS Applied Bio Materials; Ewha Womans University

14:30 **KCS3-4** Harnessing Self-organization in Confined Soft Materials for Micro/Nanofabrication
Ashutosh Sharma
Associate Editor, ACS Applied Bio Materials; IIT Kanpur

14:55 Coffee Break

Chair : Min Hee Lee (Sookmyung Women's University)

15:25 **KCS3-5** Chemical Strategies to Study Multiple Facets in Alzheimer's Disease
Mi Hee Lim
Advisory Board, ACS Applied Bio Materials; KAIST

15:50 **KCS3-6** Unlocking the Potential of Calcium Nanoparticles: From Bone Repair to Beyond
Elisabeth Engel*, Celia Ximenez, Joan Martí, Oscar Castaño, Soledad Pérez
Associate Editor, ACS Applied Bio Materials; The Barcelona Institute of Science and Technology

Juyoung Yoon

Present	Professor, Department of Chemistry and Nanoscience, Ewha Womans University, Korea
1996	Postdoc, Department of Chemistry, UCLA, USA
1994	Ph.D, Department of Chemistry, The Ohio State University, USA

Ashutosh Sharma

Present	Institute Chair Professor, Department of Chemical Engineering, IIT Kanpur, India
2023-25	President, Indian National Science Academy
2015-2021	Chairman, Life Sciences Research Board, Defense Research & Development Organization, India

Mi Hee Lim

Present	Professor, Department of Chemistry, KAIST, Korea
2008	Postdocs, Department of Chemistry, Caltech, USA
2006	Ph.D., Department of Chemistry, MIT, USA

Elisabeth Engel

Present	Professor at the Materials Science and Engineering Department, Technical University of Catalonia, Spain
2004	Ph.D, Department of Pathology, Hospital del Mar, IMIM, Barcelona, Spain

Deeksha Gupta

Present	Director, Global Strategy for Society Programs, American Chemical Society
2013-2014	Postdoctoral Fellow, The City University of New York, United States
2012	Ph.D., Indian Institute of Technology Delhi, India

16:15 **KCS3-7** Small molecule-based drug delivery system and its bioimaging
Jong Seung Kim
Associate Editor, ACS Applied Bio Materials; Korea University

<Special talk>

16:40 **KCS3-8** Resources at ACS for Career Advancement of South Korean STEM Professionals
Deeksha Gupta
ACS Publications, American Chemical Society

17:30 **Closing Remark**
Kirk S. Schanze
Editor-in-Chief, ACS Applied Materials & Interfaces; University of Texas at San Antonio

Organizer

Rodney S. Ruoff

2013-present Director, IBS CMCM; UNIST Distinguished Professor
2007-2013 Cockrell Family Regents Chair Professor, University of Texas at Austin
2003-2007 John Evans Professor of Nanoengineering, Northwestern University

Speaker

Yung Doug Suh

2021 to Present Recruited Professor, UNIST
2013-2021 KRICT-SKKU Professor, SKKU
2003-2021 Recruited Principal Research Scientist, KRICT

Hyeon Suk Shin

Present Professor, Department of Chemistry, UNIST, Korea

Seung Kyu Min

2020 Associate Professor, UNIST, Korea
2015 Assistant Professor, UNIST, Korea
2012 Max Planck Institute of Microstructure Physics, Germany

Geunsik Lee

Present Associate Professor, UNIST, Korea
2007 PhD, Department of Physics, POSTECH, Korea
1999 B.S, Department of Physics, POSTECH, Korea

Won Kyung Seong

Present Senior Research fellow, CMCM, IBS, Korea
2017 Manager, Quantum Design Korea, Korea
2010 Ph.D., Department of Physics, Sunkyunkwan University, Korea

6. [IBS Symposium] Carbon and Related Materials

Organizer : Rodney S. Ruoff (IBS/UNIST)

Chair : Rodney S. Ruoff (IBS / UNIST)

<Opening Remark and Presentation>

13:00 **KCS4-1** How's your interface?
Rodney S. Ruoff
Center for Multidimensional Carbon Materials (CMCM), Institute for Basic Science (IBS; located at the UNIST Campus)/, Department of Chemistry and Department of Materials Science and Engineering, Ulsan National Institute of Science and Technology (UNIST), Korea

13:40 **KCS4-2** MINE-based (Molecular Integration NanoscopE-based) Closer Look into Materials and Beyond.
Yung Doug Suh
Dept. of Chemistry & School of Energy and Chemical Engineering & IBS CMCM, Ulsan Nat'l Inst. of Sci. and Tech. (UNIST) & IBS, Korea

14:10 Coffee break

14:30 **KCS4-3** Hexagonal and amorphous boron nitride thin films
Hyeon Suk Shin
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea

15:10 **KCS4-4** Computational/theoretical analysis of various carbon-related materials
Seung Kyu Min
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea

15:40 **KCS4-5** DFT modeling of carbon transformation through dissolution in metal
Geunsik Lee
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea

16:10 Coffee break

16:30 **KCS4-6** Fractionation of carbon isotopes using electromigration in high carbon solubility metals
Alisher Sultangaziyev, Sun Hwa Lee[1], Dongho Jeon[1], Da Luo[2], **Won Kyung Seong**[1], Rodney Ruoff[3,*]
Chemistry, Institute for Basic Science (IBS), Center for Multidimensional Carbon Materials (CMCM), Korea
[1] *Center for Multidimensional Carbon Materials, Institute for Basic Science, Korea*
[2] *Institute for Basic Science, Korea*
[3] *Center for Multidimensional Carbon Materials / Dep, IBS CMCM / UNIST, Korea*

16:50 **KCS4-7** Interfacial properties about single crystal graphene grown on Cu(111)

Da Luo

Present	Tenure-track research fellow, IBS CMCM, Republic of Korea
2014	Ph.D., College of Chemistry and Molecular Engineering, Peking University, China
2009	B.S, School of Chemistry and Chemical Engineering, Shandong University, China

Benjamin V. Cunning

Present	Senior research fellow, IBS CMCM, Korea
2015-2016	JSPS Fellow, Kyushu University, Japan
2013-2014	Research Fellow, Griffith University, Australia

Meihui Wang

Present	Postdoctoral fellow, IBS CMCM, Korea
2022	Ph.D., Department of Chemistry, UNIST, Korea
2016	B.S, Department of Chemistry, Nankai University, China

surfaces
Da Luo*, Meihui Wang, Rodney Ruoff[1,*]
Center for Multidimensional Carbon Materials, Institute for Basic Science, Korea
[1]*Center for Multidimensional Carbon Materials, IBS CMCM / UNIST, Korea*

17:10 **KCS4-8** Putty-like gallium: A simple approach to forming gallium composites
Benjamin V. Cunning*, Yan Gong, Rodney Ruoff[1,*]
Center for Multidimensional Carbon Materials (CMCM), Institute for Basic Science (IBS; located at the UNIST campus), Korea
[1]*Center for Multidimensional Carbon Materials (CMCM), Institute for Basic Science (IBS; located at the UNIST campus)/, Department of Chemistry, UNIST / Department of Materials Science and Engineering, UNIST, Korea*

17:30 **KCS4-9** The growth kinetics of graphene islands on Cu(111) foils using C_2H_2, C_2H_4, C_2H_6, and CH_4 as reagents
Meihui Wang, Da Luo, Geunsik Lee[1], Rodney Ruoff[2,*]
Center for Multidimensional Carbon Materials, Institute for Basic Science, Korea
[1]*Department of Chemistry, Ulsan National Institute of Science and Technology, Korea*
[2]*Center for Multidimensional Carbon Materials / Dep, IBS CMCM / UNIST, Korea*

17:50 **Closing Remarks**
Rodney S. Ruoff / *IBS, UNIST*

Organizer

Hyun-Dam Jeong

Present	Professor, Department of Chemistry, Chonnam National University, Korea
2006	Principal researcher, SAIT, Korea
1996	Ph. D, Department of Chemistry, KAIST, Korea

Chair

Hyo Jae Yoon

Present	Professor, Department of Chemistry, Korea University, Korea
2014	Postdoc, Department of Chemistry and Chemical Biology, Harvard University, USA
2010	Ph.D, Department of Chemistry, Northwestern University, USA

Speaker

Sang Jun Choi

2015-present	President of Chempole
2007-2011	Principal Manager of Samsung SDI
1994-2007	Senior engineer of Samsung electronics semiconductor R&D center

Jung Hyung Kim

Present	Researcher, Advanced Instrumentation Institute, KRISS, Korea

Chan-Cuk Hwang

Present	Chief Scientist, Pohang Accelerator Laboratory, Korea
2001	Postdoc, Pohang Accelerator Laboratory, Korea
2000	Ph. D, Department of Physics, Sungkyunkwan University, Korea

7. [Chemistry Symposium for Future Innovation] The Role of Chemistry in Materials Innovation for Sub-nm Semiconductors

Organizer : Hyun-Dam Jeong (Chonnam National University)

Chair : Hyun-Dam Jeong (Chonnam National University)

13:00 **KCS5-1** Advancements and State-of-the-Art Trends in Semiconductor Photoresist Materials
Sang Jun Choi
Chempole Co., Ltd, Korea

13:30 **KCS5-2** Development of selective dissociating PECVD process for ultra low-k film
Jung Hyung Kim
Advanced Instrumentation Institute, Korea Research Institute of Standards and Science, Korea

14:00 **KCS5-3** Molecules for Electronics Applications
Hyo Jae Yoon
Department of Chemistry, Korea University, Korea

14:30 Coffee Break

Chair : Hyo Jae Yoon (Korea University)

14:40 **KCS5-4** Optical properties of materials and components used in EUVL Materials
Chan-Cuk Hwang
Pohang Accelerator Laboratory, Korea

15:10 **KCS5-5** Development of materials based on electron-driven chemistry for sub-nm node semiconductors
Hyun-Dam Jeong
Department of Chemistry, Chonnam National University, Korea

Organizer

Doo-Hyun Ko

2023 Professor, Department of Chemistry, Sungkyunkwan University
2021 Associate Professor, Department of Chemistry, Sungkyunkwan University
2017 Associate Professor, Department of Applied Chemistry, Kyung Hee University

Chair

Bong June Sung

Present Professor, Department of Chemistry, Sogang University, Korea
2006 Ph.D, Department of Chemistry, University of Wisconsin-Madison, USA
1999 B.S, Department of Chemistry, Seoul National University, Korea

Speaker

Keewook Paeng

Present Associate Professor, Department of Chemistry, Sungkyunkwan University, Korea
2014 Postdoctoral Fellow, Department of Chemistry, Columbia University, USA
2010 Ph.D., Department of Chemistry, University of Wisconsin-Madison

Sung-Soo Kim

2018-Present Senior Researcher, Carbon Composite Materials Research Center, Korea Institute of Science and Technology, Korea
2016-2018 Postdoctoral Associate, Department of Chemical Engineering and Materials Science, University of Minnesota, USA Korea
2015-2016 Postdoctoral Associate, Department of Chemistry, Seoul National University, Korea

Youngjong Kang

Present Director of College of Natural Science Research Facility Center, Hanyang University
2007 Postdoc. DMSE, MIT
2005 Ph.D. Department of Chemistry, University of Minnesota

Du Yeol Ryu

Present Professor, Department of Chemical and Biomolecular Engineering, Yonsei University, Korea

Chang Yun Son

2020-Present Assistant Professor, Department of Chemistry, POSTECH, Korea
2017-2020 Postdoc, Division of Chemistry and Chemical Engineering, Caltech, USA
2012-2017 Ph.D., Department of Chemistry, University of Wisconsin-Madison, USA

8. [Chemistry Symposium for Future Innovation] High-performance Multicomponent Macromolecular Materials with an Entropy Approach

Organizer : Doo-Hyun Ko (Sungkyunkwan University)

Chair : Doo-Hyun Ko (Sungkyunkwan University)

14:00 **KCS6-1** Segmental dynamics of a component polymer in multicomponent polymer mixtures
Keewook Paeng
Department of Chemistry, Sungkyunkwan University, Korea

14:30 **KCS6-2** Understanding Chemical Reactions of Cellulose at High Temperatures and Employing Pretreatments for Carbon Fiber Production
Sung-Soo Kim
Carbon Composite Materials Research Center, Korea Institute of Science and Technology, Korea

15:00 **KCS6-3** Simulation Studies on Mechanical Properties of Elastomers for Various Applications
Bong June Sung
Department of Chemistry, Sogang University, Korea

15:30 **KCS6-4** Entropy Engineering for Polymers
Youngjong Kang
Department of Chemistry, Hanyang University, Korea

16:00 Coffee Break

Chair : Bong June Sung (Sogang University)

16:20 **KCS6-5** Entropy-driven strategy to suppress organic phase separation
Doo-Hyun Ko
Department of Chemistry, Sungkyunkwan University, Korea

16:50 **KCS6-6** Apex-dependent supramolecular assemblies from 2G dendron mesocrystals
Du Yeol Ryu*, Woo-Dong Jang[1], Byeongdu Lee[2]
Chemical and Biomolecular Engineering, Yonsei University, Korea
[1] *Department of Chemistry, Yonsei University, Korea*
[2] *Advanced Photon Source, Argonne National Laboratory, United States*

17:20 **KCS6-7** Ion transport in advanced polymer electrolytes: role of morphology and interface
Chang Yun Son
Department of Chemistry, Pohang University of Science and Technology, Korea

Organizer

Yunmi Lee

Present	Associate Professor, Department of Chemistry, Kwangwoon University, Korea
2013	Postdoc, Department of Chemistry and Chemical Biology, Harvard University, USA
2010	Ph.D, Department of Chemistry, Boston College, USA

Tae Kyu Kim

Present	Professor, Department of Chemistry, Yonsei University, Korea
2004	Ph.D, Department of Chemistry, KAIST, Korea
1998	B.S, Department of Chemistry, KAIST, Korea

Chair

Jongwoo Lim

Present	Associate Profession, Department of Chemistry, Seoul National University, Korea
2014-2017	Postdoctoral Researcher, Stanford University
2013	Ph.D.

Speaker

Chang Yun Son

Present	Assistant Professor, Department of Chemistry, POSTECH, Korea
2017.09-2020.01	Postdoc., Division of Chemistry and Chemical Engineering, Caltech, USA
2017.08	Ph.D., Department of Chemistry, University of Wisconsin-Madison, USA

Sungju Yu

Present	Assistant Professor, Department of Chemistry, Ajou University, Korea
2020	Senior Research Scientist, KIST, Korea
2019	Postdoc, Department of Chemistry, UIUC, USA

Munseok S. Chae

2023-	Assistant Professor, Dept. of Nanotechnology Engineering, Pukyong National Univ., Korea
2019-2020	Postdoctoral Fellow, Dept. of Chemistry, Bar-Ilan Univ., Israel
2014-2019	Ph.D. Dept. of Energy Science & Engineering, DGIST, Korea

Choonsoo Kim

Present	Associate Professor, Department of Environmental Engineering, Kongju National University, Korea
2015	Ph.D, Seoul National University, Department of Chemical and Biological Engineering, Korea
2007	B.S. Seoul National University, Department of Chemical and Biological Engineering, Korea

9. [KCS] Special Symposium for Young Chemists

Organizer : Yunmi Lee (Kwangwoon University), Tae Kyu Kim (Yonsei University)

Chair : Tae Kyu Kim (Yonsei University)

13:00 **KCS7-1** **<Physical Chemistry>**
Controlling Charged Interfaces for Energy/Bio Applications: Insights from Predictive Molecular Simulations
Chang Yun Son
Department of Chemistry, Pohang University of Science and Technology, Korea

13:25 **KCS7-2** **<Analytical Chemistry>**
Manipulating Light, Matter, and Energy for Carbon Fixation
Sungju Yu
Department of Chemistry, Ajou University, Korea

13:50 **KCS7-3** **<Electrochemistry>**
How interfaces control lithium (de)insertion pathway: liquid electrolyte and solid electrolyte
Jongwoo Lim
Division of Chemistry, Seoul National University, Korea

14:15 Coffee Break

Chair : Jongwoo Lim (Seoul National University)

14:25 **KCS7-4** **<Material Chemistry>**
Crystallographic/electrochemical mechanism analysis of cathode materials for sodium-ion batteries
Munseok S. Chae
Nanotechnology Engineering, Pukyong National University, Korea

14:50 **KCS7-5** **<Environmental Energy>**
Redox Flow Deionization (RFD): Principles, Progress, and Future Directions
Choonsoo Kim
Department of Environmental Engineering, Kongju National University, Korea

15:15 **KCS7-6** **<Chemistry Education>**
Digital Era in Chemistry Classes and Laboratories
Byeong-Seon Kim
Department of Chemistry Education, Gyeongsang National University, Korea

Byeong-Seon Kim

2018-Present	Associate Professor, Department of Chemistry, Gyeongsang National University
2016-2018	Postdoc, Department of Chemistry, Rice University

Hyunchul Oh

Present	Associate Professor, Department of Chemistry, UNIST
2015-2022	Associate Professor, Department of Energy Engineering, Gyeongsang National University
2014-2015	Associate Research Fellow, Korea Institute of S&T Evaluation and Planning(KISTEP)

Yong Woong Jun

Present	Assistant Professor, Department of Chemistry, KAIST, Korea
2023	Postdoc, Department of Chemistry, Stanford University, USA
2018	Ph.D. Department of Chemistry, POSTECH, Korea

Yongju Kim

Present	Associate Prof., KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea
2012	Ph.D., Department of Chemistry, Seoul National University, Korea
2005	B.S., Department of Chemistry, Seoul National University, Korea

Han-Yong Bae

2019 - Present	Assistant Professor, Department of Chemistry, Sungkyunkwan University
2019	Assistant Professor, Department of Chemistry, UNIST
2015 - 2019	Postdoctoral researcher, Max-Planck-Institut für Kohlenforschung (with Prof. Benjamin List, Nobel Prize in Chemistry 2021)

Hye-Jin Kim

Present	Senior Research Scientist, Infectious Diseases Therapeutic Research Center, Korea Research Institute of Chemical Technology, Korea
2018	Postdoc, Homogenous Catalysis, Max-Planck-Institut für Kohlenforschung, Germany
2015	Ph.D., Department of Chemistry, Seoul National University, Korea

15:40 **KCS7-7** **<Inorganic Chemistry>**

A Study on the Reduction of H2 Boil-off of Liquefied Hydrogen for Long-Range Hydrogen Transportation

Hyunchul Oh

Department of Chemistry, Ulsan National Institute of Science and Technology, Korea

16:05 Coffee Break

Chair : Yunmi Lee (Kwangwoon University)

16:15 **KCS7-8** **<Life Chemistry**

Elucidating DNA Damage and Repair in Cells, and Harnessing Them with In Situ Enzymatic Chemical Modification of DNA

Yong Woong Jun

Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

16:40 **KCS7-9** **<Polymer Chemistry>**

Supramolecular chemistry for functional two-dimensional materials

Yongju Kim

KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea

17:05 **KCS7-10** **<Organic Chemistry>**

Water-Accelerated Sustainable and High-Turnover Organocatalysis for SuFEx Chemistry

Han-Yong Bae

Department of Chemistry, Sungkyunkwan University, Korea

17:30 **KCS7-11** **<Medicinal Chemistry>**

Harnessing Innate Immune Modulators for Therapeutic Innovation

Hye-Jin Kim

Infectious Diseases Therapeutic Research Center, Korea Research Institute of Chemical Technology, Korea

Organizer

Jeong-Mo Choi

2020-present Assistant Professor, Department of Chemistry, Pusan National University, Korea
2016-2019 Postdoctoral associate, Department of Biomedical Engineering, Washington University in St. Louis, USA
2011-2016 Ph.D., Department of Chemistry and Chemical Biology, Harvard University, USA

Chair

Yongwon Jung

Present Professor, Department of Chemistry, KAIST, Korea
2005 Ph.D, Department of Chemistry, MIT, US
1998 B.S, Department of Chemistry, KAIST, Korea

Speaker

Jaeyoung Sung

2015 Director, Creative Research Initiative Center for Chemical Dynamics in Living Cells, Chung-Ang University, Seoul, Korea
2004 Postdoctral Associate, Department of Chemistry, Massachusetts Institute of Technology, U.S.A.
1997 Ph.D, Department of Chemistry, Seoul National University, Korea

Yongdae Shin

Present Associate Professor, Department of Mechanical Engineering and Interdisciplinary Progam in Bioengineering, Seoul National University, Korea
2018 Postdoc, Department of Chemical and Biological Engineering, Princeton University, USA
2015 Ph.D. in Mechanical Engineering, MIT, USA

Jae Kyoo Lee

Present Associate Professor, Department of Applied Bioengineering, Seoul National University, Korea
2017 Postdoc, Department of Chemistry, Stanford University, USA
2011 Ph.D., Department of Biomedical Engineering, University of Southern California, USA

Tuomas Knowles

Present Professor, Department of Chemistry, University of Cambridge, UK
2008 Ph. D, Department of Physics, University of Cambridge, UK
2004 Dipl. Phys. (master in physics), ETH Zurich, Switzerland

10. [Chemistry Symposium for Future Innovation] Convergent Understanding of Phase Transition Behaviors

Organizer : Jeong-Mo Choi (Pusan National University)

Chair : Yongwon Jung (KAIST)

14:00 **KCS8-1** Statistical Thermodynamics and Chemical Dynamics of Nucleus Seed Formation and Ensuing Phase Transitions in Complex Biological and Material Systems
Jaeyoung Sung
Creative Research Initiative Center for Chemical Dynamics in Living Cells and Department of Chemistry, Chung-Ang University, Korea

14:25 **KCS8-2** The organization and function of biomolecular condensates centered around RNA
Yongdae Shin
Seoul National University, Korea

14:50 **KCS8-3** Network Structure and Dynamics of Biomolecular Condensates
Jeong-Mo Choi
Department of Chemistry, Pusan National University, Korea

15:15 **KCS8-4** Microdroplet Chemistry: Chemical Reactions at Heterogenous Phase Interfaces
Jae Kyoo Lee
Applied Bioengineering, Seoul National University, Korea

15:40 Coffee Break

Chair : Jeong-Mo Choi (Pusan National University)

16:00 **KCS8-5** Kinetics of Protein Phase Transitions
Tuomas Knowles
Yusuf Hamied Department of Chemistry, University of Cambridge, United Kingdom

16:35 **KCS8-6** Molecular basis for SOX2-dependent regulation of super-enhancer activity
Kyeong Kyu Kim
Department of Medicine, Sungkyunkwan University, Korea

Kyeong Kyu Kim

2000-Present	Professor, Department of Medicine, Sungkyunkwan University
1994	PhD, Department of Chemistry, Seoul National University

Joonkyung Jang

Present	Professor, Department of Nanoenergy Engineering, Pusan National University, Korea
2003	Postdoc., Department of Chemistry, Northwestern University, USA
2000	PhD, Department of Chemistry, Brown University, USA

17:00 **KCS8-7** Phase Transitions of Confined Water at the Nanoscale
Joonkyung Jang
Department of Nanoenergy Engineering, Pusan National University, Korea

17:25 **KCS8-8** Protein models to study biomolecular phase separation
Yongwon Jung
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

Organizer

Seong-Ju Hwang

Present	Professor, Department of Materials Science and Engineering, Yonsei University, Korea
2005-2019	Professor, Department of Chemistry and Nanoscience, Ewha Womans University, Korea
2001-2002	Postdoc, Department of Chemistry, Michigan State University, USA

Chair

Natalie Stingelin

Since 2016	Professor and Chair, School of Materials Science & Engineering, Georgia Institute of Technology
2009-2016	Professor, Department of Materials, Imperial College London, UK
2001	Ph.D, Department of Materials, Swiss Federal Institute of Technology (ETH) Zurich, Switzerland

Speaker

James K. McCusker

Present	MSU Research Foundation Professor of Chemistry
Previous	Assistant Professor of Chemistry, University of California at Berkeley
1992	Ph.D., University of Illinois at Urbana-Champaign

Yousung Jung

Present	Professor, Department of Chemical and Biological Engineering, Seoul National University, Korea
2009-2023	Professor, Department of Chemical and Biomolecular Engineering, KAIST, Korea
2015	Ph.D, Department of Chemistry, UC Berkeley, USA

Lin X. Chen

Present	Professor, Department of Chemistry, Northwestern University, and Distinguished Fellow, Argonne National Laboratory, USA
1987	Ph.D. Department of Chemistry, The University of Chicago, USA;
1982	B.S. Department of Chemistry, Peking University, China.

Martyn A. McLachlan

2020-	Professor - Imperial College London
2007-2012	Royal Academy of Engineering/EPSRC Research Fellow
2001-2004	PhD Department of Chemistry, University of Glasgow

11. [KCS-RSC Joint Symposium] Multidisciplinary Approach to Energy Science

Organizer : Seong-Ju Hwang (Vice President of KCS; Yonsei University)

Chair : Natalie Stingelin (Editor-in-Chief, Journal of Materials Chemistry C; Georgia Institute of Technology)

10:00 **Opening Remarks**
Seokmin Shin / *President of the KCS; Seoul National University*

10:15 **KCS9-1** Tailoring the Photophysics of First-row Transition Metal-based Chromophores for Applications in Light-to-Chemical Energy Conversion: Challenges and Opportunities
James K. McCusker
Associate Editor, Chemical Science; Michigan State University

10:45 **KCS9-2** Accelerated chemical science using AI
Yousung Jung
Editorial Advisory Board, Chemical Science; Seoul National University

11:15 **KCS9-3** Excited state trajectories in photoactive transition metal complexes probed by ultrafast laser and x-ray spectroscopies and scattering
Lin X. Chen
Associate Editor, Chemical Science; Northwestern University

11:45 **KCS9-4** Facile methods for engineering performance improvements in perovskite photovoltaics
Martyn A. McLachlan
Associate Editor, Journal of Materials Chemistry C; Imperial College London

Chair : Seong-Ju Hwang (Vice President of KCS; Yonsei University)

14:30 **KCS9-5** Deciphering structure/property interrelations for functional polymer systems using thermal analysis
Natalie Stingelin
Editor-in-Chief, Journal of Materials Chemistry C; Georgia Institute of Technology

15:00 **KCS9-6** Understanding catalyst-electrolyte interfaces for electrochemical CO_2 conversion
Yun Jeong Hwang*, Suhwan Yoo
Associate Editor, Journal of Materials Chemistry A; Seoul National University

15:30 Coffee Break & Networking

Yun Jeong Hwang

Present	Associate Professor, Department of Chemistry, Seoul National University, Korea
2012.06-2021.02	Researcher/Senior Researcher/ Principle Investigator, Korea Institute of Science and Technology (KIST), Korea
2012	Ph. D. Department of Chemistry, University of California, Berkeley, USA

Michaela Muehlberg

Present	Executive Editor for the RSC's Materials & Nano portfolio including Materials Horizons, Journals of Materials Chemistry A, B and C, and Nanoscale Horizons and Nanoscale
Previous	Chemistry at the Free University of Berlin, Germany and Universite Paris-Sud, France
Previous	obtained a PhD in bioorganic chemistry from the Free University of Berlin, Germany and the Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP), Germany.

16:00 **KCS9-7** Publishing with the RSC

Michaela Muehlberg

Executive Editor, Journal of Materials Chemistry A, B & C, Royal Society of Chemistry

16:30 **Closing Remarks**

Royal Society of Chemistry

Symposium

Polymer Chemistry Symposium 1
October 26 (Thu), Room 302+303

Organizer

In-Hwan Lee

Present Associate Professor, Department of Chemistry, Ajou University, Korea
2018 Postdoc., Material Research Laboratory, UC Santa Barbara, USA
2016 Ph.D. Department of Chemistry, Seoul National University, Korea

Speaker

Hye-Young Jang

present Professor, Department of Chemistry/Department of Energy Systems Research, Ajou University, Korea
2006 Postdoc, Department of Chemistry, Caltech, USA
2005 Ph.D. Department of Chemistry, The University of Texas at Austin, USA

Sang-Ho Lee

Present Principal Researcher, Korea Research Institute of Chemical Technology, South Korea
2017 Post-Doc., Materials Research Laboratory, UC Santa Barbara, USA
2014 Ph.D., Department of Polymer Chemistry, Kyoto University, Japan

Beom-Goo Kang

Present Assistant Professor, Department of Chemical Engineering, Soongsil University, Korea
2012 Ph.D, Department of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Korea
2005 B.S, Department of Polymer Science and Engineering, Sungkyunkwan University, Korea

Cheoljae Kim

Present Associate Professor, Department of Chemistry, Chungbuk National University, Korea
2014 Ph.D, Department of Chemistry, POSTECH, Korea
2008 B.S, Department of Chemistry, POSTECH, Korea

12. Recent Trends in Polymer Synthesis

Organizer : In-Hwan Lee (Ajou University)

Chair : In-Hwan Lee (Ajou University)

15:40 **POLY1-1** Transition-Metal Catalysis for Sustainable Polymer Synthesis
Hye-Young Jang
Department of Chemistry, Ajou University, Korea

16:05 **POLY1-2** Design of Topology-Controlled Polyethers toward Robust Cooperative Hydrogen Bonding
Sang-Ho Lee
Korea Research Institute of Chemical Technology, Korea

16:30 Coffee Break

16:40 **POLY1-3** Synthesis of well-defined polymers containing triphenylamine group via living anionic polymerization for hole-transporting layer of solution-processable organic light-emitting diodes
Beom-Goo Kang
Department of Chemical Engineering, Soongsil University, Korea

17:05 **POLY1-4** Living cascade enyne metathesis polymerization for stereo-defined degradable polymer and its application in controlling the molecular weight distribution
Cheoljae Kim
Department of Chemistry, Chungbuk National University, Korea

17:30 Polymer Chemistry Division General Meeting

Organizer

Myungeun Seo

Present	Professor, Department of Chemistry, KAIST, Korea
2009	Postdoc, Department of Chemistry, University of Minnesota, USA
2008	Ph.D., Department of Chemistry, KAIST, Korea

Speaker

Dong Ki Yoon

Present	Professor, Department of Chemistry, KAIST, Korea

Myung-Han Yoon

2010-present	Professor, Materials Science and Engineering, GIST, S. Korea
2006-2009	Postdoc., Chemistry, Harvard University, USA
2001-2006	Ph.D., Chemistry, Northwestern University, USA

Woo-Dong Jang

2006-	Professor, Department of Chemistry, Yonsei University, Korea
2005-2006	Assistant Professor, Department of Materials Engineering, The University of Tokyo, Japan
2003	Ph.D. Department of Chemistry and Biotechnology, The University of Tokyo, Japan

BongSoo Kim

Present	Professor, Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
2010	Postdoc, Department of Chemistry, University of California at Berkeley, USA
2008	Ph.D., Department of Chemistry, University of Minnesota at Twin Cities, USA

13. Special Symposium by Mid-Career Polymer Chemists

Organizer : Myungeun Seo (KAIST)

Chair : Myungeun Seo (KAIST)

09:00 **POLY2-1** Controlled Mesoscopic Growth of Polymeric Fibers Using Liquid Crystal Template
Dong Ki Yoon
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

09:25 **POLY2-2** Unconventional Low-voltage Organic Electronics Based on Electrochemical Doping/Dedoping and Their Application to Neuromorphic Devices
Myung-Han Yoon
School of Materials Science and Engineering, Gwangju Institute of Science and Technology, Korea

09:50 Coffee Break

10:00 **POLY2-3** Porphyrin-based supramolecular polymers
Woo-Dong Jang
Department of Chemistry, Yonsei University, Korea

<Award Lecture: Polymer Chemistry Excellence Award>

10:25 **POLY2-4** Universal 3D Crosslinkers for All-Solution Processed Electronics
BongSoo Kim*, MyeongJae Lee[1]
Department of Chemistry, UNIST, Korea
[1]*Department of Chemistry, Korea University, Korea*

Symposium

Polymer Chemistry Symposium 3
October 27 (Fri), Room 302+303

Organizer

Jeyoung Park

Present Associate Professor, Dept. of Chemical & Biomolecular Eng., Sogang University, Korea
2022 Principal Researcher, Korea Research Institute of Chemical Technology, Korea
2014 Researcher, SK Innovation, Korea

Speaker

Hoyong Chung

Present Associate Professor, Department of Chemical and Biomedical Engineering, FAMU-FSU College of Engineering, Florida State University, USA
2014 Postdoc, Division of Chemistry and Chemical Engineering, California Institute of Technology, USA
2011 Ph.D, Department of Chemistry, Carnegie Mellon University, USA

Ki-Tae Kang

2020 - Present Senior Researcher, Chemical Research Center, Samyang Corporation
2014 - 2020 Ph.D. Department of Chemistry, Sungkyunkwan University, Korea

Hyung-Sool Lee

Full professor, KENTECH
Associate Professor, University of Waterloo
Assistant Professor, University of Waterloo

Hyeonyeol Jeon

Present Senior Researcher, Center for Bio-based Chemistry, Korea Research Institute of Chemical Technology

14. Recent Advances in Sustainable Polymer Materials

Organizer : Jeyoung Park (Sogang University)

Chair : Jeyoung Park (Sogang University)

14:30 **POLY3-1** Synthesis and Characterizations of Biomass Lignin-based Degradable Polymers
Hoyong Chung*, Arijit Ghorai, Sundol Kim, Christian Gonzales, Lily Masa
Department of Chemical and Biomedical Engineering, FAMU-FSU College of Engineering, Florida State University, United States

14:55 **POLY3-2** Development of Adhesive for Laminated Electrical Steels Having Excellent Adhesion and Oil Resistance and Its Application for Dot-bonded Motor Core for Electric Vehicle
Ki-Tae Kang
Samyang Corporation, Korea

15:20 Coffee Break

15:30 **POLY3-3** Production of medium-chain length polyhydroxyalkanoate from waste biomass
Hyung-Sool Lee
Korea Institute of Energy Technology, Canada

15:55 **POLY3-4** Evaluation of biomass content and biocarbon in bioplastics and research using AMS
Hyeonyeol Jeon*, Jeyoung Park[1]
Korea Research Institute of Chemical Technology, Korea
[1]*Department of Chemical and Biomolecular Engineering, Sogang University, Korea*

Symposium

Inorganic Chemistry Symposium 1

October 26 (Thu), Room 211+212+213

Organizer

Joohyun Lim

Present	Assistant Professor, Department of Chemistry, Kangwon National University, Korea
2015	Ph.D., Department of Chemistry, Seoul National University, Korea
2009	B.S., Department of Chemistry, Seoul National University, Korea

Speaker

Jacopo Tessarolo

Present	Assistant Professor, Department of Chemistry, Chonnam National University, Korea
2018	Postdoc, Department of Chemistry and Chemical Biology, TU Dortmund University, Germany
2014	Ph.D., School of Material Science and Engineering, University of Padova, Italy

Younghoon Kim

Present	Senior Researcher, Center for Bio-based Chemistry, Korea Research Institute of Chemical Technology (KRICT)
2020-2023	Staff Engineer, Memory Division, Samsung Electronics Co.
2015-2020	Ph.D, Department of Chemistry, POSTECH, Korea

Su-Il In

Present	Professor, Department of Energy Science & Engineering, DGIST, Korea
2019-2020	Visiting Scholar at the Dept. of Environmental Science & Engineering, California Institute of Technology (Caltech), USA

Jongwoo Lim

Present	Associate Profession, Department of Chemistry, Seoul National University, Korea
2014-2017	Postdoctoral Researcher, Stanford University
2013	Ph.D. University of California, Berkeley

Minyoung Yoon

Present	Associate Professor, Department of Chemistry, Kyungpook National University, Korea
2011	Ph. D., Department of Chemistry, Pohang University of Science and Technology, Korea
2005	B.S., Department of Chemistry, Pohang University of Science and Technology, Korea

15. Recent Trends in Inorganic Materials Chemistry

Organizer : Joohyun Lim (Kangwon National University)

Chair : Joohyun Lim (Kangwon National University)

15:40 **INOR1-1** Circularly polarized luminescence in coordination-driven assemblies
Jacopo Tessarolo
Department of Chemistry, Chonnam National University, Korea

16:00 **INOR1-2** Porphyrin Box-based Supramolecular Architectures
Younghoon Kim
Center for Bio-based Chemistry, Korea Research Institute of Chemical Technology, Korea

16:20 **INOR1-3** Ternary Cu–In–Se Quantum Dots for Improving Photoelectrochemical Hydrogen Generation by Defect Engineering
Su-Il In
Department of Energy Systems Engineering, Daegu Gyeongbuk Institute of Science & Technology, Korea

16:45 **INOR1-4** Dynamic active surface phase evolution during electrochemical catalysis.
Jongwoo Lim
Division of Chemistry, Seoul National University, Korea

17:10 **INOR1-5** Generation and Storing of H_2 Using Inorganic Nanomaterials
Minyoung Yoon
Department of Chemistry and Green-Nano Materials Research Center, Kyungpook National University, Korea

17:35 Inorganic Chemistry Division General Meeting

Symposium

Inorganic Chemistry Symposium 2

October 27 (Fri), Room 211+212+213

Organizer

Jin Yeong Kim

2021.03-Present Assistant Professor, Department of Chemistry Education, Seoul National University, Korea

Speaker

Wonyoung Choe

Present Professor, Department of Chemistry and Graduate School of Carbon Neutrality, Ulsan National Institute of Science and Technology

2012-2022 Associate Professor, Ulsan National Institute of Science and Technology

2004-2012 Assistant Professor, University of Nebraska-Lincoln

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

Sarah Sunah Park

Present Assistant professor, Department of Chemistry, POSTECH, Korea

2019 Postdoc, Department of Chemistry, Northwestern University, USA

2017 Ph.D., Department of Chemistry, MIT, USA

Sangmin Kim

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

2021-2023 Postdoctoral Researcher, Dept. of Chem. & Biochem., UCLA, USA

2021 Ph.D., Department of Chemistry, Princeton University, USA

Jeongcheol Shin

2023-Present Assistant Professor, Department of Chemistry, Duksung Women's University, Korea

2021-2023 Postdoc, Department of Chemistry, KAIST, Korea

2015-2021 Ph.D, Department of Chemistry, KAIST, Korea

16. Recent Advances in Organometallic Chemistry and Coordination Chemistry

Organizer : Jin Yeong Kim (Seoul National University)

Chair : Jin Yeong Kim (Seoul National University)

09:00 **INOR2-1** Chemical Space Expedition to Target Materials Discovery for Carbon Neutrality
Wonyoung Choe
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea

09:25 **INOR2-2** Achieving Efficient TADF Using Rigid Boron Compounds
Min Hyung Lee
Department of Chemistry, University of Ulsan, Korea

09:50 **INOR2-3** Conductive Metal-Organic Framework Thin Films
Sarah Sunah Park
Department of Chemistry, Pohang University of Science and Technology, Korea

10:15 **INOR2-4** Two Approaches to Generate and Utilize Reactive Inorganic Intermediates: Photo- and Redox-Activation
Sangmin Kim
Department of Chemistry, Yonsei University, Korea

10:35 **INOR2-5** Promotion of reductive elimination reactions by generating C-to-Ni charge-transfer excited states of organometallic $Ni^{II/III/IV}$ complexes
Jeongcheol Shin
Department of Chemistry, Duksung Women's University, Korea

Symposium

Inorganic Chemistry Symposium 3

October 27 (Fri), Room 211+212+213

Organizer

Jeong-Eun Park

Present	Assistant Professor, Department of Chemistry, Gwangju Institute of Science and Technology, Korea
2021	Postdoc, Department of Chemistry, Northwestern University, USA
2018	Ph.D. Department of Chemistry, Seoul National University, Korea

Speaker

In Su Lee

Present	Professor, Dept. Chem., POSTECH, Korea
Present	Director, Center for Nanospace-Confined Chemical Reactions (NCCR), POSTECH, Korea
2000	Ph.D. (Inorg. Chem.), Dept. Chem., Seoul Nat. Univ., Korea

Jin Seok Lee

2020.03-	Professor, Department of Chemistry, Hanyang University, Korea
2018.03-2020.02	Professor, Department of Chemistry, Sookmyung Women's University, Korea
2013.03-2018.02	Associate Professor, Department of Chemistry, Sookmyung Women's University, Korea

Jung-Hoon Lee

Present	Assistant Professor, Department of Chemistry, Soonchunhyang University, Korea
2021	Assistant Professor, Department of Chemistry, City University of Hong Kong, Hong Kong SAR
2014	Ph.D, Department of Chemistry, Seoul National University, Korea

Joonseok Lee

Present	Associate Professor, Chemistry, Hanyang University, Korea
2016-2021	Senior/Principal Researcher, KIST, Korea
2013-2016	Argonne Director's Fellow, Argonne National Laboratory, USA

Hyunseob Lim

2022-Present	Associate Professor, Department of Chemistry, Gwangju Institute of Science and Technology (GIST), Korea
2019-2022	Assistant Professor, Department of Chemistry, Gwangju Institute of Science and Technology (GIST), Korea
2017-2019	Assistant Professor, Department of Chemistry, Chonnam National University, Korea

17. Recent Trends in Nanochemistry Research

Organizer : Jeong-Eun Park (GIST)

Chair : Jeong-Eun Park (GIST)

14:30 **INOR3-1** Nanocrystal Chemistry within Atomic-Thin 2D-Slit-Nanospace
In Su Lee
Department of Chemistry, Pohang University of Science and Technology, Korea

14:55 **INOR3-2** Organelle-Targeted Fluorescent Nanodiamond Quantum Thermometry for Investigating Intracellular Metabolism
Jin Seok Lee
Department of Chemistry, Hanyang University, Korea

15:20 **INOR3-3** Plasmonic photothermal-based molecular diagnostics
Jung-Hoon Lee
Department of Chemistry, Soonchunhyang University, Korea

15:40 **INOR3-4** A Local Water Molecular-heating Strategy for Near-infrared Long-lifetime Imaging-guided Photothermal Therapy
Joonseok Lee
Chemistry, Hanyang University, Korea

16:05 **INOR3-5** Epitaxial Growth of 2D MoS2 and WS2 using inorganic molecular precursors, MOCl4 and WOCl4: The critical role of Substrate Surface Termination
Hyunseob Lim
Department of Chemistry, Gwangju Institute of Science and Technology, Korea

Organizer

Yun Jeong Hwang

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

Chair

Kyungwon Kwak

2019.03-Present Professor, Department of Chemistry, Korea University
2016.03-2019.02 Associate Professor, Department of Chemistry, Korea University, Korea
2011.03-2016.02 Associate Professor, Department of Chemistry, Chung-Ang University, Korea

Speaker

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

Wooyul Kim

Present Associate professor, KENTECH
2022 Assistant/Associate professor, Sookmyung Women's University
2012 Ph.D, POSTECH

Ji Hoon Lee

2020.09- Assistant Professor, Kyungpook National University, Korea
2017.08-2020.08 Postdoc Researcher, Columbia University, USA
2013.03-2017.02 Ph.D., KAIST, Korea

Stefan Ringe

Present Assistant Professor, Department of Chemistry, Korea University, Korea
2020 Assistant Professor, Department of Energy Science & Engineering, DGIST, Korea
2017 Postdoc, Department of Chemical Engineering, Stanford University

Jaeyune Ryu

Present Assistant Professor, School of Chemical and Biological Engineering, Seoul National University
2021-2023 Postdoctoral Fellow, Department of Chemistry and Chemical Biology, Harvard University
2013-2016 Staff Research Scientist, Fuel Cell Research Center, KIST

18. Recent Physical Chemistry Studies on Photo/Electrochemistry

Organizer : Yun Jeong Hwang (Seoul National University)

Chair : Kyungwon Kwak (Korea University)

<Award Lecture: Kim Myung Soo Award>

15:40 **PHYS1-1** Plasmonic Nanoparticle Assembly: A Journey to Explore Optical, Electronic, and Thermal Properties Arising from Au Nanogaps
Sangwoon Yoon
Department of Chemistry, Chung-Ang University, Korea

Chair : Yun Jeong Hwang (Seoul National University)

16:10 **PHYS1-2** Direct observation of ammonia & water oxidation on photoanode
Wooyul Kim
Department of Energy Engineering, Korea Institute of Energy Technology (KENTECH), Korea

16:30 **PHYS1-3** Electrochemical CO_2 Reduction using Palladium-based electrocatalysts
Ji Hoon Lee
School of Materials Science and Engineering, Kyungpook National University, Korea

16:50 **PHYS1-4** Importance of charge transfer descriptor for the computational screening of electrocatalysts
Stefan Ringe
Chemistry, Korea University, Korea

17:10 **PHYS1-5** Understanding of the Polarization-Induced Interfacial Microenvironments
Jaeyune Ryu
School of Chemical and Biological Engineering, Seoul National University, Korea

Symposium

Physical Chemistry Symposium 2

October 27 (Fri), Room 208+209+210

Organizer

Hyun Woo Kim

Present Assistant Prof. Department of Chemistry, GIST
2022 Senior Researcher, KRICT
2014 Ph. D., Department of Chemistry, POSTECH

Chair

Hyungjun Kim

Present Professor, Department of Chemistry, KAIST
2009 Ph.D., Department of Chemistry, Caltech
2004 B.S, Department of Chemistry, KAIST

Speaker

Jer-Lai Kuo

Present Research Fellow, Institute of Atomic and Molecular Science, Academia Sinica, Taiwan
2003 Ph.D., Chemical Physics, Ohio State University, USA
1995 B.S., Physics, National Taiwan University, Taiwan

Kyujin Shin

Present Senior Research Engineer, Computational Materials Research Team, Hyundai Motor Company, Korea

Geunsik Lee

Present Associate Professor, UNIST, Korea
2007 Ph.D., Department of Physics, POSTECH, Korea
1999 B.S, Department of Physics, POSTECH, Korea

Yeonchoo Cho

Present Principal Researcher, SAIT, Korea
2013 Ph.D., Department of Chemistry, POSTECH, Korea

YongJoo Kim

Present Assistant Professor, Department of Materials Science and Engineering, Kookmin University, Korea
2020 KI Fellow, KI for Nanocentury, KAIST, Korea
2014 Postdoc, Department of Materials Science and Engineering, KAIST, Korea

Sang Soo Han

Present Head and Principal Research Scientist, Computational Research Center, KIST, Korea
2009 Postdoc, Dept. of Chemistry, CALTECH, USA
2005 Ph.D, Dept. of Mater. Sci. & Eng., KAIST, Korea

19. Computers and Chemistry: Recent Research Trends

Organizer : Hyun Woo Kim (GIST)

Chair : Hyungjun Kim (KAIST)

09:00 **PHYS2-1** Exploring Physical and Chemical Space of Molecular Systems from First Principles: Human and/or Artificial Intelligence
Jer-Lai Kuo
Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan

09:20 **PHYS2-2** Quantum computing and molecular simulation studies on the industrial side
Kyujin Shin
Computational Materials Research Team, Hyundai Motor Company, Korea

09:40 **PHYS2-3** DFT Study on Interface Electronic Structure
Geunsik Lee
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea

10:00 **PHYS2-4** Reducing metal-semiconductor contact resistance by inserting two-dimensional material
Yeonchoo Cho
Samsung Advanced Institute of Technology, Korea

10:20 **PHYS2-5** Active Learning approach in designing entropy alloy nanocatalyst
YongJoo Kim
Department of Materials Science and Engineering, Kookmin University, Korea

10:40 **PHYS2-6** Autonomous Laboratory for Bespoke Synthesis of Nanoparticles
Sang Soo Han
Computational Science Research Center, Korea Institute of Science and Technology, Korea

Organizer

Woon Yong Sohn

Present	Assistant Professor, Department of Chemistry, Chungbuk National University, Korea
2016-2020	Assistant Professor, Department of Applied Chemistry, Chuo University, Japan
2015	Ph. D. Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Japan

Chair

Kyungwon Kwak

2019.03-Present	Professor, Department of Chemistry, Korea University
2016.03-2019.02	Associate Professor, Department of Chemistry, Korea University, Korea
2011.03-2016.02	Associate Professor, Department of Chemistry, Chung-Ang University, Korea

Myeongkee Park

2021-Present	Assistant Professor, Department of Chemistry, Pukyong National University
2018-2021	Assistant Professor, Department of Chemistry, Dong-A University
2014-2018	Postdoc, Department of Chemistry, University of California, Berkeley, USA

Speaker

Sang Hak Lee

Present	Associate Professor, Department of Chemistry, Pusan National University
2018	Postdoc, Department of Physics, University of Illinois at Urbana-Champaign
2009	Ph.D., Department of Chemistry, Seoul National University

Jung Ho Lee

Present	Associate Professor, Department of Chemistry, Seoul National University, Korea
2013	Ph.D., Biophysics Program, University of Wisconsin-Madison, USA
2007	M.S., Genetic Engineering Program, Seoul National University, Korea

Tack Ho Lee

Present	Assistant Professor, Department of Chemistry Education, Pusan National University, Korea
2022	Postdoc, Department of Chemistry, Imperial College London, UK
2020	Ph.D., Department of Energy and Chemical Engineering, UNIST, Korea

20. Recent Advances in Physical Chemistry for Energy Science

Organizer : Woon Yong Sohn (Chungbuk National University)

Chair : Kyungwon Kwak (Korea University)

<Award Lecture: Young Physical Chemist 1>

14:20 **PHYS3-1** Anion and Cation in Neurodegenerative Diseases
Sang Hak Lee
Department of Chemistry, Pusan National University, Korea

<Award Lecture: Young Physical Chemist 2>

14:45 **PHYS3-2** Unconventional NMR Spectroscopy: Analysis of Proteins in Erythrocytes
Jung Ho Lee
Department of Chemistry, Seoul National University, Korea

Chair : Myeongkee Park (Pukyong National University)

15:10 **PHYS3-3** Generation of long-lived charges in organic photoanodes with a polymer overalyer for efficient photoelectrochemical performance
Tack Ho Lee
Department of Chemistry Education, Pusan National University, Korea

Kyung koo Lee

Present	Professor, Department of Chemistry, Kunsan national University, Korea
2012	Researcher, Battery Research & Development, LG Chem, Korea
2010	Post-Doc, Department of Chemistry, University of Toronto, Canada

Jiwon Bang

Present	Assistant Professor, Department of Chemistry, Incheon National University, Korea
2013	Ph.D, Department of Chemistry, POSTECH, Korea
2009	B.S, Department of Chemistry, POSTECH, Korea

Jeongjin (John) Kim

2023-Present	Senior Researcher, Beamline Research Division, Pohang Accelerator Laboratory /POSTECH, Korea
2021-2023	Research Associate, Chemistry Division, Brookhaven National Laboratory, United States
2019-2021	Postdoctoral Associate, Department of Chemistry, Massachusetts Institute of Technology, United States

15:30 **PHYS3-4** Modulating Solvation Structure of Electrolytes for Lithium Metal Batteries
Kyung koo Lee
Department of Chemistry, Kunsan National University, Korea

15:50 **PHYS3-5** Control of Excitonic Behaviors in Semiconductor Nanocrystals for Light Harvesting and Light Amplification Applications
Jiwon Bang
Incheon National University, Korea

16:10 **PHYS3-6** C1 conversions over well-defined model surfaces probed with ambient pressure X-ray photoemission spectroscopy
Jeongjin (John) Kim
Pohang Accelerator Laboratory, Korea

Symposium

Analytical Chemistry Symposium 1

October 26 (Thu), Room 214

Organizer

Kihun Kim

Present Principal Researcher, Doping Control Center, Korea Institute of Science and Technology, Korea

2015 Postdoc Researcher, Department of Molecular Biosciences, Northwestern University, USA

2012 Postdoc Researcher, Department of Chemistry, Yonsei University, Korea

Chair

Sang Yun Han

Present Professor, Department of Chemistry, Gachon University Korea

2013 Principal Researcher, Korea Research Institute of Standards and Science, Korea

2000 Ph.D., Department of Chemistry, Seoul National University, Korea

Speaker

Jaebum Choo

Present Vice-President for Research, Chung-Ang University, Korea

Present Director, Nanophotonics-based Biomedical Research Center (ERC), Chung-Ang University, Korea

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

Hoeil Chung

Present Professor, Department of Chemistry, Hanyang University, Korea

Jae-Min Lim

present Professor, Department of Chemistry, Changwon National University

2010 Postdoc, Complex Carbohydrate Research Center, USA

2009 Ph.D. Department of Chemistry, The University of Georgia, USA

Eunji Lee

2018-Present Professor, School of Materials Science and Engineering, GIST, Korea

2011-2018 Associate Professor, Graduate School of Analytical Science and Technology, Chungnam National University, Korea

2010-2011 Post-Doc., Department of Polymer Science and Engineering, UMass Amherst, USA

Jaebeom Lee

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

2018 Professor, Department of Opto-Mechatronics Engineering, Pusan National University

2007 Post-Doc, Department of Chemical Engineering, University of Michigan, Ann Arbor, USA

21. Recent Trends in Analytical Chemistry Research for Industrial Applications

Organizer : Kihun Kim (KIST)

Chair : Kihun Kim (KIST)

15:40 **ANAL1-1** Recent Trends in Point-of-Care Testing for Infectious Diseases
Jaebum Choo
Department of Chemistry, Chung-Ang University, Korea

16:00 **ANAL1-2** Determination of Fe_3O_4 concentration in sintered ores using Raman spectroscopy and image analysis
Hoeil Chung
Department of Chemistry, Hanyang University, Korea

16:20 **ANAL1-3** MILPIG: Metabolic Isotope Labeling of Glycans
Jae-Min Lim
Department of Chemistry, Changwon National University, Korea

16:40 **ANAL1-4** Advanced TEM as the Key to Deciphering Structure-Property Relationships in Functional Organic Materials
Eunji Lee
School of Materials Science and Engineering, Gwangju Institute of Science and Technology, Korea

Chair : Sang Yun Han (Gachon University)

<Award Lecture: Young In Outstanding Analytical Chemistry Research Award>

17:00 **ANAL1-5** Magnetoplasmonics-based Chiral Biomedical Sensing for Point Mutation of DNA
Jaebeom Lee
Chemistry, Chungnam National University, Korea

17:20 Analytical Chemistry Division General Meeting

Symposium

Analytical Chemistry Symposium 2

October 27 (Fri), Room 214

Organizer

Min-Sik Kim

Present	Associate Professor, Department of New Biology, DGIST
2018	Assistant Professor, Department of New Biology, DGIST
2016	Assistant Professor, Department of Applied Chemistry, Kyung Hee University

Speaker

Hee-Kyung Na

2021-Present	Principal Research Scientist, KRISS
2019-2021	Senior Research Scientist, KRISS
2009-2013	Ph.D course, KAIST

Seungah Lee

2013-Present	Assistant Professor, Department of Applied Chemistry, Kyung Hee University, Korea
2010-2013	Research Professor, Department of Applied Chemistry, Kyung Hee University, Korea
2008-2010	Visiting Scientist, Ames Laboratory-US Department of Energy & Iowa State University

Young-Kwan Kim

Present	Assistant Professor, Department of Chemistry, Dongguk University
2019	Senior Researcher, Carbon Composite Materials Research Center, Korea Institute of Science and Technology
2012	Ph. D. Department of Chemistry, KAIST, Korea

Tae Su Choi

Present	Assistant Professor, Division of Life Sciences, Korea University, Korea
2019-2023	Postdoctoral Researcher, Departent of Chemistry and Biochemistry, University of California, San Diego, United States
-2019	Assistant Research Professor, Department of Chemistry, Korea University, Korea

Jihyun Kim

Present	Assistant professor, Department of Chemistry Education, Kyungpook National University
2023	Postdoctoral Fellow, Department of Chemical and Biological Physics, Weizmann Institute of Science, Israelt
2020	Ph.D., Department of Chemistry, Texas A&M University, USA

22. Recent Trends in Advanced Analytical Chemistry

Organizer : Min-Sik Kim (DGIST)

Chair : Min-Sik Kim (DGIST)

14:30 **ANAL2-1** Elevating Biosensor Performance through Signal Amplification Strategies
Hee-Kyung Na
Bio-imaging team, Korea Research Institute of Standards and Science, Korea

14:50 **ANAL2-2** Single-molecule Optical Nanoimmunosensors for Supersensitive Detection
Seungah Lee
Department of Applied Chemistry, Kyung Hee University, Korea

15:10 **ANAL2-3** Nanostructure-based laser desorption/ionization time-of-flight mass spectrometry for analysis of various small molecules
Young-Kwan Kim
Department of Chemistry, Dongguk University, Korea

15:30 Coffee Break

15:50 **ANAL2-4** Step-efficient Design and Bioanalytical Characterization of Selective Metal Binding Proteins
Tae Su Choi
Division of Life Sciences, Korea University, Korea

16:10 **ANAL2-5** Enhancement of solution NMR sensitivity and resolution for studying various biomolecules: exploiting the media for labile protons
Jihyun Kim
Chemistry Education, Kyungpook National University, Korea

Organizer

Jongmin Park

Present	Associate Professor, Department of Chemistry, Kangwon National University, Korea
2018	Postdoctoral Fellow, Massachusetts General Hospital, Boston, USA
2012	Ph.D., Department of Chemistry, Seoul National University, Korea

Speaker

Yongwon Jung

Present	Professor, Department of Chemistry, KAIST, Korea
2005	Ph.D, Department of Chemistry, MIT, US
1998	B.S, Department of Chemistry, KAIST, Korea

Jeong-Mo Choi

2020-present	Assistant Professor, Department of Chemistry, Pusan National University, Korea
2016-2019	Postdoctoral associate, Department of Biomedical Engineering, Washington University in St. Louis, USA
2011-2016	Ph.D., Department of Chemistry and Chemical Biology, Harvard University, USA

Jae-Hoon Jung

2019.3-present	Assistant professor, Sungkyunkwan University
2012.6-2019.2	Postdoctoral associate, Cambridge University
2002.3-2008.2	Ph.D. in Chemistry, Seoul National University

Won-Ki Cho

Present	Associate Professor, Department of Biological Sciences, KAIST, Korea
2013	Ph.D., Physics Department, POSTECH, Korea
2008	B.S., Physics Department, POSTECH, Korea

23. Recent Advances in Biomolecular Condensation

Organizer : Jongmin Park (Kangwon National University)

Chair : Jongmin Park (Kangwon National University)

15:40 **LIFE1-1** Controlled synthesis of phase separated protein condensates
Yongwon Jung
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

16:10 **LIFE1-2** Biomolecular Phase Separation and Preferential Binding
Jeong-Mo Choi
Department of Chemistry, Pusan National University, Korea

16:40 **LIFE1-3** Integrating light and temperature information by biomolecular condensates in plants
Jae-Hoon Jung
Department of Biological Sciences, Sungkyunkwan University, Korea

17:10 **LIFE1-4** Capturing intranuclear topology of subnuclear condensates relative to transcription
Won-Ki Cho
Department of Biological Science, KAIST, Korea

Symposium

Life Chemistry Symposium 2

October 27 (Fri), Room 305+306

Organizer

Minseob Koh

2020-Present	Assistant Professor, Department of Chemistry, Pusan National University, Korea
2014-2020	Postdoc, Department of Chemistry, Scripps Research, USA
2013	Ph.D., Department of Chemistry, Seoul National University, Korea

Speaker

Hyungdon Yun

2014	Professor, Konkuk University
2007	Professor, Yeungnam University
2004	Post-Doc, Department of Biology, MIT

Soo-Jin Yeom

Present	Associate Professor. School of Biological Sciences and Technology, Chonnam National University, Korea
2013-2019	Senior researcher. Biochemicals and Synthetic Biology Research Center, KRIBB, Daejeon, Korea
2010	Ph.D., Department of Bioscience and Biotechnology, Konkuk University, Seoul, Korea

Minhee Park

2021-Present	Assistant Professor, Department of Biological Sciences, KAIST, Korea
2012-2019	Ph.D., Department of Biomedical Engineering, Boston University, USA
2008-2012	B.S, Department of Bioengineering, Rice University, USA

Inchan Kwon

Present	Professor, School of Materials Science and Engineering, GIST, Korea
2007	Ph.D., Department of Chemical Engineering, Caltech, USA
1994	B.S, Department of Chemical Engineering, SNU, Korea

24. Recent Advances in Biosystems Engineering

Organizer : Minseob Koh (Pusan National University)

Chair : Minseob Koh (Pusan National University)

09:00 **LIFE2-1** Enzyme engineering with non-canonical amino acid
Hyungdon Yun
Department of Systems Biotechnology, Konkuk University, Korea

09:30 **LIFE2-2** Development of new biocatalysts for plastic biodegradation and their potential biochemical pathway
Soo-Jin Yeom
School of Biological Sciences and Technology, Chonnam National University, Korea

10:00 **LIFE2-3** To build and visualize chromatin: Engineering the epigenome
Minhee Park
Korea Advanced Institute of Science and Technology (KAIST), Korea

10:30 **LIFE2-4** Click chemistry-mediated engineering of therapeutic proteins & in vivo imaging
Inchan Kwon
School of Materials Science and Engineering, Gwangju Institute of Science and Technology, Korea

Organizer

Hong Geun Lee

2017 Assistant and associate professor. Department of Chemistry, Seoul National University (Seoul Korea)
2012 Ph.D. (Organic chemistry), Harvard University (Cambridge, MA, USA)
2002 B.S. (Chemistry), Seoul National University (Seoul, Korea)

Chair

Sungwoo Hong

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

Speaker

Ja-Hyoung Ryu

Present Professor, Department of Chemistry, UNIST, Korea
2011 Post Doctoral Researcher, Department of Chemistry, University of Massachusetts-Amherst
2006 Ph.D. Department of Chemistry, Yonsei University, Korea

Jia-Rong Chen

Present Associate Professor, Central China Normal University (CCNU)
2012 Postdoc RWTH Aachen University, Germany
2009 Ph.D. Central China Normal University (CCNU), China

Sami Lakhdar

Present Research Director, SNRS
2006 Ph.D. Institute Lavoisier Versailles, France
2001 B.S. Department of Chemistry, University of Monastir, Tunisia

James P. Morken

Present Professor, Department of Chemistry, Boston College, USA
1995 Ph.D. Department of Chemistry, Boston College, USA
1989 B.S. Department of Chemistry, UC Santa Barbara, USA

25. International Organic Chemists Symposium

Organizer : Hong Geun Lee (Seoul National University)

Chair : Sungwoo Hong (KAIST)

<Award Lecture: Sehi Jang Award>

15:40 **ORGN1-1** Intracellular polymerization and self-assembly to control cellular fate
Ja-Hyoung Ryu
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea

Chair : Hong Geun Lee (Seoul National University)

16:10 **ORGN1-2** Visible Light-driven N-Radical Synthetic Chemistry
Jia-Rong Chen
College of Chemistry, Central China Normal University, China

16:45 **ORGN1-3** New Polar and Radical Methods for the Formation of Carbon-Phosphorus Bonds : A Mechanistically-Driven Approach
Sami Lakhdar
Laboratoire Hétérochimie Fondamentale et Appliquée, CNRS, Université Paul Sabatier, France

17:20 **ORGN1-4** Asymmetric Catalysis with Organoboron Reagents
James P. Morken
Department of Chemistry, Boston College, United States

Organizer

Juyoung Yoon

Present	Professor, Department of Chemistry and Nanoscience, Ewha Womans University, Korea
1996	Postdoc, Department of Chemistry, UCLA, USA
1994	Ph.D, Department of Chemistry, The Ohio State University, USA

Speaker

Sang-gi Lee

2006-present	Professor, Department of Chemistry and Nano Science, Ewha Womans University

Duck-Hyung Lee

2004	Professor, Department of Chemistry, Sogang University, Korea
1998	Associate Professor, Department of Chemistry, Sogang University, Korea
1994	Assistant Professor, Department of Chemistry, Sogang University, Korea

Phil Ho Lee

2023	The Korean Chemical Society, President-elected
2012-present	The Korean Academy of Science and Technology, member
2011-2020	Creative Research Initiatives, Director

Jong Seung Kim

2007-Present	Professor, Department of Chemistry, Korea University, Korea
2003-2007	Professor, Department of Chemistry, Dankook University, Korea
1994-2003	Associate Professor, Department of Chemistry, Konyang University, Korea

26. Recent Trends in Organic Chemistry

Organizer : Juyoung Yoon (Ewha Womans University)

Chair : Juyoung Yoon (Ewha Womans University)

09:30 **ORGN2-1** Development of Divergent Catalysis
Sang-gi Lee
Chemistry Department of Nano-Science, Ewha Womans University, Korea

09:55 **ORGN2-2** Efforts Towards the Synthesis of Neaumycin B
Suin Cho, Eungyeong Choi[1], **Duck-Hyung Lee**[1]
Sogang University, Korea
[1]*Department of Chemistry, Sogang University, Korea*

10:20 **ORGN2-3** B–H Functionalization of *o*-Carborane
Phil Ho Lee
Department of Chemistry, Kangwon National University, Korea

10:45 **ORGN2-4** Photocatalytic superoxide radical generator that induces pyroptosis in cancer cells
Jong Seung Kim
Department of Chemistry, Korea University, Korea

Organizer

Han-Yong Bae

2019 - Present	Assistant Professor, Department of Chemistry, Sungkyunkwan University
2019	Assistant Professor, Department of Chemistry, UNIST
2015 - 2019	Postdoctoral researcher, Max-Planck-Institut für Kohlenforschung (with Prof. Benjamin List, Nobel Prize in Chemistry 2021)

Speaker

Yunmi Lee

Present	Professor, Department of Chemistry, Kwangwoon University, Korea
2010	Postdoc, Department of Chemistry and Chemical Biology, Harvard University, USA
2004	Ph D. Department of Chemistry, Boston College, USA

Sarah Yunmi Lee

2018-Present	Assistant Professor, Department of Chemistry, Yonsei University, Korea
2014-2017	Postdoc, College of Chemistry, UC Berkeley, USA
2009-2014	Ph.D, Department of Chemistry, MIT, USA

Hyunwoo Kim

2011-present	Assistant & Associate Professor, Department of Chemistry, KAIST
2009	Ph.D., University of Toronto
2000	B.S., Seoul National University

Hyunwoo Kim

2022-Present	Assistant Professor, Department of Chemistry, POSTECH, Korea
2020-2022	Assistant Professor, Department of Chemistry and Nanoscience, Ewha Womans University, Korea
2019-2020	Postdoctoral Associate, Department of Chemistry and Chemical Biology, Cornell University, USA

27. Recent Trends in New Catalytic Reaction

Organizer : Han-Yong Bae (Sungkyunkwan University)

Chair : Han-Yong Bae (Sungkyunkwan University)

14:30 **ORGN3-1** NHC-Copper Hydride Catalysis using Diisobutylaluminum Hydride
Yunmi Lee
Department of Chemistry, Kwangwoon University, Korea

14:55 **ORGN3-2** Copper-Catalyzed C–C Cross-Couplings of Tertiary Alkyl Halides Enabled by Cyclopropenimine-Based Ligands
Sarah Yunmi Lee
Department of Chemistry, Yonsei University, Korea

15:20 **ORGN3-3** Ligand Control in Transition Metal Catalysis
Hyunwoo Kim
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

15:45 **ORGN3-4** Cobalt-Electrocatalyzed Radical-Polar Crossover Hydrofunctionalization of Alkenes
Hyunwoo Kim
Department of Chemistry, Pohang University of Science and Technology, Korea

Symposium

Medicinal Chemistry Symposium 1
October 26 (Thu), Convention Hall 1

Organizer

Sang Min Lim

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

Speaker

Ae Nim Pae

Present Principal Research Scientist, Brain Science Institute, KIST, Korea
2000 Postdoc. Department of Chemistry, University of Illinois at Urbana-Champaign, USA
1997 Ph.D Department of Chemistry, Korea University, Korea

Ky-Youb Nam

Present CTO & Co-founder, Pharos iBio Co., Ltd., Korea
2011 Bioinformatics and Molecular Design Research Center, Korea
2007 Center for Advanced Research in Biotechnology, University of Maryland Biomedical Institute, USA

Kwangho Lee

Present Principal Investigator, Korea Research Institute of Chemical Technology
Present Professor, University of Science and Technology

In-Gyun Lee

Present Senior research scientist, Integrative center for chemistry and biology, KIST, Korea

28. Award Lecture: Excellence in Medicinal Chemistry

Organizer : Sang Min Lim (KIST)

Chair : Sang Min Lim (KIST)

15:40 **MEDI1-1** Therapeutic Approaches targeting 3R/4R Tauopathies for the Treatments of AD and PSP
Ae Nim Pae
Brain Science Institute, Korea Institute of Science and Technology, Korea

16:25 **MEDI1-2** PHI-501, a novel pan-RAF/DDRs dual kinase inhibitor, overcomes BRAF or MEK inhibitor resistance in melanoma
Ky-Youb Nam
Pharos iBio Co., Ltd., Korea

16:50 **MEDI1-3** Discovery of a novel [1,2,4]triazolo[4,3-a]quinoxaline-Based Potent and BD1-Selective BET Bromodomain Inhibitors for the Treatment of Acute Myeloid Leukemia
Kwangho Lee
Korea Research Institute of Chemical Technology, Korea

17:15 **MEDI1-4** Exploiting interaction between aurora kinase-activator for thrapeutic intervention
In-Gyun Lee
Chemical Kinomics Center, Korea Institute of Science and Technology, Korea

Organizer

Kyu Myung Lee

Present Senior Researcher, Therapeutics & Biotechnology Division, KRICT
2020 Ph.D. Department of Chemistry, Technical University of Munich
2012 M.S. Department of Chemistry, Sogang University

Speaker

Jung-Nyoung Heo

Present Principal Scientist, KRICT
2003 Postdoc, Department of Chemistry, University of Michigan
2001 Ph.D. Department of Chemistry, Case Western Reserve University

Gil Tae Hwang

Present Professor, Department of Chemistry, Kyungpook National University, Korea
2009 Postdoc. Department of Chemistry, The Scripps Research Institute, USA
2002 Ph.D. Department of Chemistry, POSTECH, Korea

Min hyeon Shin

Present Assistant Professor, Department of Science Education, Daegu National University of Education, Korea
2022 Postdoctoral Fellow, Department of Chemistry, POSTECH Biotech Center, Korea
2020 Ph.D, Department of Chemistry, Pohang University of Science and Technology (POSTECH), Korea

Taedong Han

Present Vice President, Head of Discovery chemistry department of Dong-A ST

29. Recent Trends in Drug Discovery Using DNA Encoded Library Technology

Organizer : Kyu Myung Lee (KRICT)

Chair : Kyu Myung Lee (KRICT)

09:00 **MEDI2-1** Spiro Building Blocks for DNA Encoded Library (DEL) and Medicinal Chemistry
Jung-Nyoung Heo
Therapeutics and Biotechnology Division, Korea Research Institute of Chemical Technology, Korea

09:30 **MEDI2-2** The Groebke–Blackburn–Bienaymé Reaction for DNA-Encoded Library Technology
Gil Tae Hwang
Department of Chemistry, Kyungpook National University, Korea

10:00 **MEDI2-3** DNA-encoded libraries of peptidomimetics
Min hyeon Shin[*], Hyun-Suk Lim[1,*]
Department of Chemistry, Daegu National University of Education, Korea
[1]*Department of Chemistry, Pohang University of Science and Technology, Korea*

10:30 **MEDI2-4** Discovery of Kinase inhibitors from a DNA-Encoded small molecule Library
Taedong Han
Department of Discovery Chemistry, DONG-A ST, Korea

Symposium

Material Chemistry Symposium 1

October 26 (Thu), Room 201+202+203

Organizer

Sungjin Park

Present Professor, Department of Chemistry, Inha University, Korea
2005 Ph.D, Department of Chemistry, KAIST, Korea
1998 B.S, Department of Chemistry, KAIST, Korea

Chair

Jongnam Park

Present Associate Professor, Department of Biomedical Engineering, UNIST, Korea
2017 Visiting Professor, Department of Chemical & Biomolecular Engineering, UPenn, USA
2006 Postdoctoral Associate, Department of Chemistry, MIT, USA

Speaker

Nam-Gyu Park

Present Distinguished Professor, Sungkyunkwan University
2005 Senior Scientist, ETRI
2000 Director of Solar Cell Center, KIST

Sang Hoon Joo

Present Professor, Department of Chemistry, Seoul National University, Korea
2009 Postdoc, Department of Chemistry, Univ. California, Berkeley, USA
2004 PhD, Department of Chemistry, KAIST, Korea

Myung-Gil Kim

Present Associate Professor, School of Advanced Materials Science & Engineering, Sungkyunkwan University, Korea
2019 Associate Professor, Department of Chemistry, Chung-Ang University, Korea
2012 Ph.D., Department of Chemistry, Northwestern University, USA

Nam Hwi Hur

Present Professor, Department of Chemistry, Sogang University, Korea
1987 Ph.D, Department of Chemistry, University of Illinois at Urbana-Champaign, USA
1981 B.S, Department of Chemistry, Sogang University, Korea

30. 2023 Selection of BKCS-Materials Chemistry

Organizer : Sungjin Park (Inha University)

Chair : Sungjin Park (Inha University)

15:40 **MAT1-1** Current state of the BKCS and beyond
Sungjin Park
Department of Chemistry, Inha University, Korea

15:45 **MAT1-2** Perovskite solar cells: Recent Progress and Future
Nam-Gyu Park
School of Chemical Engineering, Sungkyunkwan University, Korea

16:10 **MAT1-3** Atomically Dispersed Metal Catalysts: Unusual Catalytic Selectivity and Active Site Identification
Sang Hoon Joo
Department of Chemistry, Seoul National University, Korea

16:35 **MAT1-4** Local Structure Control of Chalcogel for Environmental and Energy Applications
Myung-Gil Kim
School of Advanced Materials Science & Engineering, Sungkyunkwan University, Korea

Chair : Jongnam Park (UNIST)

<Award Lecture: Jin-Ho Choy Academic Award>

17:00 **MAT1-5** Exploring the Wonders of Metal Oxides: A New Hydrogen-Bearing Oxide for Hydrogenation Catalysts
Nam Hwi Hur
Department of Chemistry, Sogang University, Korea

17:30 General Meeting of Materials Chemistry Division

Symposium

Material Chemistry Symposium 2

October 27 (Fri), Room 201+202+203

Organizer

Jongsoon Kim

Present Associate Professor, Department of Energy Science, Sungkyunkwan University

2014 Ph.D., Department of Materials Science and Engineering, Seoul National University

2008 B.S. Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology

Speaker

Jinwoo Lee

Present Professor, Department of Chemical and Biomolecular Engineering, Korea Advanced Institute of Science and Technology

2003 Ph.D. Seoul National University

Junyoung Mun

present Associate Professor, School of Advanced Materials Science & Engineering, Sungkyunkwan University

2022 Assistant/Associate Professor, Department of Energy Chemical Engineering, Incheon National University

2013 Research Staff, Samsung Advanced Institute of Technology

Jung-Keun Yoo

2017 KIMS(Korea Institute of Materials Science)

2015 LG Chem

Jae-Seung Lee

2009-Present Professor, Department of Materials Science and Engineering, Korea University, Republic of Korea

2008-2009 Postdoctoral Associate, MIT, USA

2004-2008 Ph.D., Department of Chemistry, Northwestern University, USA

31. Recent Trends in Materials Chemistry for Next-generation Battery

Organizer : Jongsoon Kim (Sungkyunkwan University)

Chair : Jongsoon Kim (Sungkyunkwan University)

09:00 **MAT2-1** Next-Generation Sulfur Cathode: Electrocatalyst to Accelerate Sulfur Conversion Reaction

Jinwoo Lee

Department of Chemical and Biomolecular Engineering, Korea Advanced Institute of Science and Technology, Korea

09:25 **MAT2-2** Enhancing Surface Functionality of Ni-Rich Layered Oxide Cathode for Lithium-Ion Batteries

Junyoung Mun

School of Advanced Materials Science & Engineering, SKKU Institute of Energy Science & Technology (SIEST), Sungkyunkwan University, Korea

09:50 **MAT2-3** Design and Process Development of Thick Cathodes for Next-Generation Lithium-Ion Batteries

Jung-Keun Yoo*, Jihee Yoon[1]

Department of Advanced Materials Engineering, Korea Institute of Materials Science, Korea

[1]*Korea Institute of Materials Science, Korea*

10:15 Coffee Break

<Award Lecture: Young Material Chemist Award>

10:25 **MAT2-4** When Biology Meets Materials Chemistry: the Case of DNA and Inorganic/Organic Nanomaterials

Jae-Seung Lee

Department of Materials Science and Engineering, Korea University, Korea

Symposium

Material Chemistry Symposium 3

October 27 (Fri), Room 201+202+203

Organizer

In Young Kim

Present Assistant Professor, Department of Chemistry and Nanoscience, Ewha Womans University, Korea

2022 Assistant Professor, Department of Chemistry, Chonnam National University, Korea

2020 Senior Lecturer, Faculty of Engineering and Built Environment, The University of Newcastle, Australia

Speaker

Taegweon Lee

Present Professor, Department of Chemistry, Ajou University, Korea

2008 Postdoc, Department of Materials Science and Engineering, Johns Hopkins University, USA

2005 Ph.D., Department of Chemistry, Korea University, Korea

Young Keun Kim

Present Professor, Department of Materials Science and Engineering, Korea University, Korea

1993 Ph.D, Materials Engineering, MIT, USA

1985 B.S, Metallurgical Engineering, Seoul National University, Korea

Seung-hyun Chun

Present Professor, Department of Physics and Astronomy, Sejong University, Korea

1996 Ph.D. Department of Physics, Seoul National University, Korea

Youngwook Kim

Present Assistant Professor, Department of Physics and Chemistry, DGIST, Korea

32. From Synthesis to Application of Nanomaterials with Quantum Properties

Organizer : In Young Kim (Ewha Womans University)

Chair : In Young Kim (Ewha Womans University)

14:30 **MAT3-1** Research Trends of Spintronics Materials and Devices
Taegweon Lee
Department of Chemistry, Ajou University, Korea

14:55 **MAT3-2** Spin-orbit torque switching materials for nonvolatile embedded memory applications
Young Keun Kim
Department of Materials Science and Engineering, Korea University, Korea

15:20 **MAT3-3** Molecular beam epitaxy and exotic Hall effects in topological quantum systems
Seung-hyun Chun
Department of Physics and Astronomy, Sejong University, Korea

15:45 **MAT3-4** Understanding the Quantum Revolution: A Simplified Overview for Materials Chemists
Youngwook Kim
Daegu Gyeongbuk Institute of Science & Technology, Korea

Symposium

Electrochemistry Symposium 1
October 26 (Thu), Room 206+207

Organizer

Chang Hyuck Choi

Present Associate Professor, Department of Chemistry, POSTECH, Korea
2012 Ph.D., Department of Chemical and Biomolecular Engineering, KAIST
2007 B.S., Department of Chemical and Biomolecular Engineering, KAIST

Speaker

Hyunwoo Kim

2022-present Assistant Professor, Department of Chemistry, POSTECH, Korea
2020-2022 Assistant Professor, Department of Chemistry and Nanoscience, Ewha Womans University, Korea
2019-2020 Postdoctoral Associate, Department of Chemistry and Chemical Biology, Cornell University, USA

Isaac Choi

Present Assistant Professor, Department of Chemistry, Chungbuk National University, Korea
2022 Research Associate, Department of Chemistry, University of Wisconsin-Madison, USA
2021 Ph. D. Institut für Organische und Biomolekulare Chemie, Georg-August-Universität Göttingen, Germany

Jin Kyoon Park

Present Professor, Department of Chemistry, Pusan National University
2003 Ph.D Department of Chemistry, Seoul National University, Korea
1996 B.S. Department of Chemistry Education, Seoul National University, Korea

Kyoungsuk Jin

Present Assistant professor, Department of Chemistry, Korea University, Korea

Taek Dong Chung

Present Professor, Department of Chemistry, Seoul National University, Korea
Present Director, Center for Electron Transfer
Present Editor, Journal of Electroanalytical Chemistry

33. Electrochemical Organic Synthesis: Electrochemistry and Organic Chemistry

Organizer : Chang Hyuck Choi (POSTECH)

Chair : Chang Hyuck Choi (POSTECH)

15:40 **ELEC1-1** Cobalt-Electrocatalyzed Radical-Polar Crossover Hydrofunctionalization of Alkenes
Hyunwoo Kim
Department of Chemistry, Pohang University of Science and Technology, Korea

16:05 **ELEC1-2** A Way Towards Sustainable C–H Bond Functionalization
Isaac Choi
Department of Chemistry, Chungbuk National University, Korea

16:30 **ELEC1-3** Progress in Electrochemical Synthesis of (Hetero)aromatic Compounds: Efficient Generation of 1H-Indazole N-oxides and Selective Assembly of 1,3,5- and 1,2,4-Trisubstituted Benzenes
Jin Kyoon Park
Department of Chemistry, Pusan National University, Korea

16:55 **ELEC1-4** Sustainable Electrified Imine Chemistry
Kyoungsuk Jin
Chemistry Department, Korea University, Korea

17:20 **ELEC1-5** Interfacing Electrochemistry with Organic Chemistry
Taek Dong Chung
Department of Chemistry, Seoul National University, Korea

17:45 Electrochemistry Division General Meeting

Symposium

Electrochemistry Symposium 2

October 27 (Fri), Room 206+207

Organizer

Yun Jeong Hwang

2021-present Associate Professor, Department of Chemistry, Seoul National University, Korea

2012-2021 Researcher, Korea Institute of Science and Technology

2006-2012 Ph. D. Department of Chemistry, University of California, Berkeley, USA

Speaker

Sung Mook Choi

Present Principal Researcher, Surface & Nano Materials Division, Korea Institute of Materials Science

Present Associate Professor, Advanced Materials Engineering, University of Science & Technology

Dong Ki Lee

Present Principal scientist, Clean Energy Research Center, KIST, Korea

2018 Postdoc, Chem, UW-Madison, USA

2015 PhD, MSE, KAIST, Korea

Chan Woo Lee

Present Associate Professor, Department of Applied Chemistry, Kookmin University, Korea

2017 Ph.D, Department of Materials Science and Engineering, Seoul National University, Korea

2009 B.S, Department of Materials Science and Engineering, Seoul National University, Korea

Seunghwa Lee

2022.03-Present Assistant Professor, Department of Chemical Engineering, Changwon National University, Korea

2022.02 Postdoc, Institute of Chemistry and Chemical Engineering, EPFL, Switzerland

2017.08 Ph.D., School of Environmental Science and Engineering, GIST, Korea

Hye Jin Lee

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

2007 Associate Researcher, Department of Chemistry, University of California-Irvine, USA

1999 Ph.D. Department of Chemistry, Ecole Polytechnique Federale de Lausanne

34. Electrocatalytic Reactions for Carbon Neutrality

Organizer : Yun Jeong Hwang (Seoul National University)

Chair : Yun Jeong Hwang (Seoul National University)

09:00 **ELEC2-1** Non-Precious Electrocatalysts-Based Anion Exchange Membrane Water Electrolysis with Superior Performance
Sung Mook Choi
Surface & Nano Materials Division, Korea Institute of Materials Science, Korea

09:25 **ELEC2-2** Catalyst developments for the electrochemical conversion of hydroxymethylfurfural (HMF) to furandicarboxylic acid (FDCA)
Dong Ki Lee
Clena Energy Research Center, Korea Institute of Science and Technology, Korea

09:50 **ELEC2-3** Liquid-diffusion electrode with core-shell structured mixed metal oxide catalyst for near-zero polarization in chlor-alkali electrolysis
Chan Woo Lee
Department of Applied Chemistry, Kookmin University, Korea

10:15 **ELEC2-4** In-situ Tracking Active Phases in The Oxygen Evolution Reaction on Transition Metal (Oxy)hydroxides
Seunghwa Lee
Department of Chemical Engineering, Changwon National University, Korea

<Award Lecture: Q. Won Choi Academic Award>

10:40 **ELEC2-5** Voltammetric Nanobiosensing Approaches for Biomedical and Environmental Applications
Hye Jin Lee
Department of Chemistry, Kyungpook National University, Korea

Organizer

Jun Hui Park

Present Professor at Department of Chemistry, Chungbuk National University, Cheongju, Korea
2013-2018 Associate Professor at Department of Chemistry Education, Chonbuk National University, Jeonju, Korea
2011-2013 Postdoctoral Fellow in Department of Chemistry and Biochemistry, University of Texas at Austin, Austin, TX, USA

Speaker

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

Haesik Yang

Present Professor, Department of Chemistry, Pusan National University, Korea
2004 Senior Researcher, ETRI, Korea
1997 Ph. D., Department of Chemistry, KAIST, Korea

Sang-Il Choi

Present Associate Professor, Department of Chemistry, Kyungpook National University, Korea

Seol Baek

Present Assistant Professor, Department of Chemistry, Sookmyung Women's University, Korea

35. Emerging Trends in Fundamental Electrochemistry

Organizer : Jun Hui Park (Chungbuk National University)

Chair : Jun Hui Park (Chungbuk National University)

14:30 **ELEC3-1** Polymer Characterization Using Electrochemistry: Observing Molecular Weight and Phase Transitions
Byung-Kwon Kim
Department of Chemistry and Nanoscience, Ewha Womans University, Korea

14:55 **ELEC3-2** New Electron Mediators for Electrochemical Point-of-Care Testing
Haesik Yang
Department of Chemistry, Pusan National University, Korea

15:20 **ELEC3-3** Electrochemical Application of Liquid Organic Hydrogen Carriers
Sang-Il Choi
Department of Chemistry, Kyungpook National University, Korea

15:45 **ELEC3-4** Micro/Nanoscale Electrochemistry for Enhanced Chemical Detections and Molecular Dynamic Studies
Paul Bohn*, Henry White[1,*], **Seol Baek**[2]
Department of Chemistry & Biochemistry, University of Notre Dame, United States
[1] *Department of Chemistry, University of Utah, United States*
[2] *Chemistry, Sookmyung Women's University, Korea*

Symposium

Chemistry Education Symposium 1
October 27 (Fri), Room 304

Organizer

Wonho Choi
Present Professor, Department of Chemistry Education, Sunchon National University, Korea

Speaker

Dae Hong Jeong
Present Professor, Department of Chemistry Education, Seoul National University

Saetbyeol Moon
Present Teacher, Buyeong Girls' High School, Korea

Mi Young Han
2012-present Teacher, Daejeon Science High School, Korea
2009-2011 Teacher, Dejeon Bongwoo Middle School
1999-2006 Researcher, LG Chemicals

Jongho Baek
Present Korea Institute for Curriculum & Evaluation

36. Current Issues and Research in Chemistry Education

Organizer : Wonho Choi (Sunchon National University)

Chair : Wonho Choi (Sunchon National University)

09:00 **EDU1-1** The Roles of Schools and University with Respect of Mathematical & Computational Thinking Focused in the 2022 National Curriculum Revision
Dae Hong Jeong
Department of Chemical Education, Seoul National University, Korea

09:25 **EDU1-2** Cases and Suggestions for General High School Chemistry Classes to Cultivate Students' Competencies in the High School Credit System of the 2022 Revised Curriculum
Saetbyeol Moon
Buyeong Girls' High School, Korea

09:50 Coffee Break

10:10 **EDU1-3** Changes in the evaluation system of Daejeon science high school as a case of evaluation in the 2022 revised curriculum.
Mi Young Han
Department of Chemistry, Daejeon Science High School for the Gifted, Korea

10:35 **EDU1-4** The characteristics of understanding about chemistry: Focusing on the results of the National Assessment of Educational Achievement(NAEA) and Customized Assessment for Educational Achievement(CAEA)
Jongho Baek
Korea Institute for Curriculum and Evaluation, Korea

Organizer

Kihyang Kim

Present Teacher, Department of Chemistry, Sejong Academy of Science and Arts

Speaker

Nowon Park

Present Teacher, Gyeonggi Science High School for the Gifted

Daeseong Jin

Present Teacher, Daejeon Science High School for the Gifted

Jinho Oh

2009.07-present Chemistry teacher of Korea Science Academy of KAIST

2004.10-2009.6 Institute for Gifted Students, Assistant professor of KAIST

2002.10-2004.9 Post-doc Associate, Swager Group, MIT

Jihun Park

Present Lecturer, Department of Chemistry Education, Pusan National University, Korea

Present Teacher, Busan Science High School, Korea

2018 Ph.D., Department of Chemistry Education, Pusan National University, Korea

37. Chemistry Education for the Science Gifted Students

Organizer : Kihyang Kim (Sejong Academy of Science and Arts)

Chair : Kihyang Kim (Sejong Academy of Science and Arts)

14:30 **EDU2-1** Development and application of science gifted education programs using maker education: Focusing on chemical cell

Nowon Park

Department of Chemical Education, Gyeonggi Science High School for the Gifted, Korea

15:00 **EDU2-2** Normal Chemistry Class

Daeseong Jin

Department of Chemistry, Daejeon Science High School for the Gifted, Korea

15:30 **EDU2-3** A meeting chance for gifted science students! Introducing international science festival for science gifted students - Focusing on KSASF 2023

Jinho Oh

Chemistry & Biology, Korea Science Academy of KAIST, Korea

16:00 **EDU2-4** The Effect of the Chemistry Experiments Utilizing Advanced Laboratory Equipment of Science High School on the Affective Characteristics in Science Aspect of Ordinary High School Students

Jihun Park

Busan Science High School, Korea

Symposium

Environmental Energy Symposium 1
October 26 (Thu), Room 301

Organizer

Eun-Ju Kim

Present Principal Researcher, Water Cycle Research Center, KIST, Korea
2014 Postdoc, Earth Science Division, Lawrence Berkeley National Laboratory, USA
2013 Ph D., School of Environmental Science and Engineering, POSTECH, Korea

Speaker

Dongha Shin

Present Assistant professor, Department of chemistry, Inha University, Korea
2020 Assistant Professor, Division of Fine Science and Engineering, Pai Chai University
2012 Ph. D, Physical Chemistry, Department of Chemistry, Seoul National University

Young Kyoung Song

Present Postdoc, Chonnam National University, Korea
2019 Ph.D, Marine environmental science, University of Science & Technology, Korea

Jinyoung Jeong

Present Principal Researcher, KRIBB
Present Professor, Department of Biotechnology, KRIBB School, UST

Hakwon Yoon

Present Head, Environmental Exposure & Toxicology Research Center, Korea Institute of Toxicology (KIT), Korea
2020 Ph.D, Environmental Science and Engineering, Pohang University of Science and Technology (POSTECH), Korea
2013 B.S (Double major), Microbiology & Environmental Biochemistry, Pusan National University, Korea

38. Micro- and Nanoplastics: Up-to-date Knowledge on Detection and Toxicity

Organizer : Eun-Ju Kim (KIST)

Chair : Eun-Ju Kim (KIST)

15:40 **ENVR1-1** Advancing Raman Spectroscopy for Nanoplastic Detection
Dongha Shin
department of chemistry, Inha University, Korea

16:10 **ENVR1-2** Photooxidation-induced weathering and fragmentation of plastics: from macro to nanoplastics
Young Kyoung Song
Chonnam National University, Korea

16:40 **ENVR1-3** Size effects of microplastics with PAH on cardiotoxicity in zebrafish larvae
Jinyoung Jeong
Environmental Disease Research Center, KRIBB, Korea

17:10 **ENVR1-4** Fate and Effect of Microplastics in the Soil-plant System
Hakwon Yoon
Environmental Exposure & Toxicology Research Center, Korea Institute of Toxicology, Korea

Organizer

Hyunwoong Park

Present	Professor, School of Energy Engineering, Kyungpook National University, Korea
2008	Postdoc, California Institute of Technology, Pasadena, CA
2004	Ph.D. School of Environmental Science and Engineering, POSTECH

Speaker

Young Soo Kang

present	Professor, Department of Energy Engineering, Environments and Climate Change Division, KENTECH, Korea
2008.3-2022.1	Professor, Sogang University

Ryong Ryoo

Present	Distinguished Professor, Department of Energy Engineering, KENTECH, Korea
1986-2022	Professor, Department of Chemistry, KAIST
2012-2022	Director, Center for Nanomaterials and Chemical Reactions, Institute for Basic Science

Joonwoo Kim

Present	Principal Researcher, Environment & Energy Research Laboratory, RIST, Korea
2014	Senior Researcher, Diesel Catalysts Team, Heesung Catalysts Cop., Korea
2012	Ph.D, Department of Chemical Engineering, Kyung Hee University, Korea

Hyo Won Kim

2022.03-present	Assistant Professor, Department of Energy Engineering, Korea Institute of Energy Technology, Korea
2019.09-2022.02	Assistant Professor, Department of Advanced Materials Engineering, Kangwon National University, Korea
2018.09-2019.08	Professional Researcher, LG Chem.

Yun Jeong Hwang

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

Ki Tae Park

Present	Assistant Professor, Department of Chemical Engineering, Konkuk University, Korea
2018	Principal Researcher, Climate Change Research Division, KIER, Korea
2011	Ph.D., Department of Chemical Engineering, Korea University, Korea

39. CCU Alchemist Technologies: Carbon-to-Liquid

Organizer : Hyunwoong Park (Kyungpook National University)

Chair : Hyunwoong Park (Kyungpook National University)

09:00 **ENVR2-1** Break-Through Technology for the Highly Efficient CO2 Conversion into Solar Liquid Fuels
Young Soo Kang
Environmental and Climate Technology, Korea Institute of Energy Technology, Korea

09:20 **ENVR2-2** Mesoporous Zeolite Supported with Metal Catalysts for CO_2 Conversion to Methanol
Ryong Ryoo
Department of Energy Engineering, Korea Institute of Energy Technology (KENTECH), Korea

09:45 **ENVR2-3** Gas Separation Using Membrane Contactor and Application
Joonwoo Kim
Research Institute of Industrial Science & Technology, Korea

10:00 **ENVR2-4** Membrane-based greenhouse gas capture from fossil fuel flue gas
Hyo Won Kim
Department of Energy Engineering, Korea Institute of Energy Technology, Korea

10:15 **ENVR2-5** Electrochemical CO2 reduction reaction at zero-gap membrane electrode assembly
Yun Jeong Hwang
Chemistry Department, Seoul National University, Korea

10:30 **ENVR2-6** Electrochemical Carbon-to-Liquid Technologies
Ki Tae Park
Konkuk University, Korea

10:45 **ENVR2-7** A Technical Progress Towards Artificial Photosynthesis Factory
Hyunwoong Park
School of Energy Engineering, Kyungpook National University, Korea

Organizer

Jeung Gon Kim

Present Associate Professor, Department of Chemistry, Jeonbuk National University
2005 Ph.D. Department of Chemistry, University of Pennsylvania
2001 B.S. Department of Chemistry, KAIST

40. Oral Presentation for Young Polymer Scientists

Organizer : Jeung Gon Kim (Jeonbuk National University)

Chair : Jeung Gon Kim (Jeonbuk National University)

09:00 **POLY.O-1** Fast and Large Motion of Self-Oscillating Gels based on High Diffusivity Induced by Phase-separated Structures
Jaewon Choi, Taehun Chung, Ryo Yoshida[1], Younsoo Kim
Department of Materials Science and Engineering, Pohang University of Science and Technology, Korea
[1]*Department of Materials Engineering, The University of Tokyo, Japan*

09:12 **POLY.O-2** Ultraviolet Light Blocking Optically Clear Adhesives for Foldable Displays via Highly Efficient Visible-Light Curing
Seokju Lee
Materials and science engineering, Seoul National University, Korea

09:24 **POLY.O-3** Vertically oriented Ti3C2Tx MXene nanosheets for electromagnetic wave control
Changjae Lee, Dong Ki Yoon
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

09:36 **POLY.O-4** Highly Tunable Mechano-Temporal Profiles in Triblock Copolyether Hydrogels with Mixed Acetal Pendants
Jinsu Baek, Byeong-Su Kim[1,*]
Department of chemistry, Yonsei University, Korea
[1]*Department of Chemistry, Yonsei University, Korea*

09:48 **POLY.O-5** Synthesis of stereocontrolled *N,O*-acetal-containing polymer by cascade enyne metathesis polymerization
Bon Woo Koo, Cheoljae Kim
Department of Chemistry, Chungbuk National University, Korea

10:00 **POLY.O-6** Chain Length-dependent Deoxygenation of Polyacrylate for Synthesis of Functional Polypropylene
Seongjang Jeon, Taeseok Oh, Myungeun Seo
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

10:12 **POLY.O-7** SIMPLIFIED Y6-BASED NONFULLERENE ACCEPTORS: IN-DEPTH STUDY ON MOLECULAR STRUCTURE–PROPERTY RELATION, MOLECULAR DYNAMICS SIMULATION, AND CHARGE DYNAMICS
Minhun Jee, Sungnam Park, Han Young Woo
Department of Chemistry, Korea University, Korea

10:24 **POLY.O-8** Eco-friendly Degradable Organic Electrochemical Transistors for Zero E-Waste Electronics

Hyeonjun Na, Myung-Han Yoon[1,*]
Materials science and engineering, Gwangju Institute of Science and Technology, Korea
[1]*Division of Advanced Materials Engineering, Gwangju Institute of Science and Technology, Korea*

10:36 **POLY.O-9** Superoleophilic Nanocellulose Based Sponge for Nanoremediation of Microplastics

Chandravati Yadav, Woo-Dong Jang
Department of Chemistry, Yonsei University, Korea

10:48 **POLY.O-10** Assistance of Up-Conversion Phosphor in TiO2 to Augment Visible Light Absorption for Water Splitting

Amol Uttam Pawar
Environmental and Climate Technology, Korea Institute of Energy Technology, Korea

Organizer

Kyounghoon Lee

Present Assistant professor, Department of Chemical Education, Gyeongsang National University, Korea
2021 Postdoc, Department of Chemistry, Ohio State University, United States
2019 Ph.D. Department of Chemistry, University of Iowa, United States

Speaker

Daeha Seo

Present Associate Professor, Department of Physics and Chemistry, DGIST, Korea
2016 Postdoc., U.C. Berkeley and UCSF, USA
2010 Ph.D. Department of Chemistry, KAIST, Korea

Min Kim

Present Professor, Department of Chemistry, Chungbuk National University, Korea
2012 Postdoc, UC San Diego, USA
2010 Ph.D., Department of Chemistry, KAIST, Korea

Ok-Sang Jung

Present Professor, Department of Chemistry, Pusan National University, Korea
2020-2021 Chair of Korean Chemical Society

41. Oral Presentation for Young Inorganic Chemists

Organizer : Kyounghoon Lee (Gyeongsang National University)

Chair : Kyounghoon Lee (Gyeongsang National University)

<Award Lecture: Young Inorganic Chemist Award 1>

09:00 **INOR.O-1** Observation of Individual Chemical Reaction in Nanoparticle Catalyst and Cell Membrane using Optical Microscopy
Daeha Seo
Department of Physics and Chemistry, Daegu Gyeongbuk Institute of Science & Technology, Korea

<Award Lecture: Young Inorganic Chemist Award 2>

09:25 **INOR.O-2** Fine-Tuning Functional Groups in Metal-Organic Frameworks
Min Kim
Department of Chemistry, Chungbuk National University, Korea

09:50 **INOR.O-3** Photoproducts Engineering of Metal-Organic Frameworks incorporating Olefin Ligands
Jihye Oh, Jaewook An, In-Hyeok Park
Graduate School of Analytical Science and Technology, Chungnam National University, Korea

10:00 **INOR.O-4** Highly Efficient Hydrogen Isotope Separation via Gas(H2)-Liquid(D2) Phase Separation in Mesoporous Media
Jaewoo Park, Hyunchul Oh[1,*]
Chemistry, Ulsan National Institute of Science and Technology, Korea
[1]*Department of Chemistry, Ulsan National Institute of Science and Technology, Korea*

10:10 **INOR.O-5** Novel Platinum(II) Complexes Based on Tetradentate Ligands and Their High Performances in Blue Phosphorescent Organic Light-Emitting Diodes
Chan Hee Ryu, Kang Mun Lee
Department of Chemistry, Kangwon National University, Korea

10:20 **INOR.O-6** New Volatile Strontium Precursors for Next-generation Capacitor in DRAM
Chanwoo Park, Chang Seop Hong[1], Taek-Mo Chung[2,*]
Korea University, Korea
[1]*Department of Chemistry, Korea University, Korea*
[2]*Advanced Materials Division, Korea Research Institute of Chemical Technology, Korea*

<Award Lecture: Si-Joong Kim Academic Award>

10:30 **INOR.O-7** Crystals of Ni_6L_{12} Ellipsoidal Tubes as SCSC Adsorption Matrix: Direct Crystals vs Guest Exchanged Crystals
Ok-Sang Jung
Department of Chemistry, Pusan National University, Korea

Organizer

Seung Kyu Min

2020 Associate Professor, UNIST, Korea
2015 Assistant Professor, UNIST, Korea
2012 Max Planck Institute of Microstructure Physics, Germany

42. Oral Presentation for Young Physical Chemist

Organizer : Seung Kyu Min (UNIST)

Chair : Seung Kyu Min (UNIST)

09:00 **PHYS.O-1** Electric field-driven molecular memristor and synaptic applications
Chanjin Lim, Junwoo Park
Department of Chemistry, Sogang University, Korea

09:15 **PHYS.O-2** Interactions of Biologically Active Fluorophores and Graphene Oxide in Neat Solvents and Various Organized Assemblies
Aloke Bapli, Yoonsoo Pang
Department of Chemistry, Gwangju Institute of Science and Technology, Korea

09:30 **PHYS.O-3** Uncovering Energetic Positions of Surface Trap States in Hematite (α-Fe2O3) Treated with Cobalt Phosphate (Co-Pi) Using Charge Carrier-Selective Heterodyne Transient Grating (CS-HD-TG) Spectroscopic Technique
Young Hyun Kim, Woon Yong Sohn
Department of Chemistry, Chungbuk National University, Korea

09:45 **PHYS.O-4** Photochemical Dynamics of V-PYRRO/NO Investigated by Time-resolved IR Spectroscopy
Hojeong Yoon, Manho Lim, Seongchul Park, Seong Beom Jeon
Department of Chemistry, Pusan National University, Korea

10:00 **PHYS.O-5** Crystallization of Amorphous Solid Water Affected by Porosity Control
Du Hyeong Lee
Korea Polar Research Institute, Korea

10:15 **PHYS.O-6** A Novel Dataset and Model for Organic Reaction Mechanism Prediction
Joonyoung F. Joung, Connor W. Coley
Department of Chemical Engineering, Massachusetts Institute of Technology, United States

10:30 **PHYS.O-7** A Machine Learning Strategy for a Hidden Structural Origin of Two-Dimensional Colloidal Glass Transition
Eun Cheol Kim, Bong June Sung
Department of Chemistry, Sogang University, Korea

10:45 **PHYS.O-8** Density-Corrected DFT for Large Molecular Systems
Mingyu Sim, Eunji Sim, Youngsam Kim
Department of Chemistry, Yonsei University, Korea

Organizer

Sungju Yu

Present Assistant Professor, Department of Chemistry, Ajou University, Korea
2020 Senior Research Scientist, KIST, Korea
2019 Postdoc, Department of Chemistry, UIUC, USA

43. Oral Presentation of Young Analytical Chemists

Organizer : Sungju Yu (Ajou University)

Chair : Sungju Yu (Ajou University)

09:00 **ANAL1.O-1** Investigating Surface Plasmon Damping and Fano Resonance Induced by Epitaxial Growth of Palladium on Single Gold Nanorods
Metya Indah Firmanti, Ji Won Ha[1,*]
Chemistry, University of Ulsan, Korea
[1]*Department of Chemistry, University of Ulsan, Korea*

09:04 **ANAL1.O-2** Localized Surface Plasmon Decay Pathways competition on Mesoporous Silica Coated Gold Nanorods Amalgamation
Yola Yolanda Alizar, Ji Won Ha[1,*]
Chemistry, University of Ulsan, Indonesia
[1]*Department of Chemistry, University of Ulsan, Korea*

09:08 **ANAL1.O-3** Defining Co-resistance Mechanisms in Cytarabine-resistant Human Acute Myeloid Leukemia Cells Using Biochemical Analysis
Jinhui Kim, Sooyeon Chae
Department of Chemistry, Korea University, Korea

09:12 **ANAL1.O-4** Gas chromatography and Paper spray ionization mass spectrometry for the analysis and differentiation of eucalyptus oils
Heejin Ro
Chemistry, Dongguk University, Korea

09:16 **ANAL1.O-5** Volatile organic compounds (VOCs) capture with Deep eutectic solvents (DESs) and analysis by headspace gas chromatography mass spectrometry
Seo Young Hwang
chemistry, Dongguk University, Korea

09:20 **ANAL1.O-6** Improving accuracy for determination of active pharmaceutical ingredient concentration in tablets with varying compaction density using oversampling strategy
Haeseong Jeong, Hoeil Chung
Department of Chemistry, Hanyang University, Korea

09:24 **ANAL1.O-7** **[Withdrawal]** Characterization of pore-forming Amyloid Beta Protein using NMR Spectroscopy
Joohan An, Yongae Kim, Minseon Kim
Department of Chemistry, Hankuk University of Foreign Studies, Korea

09:28 **ANAL1.O-8** A hybrid carbon/solid-electrolyte coating on Fe3BO5 conversion type anodes for ultra high C-rate applications
Rajeev Kumar, Dung Nguyen[1], Jeongin Kim[2], Youngil Lee[3,*]
Chemical Industry Research Institute, University of Ulsan, Korea
[1]*Chemical Industry Research Institution, University of Ulsan, Korea*
[2]*University of Ulsan, Korea*
[3]*Department of Chemistry, University of Ulsan, Korea*

09:32 **ANAL1.O-9** SABRE Hyperpolarization of Nicotinamide Derivatives and its Chemical Kinetic Properties
Quy Son Luu, Thi Quynh Nguyen[1], SeokKi Yun[2], Jae Hwa Choi[2], Youngbok Lee[3,*]
Bionanotechnology, Hanyang University, Korea
[1]*Department of Applied Chemistry, Department of Bionano Convergence , Korea*
[2]*Applied Chemistry, Hanyang University, Korea*
[3]*Department of Bio-Nano Engineering, Department of, Korea*

09:36 **ANAL1.O-10** CRISPR/Cas13a-mediated SERS-based dual-flow assay strips for amplification-free detection of SARS-CoV-2 RNA
Younju Joung, Soyeon Lee, Jaebum Choo
Department of Chemistry, Chung-Ang University, Korea

09:40 **ANAL1.O-11** Investigation of Light-Responsive Microcapsules Based on Renewable Materials
Uyen Thi Do, Quy Son Luu, Seyoung Yang[1], Minji Song[1], Youngbok Lee[2,*]
Center for Bionano Intelligence Education and Research, Hanyang University, Korea
[1]*Hanyang University, Korea*
[2]*Department of Bio-Nano Engineering, Department of, Korea*

09:45 **ANAL1.O-12** A Comprehensive Study of Conformational Changes in Malachite Green Using Electrochemistry-SERS
Wiyogo Prio Wicaksono, Jaeuk Ahn, Jaebum Choo
Department of Chemistry, Chung-Ang University, Korea

09:50 **ANAL1.O-13** Radical and 29Si-isotope enrichment silica nanoparticles for 29Si Dynamic Nuclear Polarization
Thi Quynh Nguyen, Seyoung Yang, Minji Song, Youngbok Lee[1,*]
Department of Applied Chemistry, Hanyang University, Korea
[1]*Department of Bio-Nano Engineering, Hanyang University, Korea*

09:55 **ANAL1.O-14** Comparison of the performance of thickness-tapered channel in flow field-flow fractionation with the effect of field programming in a uniform channel
Jaihoo Kim, Myeong Hee Moon
Department of Chemistry, Yonsei University, Korea

10:00 **ANAL1.O-15** Lipid perturbation in brain and spleen tissues of mice caused by SARS-CoV-2 using nanoflow UHPLC-ESI-MS/MS
Hwangyu Park, Myeong Hee Moon[1,*]
Department of chemistry, Yonsei University, Korea
[1]*Department of Chemistry, Yonsei University, Korea*

10:05 **ANAL1.O-16** Biomarker discovery in prostate cancer from 20 cancer patients with tissue proteomics
Junghoon Kang, Miseon Jeong, Yunseon Woo, Seung Jeong Lim, Wonryeon Cho
Department of Chemistry, Wonkwang University, Korea

10:10 **ANAL1.O-17** Characterization of serum exosome lipids from patients with cholangiocarcinoma by nUHPLC and mFIFFF coupled with ESI-MS/MS
Hyeju Yu, Myeong Hee Moon
Department of Chemistry, Yonsei University, Korea

10:15 **ANAL1.O-18** SARS-CoV-2 induced lipid perturbation in lung, liver, and serum of mice
Ji Yeong Lee, Hwangyu Park[1], Myeong Hee Moon[2,*]
Chemistry, Yonsei University, Korea
[1]*Department of chemistry, Yonsei University, Korea*
[2]*Department of Chemistry, Yonsei University, Korea*

10:20 **ANAL1.O-19** Optimization of skin sampling method for lipidomic analysis via nanoflow nUHPLC-ESI-MS/MS
Seunghee Shin, Myeong Hee Moon[1,*]
department of chemistry, Yonsei University, Korea
[1]*Department of Chemistry, Yonsei University, Korea*

10:25 **ANAL1.O-20** Raman spectroscopic quantification of microplastic particles in water using polydimethylsiloxane-coated nickel foam as a particle-capturing platform
Sangjae Kim, Hoeil Chung
Department of Chemistry, Hanyang University, Korea

10:30 **ANAL1.O-21** LC-MS based metabolomic analysis of plasma from a severe COVID-19 patient treated with ECMO
Yourim Shin, Youngae Jung, Geum-Sook Hwang[1,*]
Western Seoul Center, Korea Basic Science Institute, Korea
[1]*Korea Basic Science Institute, Korea*

10:35 **ANAL1.O-22** Untargeted Metabolomic Analysis of Liver Tissues for Mouse Infected with Covid-19
Yejin Bae, Youngae Jung, Geum-Sook Hwang[1,*]
Western Seoul Center, Korea Basic Science Institute, Korea
[1]*Korea Basic Science Institute, Korea*

10:39 **ANAL1.O-23** LC-MS-based lipidomics reveals disrupted lipid metabolism in macrophages exposed to particulate matter
Su-Hyun Chae, Geum-Sook Hwang[1,*], Jueun Lee
Western Seoul Center, Korea Basic Science Institute, Korea
[1]*Korea Basic Science Institute, Korea*

10:43 **ANAL1.O-24** Advanced Solution NMR Spectroscopy for Comprehensive Characterization of Crystalline Phases in Poly(vinylidene fluoride) (PVDF) for Good-performance Electrode
SeokKi Yun, Jiwon Kim[1], Quy Son Luu[1], Youngbok Lee[1]
DEPARTMENT OF CHEMICAL AND MOLECULAR ENGINEERING, Hanyang University, Korea
[1]*Department of Bionano Technology, Center for Bionano intelligence Education and Research, Hanyang University, Korea*

10:47 **ANAL1.O-25** Metabolic and immunological responses to Delta and Omicron variant infection in hamster lung tissue
Sunho Lee, Jueun Lee, Geum-Sook Hwang[1,*]
Western Seoul Center, Korea Basic Science Institute, Korea
[1]*Korea Basic Science Institute, Korea*

10:51 **ANAL1.O-26** photoelectrocatalysis Effects of IrO_2 cocatalysts on $SrTiO_3$ nanocubes
Hyun Ju Yang, Jinju Kim, Je Hyun Bae
Graduate School of Analytical Science and Technology (GRAST), Chungnam National University, Korea

10:55 **ANAL1.O-27** Voltage-programmed Capillary Gel Electrophoretic Separation for the Fast Screening of PCR Products of Severe Acute Respiratory Syndrome Coronavirus 2 with High Sensitivity
Changuk An, Seong Ho Kang[1,*]
Chemistry, Kyung Hee University, Korea
[1]*Department of Applied Chemistry, Kyung Hee University, Korea*

Organizer

Ji Won Ha

Present Professor, Department of Chemistry, University of Ulsan, Korea

2015 Postdoc, Department of Chemistry, Northwestern University, USA

2013 Ph.D., Department of Chemistry, Iowa State University, USA

44. Oral Presentation of Early-career Analytical Chemists

Organizer : Ji Won Ha (University of Ulsan)

Chair : Ji Won Ha (University of Ulsan)

09:00 **ANAL2.O-1** Surface Modification of Fluorescent Nanodiamond for Their Applications
Haksung Jung
Quantum Technology Institute, Korea Research Institute of Standards and Science, Korea

09:15 **ANAL2.O-2** Emergence of Structural chirality and sensing capabilities from Magnetoplasmonic building blocks
Huu-Quang Nguyen, Jaebeom Lee[1,*]
Department of Chemistry, Chungnam National University, Korea
[1]*Chemistry, Chungnam National University, Korea*

09:30 **ANAL2.O-3** Development of Multidimensional Analytical Platform for Characterization of Marine Polysaccharides based on LC/MS/MS
Nari Seo, Hyun Joo An[1,*]
Graduate School of Analytical Science and Technology (GRAST), Chungnam National University, Korea
[1]*Graduate School of Analytical Science and Technology, Chungnam National University, Korea*

09:45 **ANAL2.O-4** Influence of Oxygen Plasma Treatment on the Electrocatalytic Activity of Single Gold Nanorods
Mukunthan Ramasamy, Ji Won Ha[1,*]
Department of Chemistry, University of Ulsan, India
[1]*Department of Chemistry, University of Ulsan, Korea*

10:00 **ANAL2.O-5** Evaluating seasonal differences in organic chemical constituents of airborne particulate matter in Ulaanbaatar, Beijing, Seoul, and Noto using UPLC-FT-ICR MS and artificial neural network
Seungwoo Son, Young Hwan Kim[1,*], Sunghwan Kim
Department of Chemistry, Kyungpook National University, Korea
[1]*Center for Research Equipment, Korea Basic Science Institute, Korea*

10:15 **ANAL2.O-6** The Artificial Circulatory System for Tumoroids (ACT): Investigating the Impact of Pharmaceutical and Biomimetic Approaches on through MS-based Analysis
Sooyeon Chae, Hugh I. Kim
Department of Chemistry, Korea University, Korea

10:30 **ANAL2.O-7** An Active Interface for High Performance Olivine Cathode Materials
Dung Nguyen, Jimin Kim[1], Youngil Lee[1]
Chemical Industry Research Institute, Core Research Institute, University of Ulsan, Korea
[1]*Department of Chemistry, University of Ulsan, Korea*

10:45 **ANAL2.O-8** Photo-reversible Tuning of Chemical Interface Damping in Single Gold-nanorods by Aminoazobenzene
Jaeran Lee, Ji Won Ha
Department of Chemistry, University of Ulsan, Korea

Organizer

Min Hee Lee

Present	Associate Professor, Department of Chemistry, Sookmyung Women's University, Seoul, Korea
2015	Postdoctoral Fellow, Department of Chemistry, The University of Texas at Austin, USA
2012	Ph.D. Department of Chemistry, Korea University, Seoul, Korea

Chair

Kwang Yeon Hwang

2005-Present	Professor, Department of Biotechnology, Korea University
2003-2005	Senior Scientist, Biomedical Research Center, KIST
1999-2000	Senior Scientist, LG Biotech

Speaker

YoungSoo Kim

Present	Associate Professor, Department of Pharmacy, Yonsei University, Korea
2007	Ph.D. Department of Chemistry, Scripps Research Institute, USA
2001	B.A. Department of Chemistry, New York University, USA

45. Oral Presentation for Young Scientists in Biochemistry and Chemical Biology

Organizer : Min Hee Lee (Sookmyung Women's University)

Chair : Min Hee Lee (Sookmyung Women's University)

09:00 **LIFE.O-1** Multi-target mechanism of antimicrobial peptoids: real-time and label-free monitoring of bacterial morphological changes by three diementional optical diffraction tomography
Minsang Kim, Jiwon Seo
Department of Chemistry, Gwangju Institute of Science and Technology, Korea

09:12 **LIFE.O-2** Photo-Spautin for cellular functional target identification
Kozoriz Kostiantyn, Jun-Seok Lee
Department of Pharmacology, Korea University, Korea

09:24 **LIFE.O-3** Fmoc-amino acid as a minimal molecular scaffold for liquid-liquid phase separation
Hyo Jae Jeon, Kyungtae Kang[1,*]
Chemistry, Kyung Hee University, Korea
[1]*Department of Applied Chemistry, Kyung Hee University, Korea*

09:36 **LIFE.O-4** Discovery of novel small molecule inhibitors targeting HIF-2α
Yeonju Song, Yeonjin Ko
Korea Institute of Science and Technology, Korea

09:48 **LIFE.O-5** **[Withdrawal]** Revealing new phosphoarginine binding proteins using chemoproteomic methods
Seungmin Ahn, Jung-Min Kee
Department of Chemistry, Ulsan National Institute of Science and Technology, Korea

10:00 **LIFE.O-6** Indolizine-based fluorescent compounds array for noninvasive monitoring of glucose in bio-fluids using on-device machine learning
Eunsu Kim, Eunha Kim
Department of Molecular Science and Technology, Ajou University, Korea

10:12 Coffee Break

Chair : Kwang Yeon Hwang (Korea University)

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

10:20 **LIFE.O-7** Chemical-Driven Clearance of Misfolded Proteins for Alzheimer's Disease Drug Discovery by Dimeric Amyloid Fragments
YoungSoo Kim
Department of Pharmacy, Yonsei University, Korea

Organizer

Isaac Choi

Present Assistant Professor, Department of Chemistry, Chungbuk National University, Korea

2022 Research Associate, Department of Chemistry, University of Wisconsin-Madison, USA

2021 Ph. D. Institut für Organische und Biomolekulare Chemie, Georg-August-Universität Göttingen, Germany

46. Oral Presentations for Young Scholars in Organic Division

Organizer : Isaac Choi (Chungbuk National University)

Chair : Isaac Choi (Chungbuk National University)

09:00 **ORGN.O-1** Synthesis and Photophysical Properties of Diaminobenzene-based Simple Fluorophores
Dopil Kim, Min Kim
Department of Chemistry, Chungbuk National University, Korea

09:15 **ORGN.O-2** Regioselective etherifications of quercetin and their fluorescent properties
Yongju Kim*, **Yerim Kim**
Korea University, Korea

09:30 **ORGN.O-3** A non-toxic fluorescent probe for real-time visualization of glioblastoma and its clinical application
Jaehoon Kim, Dokyoung Kim[1,*]
Department of Biomedical Science Graduate School , Kyung Hee University, Korea
[1]*College of Medicine, Kyung Hee University, Korea*

09:45 **ORGN.O-4** Copper(I)-Catalyzed Decarboxylative Nitrogen–Phosphorus Bond Formation: Preparation of *N*-Acyl Iminophosphoranes
Jinhwan Park, Anattil Unnikrishnan Krishnapriya[1], Yeongmi Park, Minsuk Kim, Tyler W. Reidl[2], Rositha Kuniyl[1], Jongwoo Son[3,*]
Department of Chemical Engineering (BK21 FOUR Graduate Program), Dong-A University, Korea
[1]*Department of Chemistry, Indian Institute of Technology-Palakkad, India*
[2]*Department of Research, Development & Innovation, Evonik Industries, United States*
[3]*Department of Chemistry, Dong-A University, Korea*

10:00 **ORGN.O-5** Axial Coordination-driven Construction of Porphyrin-based Three-Dimensional Hydrogen-Bonded Organic Frameworks
Hyunjun Park, Woo-Dong Jang[1,*]
Chemistry, Yonsei University, Korea
[1]*Department of Chemistry, Yonsei University, Korea*

10:15 **ORGN.O-6** Chemical Recycling of Polycarbonate and Polyester without Solvent and Catalyst: Mechanochemical Methanolysis
HyoWon Lee, Jeung Gon Kim[1,*]
Department of chemistry, Jeonbuk National University, Korea
[1]*Department of Chemistry, Jeonbuk National University, Korea*

10:30 **ORGN.O-7** Utilization of ketyl radical generated by persistent pyridine-boryl radical on pinacol coupling of diaryl ketones and cyclization of 2-allylic benzaldehydes
Junhyuk Jo, Won-jin Chung
Department of Chemistry, Gwangju Institute of Science and Technology, Korea

10:45 **ORGN.O-8** One-Carbon Homologative Lactonization as Step-Economical Routes to γ-Butyrolactones
Hosam Choi
Chemistry, The Catholic University of Korea, Korea

Organizer

Jonghoon Kim

Present	Assistant Professor, Department of Chemistry, Soongsil University, Korea
2016.11-2019.08	Postdoc, Department of Chemistry and Biochemistry, University of California, Los Angeles (UCLA), USA
2007-2014	Ph.D. Department of Chemistry, Seoul National University, Korea

47. Oral Presentation of Young Medicinal Chemists

Organizer : Jonghoon Kim (Soongsil University)

Chair : Jonghoon Kim (Soongsil University)

09:00 **MEDI.O-1** Optimization and evaluation of pyridinyl vinyl sulfones as Nrf2 activator for the antioxidant and anti-inflammatory effects

Byungeun Kim, Ki Duk Park[1,*]

Bio-Medical Science & Technology, University of Science and Technology, Korea

[1] *Center for brain disorders, Korea Institute of Science and Technology, Korea*

09:12 **MEDI.O-2** Discovery of a SARS-CoV-2 Nsp1 Inhibitor for Broad-Spectrum Therapeutics Against SARS-CoV-2 Variants

Wan Gi Byun, Seung Bum Park

Department of Chemistry, Seoul National University, Korea

09:24 **MEDI.O-3** Unveiling the mechanism of action of reversible, covalent 3R/4R tau aggregation inhibitors through a molecular dynamics approach.

Lizaveta Gotina, Ae Nim Pae[1,*]

Department of Bio-Medical Science and Technology, University of Science & Technology, KIST School, Korea

[1] *Brain Science Institute, Korea Institute of Science and Technology, Korea*

09:36 **MEDI.O-4** Exploration of Tetrahydroisoquinoline- and Benzo[c]azepine-Based Sphingosine 1-Phosphate Receptor 1 Agonists for the Treatment of Multiple Sclerosis

Eun Ji Cha, Jushin Kim, Lizaveta Gotina[1], Jaehwan Kim, Hyeon Jeong Kim, Hak Joong Kim[2], Ae Nim Pae, Ki Duk Park, Jong-Hyun Park, Sang Min Lim

Center for Brain Disorders, Brain Science Institute, Korea Institute of Science and Technology, Korea

[1] *Department of Bio-Medical Science and Technology, University of Science & Technology, Korea*

[2] *Department of Chemistry, Korea University, Korea*

09:48 **MEDI.O-5** Peptide-Nucleic Acid (PNA)-Encoded Chemical Libraries

Jun Hyung Park, Jungyeon Kim, Hyun-Suk Lim

Department of Chemistry and Division of Advanced Materials Science, Pohang University of Science and Technology, Korea

10:00 **MEDI.O-6** Discovery of (+)-SHIN2 analogues exhibiting improved SHMT2 activities
Vineetkumar Bapusaheb Patil, Pilho Kim[1,*]
Medicinal Chemistry, University of Science & Technology / KRICT, India
[1] *Therapeutics & Biotechnology Division, Korea Research Institute of Chemical Technology, Korea*

10:12 **MEDI.O-7** Total synthesis and immunological activities of Bacteroides fragilis α-galactosylceramides and their analogues
Jesang Lee, Sungwhan F. Oh[1,*], Seung Bum Park
Department of Chemistry, Seoul National University, Korea
[1] *Department of Anaesthesia, Brigham and Women's Hospital, United States*

10:24 **MEDI.O-8** Neuroprotective effects of diosgenin derivatives with anti-inflammatory effects for antidepressant potential
Younghoon Yoo, Sanghee Lee, Byungsun Jeon
Brain Science Institute, Korea Institute of Science and Technology, Korea

10:36 **MEDI.O-9** Design and Development of Anaplastic Lymphoma Kinase (ALK) Degrader via Covalent Fumarate Handle
Namsik Yu, Jong Yeon Hwang[1,*]
Department of chemistry, Sungkyunkwan University, Korea
[1] *Center for Medicinal Chemistry, Korea Research Institute of Chemical Technology, Korea*

10:48 **MEDI.O-10** Identification of TRD-93 as a novel DRAK2 inhibitor
Kwangho Lee*, **Seungmin Kye**[1]
Korea Research Institute of Chemical Technology, Korea
[1] *University of Science & Technology, Korea*

Organizer

Jiwoong Yang

2023- Associate Professor, Department of Energy Science & Engineering, DGIST

2019-2023 Assistant Professor, Department of Energy Science & Engineering, DGIST

2017-2019 Postdoctoral Researcher, Materials Sciences Division & Molecular Foundry, Lawrence Berkeley National Laboratory

48. Oral Presentation for Young Material Chemists

Organizer : Jiwoong Yang (DGIST)

Chair : Jiwoong Yang (DGIST)

09:00 **MAT.O-1** Narrow bandgap infrared sensitive colloidal quantum dots and optoelectronic applications
Dongsun Choi, Gahyeon Kim[1], Jin Hyeok Lee[1], So Young Eom, Kwang Seob Jeong
Department of Chemistry, Korea University, Korea
[1]*Korea University, Korea*

09:10 **MAT.O-2** Understanding Mechanism of Mechanoluminescence in ZnS:Cu Microparticle Embedded Polydimethylsiloxane Composites: Electroluminescence Induced by Interfacial Triboelectricity
Gyudong Lee, Sung Jun Lim
Division of Nanotechnology, Daegu Gyeongbuk Institute of Science & Technology, Korea

09:20 **MAT.O-3** New defect structure design for exceptional thermoelectric performance in new n-type $Cu_xPb(Se_{0.8}Te_{0.2})_{0.95}$ (x = 0 – 0.0057) compounds
Hyungseok Lee, Bangzhi Ge[1], Chung In[2,*]
Institute of Chemical Processes, Seoul National University, Korea
[1]*State Key Laboratory of Solidification Processing & Key Laboratory of Radiation Detection Materials and Devices, Northwestern Polytechnical University, China*
[2]*School of Chemical & Biological Engineering, Seoul National University, Korea*

09:30 **MAT.O-4** Attempts to unlock the puzzle box in Low-cost advanced electrode materials for energy storage application.
Njemuwa Nwaji Njoku
Chemistry, Chungnam National University, Korea

09:40 **MAT.O-5** Multifunctional phosphine oxide derivatives for CsPbBr3 emissive layer with high efficiency
Jung Min Ha, Han Young Woo
Department of Chemistry, Korea University, Korea

09:50 **MAT.O-6** Precursor stoichiometry control enabling of $CsPb(Cl/Br)_3$ blue quantum dots synthesis via one-pot design
Jin Young Kim, Dong Hwan Wang
College of ICT Engineering School of Integrative Engineering, Chung-Ang University, Korea

10:00 Coffee Break

10:10 **MAT.O-7** Exfoliated noble-metal-free conductive oxide nanosheets as efficient hybridization matrix
Namhee Kwon, Xiaoyan Jin, Seong-Ju Hwang
Department of Materials Science and Engineering, Yonsei University, Korea

10:20 **MAT.O-8** Insights into the Formation and Behavior of Graphene Oxide Langmuir-Blodgett films at the Air-Water Interface
Jae-Joon Lee*, Sang Jung Ahn[1,*], **Jongdeok Park**
Department of Energy and Materials Engineering, Dongguk University, Korea
[1]*Center for Advanced Instrumentation, Korea Research Institute of Standards and Science, Korea*

10:30 **MAT.O-9** Synthesis of a Surfactant-Free Mixed-Valence Rhenium Oxide Nanocubes and their Photocatalytic performance
Kang min Lee, Seok Min Yoon[1,*]
Department of chemistry, Wonkwang University, Korea
[1]*Department of Chemistry, Wonkwang University, Korea*

10:40 **MAT.O-10** Porous microstructure coated by whitlockite nanocrystals for bone restoration
Hyojin Kang, Caifeng Wang[1], Jaebeom Lee[2,*]
Chemical engineering and Applied chemistry, Chungnam National University, Korea
[1]*CAS Key Laboratory for Biomedical Effects of Nanomaterials and Nanosafety, National Center for Nanoscience and Technology of China, China*
[2]*Chemistry, Chungnam National University, Korea*

10:50 **MAT.O-11** Covalent Functionalization of Boron Nitride Nanotubes via Coupling Reaction
Thang Quoc Huynh, Seokhoon Ahn[1,*]
Functional Composite Materials Research Center, Korea Institute of Science and Technology, Korea
[1]*Korea Institute of Science and Technology, Korea*

Organizer

Jun Hui Park

Present	Professor at Department of Chemistry, Chungbuk National University, Cheongju, Korea
2013-2018	Associate Professor at Department of Chemistry Education, Chonbuk National University, Jeonju, Korea
2011-2013	Postdoctoral Fellow in Department of Chemistry and Biochemistry, University of Texas at Austin, Austin, TX, USA

Chair

Changsuk Yun

2022-Present	Assistant Professor, Department of Chemistry, Changwon National University, South Korea
2013-2019	M.S. & Ph.D. in Chemistry, Korea Advanced Institute of Science & Technology, Daejeon, South Korea

Speaker

Jinho Chang

2018-present	Associate Professor, Department of Chemistry, Hanyang University, Korea
2015-2018	Assistant professor, Department of Chemistry, Sungshin W. University, Korea

49. Oral Presentation for Young Electrochemists

Organizer : Jun Hui Park (Chungbuk National University)

Chair : Changsuk Yun (Changwon National University)

09:00 **ELEC.O-1** NH_3-philicity Modulation via Atomic Metal Decorated Pt Nanocube Tracing the Ammonia Oxidation Reaction Descriptor
Jungki Kim, Juhyun Cho, Jeonghyeon Kim, Saehyun Park[1], Shajahan Shaik[1], Sang-Il Choi
Department of Chemistry, Kyungpook National University, Korea
[1]Department of Chemisty, Kyungpook National University, Korea

09:07 **ELEC.O-2** Exceptionally Stable β-NiOOH-Enclosed Fe Doped-Ni Nanoplates for High-Performance Anion Exchange Membrane Water Electrolysis
Jeonghyeon Kim, Sang-Il Choi[1,*]
Kyungpook National University, Korea
[1]Department of Chemistry, Kyungpook National University, Korea

09:14 **ELEC.O-3** Electrochemical Assessment of Polymer Stability: Probing Depolymerization in Cutting-edge Engineering Polymers
Jee Woo Kim, Byung-Kwon Kim
Department of Chemistry and Nanoscience, Ewha Womans University, Korea

09:21 **ELEC.O-4** Aerosol derived carbon dots decorated boron nitride supported Zn-doped MoS2 for high performing flexible asymmetric supercapacitor
Chandan kumar Maity, Myung Jong Kim
Department of Chemistry, Gachon University Global Campus, Korea

09:28 **ELEC.O-5** Pore Opening Effect of Cu-exchanged Zeolites on Electrocatalytic CO_2 and CO Reduction to Multi-carbon Products
Dohun Kim, Dae-Hyun Nam
Department of Energy Science & Engineering, Daegu Gyeongbuk Institute of Science & Technology, Korea

09:35 **ELEC.O-6** Electrochemical Scanning Tunneling Microscopy Studies of CO_2 Electrocatalytic Reactions on Au(332) Stepped Surface
Yongman Kim, Jeong Young Park[1,*]
Chemistry, Korea Advanced Institute of Science and Technology, Korea
[1]Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

09:42 **ELEC.O-7** Recent progress on transition metal based nanostructures for energy conversion and storage
Goddati Mahendra, Jaebeom Lee[1,*]
Department of Chemical Engineering and Applied Chemistry, Chungnam National

University, Daejeon, Korea
[1]*Chemistry, Chungnam National University, Korea*

09:49 **ELEC.O-8** Investigation of Cation Effects and Mechanisms Governing Electrochemical CO2 Reduction and Hydrogen Evolution in Acidic Media
Hyewon Yun, Suhwan Yoo[1], Yun Jeong Hwang[2,*]
Department of chemistry, Seoul National University, Korea
[1]*Department of Chemistry, Seoul National University, Korea*
[2]*Chemistry Department, Seoul National University, Korea*

09:56 **ELEC.O-9** Synthesis of Heterometal Doped Silver Nanoclusters and Their Electrocatalytic Applications for Hydrogen Production
Hanseok Yi, Jiyeon Shin, Dongil Lee
Department of Chemistry, Yonsei University, Korea

10:03 **ELEC.O-10** Electrochemical 5-hydroxymethylfurfural oxidation reaction (HMFOR) on defective NiOOH electro-catalyst
Juhyung Choi, Yun Jeong Hwang
Department of Chemistry, Seoul National University, Korea

10:10 **ELEC.O-11** The Effects of mesoporous TiO2 layer for Photocatalytic Alcohol Oxidation Under Mild Conditions
Hyoeng Cheol Kang, Jongdeok Park[1], Jae-Joon Lee[1]
Energy & Materials engineering, Dongguk University, Korea
[1]*Department of Energy and Materials Engineering, Dongguk University, Korea*

10:17 **ELEC.O-12** **[Withdrawal]** Advancing PEM Water Electrolyzers: Surface Engineering of 1T′-Phase WS2 Nanosheets with Stabilized Ti3C2 MXene for Improved Hydrogen Evolution Reaction
Bee Lyong Yang
Department of Advanced Materials Engineering, Kumoh National Institute of Technology, Korea

10:24 **ELEC.O-13** Interface Engineering for Enhanced Zinc Cobalt Sulfide Performance for Electrochemical Water Splitting
Mikiyas Mekete Meshesha, Bee Lyong Yang
School of Advanced Materials Science and Engineering, Kumoh National Institute of Technology, GHS Co. Ltd., Korea

Chair : Jun Hui Park (Chungbuk National University)

<Award Lecture: i-SENS Young Electrochemist Award>

10:31 **ELEC.O-14** Redox reversibility controls of redox active organic molecules for aqueous energy storage systems
Jinho Chang
Department of Chemistry, Hanyang University, Korea

Organizer

Hyo Won Kim

2022.03-present Assistant Professor, Department of Energy Engineering, Korea Institute of Energy Technology, Korea

2019.09-2022.02 Assistant Professor, Department of Advanced Materials Engineering, Kangwon National University, Korea

2018.09-2019.08 Professional Researcher, LG Chem.

Chair

Bupmo Kim

Present Postdoctoral Researcher, Department of Energy Engineering, Korea Institute of Energy Technology (KENTECH), Korea

2023 Ph.D. Department of Chemical Engineering, Pohang University of Science and Technology (POSTECH), Korea

2015 B.S. Department of Chemistry, Kyungpook National University, Korea

50. General Session

Organizer : Hyo Won Kim (KENTECH)

Chair : Bupmo Kim (KENTECH)

09:20 **ENVR.O-1** Inorganic Photoelectrodes for Organic Pollutant Degradation and Hydrogen Production: Scale-Up Photocatalytic Reactor and Catalysts Design
Hyekyung Cho, Jeehye Byun
Water Cycle Research Center, Korea Institute of Science and Technology, Korea

09:40 **ENVR.O-2** A pervaporation process for separation of mixtures and purification and recycling of chemicals using graphene oxide membranes
Byeongho Lee, Choonsoo Kim[1,*]
Environmental engineering, Kongju National University, Korea
[1] *Department of Environmental Engineering, Kongju National University, Korea*

10:00 **ENVR.O-3** Sulfate-rich wastewater induces the sulfur aging of microplastics in the anaerobic digestion system
Jihee Kim, EunJu Kim
Korea Institute of Science and Technology, Korea

10:20 **ENVR.O-4** Photoelectrochemical activation of BiOBr in bromide solution for stable and improved photoelectrochemical conversion efficiency
Wonjung Choi, Yiseul Park
Pukyong National University, Korea

10:40 **ENVR.O-5** Water pollutant redox reactions using photo-charged inorganic catalysts membrane filters in the absence of irradiation
Jiyeon Park, Hyunwoong Park[1,*]
Energy Engineering, Kyungpook National University, Korea
[1] *School of Energy Engineering, Kyungpook National University, Korea*

POLY.P-1 Ring-opening Copolymerization Using a Chromium(III) catalyst with a Readily Available Aminotriphenolate Ligand
Seungyeon Jeong, Kyung-sun Son
Department of Chemistry, Chungnam National University, Korea

POLY.P-2 Chiral Polymer Coatings on Substrates *via* Surface-Initiated RAFT Polymerization Under Ambient Conditions
Yerim Lee, Kyung-sun Son[1,*]
Chungnam National University, Korea
[1]Department of Chemistry, Chungnam National University, Korea

POLY.P-3 Bridge-rich and loop-less hydrogel networks through suppressed micellization of multiblock polyelectrolytes
Jihoon Han, Younsoo Kim[1,*]
Materials Science and Engineering, Pohang University of Science and Technology, Korea
[1]Department of Materials Science and Engineering, Pohang University of Science and Technology, Korea

POLY.P-4 A research on Polymer Electrolyte of Episulfide Monomer Using Thermosetting
Minhyuk Jeon[*], Wansu Bae[1], Sungjun Park[1], Hohyoun Jang[2]
Applied chemistry, Konkuk University, Korea
[1]Applied Chemistry, Konkuk University, Korea
[2]Konkuk University, Korea

POLY.P-5 Rational Design of Polymer material with dual functionality for Solution-Processed TADF-OLED
MinJi Kang, Dong Hoon Choi
Department of Chemistry, Korea University, Korea

POLY.P-6 Helical-shaped Self-oscillating Gels showing Autonomous and Magnified Mechanical Oscillation
Taehun Chung, Ryo Yoshida[1], Younsoo Kim
Department of Materials Science and Engineering, Pohang University of Science and Technology, Korea
[1]Department of Materials Engineering, The University of Tokyo, Japan, Japan

POLY.P-7 Investigating Thermodynamic Trends in Gold Nanoparticles: Effects of Size and Molecular Weight of Ligand
Dong Jin Kang, Hongseok Yun[1,*]
College of Natural Sciences / Department of Chemistry, Hanyang University, Korea
[1]Department of Chemistry, Hanyang University, Korea

POLY.P-8 Enzyme-Catalyzed Self-Assembly for ER Targeting
Jihun Roh, Beom jin Kim[1,*]
University of Ulsan, Korea
[1]Department of Chemistry, University of Ulsan, Korea

POLY.P-9 Mechanical properties and impact strength of PLA/PSMA ionomer blends
Dahye Kim, Joon-Seop Kim
Department of Polymer Science and Engineering, Chosun University, Korea

POLY.P-10 Structure and phase behavior of ABA-type triblock copolymer induced by random sequence ensemble
Jimin Yoo, Myungeun Seo[1,*]
Chemistry, Korea Advanced Institute of Science and Technology, Korea
[1]Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

POLY.P-11 Development of a Trisaryl Phosphoric Triamide-Based Resin In Quartz Crystal Microbalance Sensor for Detection of Sulfur Mustard Simulant
Jin Hyun Park, Han yong Bae, Changsik Song, **Jaeyoung Heo**[1]
Department of Chemistry, Sungkyunkwan University, Korea
[1]chemistry, Sungkyunkwan University, Korea

POLY.P-12 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(tributylstannyl)acetylene reagent and Electrochemical Characterization
Ji hun Lee, Young Tae Park[1,*]
Keimyung University, Korea
[1]Department of Chemistry, Keimyung University, Korea

POLY.P-13 Carbazole based crosslinkable hole transport materials for solution processed quantum dot light emitting diodes.
Hyeonjoo Lee, Do-Hoon Hwang[1,*]
chemistry, Pusan National University, Korea
[1]Department of Chemistry, Pusan National University, Korea

POLY.P-14 Facile Diels–Alder Reaction–Aromatization Reaction Using Biomass-derived Furanic Dienes for Supramolecular Phthalimide Networks
Hong Okbi, Changsik Song[1,*]
Chemistry, Sungkyunkwan University, Korea
[1]Department of Chemistry, Sungkyunkwan University, Korea

POLY.P-15 Sustainable eco-friendly polyurethane using carbon dioxide capture and furan-based biomass polyol at the same time
Ji won Jang, Hong Okbi[1], Changsik Song[2,*], Eun Joo Kang[3,*], Junhyeon Choi[3]
Department of chemistry, Sungkyunkwan University, Korea
[1]Chemistry, Sungkyunkwan University, Korea
[2]Department of Chemistry, Sungkyunkwan University, Korea
[3]Department of Applied Chemistry, Kyung Hee University,

Korea

POLY.P-16 PHOTOLYSIS OF EUMELANIN WITH THE HYDROGEN PEROXIDE
Ghanyatma Adi Baskoro, Beom jin Kim[1,*]
Chemistry, University of Ulsan, Korea
[1]Department of Chemistry, University of Ulsan, Korea

POLY.P-17 Fabrication of patterned nanofibers through controlled liquid crystal templating via electric field
Jeong Yeon Han, Changjae Lee, Dong Ki Yoon
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

POLY.P-18 Synthesis of Hight Molecular Weight Poly(L-Lactic Acid) by using Tin and Nickel Catalyst
Shin Hye Park, Longhai Piao, Yunseo Park, Yejin Jeong, Sungho Yoon[1]
Department of Chemistry, Kongju National University, Korea
[1]Department of Chemistry, Chung-Ang University, Korea

POLY.P-19 A novel siloxane-based transdermal delivery polymer formulation
Miyeon Jeong, Dokyoung Kim[1,*]
Precision medicine, Kyung Hee University, Korea
[1]College of Medicine, Kyung Hee University, Korea

POLY.P-20 Synthesis and Characterization of BDT based Polymer for Organic Thermoelectrics
Youjin Kim, Do-Hoon Hwang[1,*]
Pusan National University, Korea
[1]Department of Chemistry, Pusan National University, Korea

POLY.P-21 Highly Efficient Green Homoleptic Ir(III) Complexes Approaching 21% of EQE by Solution-processed for Green PHOLEDs with Higher Efficiency
Al-amin Md, Yeong Soon Gal[1], Sung-Ho Jin[2,*]
Department of Chemical Education, Pusan National University, Bangladesh
[1]Department of Fire Safety, Kyungil University, Korea
[2]Department of Chemical Education, Pusan National University, Korea

POLY.P-22 Reprocessable Polyvanillin-Based Resin via Imine Formation and Reductive Amination
Soyeon Kim, Byungjin Koo
Department of Polymer Science and Engineering, Dankook University, Korea

POLY.P-23 Transfer and Amplification of Helical Chirality in Hierarchical Self-Assembly System
Jun Su Kang, Kangseok Kim, Myungeun Seo
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

POLY.P-24 Cationic CO_2-based Polycarbonate synthesized by Graft Copolymerization
Gyu ri Kim, Nam-kyun Kim
Research Center of CO2 Energy, Korea Research Institute of Chemical Technology, Korea

POLY.P-25 Depolymerizable and degradable polymer from cyclic acetal via entropy-driven ring-opening metathesis polymerization
Dayong Song, Cheoljae Kim[1,*]
Chemistry, Chungbuk National University, Korea
[1]Department of Chemistry, Chungbuk National University, Korea

POLY.P-26 Development of Proton Conductive and Anti-Poisoning Ionomers for High Temperature Polymer Electrolyte Membrane Fuel Cells
Jungwoo Han
Department of chemistry, Sungkyunkwan University, Korea

POLY.P-27 Synthesis and Thin Film Properties of Novel Photo-patternable Polyimide Gate Insulator with Trimethylolpropane Triacrylate Crosslinker
So Eun Chun, Taek Ahn
Department of Applied Chemistry, Kyungsung University, Korea

POLY.P-28 Synthesis and Characterization of Novel Photo-crosslinkable Polyimide Gate dielectric with the Bisphenol A Dimethacrylate Crosslinker
Jin A Park, Taek Ahn
Department of Applied Chemistry, Kyungsung University, Korea

POLY.P-29 Polymerization-induced microphase separation of Janus bottlebrush polymers to ordered nanostructured materials
Changsu Yoo, Myungeun Seo
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

POLY.P-30 Kinetically captured ordered morphologies via polymerization-induced microphase separation by the high χ monomers
Wonjune Yeo, Myungeun Seo[1,*]
Chemistry, Korea Advanced Institute of Science and Technology, Korea
[1]Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

POLY.P-31 Enhanced Optical Response through Positional Variation in Self-Assembled Supramolecular Structures
Kangseok Kim, Jun Su Kang, Myungeun Seo
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

POLY.P-32 Development and synthesis of Anthracene based fluorescence for Aggregation-induced emission
Jieun Lee, Kim Hyerin, Yeong Soon Gal[1], Sung-Ho Jin
Department of Chemical Education, Pusan National University, Korea
[1]Department of Fire Safety, Kyungil University, Korea

POLY.P-33 Strengthen Block Copolymer Ion Gels Using Surface-Modified Aramid Nanofiber (S-ANF)
Seonwoo Yang, Taeseok Oh, Myungeun Seo
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

POLY.P-34 Characterization of various polymer networks prepared by catechol-based crosslinking

Minjeong Kang, Jungju Ryu[1], Daewon Sohn
Department of Chemistry, Hanyang University, Korea
[1]Department of Chemistry and Research Institute for Convergence of Basic Science, Hanyang University, Korea

POLY.P-35 Composite of onion extract-derived carbon dots with polyvinyl alcohol: Thin film preparation for UV light-blocking applications
Akshay S. Patil, Daewon Sohn[1,*]
Department of Chemistry , Hanyang University, India
[1]Department of Chemistry, Hanyang University, Korea

POLY.P-36 Introduction of Pyrazine Based Polymer for Dopant Free Green Solvent Processed Hole Transfer Material in High Performance Perovskite Solar Cells
Jeonghyeon Park, Chetan Lakshman, Bo Hyeon Cho, Yeong Soon Gal[1], Sung-Ho Jin
Department of Chemical Education, Pusan National University, Korea
[1]Department of Fire Safety, Kyungil University, Korea

POLY.P-37 RAFT-Mediated Syntheses of Stimuli-Responsive Block-copolymers for Metal-Chelated Nanocatalysts
Sang-Min Lee
Department of Chemistry, The Catholic University of Korea, Korea

POLY.P-38 The New Spiro-type Hole Transport Material in Non-Hazardous Solvent Process in Perovskite Solar Cells.
Donghyun Song, Zhiqing Xie, Yeong Soon Gal[1], Sung-Ho Jin
Department of Chemical Education, Pusan National University, Korea
[1]Department of Fire Safety, Kyungil University, Korea

POLY.P-39 Lanthanide-Chelated Hybrid Polyionic Complex of Zwitterionic Polymer Shell for Luminescent Nanoplatform
Jiye Choi, Sang-Min Lee
Department of Chemistry, The Catholic University of Korea, Korea

POLY.P-40 Metal-chelated Hybrid Polyionic Complex of Multi-Agent Loading Capability by Coordination-Induced Self-Assembly
Eunseo Lee, Sang-Min Lee
Department of Chemistry, The Catholic University of Korea, Korea

POLY.P-41 Syntheses of Chemically Modifiable Amphiphilic Block-Copolymers for Facile Preparation of Functional Nano-Assemblies via Post-Synthetic Modification
Gyeong-Tae Wi, Sang-Min Lee
Department of Chemistry, The Catholic University of Korea, Korea

POLY.P-42 RAFT-Mediated Synthesis of Zwitterionic Double-Hydrophilic Block-Copolymers for Core/Shell-Type Nanoassembly
Jiwoo Park, Sang-Min Lee
Department of Chemistry, The Catholic University of Korea, Korea

POLY.P-43 Dithienobenzothiadiazole-Based Polymer Donor in All-Polymer Solar Cells with Phenyl-substituted Siloxane Terminal Groups
Priyanka Yadav, Yeong Soon Gal[1], Sung-Ho Jin[2,*]
Department of chemical materials, Pusan National University, India
[1]Department of Fire Safety, Kyungil University, Korea
[2]Department of Chemical Education, Pusan National University, Korea

POLY.P-44 Chemically Modified Polysaccharides for Facile Formation of Functional Single-Chain Nanoparticles
Yeonjoo Jung, Sang-Min Lee
Department of Chemistry, The Catholic University of Korea, Korea

POLY.P-45 Monodisperse Cyclic Polymer Mechanochemistry
Gregory Peterson[*], Kyoung Taek Kim[1], Tae-Lim Choi[2]
Chemistry, Incheon National University, Korea
[1]Division of Chemistry, Seoul National University, United States
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POLY.P-46 Porphyin-based Covalent Organic Framework
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POLY.P-47 Thermoresponsive nanocellulose membrane for selective oil-water filtration.
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POLY.P-48 Mediating the progress of organo-photocatalyst intermediate in ATRP to produce pure polymers with ultra-high molecular weight
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POLY.P-49 Detection of TNT Vapors by Fluorescence Quenching Using Highly Fluorescent Conjugated Silole Polymers
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Department of Chemistry, Chosun University, Korea

POLY.P-50 Electronic Tuning of Iminotriphenolate Ligands for Titanium(IV)-catalyzed ROCOP of Cyclic Anhydrides and Epoxides
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POLY.P-51 One-step Wet-spinning of Conducting Polymer and Cellulose Nanofiber Composites for Fiber-Type Organic Electrochemical Transistors
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IND.P-1 Interrelation between Surface Wettability and Orientation of Acrylic PSAs with Hydrophilicity Control for Medical Application
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IND.P-2 Influence according to Functional Structure of Polysilsesquioxanes and POSS for Flexible Application
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IND.P-3 Characterization of Crosslinking Network for PSQ/POSS Blended Films by UV Curing Process
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IND.P-4 One Pot Preparation of Spherical Magnesium Silicate by W/O/W Emulsion Precipitation Method
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IND.P-5 A study on the manufacturing of TBHP used in chemical industry
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IND.P-6 Development of a substance that simultaneously inhibits PVY and coronavirus
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IND.P-7 Bulk Etch Study for Monitoring of Pollution in Wafer
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IND.P-8 Design and construction of a homebuilt solid-state NMR probes
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IND.P-9 Development of filed-adaptive conductive plastic electrode system for reducing toxic microalgae
Jong Won Shin
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IND.P-10 Fe&Cu dual single atoms decorated N&S co-doped porous 2D Carbon Nanosheets/1D g-C3N4 hollow nanotubes heterojunction composite for enhanced photocatalytic CO2 reduction into solar liquid fuels
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Environmental and climate technology, Post-doctoral researcher, Korea

INOR.P-11 Novel Homochiral Metal-Free Pseudo Sillén-Aurivillius Perovskite
Yunseung Kuk, Kang Min Ok
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INOR.P-12 Polymerization of *rac*-lactide with Complexes [$L_{TH}MX_2$] (M = Zn, Pd; X = Br, Cl and L_{TH} = *(E)*-N^1,N^2-dimethyl-N^2-(thiophen-2-ylmethylene)ethane-1,2-diamine) and [LiO^{i}Pr]
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INOR.P-13 Insighting the Inhibitory Potential of Some 3d Metal Complexes Supported with Pyridine Derived *N,N,N*-Tridentate Ligand: Synthesis, Structural Properties, and Biological Evaluation
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INOR.P-14 Overview of supramolecular crystallography Beamline and Software at Pohang Light Source II
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INOR.P-15 Synthesis, crystal structure, luminescence, and magnetic properties of lanthanide(Ⅲ) complexes containing chiral (S,S/R,R)-N,N'-bis(3,5-dinitrosalicylidene)-1,2-cyclohexanediamine ligand
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INOR.P-16 Chiral amino acid-templated Tin fluorides with lone pair stereochemical activity
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INOR.P-17 Terbium(III) octanuclear complex based on tetradentate reduced Schiff base ligand: Synthesis, crystal structure, and magnetism
Anh Le Ngoc Tram, Yuri Jeong[1], Ihsan Ullah[2], Bae Hyemin[3], Yoon Jung Jang[4], Kil Sik Min[5,*]
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INOR.P-18 Synthesis, characterization, and dye adsorption of novel Cd-based coordination polymers
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Department of Chemistry, Sogang University, Korea

INOR.P-19 Harnessing Plasmonic Effects for Efficient Upconversion in $Y_2SiO_5:Pr^{3+}$ with $AgAu_3@SiO_2$
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INOR.P-20 Tailoring 0D Optically Anisotropic Bismuth Halides Enabled by Superb Dual-ions Cosubstitution Engineering
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INOR.P-21 Design an SBBO-type Metal Free Compound with Large Bandgap and Birefringence
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INOR.P-22 Homochiral d^{10}-metal coordination polymers with strong second-harmonic generation and amplified photoluminescence by excitation wavelength
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INOR.P-23 Triptycene-Fused Asymmetric Multi-Resonance TADF Emitters and Their Photophysical Properties
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INOR.P-24 Blue Fluorescence Compounds Based on Planarized B,N-Diarylated Benzonaphthoazaborine Ring
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INOR.P-25 Sterically Shielded Triptycene-Fused Multi-Resonance TADF Emitter for Highly Efficient Deep Blue OLEDs
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INOR.P-26 Two silver aminopyridine nitrate complexes with large birefringence
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INOR.P-27 Air-Stable Multi Redox-Active 1,2-Dicarbonyl Radical Cation Stabilized by Naphthoquinone Fused N-Heterocyclic Carbenes
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INOR.P-28 Tetradentate Pt(II) Complexes with a Bulky Substituent for Deep Blue
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INOR.P-29 $Sr(NO_3)(NH_2SO_3)\cdot H_2O$: First Nitrate Sulfamate Revealing Remarkable Second-Harmonic Generation and Enhanced Birefringence with Honeycomb-like Layered Structure
Xuefei Wang, Kang Min Ok[1,*]
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INOR.P-30 Synthesis of Catalysts based on Tridentate Salicylaldimine for the Conversion of Carbon Dioxide into Carbonates
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INOR.P-31 Developing zinc(Ⅱ) heterogeneous catalysts for CO_2 conversion to cyclic carbonates.
Hongseo Park
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INOR.P-32 Chimeric MOFs: SBU Transformation from Zn-cluster to Fe-cluster and Its Effects on Gas Adsorption and Dye Selectivity
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INOR.P-33 Improved electrooxidation of ammonia via single-atom metal decoration on Platinum Nanocubes.
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INOR.P-34 Magnesium–Aliphatic Dicarboxylate–Aqua Framework: Glass–Forming Coordination Polymers
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INOR.P-35 Regulation of MMP-2/9 by Natural Products: Implications for Cancer Therapy
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INOR.P-36 Systematic Investigations of PCN-222 derivatives' Moisture sensitivity prepared for applications of Colorimetric Sensor Arrays.
Dongmin Kim, Jungseok Heo
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INOR.P-37 Morphology-Controlled Synthesis of β-FeOOH Nanorods and Their pH-Dependent Formation
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INOR.P-38 Molecular Geometry Effect for Photoluminescence of 2-Phenylnaphthalene-appended *ortho*-Carboranes
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INOR.P-39 Modifications of amyloid-β peptides by a mononuclear cobalt complex
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INOR.P-40 Formation Process of $SiF_6@Cu_2L_4$ Chiral Cage Pairs in Glass Vessel: Catechol Oxidation Catalysis and Chiral Recognition

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INOR.P-41 High-Yield Recycling of Zn(II) Complexes as Catalysts: Structural Differences via Recrystallization Methods
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INOR.P-42 Comparison of Self-Assembled Crystals and Guest-Exchanged Crystals as SCSC Adsorption Matrices in Ni_6L_{12} Ellipsoidal Tubes
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INOR.P-43 Dimensional Transformation of Cage Compounds: Conversion into 3D Networks through a Simple Method
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INOR.P-44 **[Withdrawal]** Facile Fabrication of Homochiral MOF Composite Membrane for Efficient Chiral Separation via Templated Strategy
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INOR.P-45 Construction of Photoreactive Zinc(II) Metal-Organic Frameworks with *cis*- and *trans*-Stereoisomers
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INOR.P-46 Structural and Photoreactivity Differences in Zn(II) Metal-Organic Frameworks with Stereoisomers
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INOR.P-47 Emissive Supramolecular gel of 1-Pt(II) Complexes
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INOR.P-48 Sensitivity Optimization of Colorimetric Sensor Array in terms of concentrations of MOFs particles
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INOR.P-49 Synthesis and structural and electrochemical properties of 1,1-Disubstituted-benzosiloles
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INOR.P-50 Structural, Spectroscopic Characterization and Reactivity of Manganese(III)-Peroxo Intermediate: Deformylation Reaction of 2-PPA via Initial α-H Abstraction
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INOR.P-51 A Nonheme Iron(III)-Peroxo Intermediate as a Functional Model of Rieske Dioxygenases
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INOR.P-52 Nonlinear Acid Promotion in Oxidation of Substrates by Mononuclear Nonheme Iron(III)-Aqua Complexes
Madhuri Nilajakar, Yong-Min Lee[1], Shunichi Fukuzumi[2,*], Wonwoo Nam[3,*]
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INOR.P-53 Regulation of C-H and O_2 activation through auxiliary components
Yunha Hwang, Gayeon Shin, Yerim Park, Seung Jae Lee
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INOR.P-54 Selective Anaerobic Photocatalytic Oxidation of 5-Hydroxymethylfurfural to 2,5-Diformylfuran by Gold-Exchanged CdS cluster in Zeolite Y Framework
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INOR.P-55 Substitution of xenobiotic metal ions for the structural zinc finger domains

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INOR.P-56 High-Performance Lithium Metal Batteries Using Wrinkled-Multilayered Graphene

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INOR.P-57 *De novo* Design of Dinuclear Metal Complexes for Discriminating between Normal Cell and Colorectal Cancer Cells

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INOR.P-58 Unlocking the Potential of Copper Complex in Triple-Negative Breast Cancer: A Superoxide Dismutase Mimicking Model

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INOR.P-59 Heterojunction of TiO_2 and methylammonium (MA) lead halide for enhancing photocatalytic HMF oxidation

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INOR.P-60 Investigation for Enhancing the Stability of Lead Halide Perovskite QDs During Photooxidation of 5-Hydroxymethylfurfural

Jaemin Han, Hyun Sung Kim
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INOR.P-61 Selective Oxidation of a Mustard Gas Simulant by Tris(2,2'-bipyridine)ruthenium(II) Encapsulated in Zeolite Y with Varied Si/Al Ratios

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INOR.P-62 Transition metal complexes and main group phosphorus compounds of a tetradentate ligand with a urea backbone

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INOR.P-63 Fluorescence Properties of Dicationic Pyrene-Based Chromophores Encapsulated in In-MOFs

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INOR.P-64 Size-tunable mesoporous carbon spheres for high-performance supercapacitors

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INOR.P-65 CO2 Hydrogenation Catalyzed by an rigidified (PNP)Ru(II) Scaffold

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INOR.P-66 One-Step DNA Functionalization of Metal-Organic Framework Nanoparticles

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INOR.P-67 Enhanced drug loading efficiency and long-term drug release based on porous silicon nanoparticles via self-sealing chemistry of calcium/magnesium silicate

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INOR.P-68 Effect of Zn and Cu substitution on the Electronic Structure and Thermoelectric Properties of the $Ca_9Cd_{4.5-x}M_xSb_9$ (M = Zn and Cu) System

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INOR.P-69 Double-doping Effect of the Zintl Thermoelectric $Ca_{3-x}Sr_xAl_{1-y}Zn_ySb_3$ System

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INOR.P-70 Effect of Cation Substitution for the Electronic Structure and Thermoelectric Properties of the $Ba_{1-x}Eu_xZn_2Sb_2$ System

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INOR.P-71 Synergistic Effects of Cation Substitution and *p*-type Doping for Thermoelectric Materials: the $Ca_{9-x}Yb_xZn_{4.5-y}Cu_ySb_9$ System
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INOR.P-72 Study of Electrochemical Properties of Nano-rod MnS@rGO as High-performance Anode for Lithium-Ion Batteries
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INOR.P-73 Synthesis and Electrochemical Properties of hexagonal structure type of SnS_2@rGO as Anode materials for Lithium-Ion Batteries
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INOR.P-74 Design of CMOF by PSM method for Enantiomer Separation
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INOR.P-75 Facile and Naked-eye Decoding of Hydrohalic Acids using Metal-Organic Frameworks
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INOR.P-76 Tunable emission in metallo-supramolecular gels
Eungyu Lee, Hyeon Min Han[1], Sung Ho Jung[1], Jong Hwa Jung[1]
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INOR.P-77 Disproportionation reaction- A DFT Study.
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INOR.P-78 Synthesis of titanium using [N, O] type ligands including azole, and cyclic addition and copolymerization reactions using carbon dioxide
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INOR.P-79 Intersection of Apoptosis and Ferroptosis Cell Death Pathway Confirmed by RNA Sequencing Analysis : Eruptive Generation of Hydroxyl Radical in Gastric Cancer
Hyungbin Park, Chaewon Ahn[1], Yougang Kim[2], Yerin Lee[3], Seungwoo Hong
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INOR.P-80 High-Performance Lithium Metal Batteries Enabled by Nanodiamond Scaffolds
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INOR.P-81 Tailoring the morphology of WO_x nanoparticles for near-infrared absorbing polymer-ceramic composite fiber
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INOR.P-82 Converting Achiral to Chiral Metal-Organic Framework for Asymmetric Diels-Alder Reactions
Hyeonsu Kim, Younghu Son[1], Purna Chandra Rao[1], Jeong Yera[1], Sunggi Lee[2,*], Minyoung Yoon[1]
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INOR.P-83 Trinuclear Ruthenium Complexes: Catalyzing Photocatalytic Oxidation for Biomass-Derived HMF Conversion
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INOR.P-84 Modulating Polariton Lasing Properties by Controlling Gain Volume in the Fabrication of Multi-Layered Axial Heterostructure Nanorods
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INOR.P-85 The fabrication of a GaN-based micro-light-emitting diode (LED) and fluidic self-assembly using low frequency sonication
Young rag Do[*], **Yong Jae Lee**, SeungJe Lee, Huiyeong Kang, Yun Jae Eo
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INOR.P-86 Amine decorated (Zn, Zn)-bimetallic catalyst for the valorization of carbon dioxide
Ho Jun Lee, Jungseok Heo
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INOR.P-87 Balancing the Imbalance: Design Strategies for Heterobimetallic Metallohelicates
Kyunghwan Min, Heechan Kim, Dongwhan Lee
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INOR.P-88 Moisture-Triggered Proton Conductive Switch in Metal-Organic Frameworks : Role of Coordinating Solvents
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INOR.P-89 Introduction of Strong Open Metal Sites into Zr-based MOFs for Hydrogen Isotope Separation using CAQS Effect
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INOR.P-90 Optimizing Micro-LED Separation with Electrochemical Etching (ECE) for Enhanced Performance
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INOR.P-91 Magnetic Structure Analysis in Water-Coordinated Coordination Polymers
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INOR.P-92 A Novel Approach to Fabricate InP/ZnSeS/ZnS Quantum Dot-Embedded Alumina Microbeads for Color-by-Blue Displays
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INOR.P-93 Density Functional Theory Study of Tyrosine Radical Formation and Di-tyrosine Cross-linking Catalyzed by Transition Metal Ion And Reactive-Oxygen Species
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INOR.P-94 Reactivity of Low-valent Nickel Carbonyl Complexes with Methyl Iodide Supported by an Acridine PNP Ligand Containing Phenyl Moieties
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INOR.P-95 Interrelations of MMP-2/9 and Metal Ions
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INOR.P-96 Development of ethane-selective adsorbent by aminal-linked covalent organic frameworks
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INOR.P-97 Exploration of electrochemical performance of Mn-substituted Li_2ZrCl_6 solid electrolyte for all solid state lithium batteries
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INOR.P-98 High proton conduction through functional group modifications of porous organic polymers
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INOR.P-99 Impairment of Bone Marrow Mesenchymal Stem Cell Differentiation by Tobacco Nitrosamines, Alleviated by Nanostructures
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INOR.P-100 Study of ROS concentration of Keratinocyte cells on nano-diamond substrates with various densities
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INOR.P-101 Improved Extraction of Exosomes from Bovine Milk through the Integration of Electrophoretic Oscillation-Enhanced Tangent Flow-Driven Ultrafiltration Procedure
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INOR.P-102 $LiTaO_3$ mixing effects to suppress the side reactions between electrolyte and cathode in all-solid-state batteries
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INOR.P-103 Synthesis and characterization of Zn(II) precursors for atomic layer deposition
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INOR.P-104 Synthesis and Characterization of Germanium(II) Complexes for Atomic Layer Deposition
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INOR.P-105 Synthesis of various novel scandium precursors for ALD
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INOR.P-106 Oxidation of aniline derivatives by catalytic reactions in HKUST-1 with hydrolytic stability enhancement for water harvesting
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INOR.P-107 Audible Sound-driven Chemical Patterns in a Square Dish
Mingyu Kim, Ilha Hwang, Kimoon Kim
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INOR.P-108 Pyrene-Functionalized Ru-Catenated Metallacycle: Conversion of Catenated System to Mono-Rectangle Through Aging
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INOR.P-109 Polyaniline-incorporated Metal-Organic Frameworks for Enhanced Hydrolytic Stability and Atmospheric Water Harvesting
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INOR.P-110 Synthesis and Characterization of Nickel(II) Complexes Supported by a Phosphine-Based Ligand
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INOR.P-111 Surface-Modified Zinc-Glutarate for Efficient Copolymerization of CO2 and Epoxides
Jong Doo Lee, Seung Uk Son
Department of Chemistry, Sungkyunkwan University, Korea

INOR.P-112 High Selectivity of Alkenes Even with Extended Reaction Times for Semi-hydrogenation of Alkynes Using Pd4S nanoparticles on Sulfur-rich Hollow Carbons
Yoon Kee Kim, Seung Uk Son
Department of Chemistry, Sungkyunkwan University, Korea

INOR.P-113 Synthesis of Microporous Organic Polymers with Tri-Zinc Macrocycles as Heterogeneous Catalysts for Converting Furan Esters Derived from Biomass into Polymer Precursors
June Young Jang, Seung Uk Son[1,*]
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INOR.P-114 Photoactivated Release of Nitric Oxide from {Ru-NO}^{6} Complexes
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INOR.P-115 Mechanistic Study of Bis(dithiolene) W-oxo Complex: Identifying Proton Transfer and Potential-Directed Pathways
Wonjung Lee, Jaeheon Lee, Junhyeok Seo
Department of Chemistry, Gwangju Institute of Science and Technology, Korea

INOR.P-116 Photochemical and Patternable Synthesis of 2D Covalent Organic Framework Thin Film at Solid and Flowing-Liquid Interface
Hyunseob Lim*, **Taewoong Kim**
Department of Chemistry, Gwangju Institute of Science and Technology, Korea

INOR.P-117 The Effect of Diverse Anions in Heterometallic Au(I)-Ag(I) complexes
Jiyeong Song, Young-A Lee
Department of Chemistry, Jeonbuk National University, Korea

INOR.P-118 Wet-Chemical Synthesis of Diverse-Faceted Tungsten Oxide Photoanodes for Photoelectrochemical Water Splitting
Thandapani Marimuthu, Junhyeok Seo[1,*]
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INOR.P-119 Overcoming phase purity, grains and surface defects challenges in copper bismuth oxide thin film photocathodes
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INOR.P-120 Exploiting dynamic bonding to activate open metal sites in HKUST-1 under mild conditions
Mariana Diaz Ramirez, Nak Cheon Jeong[1,*]
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INOR.P-121 Synthesis of Mono- and Divalent Copper Iodide Complexes with Bisquinoline Ligands
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Department of Chemistry, Kyungpook National University, Korea

INOR.P-122 Electrocatalytic H_2 Evolution Reaction using Molybdenum Bis(dithiolene) complex with Cation
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INOR.P-123 Formation of a 1D Poly-Pseudo-Rotaxane with Sulfur-Bearing Pillar[5]arene: Threading by Ion-Triplet and Organic Guest Molecules
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INOR.P-124 Analysis of lipid phase separation in senescence cells by single lipid tracking
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INOR.P-125 Spatiotemporal Control of Bacterial Motility and Photo-decomposition of Cu_2O NPs for Effective Antibacterial
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INOR.P-126 Effect of Ferroelectric nanoparticles on Proteins in Alternating electric field
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INOR.P-127 Cu(II)-based 2D Single and Interpenetrated Networks depending on Coordination Environments.
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INOR.P-128 Zinc(II) Coordination Compounds for Chemical Sensors
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INOR.P-129 Observing the Exchange of Motor Proteins in Live Cells using a Fourier Transform-Based Plasmonic Dark-Field Microscope
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INOR.P-130 Kinetic investigation of organic reactions on the single molecule
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INOR.P-131 Exploring Novel Approaches for Detecting Harmful Substances and Treating Related Diseases
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INOR.P-132 Effect of Controlling Intramolecular Charge Transfer on Proton-Coupled Electron Transfer (PCET) : in Co-Imbpy Complexes
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INOR.P-133 Construction of Supramolecular Complexes by Host-Guest Interactions with Crown Ether-Armed Pillar[5]arene
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INOR.P-134 Coordination Polymers of Polypseudorotaxanes of A1/A2 Thioglycolate-Armed Pillar[5]arene
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INOR.P-135 Metallosupramolecules of Pillar[5]-*bis*-azathiacrown: Host-Guest Molecular Recognition and Coordination Networks
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INOR.P-136 Solvent-Assisted Reversible Interpenetration of Cu(II)-Based Metal-Organic Frameworks: A Strategy for Enhancing Ethane and Ethylene Separation
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INOR.P-137 Exploring NiS Nanoparticle-Embedded 3D Hollow Diatom Framework as a Unique Electrocatalyst for HER and DFT Analysis
Younghu Son, **Bonseon Eo**, GaEun Lee, Yunseul Kim, Minyoung Yoon
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INOR.P-138 Detection of TNT Vapor Using Photonic Polymer Replicas Containing Silicon Quantum Dots with Distributed Bragg Structure
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Department of Chemistry, Chosun University, Korea

PHYS.P-139 Temperature dependent ion aggregation behavior and spatial inhomogeneity in electrolyte solutions
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Department of Chemistry, Gwangju Institute of Science and Technology, Korea

PHYS.P-140 Photochemistry of thymine in solution revealed by an electrostatic embedding QM/MM combined with mixed-reference spin-flip TDDFT
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PHYS.P-141 Changing Perspective: Upconversion Properties of Lanthanide doped NASICON
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PHYS.P-142 In-situ XPS study for Photocatalytic Performance Variations of ZnIn2S4 Nanoparticles Depending on Sulfur Source
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PHYS.P-143 Solvent effects and pH dependence of the X-ray absorption spectra of proline from electrostatic embedding quantum mechanics/molecular mechanics and mixed-reference spin-flip time-dependent density-functional theory
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PHYS.P-144 Understanding of Protein-Peptide Binding Using Artificial Intelligence and Large-Scale Molecular Dynamics
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PHYS.P-145 Effect of Fluorescent Protein Charge in Protein Aggregation
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PHYS.P-146 Quantum and Semi-classical Dynamics for a Simultaneously Coupled Bond-Breaking and Bond-Making in the Bi-directional Proton-Coupled Electron Transfer Process of FHCl
Pinit Ariyageadsakul, Kyoung-Koo Baeck
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PHYS.P-147 Predicting Electron Affinity of Polycyclic Aromatic Hydrocarbon Molecules
Jinmin Lee, Sang Hak Lee
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PHYS.P-148 Elucidating Molecular Mechanism underlying the Alpha-Synuclein Aggregation or Phase separation
Kyubin Lee, Jinmin Lee[1], Sang Hak Lee[1]
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PHYS.P-149 Multi-reference Second-Order Perturbation Theory (MRPT2) with Adaptive Sampling Configuration Interaction Self-Consistent Field (ASCI-SCF)
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Department of Chemistry, Chungbuk National University, Korea

PHYS.P-150 Highly Efficient T_1 MRI Contrast Enhancement using D-glucuronic acid coated mixed Zn(II)/Gd(III) oxide nanoparticles
Tirusew Tegafaw, Gang Ho Lee
Department of Chemistry, Kyungpook National University, Korea

PHYS.P-151 T_1-T_2 Dual-Modal MR Imaging: ultrasmall Gd_2O_3 coated by Polyaspartic Acid
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PHYS.P-152 Polyacrylic Acid-Coated Terbium(III) and Holmium(III) Oxide Nanoparticles: Synthesis, Characterizations, and 9.4 Tesla T_2 MR Imaging
Abdullah Al Saidi, Gang Ho Lee[1,*]
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PHYS.P-153 Glucosamine-Conjugated Polyacrylic Acid-Coated Ultrasamll Gadolinium oxide Nanoparticles as Tumor Targeting Positive Magnetic Resonance Imaging Contrast Agents
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PHYS.P-154 Biotin-Conjugated Poly(Acrylic Acid)-Grafted Ultrasmall Gadolinium Oxide Nanoparticles for Enhanced Tumor Imaging
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PHYS.P-155 Aggregation and Disaggregation of FUS Protein
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PHYS.P-156 Regulation of cellular expression level of MMP-9 by vitamin A, B, C, and D
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PHYS.P-157 A Study on the Effect of Vitamins on cellular expression level of MMP-2
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PHYS.P-158 Optical gain in colloidal quantum dot film under nanosecond optical pumping
Suhyeon Kim, Jiwon Bang
Department of Chemistry, Incheon National University, Korea

PHYS.P-159 Selective Binding of SERS-Active Fe_3O_4@Au NPs@SiO_2 to Circulating Tumor Cells
Hae-jin Chung, Eungyeong Park, Young Mee Jung
Department of Chemistry, Kangwon National University, Korea

PHYS.P-160 Screening Cancer Cell Lines Using Deep-UV Resonance Raman Spectroscopy
Ah-hyun Woo, Sila Jin[1], Yeonju Park[2], Jongmin Park[3], Young Mee Jung
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PHYS.P-161 Effect of Electromagnetic Field Effect on Charge Transfer in Semiconductor By SERS Activity of PS/Ag/MoO_3 Film
YoonSeop Byun, Shuang Guo, Young Mee Jung
Department of Chemistry, Kangwon National University, Korea

PHYS.P-162 Effect of Ag-rGO Structure on the SERS Activity of PEDOT:PSS Film
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PHYS.P-163 Chiral-induced Surface-enhanced Raman Optical Activity on Single-particle Level Substrate
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PHYS.P-164 Nanoscale Phase Behaviors of Binary Self-Assembled Monolayers Formed by Alkanethiols and Alkyl-substituted N-Heterocyclic Carbenes on Au(111)
Haeri Kim, Hyun Su Oh, Yeon O Kim, Jaegeun Noh
Department of Chemistry, Hanyang University, Korea

PHYS.P-165 First-Principles Study of Co-free Li-excess ($Li_{1.25}Mn_{0.625}Ni_{0.125}O_2$) Layered Cathode Material
Joonkyung Jang[*], **Kisang Byun**[1], Dohee Kim[1], Seyong Choi[1]
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PHYS.P-166 Synthesis of Styrene Carbonate: Computational Design and Evaluation of a Novel Ferrocene Catalyst
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PHYS.P-167 Effects of Phase Separation on Protein Expression
Min Chung, Jeong-Mo Choi
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PHYS.P-168 *In Silico* Engineering of Binding Affinities of Green Fluorescent Proteins
Yu-Gon Eom, Jeong-Mo Choi
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PHYS.P-169 Two-dimensional Ordering of Aromatic Thiol Self-Assembled Monolayers on Au(111) Guided by Displacement Method
Dongjin Seo, Haeri Kim, Hongki Kim, Jaegeun Noh
Department of Chemistry, Hanyang University, Korea

PHYS.P-170 Wingtip Group Effects on the Formation and Structure of Self-Assembled Monolayers of N-heterocyclic Carbenes with Alkyl Backbones on Au(111)
Yeon O Kim, Haeri Kim, Hyun Su Oh, Jaegeun Noh
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PHYS.P-171 Molecular Self-Assembly of Aromatic Thiocyanates on Au(111)
Jun Hyeong Lee, Haeri Kim, Hyun Su Oh, Jaegeun Noh
Department of Chemistry, Hanyang University, Korea

PHYS.P-172 High Photocatalytic Effect of La/TiO_2/GO/Halloysite Nanocomposites for Degradation of Organic Dyes
Hongki Kim, Dongjin Seo, Haeri Kim, Jaegeun Noh
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PHYS.P-173 Crossover between Energy and Charge-transfer in Two-Dimensional PTCDA/WS_2 Heterojunctions
Myeongin Song, Sunmin Ryu
Department of Chemistry, Pohang University of Science and Technology, Korea

PHYS.P-174 Circular Dichroism Spectroscopy of Jet-Cooled Amino Diphenyl Ethanol
Jiyeon Yun, Nam Joon Kim
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PHYS.P-175 A Study of Light-controllable Hydrogel using PEG and GFP for Insulin Delivery.
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PHYS.P-176 Bioinformatic Analysis of Protein Structures Using Contact Map Formalism
TaeHwan Kim, Jeong-Mo Choi
Department of Chemistry, Pusan National University, Korea

PHYS.P-177 Towards Accurate Determination of Amyloid Fibril Stability Using Molecular Dynamics Simulations
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PHYS.P-178 Mind the Gap: Energy Gap for Protein Binding
Chan-Gyu Kim, TaeHwan Kim, Jeong-Mo Choi
Department of Chemistry, Pusan National University, Korea

PHYS.P-179 Spatiotemporal carrier dynamics of pyrene incorporated multi-cation halide perovskites with high stability
Yu Jin Lee, Dongho Kim[1,*]
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PHYS.P-180 Computational Insights into Electrocatalytic Hydrogen Evolution: First-Principles Comparison between NiMo and NiMo-MoO_{3-x} Catalysts
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PHYS.P-181 Efficient Detection of Cell Surface Proteins using a SERS-based Platform
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PHYS.P-182 Efficiency of FeCoNi-P/Co-OH Heterostructure Supported on Nickel Foam for Bifunctional Water Splitting
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PHYS.P-183 DFT study of Ni and P doped MoS2 for the application of hydrogen evolution reaction (HER)
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PHYS.P-184 DFT studies of nickel-cobalt phosphide carbon (NiCo3P-C) nanostructure for hydrogen evolution reaction (HER), Oxygen evolution reaction (OER), and Oxygen reduction reaction (ORR), as an efficient electrocatalyst
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PHYS.P-185 Generative Deep learning for designing molecules with target optical properties in given solvents
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PHYS.P-186 Chemical vapor deposition of two-dimensional amorphous carbon
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PHYS.P-187 Charge-Transfer Absorption Band in Two-Dimensional PTCDA/TMDs Heterocrystals
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PHYS.P-188 Theoretical investigation of photo and thermal reaction mechanisms of p-hydroxyphenacyl diethyl phosphate (HPDP)
Eunji Park, Joonghan Kim
Department of Chemistry, The Catholic University of Korea, Korea

PHYS.P-189 Development of density functional theory applicable to both absorption and fluorescence spectrum calculations with optimized van der Waals correlation functional
Dae-Hwan Ahn, Jong-Won Song
Chemistry Education, Daegu University, Korea

PHYS.P-190 Investigation of photoswitching mechanism in single molecule localization imaging
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PHYS.P-191 Development of three-dimensional super-resolution imaging method for phase-separated polymer nanopatterns
DongMin Lee, Doory Kim
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PHYS.P-192 Development of a low-field NMR spectrometer with an adjustable sample geometry
Minchae Kwak, Jung Ho Lee[1,*]
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PHYS.P-193 Removal of carbazole from model biodiesel composed of methyl laurate by using metal-organic frameworks functionalized with sulfonic acid both on metal and linker sites
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Department of Chemistry, Kyungpook National University, Korea

PHYS.P-194 Transient Absorption Microscopy (TAM), a Powerful Tool for Understanding Charge Carrier Dynamics.
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PHYS.P-195 Surface Accessibility of an Intrinsically Disordered Protein Probed by Laser-Assisted NMR Spectroscopy
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PHYS.P-196 Development of nanoscale metrology and inspection tool for semiconductor using super-resolution fluorescence microscopy
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PHYS.P-197 Improving Efficiency of Quantum Chemical Computations through Density Sensitivity of Atoms
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PHYS.P-198 Dispersion Corrections to Density-Corrected Density Functional Theory: DC^2-DFT
Minhyeok Lee, Mingyu Sim, Eunji Sim
Department of Chemistry, Yonsei University, Korea

PHYS.P-199 Photoluminescence Study of Two-Dimensional Picene Molecular Crystals
Hyunsuk Yun, Sunmin Ryu
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PHYS.P-200 Synthesis and Photophysical Studies of NIR Emitting Organic D-A Charge-Transfer Complexes
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PHYS.P-201 NIR Photoluminescence Enhancement of Ag2S Nanocrystals by Chloride Passivation
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PHYS.P-202 NIR Optical Properties of Surface-Controlled Ag2S Nanocrytals
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PHYS.P-203 Adsorptive removal of 4-nitrophenol from water with covalent-organic framework derived nitrogen-enriched carbon.
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PHYS.P-204 Complete Basis Set Limit of HF-DFT
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PHYS.P-205 NMR Method Development for Selective Detection of Protein Acetylation
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PHYS.P-206 Transferability of HF-DFT to Periodic Systems
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PHYS.P-207 Mechanisms of Carbonic Anhydrase and its Metal Variants through DFT Calculations
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PHYS.P-208 Simulation Model for Percolation-Mediated Condensation of Associative Polymers
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PHYS.P-209 Re-establishment of descriptor for hydrogen evolution reaction.
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PHYS.P-210 A Miniature Reflectron Time-of-Flight Mass Spectrometer in the coaxial design
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PHYS.P-211 Electron Beam Cross-Linking Mechanism of Cyclotetrasiloxane-Based Inorganic Molecular Resists for EUV Lithography
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PHYS.P-212 Enhanced photocatalytic degradation of toxic dyes with core-shell nanoparticle clusters
You Hee Seo, Jeongmin Seo[1], Chaeyoung Im[1], Seunghoon Lee
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PHYS.P-213 Development of clustering analysis method for single-molecule localization images
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PHYS.P-214 Why and How to Increase EUV-Induced Material Alteration Degree in EUV Inorganic Resists? : The Effect of Electron Beam Irradiation on Dibenzyltin Diacetate Thin Film Using Local Analysis and Quantum Chemical Calculations
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PHYS.P-215 Synthesis and Characterization of Zinc-Oxo Cluster for EUV and E-beam photoresist
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PHYS.P-216 Basis Set Superposition Error and Counterpoise Correction in Hartree-Fock DFT
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PHYS.P-217 Electrochemical Performance of π-Conjugated Molecule Bridged Silicon Nanocrystal Nanocomposite Synthesized by Imine Conjugation Reaction for Lithium-Ion Battery Anode Material
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PHYS.P-218 Synthesis and Electrochemical Performance of π-Conjugated Molecule Bridged Silicon-Silver Nanocrystal Nanocomposite as Anode Materials for Lithium-Ion Batteries
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PHYS.P-219 Impact of Solvent Environment on Singlet Fission Rate in Perylene Bisimide Dimers
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PHYS.P-220 Pre-Homonuclear Decoupling: NMR Measurements of Intrinsically Disordered Proteins at Ultrahigh Resolution
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PHYS.P-221 Tin Oxo Cluster Photoresist CNU-TOC-01(4C-C) for Extreme Ultraviolet (EUV) Lithography
Hyeok Yun, Hyun-Dam Jeong
Department of Chemistry, Chonnam National University, Korea

PHYS.P-222 Density-Corrected DFT for Molecular Properties: Dipole Moment
Jiye Shin, Mingyu Sim, Soohyeon Lee, Youngsam Kim, Eunji Sim
Department of Chemistry, Yonsei University, Korea

PHYS.P-223 De novo nanobody binder design by generative AI models
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PHYS.P-224 Absolute determination of crystal orientation by phase-resolved SHG spectroscopy
Jihun Kim, Sunmin Ryu
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PHYS.P-225 Rotational Isomerization of Carbon-Carbon Single Bonds in Haloethyl Radicals in Solution
Seongchul Park, Juhyang Shin, Hojeong Yoon, Manho Lim
Department of Chemistry, Pusan National University, Korea

PHYS.P-226 Rebinding Dynamics of Carbon monoxide with Cytoglobin Using Time-resolved Infrared Spectroscopy
Juhyang Shin, Manho Lim
Department of Chemistry, Pusan National University, Korea

PHYS.P-227 Advancing Spectral Analysis: Two-photon IR+VUV-MATI Technique for Resolving Low-frequency Vibrational Modes in Thietane
Sung Man Park, Yu Ran Lee[1], Chan Ho Kwon
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PHYS.P-228 Spatial Correlation in Dynamics of Glassy Polymers
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PHYS.P-229 Development of a high-resolution NMR technique to measure diffusion of proteins at near-physiological conditions
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Division of Chemistry, Seoul National University, Korea

PHYS.P-230 Probing Electronic Structure and Cationic Properties of 2,4-Difluoropyridine: Insights from High-Resolution VUV-MATI Spectroscopy and Quantum Chemical Analysis
Hyojung Kim, Sung Man Park, Chan Ho Kwon
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PHYS.P-231 New source design for laser-desorbed anion formation: Elucidation of the dipole-bound state of diatomic alkali halide anions
Dabin Kim, Sang Kyu Kim, Sejun An
Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

PHYS.P-232 Parasite exciton dynamics of phosphorescent OLEDs under external bias voltage by time-resolved photoluminescence spectra measurement
HyunJae Lee, Chul Hoon Kim, Changmin Lee[1], Seung Yoon[1]
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PHYS.P-233 Tracking the tunneling potential of photodissociation reaction in methylamine-d2 via IR+UV double resonance spectroscopy
Minseok Kang, Sang Kyu Kim
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PHYS.P-234 Ultrafast study of the photodissociation for iodo-phenolate anions in solution with UV pump
Chanho Park, Sang Kyu Kim
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PHYS.P-235 The synthesis of chiral plasmonic nanoparticles based on understanding of chiral transfer mechanism
Chaeyoung Im, Seunghoon Lee
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PHYS.P-236 Vertical and In-plane $MoSe_2$-WSe_2 Heterostructures Uniformly Grown by Chemical Vapor Deposition Using Liquid Precursors
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PHYS.P-237 Charge Carrier Dynamics in $CsPbBr_3$ Perovskite Quantum Dots and Nanowires: Insights from FP-TRMC and TCSPC
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PHYS.P-238 Synthesis and Characterization of High-Entropy Oxide Cathode Materials with Spinel Structure for High-Voltage Lithium-Ion Batteries
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PHYS.P-239 Computational study on the geometric and electronic structures of MoS_2 grain boundaries
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PHYS.P-240 Accelerating Excimer Formation through Dense Assembly of Coumarin Dyes on TiO2 Films
Hyunseok Lee, HyungJoo Lee, Chul Hoon Kim
Department of Advanced Materials Chemistry, Korea University, Korea

PHYS.P-241 Detection of benzenediol compounds with SERS using Metal-Chelation Nanoshell(MCNS)
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PHYS.P-242 Enhanced photocatalytic activity of TiO_2 by Fe incorporation towards simultaneous oxidation of NO and acetaldehyde under visible light
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PHYS.P-243 Plasmon-Enhanced Hybrid Nanoparticles for Efficient Plastic Degradation
Jeongmin Seo, Seunghoon Lee[1,*]
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PHYS.P-244 In-Plane Mixed-Dimensional Heterostructures from Monolayer MoS_2 and Low-dimensional Mo/Te Compounds Synthesized by Te-Flux-Controlled Chemical Vapor Deposition
Hyeonkyeong Kim, Youngdong Yoo[1,*]
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PHYS.P-245 Enhanced photocatalytic behaviors over Pt-modified TiO_2 towards acetaldehyde oxidation under visible light irradiation: Effect of Pt single atoms dopants
Ji Yujing, Shufang Zhao[1], Yebin Choi, Jichuang Wu[2], Hyun Ook Seo[3], Young Dok Kim[4,*]
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PHYS.P-246 The Diffusion of Membrane Molecules in small Phospholipid Vesicles: Insights from Molecular Dynamics Simulations
Jaeheon Yang, Bong June Sung
Department of Chemistry, Sogang University, Korea

PHYS.P-247 Anisotropic charge transport in memristive behavior of MXene
Suji Ha, Junwoo Park
Department of Chemistry, Sogang University, Korea

PHYS.P-248 The Role of Soft Segments on the Stress Relaxation of Thermoplastic Elastomers
Hyungshick Park, Bong June Sung
Department of Chemistry, Sogang University, Korea

PHYS.P-249 Ultranarrow Quantum Plasmon Resonance of Self-doped Ag2Se Nanocrystal in Mid-Infrared Region
Haemin Song, Jin Hyeok Lee, So Young Eom, Dongsun Choi, Kwang Seob Jeong
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PHYS.P-250 The modeled protein structure quality assessment via Graph neural network
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PHYS.P-251 Charge-carrier dynamics in Organic Photovoltaic Materials
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PHYS.P-252 Excimer Formation in Polycrystalline PBI Films: Dependence on Packing Geometry
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PHYS.P-253 Excited-state dynamics of cobalt-based photocatalyst using X-ray and optical transient absorption spectroscopies
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PHYS.P-254 Investigating binding affinities of coomasive brilliant blue in protein-dye complex; Structural insight from the theoretical calculations of X-ray scattering data
Junu Bae, Tae Wu Kim
Department of Chemistry, Mokpo National University, Korea

PHYS.P-255 Structural changes of thioflavin T during intramolecular charge transfer studied by time-resolved vibrational spectroscopy
Sebok Lee, Taehyung Jang, Yoonsoo Pang
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and Technology, Korea

PHYS.P-256 Relativistic Mixed-Reference Spin-Flip (MRSF)-TDDFT
Konstantin Komarov, Cheol Ho Choi[1,*]
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PHYS.P-257 Tracking electronic dynamics of pristine and blue TiO2 nanocomposites under various catalytic conditions
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PHYS.P-258 Enhancing the methanol oxidation activity of Pd@Pt by modulating synergistic effects
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PHYS.P-259 Comparison of HMF to FDCA Conversion Efficiency and Methods for Performance Improvement of BiVO4 Photocatalyst
Myung Jong Kang[*], **Serin Jung**
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PHYS.P-260 Synthesis Waste Melamine formaldehyde Resin and Metal with Urea, applied into Photocatalytic Electrode
Myung Jong Kang[*], **Kyong Suh Kim**
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PHYS.P-261 Intramolecular Charge Transfer Dynamics of Anthraquinone Derivatives in the Confined Environments of Reverse Micelles
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PHYS.P-262 Photoelectrochemical Performance Analysis of Photocatalytic Electrode MgAl-Layered Double Hydroxide(LDH) by a Manufacturing Method
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PHYS.P-263 Theoretical Insights into Active Centers of Electrocatalyst with a Strong Metal-Support Interaction for Cost-Effective Synthesis of Ammonia via Electrochemical Nitrite Reduction Reaction
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PHYS.P-264 Sensitive Chiral Sensing of Glucose by Surface-Enhanced Raman Spectroscopy
Daedu Lee, Yoonsoo Pang
Department of Chemistry, Gwangju Institute of Science and Technology, Korea

PHYS.P-265 Pulsed laser induced synthesis of nickel sulfoselenide for efficient furfural and water oxidation
Theerthagiri Jayaraman, Yewon Oh, Myong Yong Choi
Department of Chemistry, Gyeongsang National University, Korea

PHYS.P-266 Investigating the Effects of FOXA Proteins on Transcriptional Activity in DNA-FOXA Complexes: A Molecular Dynamics Simulation Study Minjun Jung and Rakwoo Chang* Department of Applied Chemistry, University of Seoul, Korea
Min Jun Jung, Rakwoo Chang
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PHYS.P-267 Evaluation of the Corrosion Rate for Ni-containing alloys under LiCl Molten Salt
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PHYS.P-268 Adsorption structure of benzyl alcohol molecule on Ge(100) surface
Yeonju Lee, Young-Sang Youn
Department of Chemistry, Yeungnam University, Korea

PHYS.P-269 Investigation on adsorption structure of 1,3-dithiolane on Ge(100) surface
Su-Ji Choi, Young-Sang Youn
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PHYS.P-270 **[Withdrawal]** Asymmetric Catalyst Design using Machine Learning with fragment count fingerprints and augmented substructure type descriptors
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PHYS.P-271 DFT Calculation for the First One-Electron Transfer in CO2 Activation and Reduction Reaction induced by PVP
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PHYS.P-272 Circular Dichroism Spectroscopy of Jet-Cooled 6,6′-Dimethyl-2,2′-diaminobiphenyl
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PHYS.P-273 Fully Self-consistent QM/MM for Solvated Systems
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Technology, Korea
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PHYS.P-274 Transformation of High Entropy Prussian Blue Analogue Derived High Entropy Oxide into Alloy via Pulsed Laser for Ammonia Production
Yewon Oh, Theerthagiri Jayaraman, Myong Yong Choi
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PHYS.P-275 Examining the Predominant Phenomenon in Liquid Water under 800 nm Optical Laser : Comparing Optical Kerr Effect and Multiphoton Ionization
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Department of Chemistry, Pohang University of Science and Technology, Korea

PHYS.P-276 Impact of Contortion on Singlet Fission Mechanism
Eunho Hwang, Hyungjun Kim
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PHYS.P-277 Direct Identification of Benzene-I Atomic Charge Transfer Complex Structure via Time-Resolved X-ray Solution Scattering
Seoyoung Lee, Kyung Hwan Kim
Department of Chemistry, Pohang University of Science and Technology, Korea

PHYS.P-278 Ru-nanoclusters with exfoliated black phosphorus via acoustic levitator proceeded pulsed laser process for robust hydrogen evolution kinetics
Juhyeon Park, Ahreum Min, Cheol Joo Moon, Theerthagiri Jayaraman, Myong Yong Choi
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PHYS.P-279 Revealing droplet-size-dependent molecular behaviors in the charged nanodroplets by X-ray scattering
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PHYS.P-280 Resolving the fragile-to-strong transition in water by following temperature-induced structural changes and anisotropy
MyeongSik Shin, Kyung Hwan Kim
Department of Chemistry, Pohang University of Science and Technology, Korea

PHYS.P-281 Real-time Tracking of Vesicles in Living Cells Reveals that Tau-hyperphosphorylation Suppresses Unidirectional Transport by Motor Proteins
Donghee Kim, Kyujin Shin[1], Sanggeun Song[2], Mi Hee Lim[3], Ji-Hyun Kim, Jaeyoung Sung, Kang Taek Lee[4,*]
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PHYS.P-282 Nonadiabatic Molecular Dynamics on the Ultrafast Photoisomerization of 2*H*-1,2-Oxaborine
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PHYS.P-283 High-entropy alloys (Au, Pt, Pd, Ru and Ir) via CO_2 Laser for Hydrogen Evolution Reaction with seawater splitting
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PHYS.P-284 Circular Dichroism Spectroscopy of Protonated Phenylalanyl-alanyl-alanine Ions Stored in the Cryogenic Ion Trap
Jinho Jeong, Iltae Yoo, Nam Joon Kim
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PHYS.P-285 High-entropy Alloys (HEA) and Graphene Oxide (GO) Composites for the development of water splitting system under acidic condition
Yeryeong Lee, Gyoung Hwa Jeong, Myong Yong Choi
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PHYS.P-286 Investigating the superheating and melting dynamics of crystalline ice in ps/ns timescale with TRXS
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PHYS.P-287 Insights into the Behavior of Chlorosulfolipids and Dipalmitoyl-Glyceryl-Trimethylhomoserine: Coarse-Grained Simulation and Phase Diagram Analysis of Mixed Membrane Systems
Janghee Hong, Rakwoo Chang
Department of Applied Chemistry, University of Seoul, Korea

PHYS.P-288 Pulsed laser-induced synthesis of cobalt selenide as bifunctional electro catalyst for total water splitting
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PHYS.P-289 Chemical fluctuation produced by stochastic switch with competitive versus non-competitive inactivation: A pivotal role of active state duration variability
Heemo Yang, Ji-Hyun Kim, Jaeyoung Sung
Department of Chemistry, Chung-Ang University, Korea

PHYS.P-290 Reusable Composite Microspheres for Continuous Flow and Mass Production with Superior Photocatalytic Properties
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PHYS.P-291 Deep Learning Strategy for Prediction of Physical Properties in Binary Chemical Mixtures
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PHYS.P-292 Exploring bifunctional characteristics of Ir doped CoGa-LDH towards overall water splitting
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PHYS.P-293 From PBA to Alloy: Selective Electrocatalysts for Ammonia Synthesis from Nitrite Wastewater
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PHYS.P-294 Threading Subunits for Polymers to Predict the Equilibrium Ensemble of Solid Polymer Electrolytes
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PHYS.P-295 Preparation of antimony-doped tin oxide coating TiO2 microrods and resistance properties
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PHYS.P-296 ZIF-8 derived N-doped porous carbon with Pt catalyst support for electrocatalytic hydrogen evolution reaction (HER) in seawater
Maheskumar Velusamy, Ahreum Min, Cheol Joo Moon, Myong Yong Choi
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PHYS.P-297 Dual hydrogen production from electrocatalytic water reduction coupled with formaldehyde oxidation using a novel pulsed laser produced Ru/Cu composite electrocatalyst
Sagyntay Sarsenov, Senthil Raja Arumugam, Myong Yong Choi
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PHYS.P-298 A novel strategy for synthesis of carbon-coated Ru nanoparticles as robust electrocatalyst for hydrazine assisted energy-saving hydrogen production
Heeeun Ahn, Senthil Raja Arumugam[1], Myong Yong Choi[1]
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PHYS.P-299 Fabrication of high-entropy alloys nanostructure by pulsed laser technique for electrocatalytic hydrazine oxidation reaction
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PHYS.P-300 Nickel-Molybdenum alloy particles with pulse laser irradiation in methanol for hydrogen fuel production via water splitting
Seong Bo Lee, Hyeyeon Lee[1], Chae Eun Park[1], Theerthagiri Jayaraman[1], Myong Yong Choi[1]
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PHYS.P-301 Pulsed laser-assisted synthesis of Pd/$NiCo_2O_4$ composite electrocatalyst for energy-saving hydrogen production
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ANAL.P-302 Considering factors for quantification of tire wear particles in environmental samples
Eunji Chae, Sung-Seen Choi
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ANAL.P-303 Detection of drug compounds using ion mobility spectrometry: Interference by phthalates
He-Ryun Choi, Sung-Seen Choi[1,*]
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ANAL.P-304 Modulation of structural chirality with magnetoplasmonic titania gel structures
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ANAL.P-305 SERS detection of natural dye molecule by metal ion-mediated bonding and NPoM
Kyunghun Kim, Dae Hong Jeong
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ANAL.P-306 Study on interaction between lipid vesicle and proteins by asymmetrical flow field-flow fractionation coupled online with multi-angle light scattering (AF4-MALS)
Donggyun Kim, Seungho Lee, Jaeyeong Choi
Department of Chemistry, Hannam University, Korea

ANAL.P-307 Investigating Surface Plasmon Damping and Fano Resonance Induced by Epitaxial Growth of Palladium on Single Gold Nanorods
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ANAL.P-308 Combined Experimental and Electronic Structure of the Optical Bandgaps of 2-D FeSe
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ANAL.P-309 Simultaneous detection of cyanide and sulfide ions using a fluorescent chemical sensor containing a fluorophore and a potential ligand for metal complexes
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ANAL.P-310 **[Withdrawal]** Tracing Geographic Origins Through Isotopic Ratio Analysis of Human Remains
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ANAL.P-311 Construction of Li-ion transport channels for practical improvement of high-voltage $LiFe_{0.4}Mn_{0.6}PO_4$ cathode material
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ANAL.P-312 Liquid chromatography-mass spectrometry-based approach for multiplexed and direct analysis of mature microRNAs in rat whole blood
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ANAL.P-313 Skin-mountable and wearable colorimetric sensor for human dehydration status monitoring through sodium ion detection
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ANAL.P-314 Laser-Induced Breakdown Spectroscopy Analysis of Magneisum in Fermented Soybean Paste
Hyemin Jung*, Yujin Oh, Minji Kwon, Sang-Ho Nam, Yonghoon Lee
Department of Chemistry, Mokpo National University, Korea

ANAL.P-315 Localized Surface Plasmon Decay Pathways competition on Mesoporous Silica Coated Gold Nanorods Amalgamation
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ANAL.P-316 Use of Makgeolli lees for the removal of Acid Orange 7 dye in aqueous solution
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ANAL.P-317 Label-free vibrational imaging and quantification of microplastics with CARS microspectroscopy
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ANAL.P-318 Digital and multiplexed analysis of disease-related biomarkers by integration of encoded-PEGDA microparticles and microfluidics
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ANAL.P-319 Multiplexed detection of bacteria using barcoded-PEDGA microparticles
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Department of Chemistry, Incheon National University, Korea

ANAL.P-320 Characteristics and electrochemical performance of hydroxyl-functionalized graphene quantum dot-coated Si nanoparticles/reduced graphene hybrid anodes for advanced Li-ion batteries
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ANAL.P-321 Detection of SARS-CoV-2 Using CRISPR/Cas12a-based SERS Sensor
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ANAL.P-322 Bubble wrap-like carbon-coated rattle-type silica@silicon nanoparticles by surface-protected etching as hybrid anodes for lithium-ion batteries
Angelica Martino, Hyun Jin Kim, Chang-Seop Lee
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ANAL.P-323 Classification of fermented soybean pastes based on the concentrations of Mg and Sr using K-nearest neighbors
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ANAL.P-324 Determining the Electrical Surface Properties of Iron Selenide by Contact Electrification
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ANAL.P-325 Antimicrobial activity Enhancement of LPcin analogs using NMR spectroscopy
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Department of Chemistry, Hankuk University of Foreign Studies, Korea

ANAL.P-326 Enhancement of FO-SERS sensing and quantitative detection of pancreatic cancer biomarker CA19-9 by optimization of optical fiber surface and path
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ANAL.P-327 Defining Co-resistance Mechanisms in Cytarabine-resistant Human Acute Myeloid Leukemia Cells Using Biochemical Analysis
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Department of Chemistry, Korea University, Korea

ANAL.P-328 Paper-based PCR platform integrated thermocycler on digital microfluidics chip
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ANAL.P-329 The Artificial Circulatory System for Tumoroids (ACT): Investigating the Impact of Pharmaceutical and Biomimetic Approaches on Through MS-based Analysis
Sooyeon Chae, Hugh I. Kim
Department of Chemistry, Korea University, Korea

ANAL.P-330 New phenothiazine-conjugated benzimidazoles for naked eye detection of Au^{3+}, Ag^{+} and Hg^{2+}
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ANAL.P-331 Gas chromatography and Paper spray ionization mass spectrometry for the analysis and differentiation of eucalyptus oils
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ANAL.P-332 Volatile organic compounds (VOCs) capture with Deep eutectic solvents (DESs) and analysis by headspace gas chromatography mass spectrometry
Seo Young Hwang
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ANAL.P-333 Phosphoproteomic analysis to identify the mechanism underlying the development of childhood autism on prenatal VPA exposure
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Daegu Gyeongbuk Institute of Science & Technology, Korea

ANAL.P-334 Metabolic Isotope Labeling of Glycans in Fruit Fly for Quantitative Mass Spectrometry
Ye-Eun Cho, Jae-Min Lim

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ANAL.P-335 Development of phosphate ion-selective electrode for monitoring soil nutrients
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ANAL.P-336 NMR structural studies of anti-inflammatory Peptide, tIK
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ANAL.P-337 Quantification of Inorganic Mercury Using Ion-Exchange Membranes and Laser-Induced Breakdown Spectroscopy
Jang Mi Park, Sang-Ho Nam, Yonghoon Lee
Department of Chemistry, Mokpo National University, Korea

ANAL.P-338 Improving accuracy for determination of active pharmaceutical ingredient concentration in tablets with varying compaction density using oversampling strategy
Haeseong Jeong, Hoeil Chung
Department of Chemistry, Hanyang University, Korea

ANAL.P-339 Characterization of pore-forming Amyloid Beta Protein using NMR Spectroscopy
Joohan An, Yongae Kim, Minseon Kim
Department of Chemistry, Hankuk University of Foreign Studies, Korea

ANAL.P-340 A hybrid carbon/solid-electrolyte coating on Fe3BO5 conversion type anodes for ultra high C-rate applications
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ANAL.P-341 SABRE Hyperpolarization of Nicotinamide Derivatives and its Chemical Kinetic Properties
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ANAL.P-342 Improving the electrochemical performance of $Zn_3(BO_3)_2$ as an anode material for Li-ion batteries
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ANAL.P-343 Sensitivity Enhancement of Biomolecules Detection through Flow-Controlled Lateral Flow Assays
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ANAL.P-344 CRISPR/Cas13a-mediated SERS-based dual-flow assay strips for amplification-free detection of SARS-CoV-2 RNA
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ANAL.P-345 Investigation of Light-Responsive Microcapsules Based on Renewable Materials
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ANAL.P-346 A Comprehensive Study of Conformational Changes in Malachite Green Using Electrochemistry-SERS
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ANAL.P-347 Developing a consumable-free peristaltic pump replacement for ICP-MS
DongChan Lee
NvisANA, Korea

ANAL.P-348 Preprocessing Challenges for Ultra-Trace Analysis in the Beverage
JongHo Ban, Seung Mo Nam[1], Woong-ki Kim[1], Yujin Seo[2], Siyeong Park[3], Sungyool Bong[4,*]
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ANAL.P-349 A Systematic Review of Volatile Organic Compounds Analysis as a Screening Tool for Breast Cancer
Ju young Kim, Yejin Park, Sunyoung Bae
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ANAL.P-350 Radical and 29Si-isotope enrichment silica nanoparticles for 29Si Dynamic Nuclear Polarization
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ANAL.P-351 Comparison of the performance of thickness-tapered channel in flow field-flow fractionation with the effect of field programming in a uniform channel
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Department of Chemistry, Yonsei University, Korea

ANAL.P-352 Lipid perturbation in brain and spleen tissues of mice caused by SARS-CoV-2 using nanoflow UHPLC-ESI-MS/MS
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ANAL.P-353 NMR structural studies of Syndecan-4 and PIP_2 in cellular signaling
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ANAL.P-354 NMR structural studies of Obesity related hMC4R-TM2
Yeseul Yang, Yongae Kim[1,*], Minseon Kim[1]
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ANAL.P-355 Biomarker discovery in prostate cancer from 20 cancer patients with tissue proteomics
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ANAL.P-356 Characterization of serum exosome lipids from patients with cholangiocarcinoma by nUHPLC and mFIFFF coupled with ESI-MS/MS
Hyeju Yu, Myeong Hee Moon
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ANAL.P-357 SARS-CoV-2 induced lipid perturbation in lung, liver, and serum of mice
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ANAL.P-358 Rapid Forensic Analysis of Gel Pen Ink Using Capillary Zone Electrophoresis and MALDI-TOF MS
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ANAL.P-359 Microdispensers integrated with paper-based electrowetting-on-dielectric for high-precision chemical synthesis
Semin Chun, Sarath Kin, Oh-Sun Kwon, Kwanwoo Shin
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ANAL.P-360 Optimization of skin sampling method for lipidomic analysis via nanoflow nUHPLC-ESI-MS/MS
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ANAL.P-361 Real-time and absolute quantification of rare disease biomarkers using droplet microfluidics
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ANAL.P-362 Raman spectroscopic quantification of microplastic particles in water using polydimethylsiloxane-coated nickel foam as a particle-capturing platform
Sangjae Kim, Hoeil Chung
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ANAL.P-363 LC-MS based metabolomic analysis of plasma from a severe COVID-19 patient treated with ECMO
Yourim Shin, Youngae Jung, Geum-Sook Hwang[1,*]
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ANAL.P-364 Plasmonic Nanogap-Nanoparticles Engineered by Non-Thiolated DNAs for Highly Sensitive Nanobiosensors
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ANAL.P-365 Untargeted Metabolomic Analysis of Liver Tissues for Mouse Infected with Covid-19
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ANAL.P-366 LC-MS-based lipidomics reveals disrupted lipid metabolism in macrophages exposed to particulate matter
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ANAL.P-367 Vibrational Circular Dichroism for analysis of metal chalcogenide nanoparticle
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ANAL.P-368 Band gap analysis of FeSe nanomaterials with diverse dimensions using optical method

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ANAL.P-369 Advanced Solution NMR Spectroscopy for Comprehensive Characterization of Crystalline Phases in Poly(vinylidene fluoride) (PVDF) for Good-performance Electrode
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ANAL.P-370 Metabolic and immunological responses to Delta and Omicron variant infection in hamster lung tissue
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ANAL.P-371 Investigation on Microbial Degradation of Biodegradable Microcapsules Using 1H-NMR
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ANAL.P-372 Comprehensive profiling of PHF6 T208-induced interactome to seek mechanism hints of its epigenomic dynamic changes in breast cancer
Jiwon Hong, Somi Jeong, Sang-Won Lee
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ANAL.P-373 Chemical characterization of aerosol particulate matter with UHR-MS and Neural networks from Road, Subway, and Urban Sources
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ANAL.P-374 Band gap Estimation of 2D Multilayered FeSe nanoplates using Cyclic Voltammetry
Jae Kyung Lee, Jaebeom Lee
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ANAL.P-375 photoelectrocatalysis Effects of IrO_2 cocatalysts on $SrTiO_3$ nanocubes
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ANAL.P-376 Voltage-programmed Capillary Gel Electrophoretic Separation for the Fast Screening of PCR Products of Severe Acute Respiratory Syndrome Coronavirus 2 with High Sensitivity
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ANAL.P-377 EGaIn Liquid Metal and Au Hetero-Plasmonic Nanoparticles
Seoyoung Hur
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ANAL.P-378 Plasmon-Driven Catalytic Performance of Au/Pd Core-Shell Nanoparticles and Mechanistic Insights
Lucas Cho
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ANAL.P-379 Laser induced damage of nanoplastics during Raman detection
Juhui Seo
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LIFE.P-52 Investigation on Chemical Inhibitors of Starch Excess 4
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LIFE.P-53 Spontaneous Osteogenic Differentiation of Human Mesenchymal Stem Cells by Tuna Bone-Derived Hydroxyapatite Composites with Green Tea Polyphenol-Reduced Graphene Oxide
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LIFE.P-54 Designing Multi-target-directed Flavonoids: A Strategic Approach to Alzheimer's Disease
Seongmin Park, Mi Hee Lim
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LIFE.P-55 Impact of sphingosine and acetylsphingosines on the aggregation and toxicity of metal-free and metal-treated amyloid-β
Yelim Yi, Jiyeon Han[1], Hyuck Jin Lee[2], Young S. Park[3], Mi Hee Lim
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LIFE.P-56 NMR Study of the Contribution of the α4 Helix of Human TALE TF, PBX4 to DNA Binding
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LIFE.P-57 NMR Study on target DNA recognition of transcription factor HoxA1
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LIFE.P-58 Impact of exogenous aminoacyl-tRNA synthetase and tRNA on temperature sensitivity in *Escherichia coli*
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LIFE.P-59 Comparison of Z-DNA and Z-RNA binding mode of the ADAR1-Zα protein mutants
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LIFE.P-60 Genetic encoding of fluorogenic synthetic amino acids for bioimaging
Hwiyeong Lee, Minseob Koh
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LIFE.P-61 A Microbial Biosensor for Fluoride Ion Detection
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LIFE.P-62 Understanding the DNA recognition mechanism of FOXO4 through NMR investigation
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LIFE.P-63 Development of a Peptide Inhibitor of the FOXO4-p53 Interaction Based on the Sequence of p53 Transactivation Domain
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LIFE.P-64 Temperature-sensitive protein-protein Interaction module for gene expression switch
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LIFE.P-65 Structural basis for the selective methylation of 5-carboxymethoxyuridine in tRNA modification
Jaehun Yoo, Jungwook Kim
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LIFE.P-66 Human embryonic stem cell factor L1TD1 dissolves ribonucleoprotein condensates
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LIFE.P-67 Transcriptome-wide location analysis of EIF4A3 binding sites reveals interactions with pre-rRNAs and snoRNAs
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LIFE.P-68 Development of *In Situ* Click Chemistry Screening Strategy for a Efficient Discovery of Potent Protein Ligands
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LIFE.P-69 Design, Synthesis, and Screening of DNA-Encoded Libraries of Macrocyclic Peptides and Peptidomimetics.
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LIFE.P-70 Development of Nanoparticle-Based Encoded Library Technology as a Versatile Tool for Discovery of Potent Protein Ligands
Hee Myeong Wang, Hyun-Suk Lim
Department of Chemistry, Pohang University of Science and Technology, Korea

LIFE.P-71 Understanding Actin-Microtubule Architecture and Microtubule Bundle Patterns on Crowded Environment and Confinement Condition
Chang Ho Kim, Sang Ho Lee[1], Albertus Ivan Brilian[2], Eunjin Huh[1], Kwanwoo Shin[1]
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LIFE.P-72 Novel Design of Phase Separation Drivers Based on Fluorescent Proteins
YongJun Ha, Da-Eun Hwang, Da-Hyun Koo[1], Yongwon Jung[2], Jeong-Mo Choi
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LIFE.P-73 Biochemical study on the FRET efficiency of various fluorescent protein pairs
Yu Jeong Kim, Jae-Won Soh
Department of Chemistry, Inha University, Korea

LIFE.P-74 Single-molecule evaluation of fluorescent proteins for gene loci observation in live and fixed Escherichia coli
Jung Bae Son, Nam Ki Lee
Division of Chemistry, Seoul National University, Korea

LIFE.P-75 Nanoparticle-promoted on-DNA Grignard reactions for DNA-encoded library synthesis
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LIFE.P-76 Investigating the Mode of Action of Antimicrobial Peptoids with Multi-Cationic Side Chains
Yeojin Yun, Jiwon Seo
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LIFE.P-77 **[Withdrawal]** Revealing new phosphoarginine binding proteins using chemoproteomic methods
Seungmin Ahn, Jung-Min Kee
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LIFE.P-78 Development of single-cell level bacteria detection and species identification method using super-resolution microscopy
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LIFE.P-79 Super-resolution structural study of the crucial roles of extracellular vesicles in host-parasite interactions
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LIFE.P-80 Development of STRIC (Stimulus TRiggered Cleavage) technology for immune-modulating antibody-payload conjugate
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LIFE.P-81 Shotgun Scanning Proteomics using Genetically Encoded Photocrosslinkable Amino Acid
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LIFE.P-82 Synthesis of Porphyrin-Deferoxamine B conjugates for antimicrobial application
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LIFE.P-83 Development of ROS-generating moiety containing peptoid as a potent antimicrobial agent with a multi-target mechanism
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LIFE.P-84 Observing Nanoscale Deformation of Actin in Human Dermal Fibroblasts using Super-resolution Microscopy
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LIFE.P-85 Ultrashort antimicrobial peptoids for improved cell selectivity and drug resistance
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LIFE.P-86 Extracellular matrix proteins modify the lipid distribution observed in an artificial cell model
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LIFE.P-87 Hollow-structured Colloidal Quantum Dots for High-Sensitive Biomolecular Detection
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LIFE.P-88 A Controllable Artificial Eukaryotic Cell-like Model
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LIFE.P-89 Residue 103 is temperature regulation factor in Heat Shock Factor1 trimerization
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LIFE.P-90 Cysteine is essential for the HSF1 trimerization.
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LIFE.P-91 Chiral presentation of pyrene on a peptoid scaffold: secondary structure-driven excimer chirality inversion
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LIFE.P-92 Synthesis of fluorescein-labeled iron-chelating peptoid and internalization of the conjugate into gram-negative bacteria
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LIFE.P-93 Structural stabilization of dynamic DNA-gold nanoparticle free-standing films via enzymatic ligation
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LIFE.P-94 Investigation of Molecular Mechanisms Underlying Suppressed Aβ42 Aggregation by Small Molecules
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LIFE.P-95 Unveiling the Molecular Mechanism of Amyloid-β (1-42) Aggregation Suppression through Host-Guest Interaction with Cucurbit[7]uril
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LIFE.P-96 A Study on the synthesis of organogermanium-vitamin C derivatives and their biological effect
Sangmin Park
Chung-Ang University, Korea

LIFE.P-97 Self-assembled Nanostructure of Homo-oligopeptide with Ice Recrystallization Inhibition Activity
Yong Duk Kim, Dongkwon Lim[1,*]
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LIFE.P-98 Controlling autophagy by spatiotemporal protein photo-oxidation to overcome drug resistance.
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ORGN.P-99 A near-infrared fluorescence chemosensor for selectively detecting hydrazine in aqueous solutions
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ORGN.P-100 Polydomaine-coated agarose film as a template for visible-light-induced polymerization
Ma Hyeonsoo, Hoyun Kim, Jieun Yoon, JungKyu Lee
Department of Chemistry, Kyungpook National University, Korea

ORGN.P-101 a-L-Fucosidase–responsive AIEgen for cellular senescence in vivo imaging
Miae Won, Jong Seung Kim
R&D institute, TheranoChem Inc, Korea

ORGN.P-102 MoO3 nanoparticle decorated carbon nanotube catalytic application for cross-dehydrogenative coupling-type aza-Henry reaction
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ORGN.P-103 Oxygen-Dependent Photoaddition Reactions of Silyl Tether Containing *N*-Phenyl Amino Acid Esters with Fullerene C_{60}.
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Department of Chemistry, Yeungnam University, Korea

ORGN.P-104 NHC-Catalyzed Oxidative Cyclization for the Regioselective Synthesis of 3-Aminoisocoumarins
Won Bin Ha, Phil Sik Kim, So Won Youn
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ORGN.P-105 NHC/Base-Catalyzed Regioselective Synthesis of (*Z*)-3-Aminomethylenephthalides via Umpolung β-Addition of Ynamides
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ORGN.P-106 Research on the Combination of Urethane Structure and LiFSI for Mitigating Explosion Risks in Lithium-Ion Batteries
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ORGN.P-107 Hydrophilicity-Driven Predictable Architectures of β-Peptide Foldamers
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Department of Chemistry, Korea Advanced Institute of Science and Technology, Korea

ORGN.P-108 Imidazo[1,5a]pyridinylidene-nickel catalysts for acrylate synthesis from ethylene and CO_2
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ORGN.P-109 Visible-light-promoted preparation of sulfonamide derivatives via one-pot reaction of arylazo tetrafluoroborate, DABSO, and benzoyl amine
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ORGN.P-110 Synthesis of Oxime Esters from Aldehyde via Visible-Light-Induced Multicomponent Reaction
Anh Thu Nguyen, Hee-Kwon Kim
Department of Nuclear Medicine, Jeonbuk National University, Korea

ORGN.P-111 Spirofluorene-Indenopyridine substituted anthracene derivatives for efficient blue Organic Light-Emitting Diodes
Donggun Lee, Seung Soo Yoon
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ORGN.P-112 HFIP Empowered Synthesis of C4-Arylated Tetrahydroquinolines with Propargylic Chlorides and Anilines
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ORGN.P-113 Photoredox Catalyzed Decarboxylative Vinylation of PEG-tethered Sugars and Alkynes
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ORGN.P-114 o-(2-Thienyl)vinylarene as an Alternative Synthetic Motif for Por-phyrinoids: o-Arene-connected porphyrinoids
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ORGN.P-115 Exploration of Unstabilized Aryldiazoalkanes in Lewis Acid Catalyzed Enantioselective 1,3-Dipolar Cycloaddition
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ORGN.P-116 Total synthesis of (E)-Secobutanolides: Structure Analysis of (+)-Litseakolide F and G
Jin Won Lee, Do Hyun Ryu
Department of Chemistry, Sungkyunkwan University, Korea

ORGN.P-117 Dia- and Enantioselective Cyclization reaction of Aryl Glyoxals with Allylsilanes Using Chiral Oxazaborolidinium Ion Catalyst
Dong Kyu Kim, Terim Seo, Do Hyun Ryu
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ORGN.P-118 Catalytic Asymmetric Formal C–C Bond Insertion of Diazo Compound for the Enantioselective Formation of All-carbon Quaternary Stereocenters
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Department of Chemistry, Sungkyunkwan University, Korea

ORGN.P-119 Conversion of Chiral Epoxides with gem-Diborylalkanes: Stereospecific Approach of Secondary and Tertiary Cyclopropylboronates
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ORGN.P-120 Ir(III)-Catalyzed Regioselective B(4)–H Amination of *o*-Carboranes with Sulfilimines
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ORGN.P-121 Ru(II)-Catalyzed Selective B(4)–H Amidation of *o*-Carboranes with Dioxazolones
Sugyeong Yoon, Phil Ho Lee
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ORGN.P-122 Synthesis of *o*-Carboranyl Diazo Compounds from B(4)-Acylmethyl Carboranes and 2-Azido-1,3-Dimethylimidazolinium Hexafluorophosphate
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ORGN.P-123 Ru-Catalyzed B(4)-Selenylation and Pd-Catalyzed C(1)-Selenylation of *o*-Carboranes
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ORGN.P-124 Iridium(III)-Catalyzed C–H Cyclization of Sulfoximines with Diazo Meldrum's Acids for the Synthesis of Cyclic Sulfoximines
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ORGN.P-125 Microcrystal Electron Diffraction in Determining Crystal Structures of Metal-Biomolecule Complexes
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ORGN.P-126 Cyclic β-Amino Acid Enriched with Thioether Functionality and Versatile Post-synthetic Modifications of Helical β-Peptides
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ORGN.P-127 Chiral Recognition in Short β-Peptide Foldamers: Insights from Racemic Mixtures
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ORGN.P-128 Catalytic Asymmetric 1,2-Addition of Borylalkene-Derived Nucleophiles to Imines for Chiral β-Aminoboronate Synthesis
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ORGN.P-129 Divergent access to functionalized sulfones or skipped dienes via base-controlled boroallylation of alkenyl sulfones
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ORGN.P-130 Benzoyl Chloride-Catalyzed Reaction of *N*-Acyl Iminophosphoranes: New Synthetic Methodology for Organic Nitriles
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ORGN.P-131 Triphenylcarbenium Tetrakis(pentafluorophenyl)borate Enabled Sustainable and Extremely Active Cyanosilylation of Ketones
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ORGN.P-132 Manganese(I)-Catalyzed *ortho*-selective C-H Alkenylation of Purines Using Terminal Alkynes
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ORGN.P-133 Solution-Based Synthesis for Large-Scale Peptide Nucleic Acid
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ORGN.P-134 Janus-Type ESIPT Chromophores with Distinctive Intramolecular Hydrogen-bonding Selectivity
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ORGN.P-135 Electron donor-acceptor type delayed fluorescence emitters with inverted singlet and triplet excited states
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ORGN.P-136 A Strategy for Enzyme-Responsive Foldecture Construction
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ORGN.P-137 Self-Assembly Induced Photosensitization of Long-Tailed Heavy-Atom-Free BODIPY Derivatives for Photodynamic Therapy
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ORGN.P-138 Temperature controlled divergent synthesis of 2H-pyrrole and oxathiazonine
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ORGN.P-139 STRATEGY FOR REDUCING NON-RADIATIVE RECOMBINATION IN DYE-SENSITIZED SOLAR CELL
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ORGN.P-140 Alkyl SuFEx Hubs of Quaternary Carbon Stereogenic Centers via Super Brønsted Base Organocatalysis
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ORGN.P-141 Stereoselective bis-arylation and oxazolidinone-mediated stereoselective tris-arylation from aziridine-2-carboxylate
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ORGN.P-142 Cu-Catalyzed Regio- and Stereoselective Disilylation of 1-Aryl-substituted buta-2,3-dien-1-ols
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ORGN.P-143 Copper-catalyzed silylation of allenols with silylborane reagents
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ORGN.P-144 Copper Catalyzed One-Pot Arylation and Cyclization of Diaryliodonium Salts Derived from o-Iodoanilines for heterocycles syntheses.
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Department of Chemistry, Gachon University, Korea

ORGN.P-145 Unveiling Metal-Peptide Interactions: Synthesis and Characterization of Histidine-Integrated Foldamer Ligands
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ORGN.P-146 Mitochondria-targeted heavy-atom-free photosensitizers based on thiophene-fused BODIPY for aggregation-induced fluorescence theranostic
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ORGN.P-147 A Heavy-Atom-Free Photosensitizer: The Imidazole-Carbazole Conjugate for Two-Photon-Excited Photodynamic Therapy and Fluorescence Imaging
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ORGN.P-148 Degradation of Cyano-arenes based Organic Photocatalysts in the presence of amines.

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ORGN.P-149 A method for Synthesis of tri-substituted Pyrazole from β,γ-unsaturated-α-ketoester
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ORGN.P-150 Synthesis of Functionalized Isocoumarin Derivatives via Base-promoted Dimerization of 2-(Cyanomethyl)benzoyl Fluorides
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ORGN.P-151 Bifunctional imidazo[1,5-a]pyridine (ImPy)-derived N-heterocyclic carbene (NHC)-palladium catalysts for Buchwald-Hartwig amination
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ORGN.P-152 Synthesis of Diarylketones via Palladium-Catalyzed Coupling Reactions between Acylsilanes and Diaryliodonium Salts
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ORGN.P-153 A simple method for synthesis of diversely substituted pyrazole
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ORGN.P-154 Correlation between cross-linking density and drug diffusion in thiol-norbornene photopolymerized PEG hydrogels
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ORGN.P-155 Synthesis and Characterization of Cationic Pd Complexes with 2-benzyl-oxazolines as hemilabile coordination
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ORGN.P-156 Tetra-component Palladium-catalyzed Asymmetric Diboration of Allenamides: Synthetic Approach to (Z)-δ-Amino Homoallylic Alcohol
Hae Eun Lee, Jin Kyoon Park, Tae Jun Kim
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ORGN.P-157 Exploration of Chiral Phosphine Ligands in Palladium-Catalyzed Asymmetric Silaboration of Allenamide
Tae Jun Kim, Hae Eun Lee, Jin Kyoon Park
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ORGN.P-158 Photocatalytic hydroxyl radical generation for protein mapping
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ORGN.P-159 Organophotocatalyzed synthesis of 3-arylsulfonylated thioflavones via in situ activation approach
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ORGN.P-160 Synthesis of 3-Arylselanyl Benzothiophenes via Visible Light-Mediated Radical Cyclization
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ORGN.P-161 One-Pot Synthesis of Selenosulfides under Mild Reaction Conditions
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ORGN.P-162 Synthetic Strategy for Tetraphenyl-Substituted All-*E*-Carotenoids as Molecular wire
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ORGN.P-163 Grifolin synthesis optimization via C-alkylation of 5-methylcyclohexane-1,3-dione
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ORGN.P-164 Apocarotenals of Phenolic Carotenoids for Superior Antioxidant Activities.
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ORGN.P-165 Application of Mn(III)/Co (II) catalyzed oxidation-synthesis of benzofuran and derivatives
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ORGN.P-166 Biomass conversion synthesis to pyralline platform through one-pot reaction of ribose and amino acids and synthesis of various pyrrole alkaloid derivatives
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ORGN.P-167 Synthesis of diglycerides using bioactive organic substances
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ORGN.P-168 Palladium-Catalyzed S-allylation of Allylic Alcohols as a Highly Effective Method for Synthesis of Carotenoids by Julia-Kocienski Olefination
Aleksei Golikov, Sangho Koo
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ORGN.P-169 Practical efficient synthesis of Dichloroglyoxime
Hae-Wook Yoo, SeungHee Kim, So Jung Lee, Kuktae Kwon
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ORGN.P-170 The Synthesis of Disubstituted Cyclic Ethers via Pd-Catalyzed Intermolecular Oxidative Cyclization Cascade.
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ORGN.P-171 A Bulky Chiral Imidazo[1,5-a]pyridin-3-ylidene Ligand Enabling Pd(II)-Catalyzed Enantioselective Desymmetrization Reaction and Enantioselective Synthesis of 3,4-Dihydro-2-quinolinone to All-Carbon Quaternary Stereocenters.
Woosong Han, Huijeong Ryu, Sukwon Hong
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ORGN.P-172 A novel synthesis of quinazoline derivatives by polymer-supported methodologies
Chang Sang Moon*, Jae Yeol Lee
Department of Chemistry, Kyung Hee University, Korea

ORGN.P-173 An Eco-Friendly Route to Access 4,5-Unsaturated Sulfonamides via Three-Component Alkene Carbo-Sulfonamidation.
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ORGN.P-174 Education Application of Wittig Reaction Using Modular Microfluidic Chip
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ORGN.P-175 Fenoprofen-lipoic acid derivatives for butyrylcholinesterase inhibitor
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ORGN.P-176 Melamine-cored Glucosides (MGs) for Membrane Protein Stabilization
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ORGN.P-177 Photosensitized Oxygenation of Oxophilic Silyl Group Containing Electron-Deficient Enaminoester: Direct Access to Aldehyde Formation
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ORGN.P-178 Intramolecular Cyclization of *N*-Cyano Sulfoximines by N-CN Bond Activation
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ORGN.P-179 PET Mechanism-Based Ratiometric Dual-Emissive Fluorescent Probe for the Detection of H2S
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ORGN.P-180 Conversion from 5-Hydroxymethylfurfural (HMF) to 2,5-Diformylfuran (DFF) through Continuous Flow System
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ORGN.P-181 Exploring NO Involvement in Autophagy and Ferroptosis via a Lysosomal-Targeted Fluorescent

Probe
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ORGN.P-182 Design of a double-locked fluorescent probe for selective imaging of NTR and H_2S in hypoxic cancer cells
Shin A Yoon, Min Hee Lee
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ORGN.P-183 Simultaneous fluorescent detection of hNQO1 and NTR in hypoxic cancer cells using a single probe
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ORGN.P-184 Cellular Redox Dynamics Study Using a Dual-Sensing Bioprobe for Hydrogen Sulfide and Hydrogen Peroxide Detection
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ORGN.P-185 Dual-functional Fluorescent Probe to simultaneously detect adenosine triphosphate ATP and hypochlorite ion (ClO–), in living cells and Drug-Induced Liver Injury mice model.
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ORGN.P-186 Pyridoquinolones for Organic Electronic Applications
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ORGN.P-187 Synthesis of Photo-Cleavable Azo Surfactants
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ORGN.P-188 Conjugatable Fluorophores with Ultralarge Stokes Shifts
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ORGN.P-189 Efficient Synthesis of Nucleoside Phosphonamidate Prodrugs Using Cross Metathesis Associated with Ultrasonic Radiation
Se Myeong Choi, Yeon Jin An, Eun Rang Choi, Ji Yeon Yang, Yong Hun Choi, A Young Jung, So Jung Kwon, Jong Hyun Cho
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ORGN.P-190 Chiral Molecular Clips for Stereoselective Self-Assembly
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ORGN.P-191 pH-Driven Hydrophobicity Switching for Anion Recognition in Water
Seungyeon Hyun, Dongwhan Lee
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ORGN.P-192 Photo-oxidation of 1,5-dihydroxynaphthalene (1,5-DHN) to 5-hydroxy-1,4-naphthalenedion (Juglone) slug based continuous flow system
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ORGN.P-193 Photochemical reaction of intermolecular cyclization between N-((trimethylsilyl)methyl)-N-phenyl-substituted and N-phenylmaleimide via visible light
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ORGN.P-194 Modulating the frontier molecular orbitals of phenothiazine derivatives for electrochromic applications
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ORGN.P-195 The steric hindrance in PN annulation facilitated the synthesis of PN-fulvenes
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ORGN.P-196 Cu-Catalyzed Regioselective Hydrosilylation of Mono- and Di-substituted Allenes
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ORGN.P-197 Protocatechuic acid derivatives effectively inhibit TNF-α-induced inflammatory response.
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ORGN.P-198 Fluorescent tagging of proteins using flow chemistry
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ORGN.P-199 Efficient Detection of Heavy Metal Lead Ions in Water using AIE-based Turn-on Fluorescence Sensor
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ORGN.P-200 Ultrasensitive Determination of Trypsin in Human Urine Based on Amplified Fluorescence Response
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Department of Chemistry, Daegu University, Korea

ORGN.P-201 Ratiometric Fluorescence Detection of Tyrosinase Activity Based on Excited-State Proton Transfer
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ORGN.P-202 Visible-Light-Mediated Alkylation of Imines Using Alcohol as a Radical Precursor
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ORGN.P-203 Synthesis of Monomeric Masked ortho-Benzoquinones via Oxidative Dearomatization of ortho-Substituted Phenol MIDA Boronates
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ORGN.P-204 Skeleton Divergent Total Synthesis of Monoterpene Indole Alkaloids
Myunghoon Jeong, Cheol-Hong Cheon
Department of Chemistry, Korea University, Korea

ORGN.P-205 Synthetic Studies towards Guettardine
Seungmin Ryu, Cheol-Hong Cheon
Department of Chemistry, Korea University, Korea

ORGN.P-206 Synthesis of 3-trifluoromethyl benzo[b]thiophenes via electrochemical cyclization reaction
Gihun Kwak
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ORGN.P-207 Synthesis and Characterization of selenium-containing non-fullerene acceptors for organic solar cells
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ORGN.P-208 Alkaline phosphatase responsive disulfide formation for transforming into fiber structure inside mitochondria of senescent cells
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ORGN.P-209 Carbofunctionalization of Terminal Alkynes via Combined Rhodium Catalysis Enabling Formations of Four Different Bonds
Dae-Kwon Kim, Minjung Keum, Chulbom Lee
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ORGN.P-210 Supramolecular Polymerization of *p*-phenylene Linked Metalloporphyrin Dyads
Yongho Lee, Woo-Dong Jang
Department of Chemistry, Yonsei University, Korea

ORGN.P-211 Electrooxidative Palladium-Catalyzed Remote Hydrofunctionalization of Olefins with Nucleophiles
Seungdae Park, Baeho Yang, Dohyun Lee, Hyunwoo Kim[1,*], Kwangmin Shin
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ORGN.P-212 General access to α-cyano carbonyl compounds via NiH-catalyzed hydrofunctionalization of α,β-unsaturated nitriles with carbonyl electrophiles
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ORGN.P-213 Iridium-Catalyzed Regioselective B(4)-Alkenylation and B(3,5)-Dialkenylation of *o*-carboranes
Jiwon Kim, Phil Ho Lee
Department of Chemistry, Kangwon National University, Korea

ORGN.P-214 Conversions of Sulfonylamides and Sulfinylamides with Benzyne Intermediates for the Selective Formation of Dihydroquinolin-4-one and Chroman-4-imine Skeletons
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ORGN.P-215 Synthesis of Naturally Occurring Dihydroavenaciolide and Dihydro-4-epi-ethisolide through Cyclocarbonylation of Allenyl Glyoxylate: Correction of Stereochemistry
Jisu Kim, Suh Young Yu, Jimin Kim
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ORGN.P-216 MOF-TEMPO-Catalyzed Oxidative Cyclization Between Aminophenol and Aldehydes
Jonghyeon Lee, Daeyeon Lee, Min Kim
Department of Chemistry, Chungbuk National University, Korea

ORGN.P-217 Amine Functionalizations on Dopamine Molecules
Yoonji Heo, Min Kim
Department of Chemistry, Chungbuk National University, Korea

ORGN.P-218 Background-Signal-Minimized Fluorescent Sensing Systems for Alzheimer's Diseases Diagnosis
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ORGN.P-219 Chemodynamic/Photodynamic Synergistic Therapy for Cancer Stem Cell with A Carbonic Anhydrase IX-targeted Cu(II)-BODIPY PS complex
Eunbin Hwang, Jungmin Lee[1], Lee Soeun[2], Seyoung Koo[3], Miae Won[4], Jong Seung Kim[5,*], Hyo Sung Jung[6,*]
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ORGN.P-220 Performance improvement of Y-series based acceptors through halogenation of terminal groups
Hoeon Baek, Yun Hi Kim[1,*]
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[1]Department of Chemistry, Gyeongsang National University, Korea

ORGN.P-221 Synthetic Studies towards Madeirolide A
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ORGN.P-222 Calix[4]pyrrole with Extended Indole as highly selective receptor for the phosphate anion
Ju hyun Oh, Sung Kuk Kim
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ORGN.P-223 Deuterium Exchange of Pyrrolic NH Protons Accelerated by Fluoride and Bicarbonate Binding in CDCl3, CD3CN and DMSO-d6
Nam Jung Heo, Sung Kuk Kim
Department of Chemistry, Gyeongsang National University, Korea

ORGN.P-224 Rational Design, Synthesis and Biological Evaluation of Novel Ionizable Lipid Materials for RNA Delivery
Faisal Muhammad, Soyeon Yoo[1], Gyo chang Keum[1], Eun-Kyoung Bang[1]
Organic chemistry, University of Science & Technology, Pakistan
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ORGN.P-225 Metal Ion Recognition of 12- and 24-Membered Macrocycle-Based Chromogenic Sensors via 1:1 and 2:2 Cyclization
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ORGN.P-226 Phosphine-Catalyzed [5 + 4] Cycloaddition of 2,3-Butadienoates and N-aromatic Zwitterion
Sekwang Baek, Eun Jeong Yoo
Department of Applied Chemistry, Kyung Hee University, Korea

ORGN.P-227 [5 + 3] Cycloaddition of N-Aromatic Zwitterions by Switching Regioselectivity of Metal-Allyl Species
Sumin Lee, Eun Jeong Yoo, Sekwang Baek
Department of Applied Chemistry, Kyung Hee University, Korea

ORGN.P-228 Structural Studies in Valine-based D/L-Peptides Introducing Cyclic β-Aamino Acids
Mireu Kim, Soo Hyuk Choi
Department of Chemistry, Yonsei University, Korea

ORGN.P-229 Palladium-Catalyzed Enantioselective [3 + 2] Cycloaddition of N-Aromatic Zwitterions and Vinylcyclopropanes
Juno Im, Eun Jeong Yoo
Department of Applied Chemistry, Kyung Hee University, Korea

ORGN.P-230 Synergistic Activation of di-Proline-Thiouronium Salt Catalysts for Highly Enantioselective Asymmetric Michael Addition of Aldehydes to Nitroolefins
Hyoung Min Yeo, Taek Hyeon Kim
School of Chemical Engineering, Chonnam National University, Korea

ORGN.P-231 Conformational Analysis of α/β-Peptides and β-Peptides Containing Azepane-Derived Heterocyclic β-Amino-Acids
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ORGN.P-232 Scalable Synthesis of *cis*-2-(Aminomethyl)cyclohexane Carboxylic Acid Using Diastereomeric Salt Formation
Heeyeon Kim, Soo Hyuk Choi[1,*]
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ORGN.P-233 Nickel-Catalyzed Borylation of Aryl Fluorosulfates
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ORGN.P-234 HFIP Mediated Synthesis of C4-Arylated Quinolones via Serial Oxidation
Minseok Kang, Hyung Min Chi
Department of Chemistry, Pohang University of Science and Technology, Korea

MEDI.P-235 A Cancer-Specific Cell-Penetrating Peptide BR2 for Targeted Delivery of Oxaliplatin Toward Colorectal Cancer

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MEDI.P-236 Confirmation of Synergistic Anti-inflammatory and Anti-aging Efficacy of Complex Extracts from *V. rotundifolia* and *I. okamurae*

Mingyeong Kim, Dain Um[1], Shin Minyoung[2], Eun-Seok Oh[3], Sang Yun Kim[3], Chi-Young Yun[4], Byong Wook Choi[1], Bong Ho Lee
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MEDI.P-237 Development of Cleavable Linker Conjugated Silica Nanoparticles for Theranostics

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MEDI.P-238 Optimization and evaluation of pyridinyl vinyl sulfones as Nrf2 activator for the antioxidant and anti-inflammatory effects

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MEDI.P-239 Enhance skin smoothness and boost skin suppleness by fortifying adenosine's absorption into the outermost layer of the skin.

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MEDI.P-240 Optimizing the Preparation of Lysozyme-Loaded Liposomes through Microfluidic Process Parameter and Lipid-Cholesterol Composition Optimization

Minji Choi, Sung-Joo Hwang
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MEDI.P-241 Enhancing Solubility and Efficacy of Purpurin-18-loaded Solid Lipid Nanoparticles for Photodynamic Therapy in Cancer Treatment

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MEDI.P-242 Enhancing Methyl pyropheophorbide-a (MPPa) Delivery and Photodynamic Therapy using Solid Lipid Nanoparticles: A Promising Approach for Anticancer Treatment

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MEDI.P-243 Enhancing Cancer Treatment : Synergistic Photodynamic Therapy and Chemotherapy Using Nano-Transferosomes of Purpurin-18 Sodium salt and Doxorubicin hydrochloride

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MEDI.P-244 Development of antimicrobial agents for treatment of Mycobacterium abscessus infection

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MEDI.P-245 Development of Phthalic Hydrazide Scaffold Tankyrase Inhibitors

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Institute of Chemical Technology, Korea

MEDI.P-246 Phloroglucinol Derivatives Exert Anti-inflammatory Effects and Attenuate Cognitive Impairment in LPS-induced Mouse Model
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MEDI.P-247 An Innovative Approach for Peptide Nucleic Acid (PNA) Oligomer Synthesis: Utilizing PNA Trimer Blocks in Solid-Phase Peptide Synthesis (SPPS)
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MEDI.P-248 Long-Wavelength Absorbing Benzimidazolo-Chlorin for Enhanced Photodynamic Therapy
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MEDI.P-249 Exploration of the Structure-Activity Relationship of Tirbanibulin: Synthesis and Evaluation of Amide- and Benzylamine-Modified Derivatives
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MEDI.P-250 Discovery of azaindole analogs as SGK kinase inhibitors
Dagyu Kang, Mingyu Jeon, Jieun Kim, Victor Sukbong Hong, Jinho Lee
Department of Chemistry, Keimyung University, Korea

MEDI.P-251 Synergistic Anticancer Effects of Photodynamic Therapy and Chemotherapy Using Nanostructured Lipid Carriers Loaded with Methyl pheophorbide a and Curcumin
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MEDI.P-252 Enhanced Deep-Tumor Penetration and Anticancer Efficacy of SIWV Peptide-Functionalized Porous Silicon Nanoparticles in Glioblastoma Multiforme
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MEDI.P-253 Formulation and development of rivastigmine sustained-release tablets
Hyesoo Kim, Sung-Joo Hwang
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MEDI.P-254 Cationic purpurinimide-polyoxometalate supramolecular complex for photodynamic and chemo combination therapy
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MEDI.P-255 Synthesis and biological study of JAK1 selective inhibitors for the treatment of autoimmune conditions
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MEDI.P-256 Application of Lipid Nano-carrier formulation of Methyl pheophorbide-a for Enhanced Anti-cancer in Photodynamic Therapy
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MEDI.P-257 Design and Synthesis of Large Tumor Suppressor Kinase 1/2 Inhibitors with the Core Scaffold of 2-(Pyridin-4-yl)quinazoline
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MEDI.P-258 Encapsulation of Methyl pheophorbide-a in Nano-transfersomes for pH-responsive drug delivery system in Photodynamic Cancer Therapy
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MEDI.P-259 Lipid Nanoparticle of Curcumin for Advanced Chemotherapy of Cancer
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MEDI.P-260 Design of Solid Lipid Nanoparticles to Improve Skin Barrier Permeation of Adenosine
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MEDI.P-261 Lipid Nanocarrier-incorporated Elastic Artificial Skin Formulation for Topical Delivery of Adenosine
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MEDI.P-262 Phospholipid-based Solid Dispersion Formulation of Aprepitant for Enhanced Bioavailability
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MEDI.P-263 Improved Skin Moisturization Designed by Combined Formulation of Lipid Nanoparticles of Serine with Reed Root Extract
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MEDI.P-264 pH-sensitive Nano-transfersome of 5-fluorouracil Incorporated in Pectin-based Hydrogel for Intraperitoneal Injection
Soo Ho Yeo*, Chae Yeong Hong[1], JooYeon Lee[1], Sung-Joo Hwang[1]
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MEDI.P-265 Poly(lactic-co-glycolic acid) of 5-fluorouracil Contained in Hyaluronic acid-based Hydrogel for Intraperitoneal Injection
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MEDI.P-266 Carbopol and Chitosan-based Hydrogel with Nanostructured Lipid Carriers of 5-Fluorouracil for Cancer Therapy with Intraperitoneal Injection
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MEDI.P-267 High throughput virtual screening strategy to discover novel inhibitors for E3 ubiquitin-protein ligase CBL-B with docking and machine learning
Soo Won Lee
College of pharmacy Seoul National University, Korea

MEDI.P-268 New fibroblast activation protein (FAP)-targeted molecules based on the stilbene scaffold.
Dabin Kim, Ji Young Choi[1], Ho Rim Oh[2], Giuseppe Felice Mangiatordi[3], Nunzio Denora[4], Hyewon Youn[2], Hyung-Jun Im[5,*], Byung Chul Lee[1]
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MEDI.P-269 Synthesis and Molecular Docking Analysis of 2-Phenylbenzimidazole Derivatives for the Discovery of novel mPGES-1 Inhibitors
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MEDI.P-270 Synthesis and Biological Evaluation of Benzoxazole Derivatives for the Discovery of Novel NDRIs Antidepressants
Choi Kim, Hyemin Choi, Minju Gwon, Jae Yeol Lee
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MEDI.P-271 Advancing Cancer Treatment: Pyropheophorbide-a (PPa) PPa-loaded Nanostructured Lipid Carriers
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MEDI.P-272 Synthesis of 7-dimethylamino-6-demethyl-6-deoxytetracycline (minocycline)
Heung Mo Kang*, Jae Yeol Lee
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MEDI.P-273 Utilization of PLGA Nanoparticles as Methyl pheophorbide-a Delivery Systems for Photodynamic Cancer Treatment
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MEDI.P-274 Synthesis of mitochondria-targeted TIPTP derivatives as therapeutic agents for colitis
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MEDI.P-275 Synthesis and Antiviral Activity of β-D-N^4-Hydroxycytidine (NHC) Prodrugs against SARS-CoV-2 *in vitro*
Yeon Jin An, Jong Hyun Cho[1,*], Se Myeong Choi[2], Eun Rang Choi[2], Ji Yeon Yang, Yong Hun Choi, A Young Jung[2], So Jung Kwon[2]
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MEDI.P-276 Development of Practical Synthesis of Avenanthramide C Using Crystallization
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MEDI.P-277 Synthesis of Five-membered Hetero Cyclic Base Nucleoside Analogs and their Antiviral Activity
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MEDI.P-278 Development of nano drug-delivery system for photodynamic therapy using hydrophilic and biocompatible photosensitizer-polyethyleneimine conjugate
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MEDI.P-279 Synthesis and antitumor activity of novel 1,4-dialkoxynaphthalene-2-methyl imidazolium salts
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MEDI.P-280 Dual-targeted, NIR(near-infrared) Fluorescence-based Tumor Imaging and Therapy
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MEDI.P-281 Synthesis of pyrazolone-fused aza-naphthoquinone derivatives via regioselective hetero-Diels-Alder Reactions
Jeong Ho Kim, Hakwon Kim, Kyungmin Kim
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MEDI.P-282 Synthesis and anti-inflammatory activity of α-spinasterol derivatives
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MEDI.P-283 Drug synthesis to solve the side effects caused by drug interactions between prohibited concomitant medications
Jia Kim, Miyeon Choi, **Taejun Park**, Jaemin Bae, Chang Wook Jung, Sunggi Lee[1,*], Byunghyuck Jung[2,*]
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MEDI.P-284 Efficient estimation of protein solvation free energy and vibration entropy using graph neural networks
Yeseul Oh
pharmacy , Seoul National University, Korea

MEDI.P-285 Characterization study of Apixaban microsphere
Surin Min, Sung-Joo Hwang
Yonsei University, Korea

MEDI.P-286 DTC0630, a fluorescent imaging probe selectively targeting gingipains of Porphyromonas gingivalis
Aizhan Abdildinova, Lizaveta Gotina[1], Yun Kyung Kim[2,*], Ae Nim Pae[2]
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MEDI.P-287 Discovery of novel β-arrestin-biased S1P1 agonists for the treatment of Multiple Sclerosis
Chang Yong Lee, Jushin Kim[1], Jong-Hyun Park[1], Sang Min Lim[1], Ki Duk Park[1], Jae Yeol Lee[2], Ae Nim Pae[1]
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MEDI.P-288 Organosilica-Based Hydrogen Sulfide

Nanogenerator
Yerim Lee, Chung-Min Park
Chemistry, Gangneung-Wonju National University, Korea

MEDI.P-289 Direct Conversion of Biothiols to Persulfides
Yuri Lee, Baskar Selvaraj[1], Jaeho Kim, Subin Ham, Maniriho Olivier, Jae Wook Lee[2], Chung-Min Park
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MEDI.P-290 Rational Design, Synthesis and Biological Evaluation of Novel Ionizable Pantothenic Acid-Medicated Lipid Materials for mRNA, DNA, and siRNA Delivery
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MEDI.P-291 Discovery of Lead Compounds for the Treatment of Progressive Supranuclear Palsy by Controlling 4R Tauopathy
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MEDI.P-292 Reliable Detection of DNase-I through Localized Surface Plasmon Resonance Using Uniform Gold Nanostructures Formed by Thermal Annealing of Weakly Adsorbed Gold Films
Chai Won Park, Donghyuk Seo, Wonhwa Lee
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MEDI.P-293 Zwitterionic nanocomplexes facilitated by nitric oxide for enhanced treatment of severe respiratory infectious diseases through mucus-walking
Hye-Jin Lee, Jungbum Kim, Wonhwa Lee
Department of Chemistry, Sungkyunkwan University, Korea

MEDI.P-294 Illudin S-Induced p53 Stabilization for Colorectal Cancer Treatment
Jinyoung Park, Jisun Kim, Wonhwa Lee
Department of Chemistry, Sungkyunkwan University, Korea

MEDI.P-295 Design and synthesis of Sirt6 activator for pancreatic cancer
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MAT.P-296 Tuning Core-shell Nanoparticles Interfacial Engineering for Plasmon-Enhanced Energy Conversion Performance
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MAT.P-297 Advanced hybrid washing machine filters for effective elimination of microplastics and surfactants
Su Hyeon Son, Won san Choi
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MAT.P-298 Omega-3 fatty acid-enriched thermoreversible nanogel for prevention of capsular contracture
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MAT.P-299 Study on Causes and Countermeasures for the Mass Death of Fish in Reservoirs in Andong-si
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MAT.P-300 Recovery of Ammonium Nitrogen and Phosphate from the Piggery Wastewater as Struvite and Its Assessment for the Reduction of Water Pollution Through the Field Test
Keon Sang Ryoo
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MAT.P-301 Manufacture of electrospun porous PLA fiber-type film coated with CMC and its anti-adhesion efficiency in white mice
Keon Sang Ryoo
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MAT.P-302 Wet-based cylindrical air filters for simultaneous removal of PMs and VOCs
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MAT.P-303 Preparation and characterization of V2O5-decorated carbon nanotubes as a visible-light active photocatalysts
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MAT.P-304 One-Pot Design of $CsPbClBr_2$ Blue Perovskite Quantum dot Control for High-Purity Luminescence with Precursor Stoichiometry
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MAT.P-305 Dual emissive Mn-Doped Lead Halide Perovskite Nanocrystals for Background Interference Suppressed Latent Fingerprint Detection
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MAT.P-306 Revealing the Role of Defects in Ternary Cu–In–Se Quantum Dots for Boosting Photoelectrochemical Hydrogen Generation
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MAT.P-307 Double-layer transfer printing strategy for high-resolution red/green/blue perovskite nanocrystals patterning.
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MAT.P-308 Impact of Surface Characteristics of Quantum Dots on the Efficiency of Intaglio Transfer Printing Process
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MAT.P-309 MXene-based zwitterionic polymer hydrogel with adhesive, electrically conductive, and viscoelastic properties

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MAT.P-310 Halide Ion Mixing across Colloidal 2D Ruddlesden-Popper Perovskites: Implication of Spacer Ligand on Mixing Kinetics
Junsang Cho*, **Seonhong Min**
School of Chemistry and Energy, Sungshin University, Korea

MAT.P-311 Real-Time Imaging of Moisture-Induced Degradation of Quantum-Sized Nanocrystals through Amorphous Intermediates
Soyeon Lee, Jungwon Park[1,*], Jiwoong Yang
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MAT.P-312 Phase Transition Mechanisms of 2D CdSe Quantum Nanosheets Induced by Off-Stoichiometry at Atomic-Scale
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MAT.P-313 Synthesis of monodispersed InP quantum dots and their ZnSe/ZnS shell growth for bright and narrow band edge emission
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MAT.P-314 Study on the mechanism of SEI generated in aqueous Zn-Mn battery using ordered mesoporous manganese oxide by in-situ scattering X-ray
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MAT.P-315 Synchrotron Based X-ray Analysis for Effects of Ordered Mesoporous Carbon as Selenium Support for Li-Se Batteries
Yelim Kwon, Chenglin Cui[1], Hansol Kim[1], Ji Man Kim
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MAT.P-316 One-pot Synthesis of Mono- and Bimetallic Nanoparticles Using Acrylic Monomer as Solvent, Reductant, and Stabilizer
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MAT.P-317 Electro/chemical deposition of C_{60} microcrystals on Cu(111) in LiCl-KCl eutectic molten salt
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MAT.P-318 Ligand free, well-dispersed quantum-sized tin(IV) oxide nanocrystals
Hooin Lee, Wongyun Byoun, Jung Tak Jang[1,*]
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MAT.P-319 Proton-conductive cobalt-based coordination polymer for memristive applications
Uichan Lee, Intek Song[1,*]
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[1]Department of Chemical and Biological Engineering, Andong National University, Korea

MAT.P-320 Facile synthesis of size and shape-controlled silver nanoparticles
Seungmin Lee, Jaehee Song
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MAT.P-321 Large-area Single Crystal Graphite
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MAT.P-322 Monitoring of energy storage mechanism of *Zn/meso-*MnO_2 battery system using X-ray absorption fine structure
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MAT.P-323 Growing diamond in liquid metal at 1 atm
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MAT.P-324 Carborane Superacids for Activation of Diamondoids
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MAT.P-325 Synthesis and Characterization of Nickel Oxide Nanoparticles, and Observation of Changes in Magnetic Properties via Surface Modification
Wongyun Byoun, Hooin Lee, Jung Tak Jang[1,*]
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MAT.P-326 Reaction of liquid gallium at near room temperature with a wide range of chemicals
Sudipta Bag, Bharat Ugale[1], Benjamin Cunning[2], Rajmohan Rajendiran[3], Sun Hwa Lee[2], Rodney Ruoff[4,*]
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MAT.P-327 Control of wetting properties for plasticizers in the PBXs
Huisu Shim, Kuktae Kwon, Seong Han Kim, Mingu Han
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MAT.P-328 Rational Design of Heterostructured Anode Materials: Layered Titanium Oxide and Covalent Organic Nanosheets for High-Rate and Durable Sodium-Ion Batteries
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MAT.P-329 Electrodes in sodium-Ion batteries that take the form of nanosheets with organic/inorganic hybrid two-dimensionally for increased electrical conductivity toward steady and towering-performance
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MAT.P-330 Preparation of three-dimensional layered double hydroxide filters by 3D printing
Tae-Hyun Kim, Jeong Hoon Park
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MAT.P-331 Development of durable column material for $^{68}Ge/^{68}Ga$ generator system
Jun Young Lee, Jeong Hoon Park
Accelerator and Radioisotope Research Section, Korea Atomic Energy Research Institute, Korea

MAT.P-332 Using Pendant Polymer as Hole Transport Materials via Supramolecular Self-Assembly by Electron Withdrawing Functional Group
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MAT.P-333 Effect of Polyvinylpyrrolidone (PVP) on Bismuth Catalysts for Electrochemical CO2 Reduction
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MAT.P-334 Ethylene Glycol Based Crosslinking Agent Enables Photopatterning of Silver Nanowire Electrodes
Wanho Cho, BongSoo Kim[1,*]
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MAT.P-335 Mechanistic Study of the Effect of Quantum Confinement and Triplet Energy Variation on Energy Transfer Efficiency Using Lead Halide Perovskite Nanocrystals
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MAT.P-336 Local Graphitization and Pore Blockage of Si@C Yolk-Shell Structure during Magnesiothermic Reduction
Min seok Kang, Seongchan Lee[1], Won Cheol Yoo[2,*]
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MAT.P-337 Defect Engineering on UiO-66 for Glucose Conversion to Levulinic acid in Aqueous Condition
Sininat Boonmark, Asst. Prof. Dr. Sareeya Bureekaew
School of Energy Science and Engineering (ESE) ,

Vidyasirimedhi Institute of Science and Technology (VISTEC), Thailand

MAT.P-338 Perovskite Nanocrystal as Triplet Energy Transfer Photocatalyst for [2+2] Cycloadditions of 4-Vinyl Aniline with Amine Functional Groups
Jeonghun Hyun, Young-Je Kwark, Yerin Kim
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MAT.P-339 Enhanced shielding against electromagnetic pulse and neutron shielding of unidirectional CNT mat-BN composites
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MAT.P-340 Synthesis of Cu-imidazole-resorcinol coordination compound and evaluation of its insecticidal activity against termites
Sanha Park, Jinkwon Kim, Seog Woo Rhee
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MAT.P-341 Organo-Metallic Complex Inserted Montmorillonites Coated on Carbon Paper: A Novel Approach to Electrocatalysis for the Oxygen Evolution Reaction.
In Seon Lee
Chemistry, Kyung Hee University, Korea

MAT.P-342 Ordered Mesoporous Cobalt Oxides as a Negative Electrode for Li-ion Batteries: Electrochemical Properties
Jung-ho Lee, Yelim Kwon, Lee Jea Won[1], Ji Man Kim
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MAT.P-343 Mercaptoamine-assisted efficient capture of ppm-level Hg^{2+} ions by FAU zeolite for water purification
Kang Min Lee, Hae Sung Cho[1,*], Changbum Jo[2,*]
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MAT.P-344 Synthesis and characterization of chromium-based coordination compounds reacting to ultraviolet light
Minjeong Kim, Minju Park, Intek Song
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MAT.P-345 CO_2 adsorption at low pressure using Zr-based metal-organic framework (UiO-67) functionalized with aminosilanes
Ha-Young Nam*, Sung Hwa Jhung[1,*]
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MAT.P-346 Propylene production from ethylene and carbon dioxide adsorption with SSZ-13 zeolites prepared from calcined rice husk as silica source
Jeongbin Lee, Sung Hwa Jhung
Department of Chemistry, Kyungpook National University, Korea

MAT.P-347 Computational Analysis of Lithium Iron Phosphate Cathode Material Doped with Silicon or Nitrogen for Enhanced Electronic Conductivity
Yelak Abebe
Nano Convergence Technology , Pusan National University , Korea

MAT.P-348 Regulation of the formation of calcium carbonate polymorphs using 1*H*-imidazole-4,5-dicarboxylic acid as an additive
In Soo Koo, Jungkoo Lee[1], Jinman Kim[1], Seog Woo Rhee
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MAT.P-349 Elimination of aromatic diamines from water using metal-organic frameworks functionalized with a nitro group
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MAT.P-350 Carbon Isotope Enrichment from the Electromigration of ^{12}C and ^{13}C in Cobalt and Nickel
Alisher Sultangaziyev, Sun Hwa Lee, Dongho Jeon, Da Luo, Won Kyung Seong, Rodney Ruoff[1,*]
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MAT.P-351 Study of three-dimensional porous structure and its evolution of zeolite-templated carbons
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MAT.P-352 Wrinkle-free monolayer graphene grown on Ni(111) foils
Yongqiang Meng, Meihui Wang, Won Kyung Seong, Rodney Ruoff[1,*]
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MAT.P-353 Multi-layer Layered Double Hydroxides on Aluminum Metal
Yongju Lee, Duk-Young Jung
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MAT.P-354 Selective capture of CO_2 under low pressure using metal-organic framework (MOF-808) functionalized with ethyleneamines
So Yeon Lee[*], Sung Hwa Jhung[1,*]
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MAT.P-355 1. Modeling the structure of a Faujasite zeolite-templated carbon 2. Exploring the Interface Chemistry of Hydrogenated Graphene on Cu(111): Insights into Covalent Cu-C Bonding
Alisher Fatkhulloev, Madi Arsakay[1,*], Sun Hwa Lee, Won Kyung Seong, Rodney Ruoff[2,*], Maksim Rabchinskii[3]
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MAT.P-356 On the interplay between chemistry, electronic structure, and optical properties of graphene derivatives: revisiting the puzzling complexity
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MAT.P-357 Fluorination of carbon nanotubes with different diameters and chiral indices utilizing xenon difluoride
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MAT.P-358 Stimuli-responsive azo-based fluorophores and their alkyl length effect on fluorescence characteristics
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MAT.P-359 Preparation of ceramic/nickel composites using preceramic polymers and their use as HER catalyst
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MAT.P-360 Metal Nanocatalyst-Loaded Covalent Framework Membrane Nanoreactors: A Versatile Platform for Precise Catalytic Control, Enhanced Performance, and Long-Term Reusability
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MAT.P-361 Cobalt-Based Metal-Organic Framework for Photocatalytic Hydrogen Production: An Impact of Amino Functional Group
Yollada Inchongkol, Taya Saothayanun, Sareeya Bureekaew
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MAT.P-362 Nanoarchitectural engineering of iron-doped layered titanium oxide with hollow structures for advanced sodium-ion battery
Seung-Min Paek[*], **Gichan Kim**
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MAT.P-363 Enhanced UV-stability and efficiency of cobalt-triazole framework via Zn substitution for photocatalytic hydrogen production
Taya Saothayanun, Sareeya Bureekaew[1,*]
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MAT.P-364 Ni-based Metal-Organic Framework as a Nanoreactor for an Enantioselective Production of Lactic Acid
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MAT.P-365 Synthesis and characterization of FeSe nanomaterials in a two-dimensional cluster configuration
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MAT.P-366 Nanoporous ZSM-5 Particles Coated with Silicalite-1 for Adsorption Ammonia in High Humid Environment
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MAT.P-367 Porous conductive cobalt-based metal-organic frameworks as promising electrocatalysts
Kanyaporn Adpakpang, Sareeya Bureekaew
Energy Science and Engineering, Vidyasirimedhi Institute of Science and Technology (VISTEC), Thailand

MAT.P-368 Azobenzene-containing fluorescent compounds capable of photoisomerization with high efficiency
Mina Han[*], Pyae Myat Phyo Thu[1]
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MAT.P-369 A Novel Fluorophore based on Single Benzene for Hydrazine Visualization
Jisoo Kang, Dokyoung Kim[1,*]
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MAT.P-370 Scalable Fibronectin-Coating Strategy for Wound Dressing Composites Using Spray Technique
Albertus Ivan Brilian, Sang Ho Lee, Kwanwoo Shin
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MAT.P-371 ß-phase $M_xV_2O_5$ (M= Ca, Na) as New Viable Cathode Materials in Calcium- Ion Batteries
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MAT.P-372 Rhenium Redefined as Electrocatalyst for Hydrogen Evolution Reaction
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MAT.P-373 Atomically Dispersed Non-Precious Metal Catalysts for Electrochemical Chlorine Evolution Reaction
Jinjong Kim, Sang Hoon Joo
Department of Chemistry, Seoul National University, Korea

MAT.P-374 General Synthetic Method of Mesoporous Atomically Dispersed Nickel Catalysts for Electrocatalytic H2O2 Production
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MAT.P-375 Ca-doped Na_3ZnGaS_4 with improved ionic conductivity and stability for all-solid-state sodium-ion batteries
Jungyong Seo, Myoungho Pyo
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MAT.P-376 Defect Assessment of Boron Nitride Nanotube with Conjugated Polymer
Jeong-Seok Lee, Myung Jong Kim
Department of Chemistry, Gachon University Global Campus, Korea

MAT.P-377 Understanding Surface Passivation of Silver Bismuth Sulfide Nanocrystals by Organic and Inorganic Ligands
Cheong Beom Lee, Hyosung Choi
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MAT.P-378 Reversible calcium ion electrodeposition with a dual additive system
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MAT.P-379 Investigation of Calcium-ion Insertion and Extraction Mechanism in Manganese Niobium Phosphate as a New Cathode Material for Rechargeable Calcium-ion Batteries
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MAT.P-380 Crystal Water-free Iron Hexacyanoferrate: Preparation and Electrochemical Investigation as a Host Material for Calcium-ion Batteries
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MAT.P-381 Melamine phytate as an anti-termite agent
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MAT.P-382 Improving the ion conductivity by aliovalent-doping into Na halide solid electrolyte
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MAT.P-383 Investigating Novel Inorganic Solid Electrolytes, Lithium Indium Sulfide, for All-solid-state Batteries
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MAT.P-384 Sodium ionic conductors with new type of crystal structure
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MAT.P-385 Precise Pore Size Matching of Carbon Electrode with Redox Species for Improvement of Redox-Enhanced Electrochemical Capacitor Performance
Young Hun Cho, Seung Joon Yoo
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MAT.P-386 Stable and High-Energy Zinc-Iodine Battery through Deep Eutectic Solvents (DES)
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MAT.P-387 Methylene blue loaded-GNR@mSiO$_2$ core@shell nanocomposites integrated on graphene oxide; a multifunctional photo-nanotheranostic solution for cancer
Seohyeong Lee, Eue-Soon Jang
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MAT.P-388 Micro-needle photothermal patch system for improving wrinkles
Jiwon Choi, Eue-Soon Jang
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MAT.P-389 Formulation of Cosmetic Composites Incorporating Gold Nanorods for Infrared-A Radiation
Juhui Seo, Eue-Soon Jang
Department of Applied Chemistry, Kumoh National Institute of Technology, Korea

MAT.P-390 Electrolytic Cancer Ablation Therapy Using Gold Nanorods as Electric Antenna
Yeong-Jun Jeon, Eue-Soon Jang[1,*]
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MAT.P-391 Effect of Gallium on Silver Indium Gallium Sulfide Nanocrystals Photoluminescence
Jiyeon Ban, Haemin Song, Kwang Seob Jeong
Department of Chemistry, Korea University, Korea

MAT.P-392 Electrical behaviors of oxynitride perovskites $SrAl_{0.2}M_{0.8}O_{2.4}N_{0.6}$ (M = Nb, Ta)
Yang Hun Kim, Young-il Kim[1,*]
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MAT.P-393 Controlling Interband and Intraband Transitions in Silver Selenide Quantum Dots via Trioctylphosphine-Assisted Cation Exchange
Hyeong Seok Kang, Kwang Seob Jeong[1,*]
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MAT.P-394 Facile synthesis method of self-doped mid-infrared Ag_2Se colloidal quantum dots
Ngoc Mai An, Jin Hyeok Lee[1], So Young Eom[1], Haemin Song[1], Kwang Seob Jeong[1], Minhaeng Cho[1]
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MAT.P-395 Inclusion of kojic acid into the gallery of layered yttrium hydroxide and its tyrosinase inhibition behavior
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MAT.P-396 A comparison study of MnO_2 cathodes for aqueous zinc-ion batteries
Nahyun Kim, Chung-Yul Yoo
Department of Chemistry, Mokpo National University, Korea

MAT.P-397 Investigation the Effect of Functional Groups on Hyperfluorescence Organic Light-Emitting Diodes with Multiple Resonance Terminal Emitter
Minho Jang, Chaewon Park, Sae Youn Lee[1,*]
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MAT.P-398 Synthesis of Co nanoparticles using inverse micelle methods
Yu Bin Heo, Myung Jong Kim[1,*]
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MAT.P-399 Antimonene-Graphene Composite: A Versatile Electrocatalyst for Nitrogen Reduction and Beyond

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MAT.P-400 Controlled catalysts for single-walled carbon nanotubes growth
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MAT.P-401 Catalyst Plasma Treatment for the CVD synthesis of BNNTs
DongHwan Lee, Myung Jong Kim
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MAT.P-402 Preparation of Ni-Pd/MgO-based bimetallic supported catalysts by wet-impregnation methods
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MAT.P-403 Synthesis of W-BN core-shell nanoparticles using Arc discharge method for radiation shielding applications
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MAT.P-404 Novel Metal-BNNT Hybrid Materials: Synthesis, Characterization, and Prospects for Gamma Ray Shielding Applications
Honggu Kim, Myung Jong Kim[1,*]
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MAT.P-405 Ultrathin rGO/RuO_2/TiO_2 Hollow Nanospheres with Boosted Pseudocapacitive Charge Storage as Anode for Lithium-Ion Batteries
Ji-Ho Park, Seung-Min Paek
Department of Chemistry, Kyungpook National University, Korea

MAT.P-406 Adsorption of linear alpha olefins (LAOs) from olefin/paraffin binary liquid using ZIF-8 and ZIF-67: Experiment and Simulation
Sungbin Jo, SungHyun Yun[1], Yongchul Chung[1], Chung-Yul Yoo
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MAT.P-407 Selective synthesis of BNNTs and MgO-BN Core/Shell Nanowires by controlling catalysts
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MAT.P-408 Effect of the triplet state energy of organic guest on sensitizing the luminescence of Eu3+ and Tb3+ in layered yttrium hydroxide host
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MAT.P-409 Exfoliation of N-rich Carbon Nitrides with Tailored Band Structures
Ayoung Yoon, In Young Kim
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MAT.P-410 Toward non-gas-permeable hBN film growth on smooth Fe surface
Hayoung Ko, Soo Min Kim[1,*]
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MAT.P-411 Fabrication of Implantable Electrochemical Sensors using Conformal Biocompatible Material Coating
Jiae Park, Kwanwoo Shin[1,*]
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MAT.P-412 Formation of Electrospun Keratin Nanofibers: Protein Structure, Mechanical and Chemical Properties for Food packaging
Kim SuGyoem, Kwanwoo Shin[1,*]
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MAT.P-413 Development of Drug carrier Using Silk Fibroin Encapsulated Hydroxyapatite Hybrid material
Byeongho Park, Sehun Jung, Seog Woo Rhee, Jinkwon Kim
Department of Chemistry, Kongju National University, Korea

MAT.P-414 A study intercalated anion effect on flame retardancy of the composite materials of clay mineral natural and silk fibroin for the traditional Hanji
Sehun Jung, Seog Woo Rhee, Jinkwon Kim
Department of Chemistry, Kongju National University, Korea

MAT.P-415 Exploration of Na2+xZr1-xMxCl6 Solid Electrolytes as Potential Catholytes for Sodium Solid-State Batteries
Dongyeon Yun, Seung-Tae Hong
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MAT.P-416 Defect-controlled ultrathin large-area 2D holey metal nanosheets with efficient electrocatalyst performance
Xiaoyan Jin, Seong-Ju Hwang
Department of Materials Science and Engineering, Yonsei University, Korea

MAT.P-417 Interaction-based Bacteria-dye Combination Screening for Visualization of *Acinetobacter baumanni*
Ji Hye Jin, Dokyoung Kim[1,*]
Department of Biomedical Science, Kyung Hee University, Korea
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MAT.P-418 Silver Telluride Colloidal Quantum Dot Photodetector in Near-Infrared Region
Gahyeon Kim, Dongsun Choi, So Young Eom, Jin Hyeok Lee, Kwang Seob Jeong
Department of Chemistry, Korea University, Korea

MAT.P-419 Mercury Telluride Colloidal Quantum Dot Based High-Sensitive Mid-wavelength Infrared (MWIR) Photodiode Sensors
So Young Eom, Haemin Song, Gahyeon Kim, Yoon Seo Jung, Dongsun Choi, Jin Hyeok Lee, Hyeong Seok Kang[1], Jiyeon Ban, Woong Kim[2], Kwang Seob Jeong
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MAT.P-420 Colloidal Tellurium Nanowire Laser in the Mid-Wavelength Infrared Region
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MAT.P-421 A phase tuning approach to optimize electrocatalyst performance of MoS_2 nanosheets
Dong Wook Lee, Xiaoyan Jin, So Yeon Yun, Seong-Ju Hwang
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MAT.P-422 Engineering Porous Structures of Cu/C Nanofibers for CO_2 Reduction Electrocatalysts
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MAT.P-423 Ionic conductivity measurement of wurtzite $Li_{2.95}Al_{0.95}Si_{1.05}O_5$ depending on the compaction processing
Song Hyeon Kim, Young-il Kim
Department of Chemistry, Yeungnam University, Korea

MAT.P-424 Boosting Hydrogen Evolution Reaction through Strained rGO/MoS2/PS Electrodes
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Chemistry, Kyung Hee University, Korea

MAT.P-425 Electrochemical Behavior of Graphene Grown on Cu Depending on the Different Types of Molecules
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MAT.P-426 Molecular Structural Descriptor-assisted Machine Learning to Accelerate Development of Organic Photovoltaics
Gyu-Hee Kim, Doo-Hyun Ko[1,*]
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MAT.P-427 The growth of highly ordered, porous, and graphene-like 3D carbon under high pressure using FAU zeolite as a template and acetylene as a carbon source
Bayrammuhammet Annageldyyev, Madi Arsakay[1], Alisher Fatkhulloev[2], Won Kyung Seong[2], Sun Hwa Lee[2], Rodney Ruoff[3,*]
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MAT.P-428 Photodetection Range Expansion through the Cation Exchange Method
Yoon Seo Jung, Kwang Seob Jeong, Dongsun Choi, Haemin Song
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MAT.P-429 Synthesis of Thermally Stable and Highly Luminescent Cs5Cu3Cl6I2 Nanocrystals with Nonlinear Optical Response
Dongil Son, Jongnam Park[1,*]
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MAT.P-430 Enhancing Compatibility and Electrochemical Performance of All-Solid-State Batteries through Novel LISICON-Type Oxide Electrolytes
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MAT.P-431 A Study of Zn2GeO4@C with a core shell structure applicable to lithium-ion batteries
Deukhyeon Nam, Joon Ha Moon[1], Jaewon Choi[1], Chan Woong Na[2], Yoon Myung[2]
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MAT.P-432 Synthetic Way for Atomically Thin Wurtzite Boron Nitride via Periodic Functionalization
Joohee Oh, Hyunseob Lim
Department of Chemistry, Gwangju Institute of Science and Technology, Korea

MAT.P-433 Facile and Low-energy Integration of Metal Electrodes with Two-dimensional Semiconductors Using the Electroless Deposition Process
Giyoon Kwak, Hyunseob Lim
Department of Chemistry, Gwangju Institute of Science and Technology, Korea

MAT.P-434 Facile Mesoporous Hollow Silica for Formaldehyde Adsorption
Jong-tak Lee, Jae Young Bae
Department of Chemistry, Keimyung University, Korea

MAT.P-435 Synthesis and Application of Multiphase $PdSe_2$ Using Single Source Precursor
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MAT.P-436 Highly Enhanced Biocompatibility of Dexamethasone in Layered Double Hydroxide
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MAT.P-437 Caffeic Acid-Layered Double Hydroxide Nanohybrids for Enhanced Sunscreen Formulations
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MAT.P-438 Pre-clinical evaluation of injectable photo-thermal agent as triple-negative breast cancer nanomedicine
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MAT.P-439 Precise control over the silica shell thickness and finding the optimal thickness for the peak heat diffusion property of AuNR@SiO_2
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MAT.P-440 Preparation of Flare-Raman Platform as SERS Probe to Detect Signals by Survivin mRNA Expression in Live Cell
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MAT.P-441 Unravelling Active Sites in Additive-Modified Interfacial Architectures for Enhanced Lithium Redox-Driven Nitrogen Reduction to Ammonia
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MAT.P-442 In silico design of electrocatalysts for enhancing nitrogen reduction reaction
Minh phuong Nguyen
Graduate School of energy science and technology, Chungnam National University, Vietnam

MAT.P-443 Exploring Spinel Cathodes through First-Principle Calculation for Next-Generation Li-ion Battery
Thi Yen Nhi Phan
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ELEC.P-380 Fabrication of Spinel MCr2O4 (M = Ni and Co) Nanostructures as Positive Electrode Materials for High-Performance Supercapacitors
Venkatachalam Vinothkumar, Tae Hyun Kim
Department of Chemistry, Soonchunhyang University, Korea

ELEC.P-381 Application of Deep Learnging to Analysis of Electrochemical Impedance Spectra
Byoung-Yong Chang
Department of Chemistry, Pukyong National University, Korea

ELEC.P-382 Wash-Free Photoelectrochemical DNA Detection Based on Photoredox Catalysis Combined with Electroreduction and Light Blocking by Magnetic Microparticles
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ELEC.P-383 Sensitive Affinity-Based Biosensor Using the Autocatalytic Activation of Trypsinogen Mutant by Trypsin with Low Self-activation
Seonhwa Park, Haesik Yang
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ELEC.P-384 Rapid nanocatalytic reaction using antibody-conjugated gold nanoparticles for sensitive detection of parathyroid hormone
Gyeongho Kim, Haesik Yang
Department of Chemistry, Pusan National University, Korea

ELEC.P-385 Facile Synthesis of Co3O4 Thin Films and Subsequent Conversion to Cobalt Chalcogenides: Application to Supercapacitors
Seonghwan Yu, Tae Wan Park, Soo Yeon Kim, Noseung Myung
Department of Applied Chemistry, Konkuk University, Korea

ELEC.P-386 Electrodeposition of Nickel Selenide Thin Films: An EQCM Study
Soo Yeon Kim, Noseung Myung
Department of Applied Chemistry, Konkuk University, Korea

ELEC.P-387 Utilizing Perovskite BaIrO3 Nanofibers for Potentiometric pH Sensing Applications
Subin Choi, Hee Ah Oh[1], Youngmi Lee[2,*], Myung Hwa Kim[2]
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ELEC.P-388 Reliable bi-functional Ni-Pi/TiO2 integration enables stable n-GaAs photoanode for water oxidation under alkaline condition
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ELEC.P-389 Study of PEC performance of silica photocathode protected by TiN layer
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ELEC.P-390 Detection of Gel Particles via Nanoimpact
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ELEC.P-391 MoS2/MnMoO4@Ti nanocomposite electrocatalyst for efficient hydrogen evolution reaction
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ELEC.P-392 N Doping ZnO Electrocatalysts Towards Electrochemical CO2 Reduction
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ELEC.P-393 Investigating Tin Oxide Catalysts for Selective Electrochemical Reduction of Carbon Dioxide into Formate
Hyeon Beom Cho, Joon Yong Park, Ki Min Nam
Department of Chemistry, Pusan National University, Korea

ELEC.P-394 Unraveling the surface self-reconstruction of Fe-doped Ni-thiophosphate for efficient oxygen evolution reaction
Yo Seob Won
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ELEC.P-395 Electrochemical monitoring of thermodynamics/kinetics at nanoscale interface of a liquid droplet
Hyeongkwon Moon, Jun Hui Park
Department of Chemistry, Chungbuk Natioanl University, Korea

ELEC.P-396 Synergistic Effects of Green Additives on Melt Electrospinning of Biodegradable Polymer
Yun Hyeong Lee, Jee Woo Kim[1], Byung-Kwon Kim
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ELEC.P-397 Size Control of BaTaO2N Crystals for Efficient Solar-Driven Photoelectrochemical(PEC) Water Splitting
Minseok Ki, Jeongsuk Seo[1,*]
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ELEC.P-398 Visible-light-driven Seawater Splitting over LaTiO2N Crystals Prepared by Nitridation of Layered Perovskite BaLa4Ti4O15
Thanh Tam Thi Tran, Jeongsuk Seo
Department of Chemistry, Chonnam National University, Korea

ELEC.P-399 Electrochemical Detection of Silver Nanoparticle Collisions on a Gold Electrode
Yerin Bang, Soongyu Han, Sieun Kim, Subin Kim, Seung-Ryong Kwon
Department of Chemistry, Gyeongsang National University, Korea

ELEC.P-400 Ruddlesden-Popper Type Layered Perovskite Oxynitrides for Solar Water Splitting
Yoonji Seo, Jeongsuk Seo
Department of Chemistry, Chonnam National University, Korea

ELEC.P-401 Photoelectrochemical Seawater Splitting of Barium-doped Tantalum Nitride in the Wide Range of pH
Seongeon Mun, Jeongsuk Seo
Department of Chemistry, Chonnam National University, Korea

ELEC.P-402 Interface Engineering of BaTaO2N Photoanodes with a Metal Oxide Layer for Efficient Solar Seawater Splitting
Van-Huy Trinh, Jeongsuk Seo
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ELEC.P-403 Mixed metal CoNi-triazole metal-organic framework for an enhanced oxygen evolution electrocatalyst
Natchaya Phongsuk, Sareeya Bureekaew
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ELEC.P-404 Improved Electrocatalytic Seawater splitting using Co3O4 Nanocubes with Photodeposited Noble Metal for Selective oxidation
Joon Yong Park, Hyeon Beom Cho[1], Ki Min Nam
Department of Chemistry, Pusan National University, Korea
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ELEC.P-405 Advancing Safety and Performance of Fluorine-Free highly concentrated Water-in-Salt Sodium/Calcium-Ion Hybrid Electrolyte for Aqueous Rechargeable Batteries
Thileep Kumar Kumaresan, Myoungho Pyo[1,*]
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ELEC.P-406 Synthesis of F-doped arc graphene and its electrochemical applications
Howoung Shin, Myung Jong Kim
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ELEC.P-407 Altered Redox Reaction Behavior of Quinone Induced by Nanoconfinement Effects at Microporous Carbon Electrode
Jee Hae Yang, Jinho Chang
Department of Chemistry, Hanyang University, Korea

ELEC.P-408 Design and Fabrication of an Adhesive-Based Electrochemical Continuous Flow Reactor with Chemical Resistance
Chanho Song
Graduate school of Analytical Science and Technology, Chungnam National University, Korea

ELEC.P-409 The Role of Conducting Polymers Intercalated in Potassium Vanadate Nanofibers for High-Performance Aqueous Zinc-ion Batteries Performance
Yongyeol Park, Seo Young Kang, Young Joon Yoo[1,*], Yuanzhe Piao[2,*], Sang Yoon Park[3,*]
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[3]Department of Electronic Engineering, Kyonggi University, Korea

ELEC.P-410 Highly Crystalline Carbon Supports for Fuel Cell Cathodes with Enhanced Catalytic Activity and Stability
Sunguk Noh, Jun Ho Shim
Department of Chemistry, Daegu University, Korea

ELEC.P-411 Efficient and Stable Ammonia Synthesis from MoFe Nanostructures Directly Grown on Carbon Cloth

Under Ambient Conditions
Shinyoung Kweon, Jun Ho Shim[1,*]
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ELEC.P-412 Enhanced Pseudocapacitor Performance through Mixed Ionic-electronic Behavior of Cationic, Anionic, and Zwitterionic Conjugated Polyelectrolyte Composited with Single-Walled Carbon Nanotubes.
Jinesh Chouhan, Han Young Woo
Department of Chemistry, Korea University, Korea

ELEC.P-413 Covalent Conjugation of 'Hydroxide-Philic' Functional Group Achieving 'Hydroxide-Phobic' TEMPO with Superior Stability in All-Organic Aqueous Redox Flow Battery
Jeongmin Yeo, Jinho Chang
Department of Chemistry, Hanyang University, Korea

ELEC.P-414 Rugged forest morphology of magnetoplasmonic nanorods for photoelectrochemical water splitting
Goddati Mahendra, Jaebeom Lee[1,*]
Department of Chemical Engineering and Applied Chemistry, Chungnam National University, Daejeon, Korea
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ELEC.P-415 Bio-inspired Aqueous Redox Flow Batteries Utilizing Direct Electron Transfer Based Bioelectrochemical Interconversion of NADH and NAD+
Jeon Yerin, Yoo Seok Lee[1,*]
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ELEC.P-416 Electrochemical biomass upgrading of 5-hydroxymethylfurfural to 2,5-furandicarboxylic acid under mild alkaline media.
Eunchong Lee, Yun Jeong Hwang
Department of Chemistry, Seoul National University, Korea

ELEC.P-417 Strategies for enhancing Performance of Nitrogen Reduction Reaction with Cathode Coatings
Yeongbae Jeon, Dongwoo Shin, Yun Jeong Hwang[1,*]
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[1]Chemistry Department, Seoul National University, Korea

ELEC.P-418 Effect of metal oxides on product selectivity and current density of the Cu-based catalyst during electrochemical CO2 reduction
Dayeon Kim, Yun Jeong Hwang[1,*]
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ELEC.P-419 Elucidating the Electric Field Effect Controlled by Cation Concentration on the Cu in the Acidic CO2RR
Suhwan Yoo, Yun Jeong Hwang[1,*]
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ELEC.P-420 Influence of Sulfur Doping Concentrations on the Electrochemical Performance of Hollow NiFe-LDH in Oxygen Evolution Reactions
Sojin Jung, Jun Ho Shim
Department of Chemistry, Daegu University, Korea

ELEC.P-421 Correlations between the Impedance and Compressive Strength of Hardened Cement According to the Aggregate Type
Jinju Kim, Hyun Ju Yang, Je Hyun Bae
Graduate School of Analytical Science and Technology (GRAST), Chungnam National University, Korea

ELEC.P-422 Effect of Additives on Electrochemical Nitrogen Reduction Reactions in Non-aqueous Lithium-mediated Systems
Dongwoo Shin, Yeongbae Jeon, Yewon Hong, Yun Jeong Hwang
Department of Chemistry, Seoul National University, Korea

ELEC.P-423 Improving the Electrochemical Oxygen Evolution Activity of Conventional Nickel-Iron Catalyst through Anion Regulation
Yewon Hong, Juhyung Choi, Yun Jeong Hwang[1,*]
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[1]Chemistry Department, Seoul National University, Korea

ELEC.P-424 Spontaneous Zn-CO2 Battery for Efficient CO2 Electroreduction
DongYoon Lee, Yongsung Jo, Dongil Lee[1,*]
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ELEC.P-425 Dopant Effects on the Electrochemical Hydrogen Evolution Reaction Catalyzed by Heterometal Doped Silver Nanoclusters
Jiyeon Shin, Hanseok Yi[1], Dongil Lee[1]
chemistry, Yonsei University, Korea
[1]Department of Chemistry, Yonsei University, Korea

ELEC.P-426 **[Withdrawal]** The Crumpled Interlayered Architecture of Copper Tungsten Sulfide decorated reduced Graphene Oxide Nanocomposite as Advanced air cathode for Flexible Zinc–Air Battery
Bee Lyong Yang
Department of Advanced Materials Engineering, Kumoh National Institute of Technology, Korea

EDU.P-444 Textbook analysis and science teachers' awareness of the conditions under which phase diagram is drawn

YoungHa Hwang, Seounghey Paik[1,*]
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EDU.P-445 The effect of What-If Activities on Student Discourse in Inquiry-Based Investigative Science Education(ABI)

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EDU.P-446 Direction of Pre-service Chemistry Teacher Education for Change in Cognition of the Nature of Model

Najin Jeong, Seounghey Paik
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EDU.P-447 The Effect of Advanced Science Technology-Based Education Programs on Science Career Orientation and Attitude Toward Chemistry

Jiyun Yang, Hyunjung Kim[1,*], Hyuck Jin Lee[1], Sungyool Bong[1]
Chemical Education, Kongju National University, Korea
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EDU.P-448 A Modular Robotic Platform for Chemical & Biological Research

Sung-Ho Lee, Jiae Park[1], Albertus Ivan Brilian[1], Kwanwoo Shin[2,*]
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[2]Department of Chemistry, Sogang University, Korea

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Raeyoung Lee, Sangwoo Bae[1], Park Geon Hee[2], Hyuck Jin Lee[3], Hyunjung Kim[3], Sungyool Bong[3]
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EDU.P-450 The Perceptions of Chemistry Teachers regarding Science Experiment Safety and Chemicals

Hyein Park, Hyunjung Kim[1,*], Jiyun Yang[2]
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EDU.P-451 A Comparison of Chemistry Textbooks in Elementary and Middle Schools in Mongolia and Korea

Gantumur Darisuren, Hyun Kyung Kim[1,*]
Jeonbuk National University, Korea
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Seong Hye Kim*, Seounghey Paik
Department of Chemical Education, Korea National University of Education, Korea

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DaYeong Jang, Jeongho Cha
Department of Chemistry Education, Daegu University, Korea

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Minhwan Kim, Sunghoon Kim[1], Taehee Noh[2,*]
Center for Educational Research, Seoul National University, Korea
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[2]Department of Chemistry Education, Seoul National University, Korea

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Nayoon Song, Taehee Noh
Department of Chemistry Education, Seoul National University, Korea

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Wonjun Hwang, Heesook Yoon
Department of Science Education, Kangwon National University, Korea

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Seung Bin Choi, Heesook Yoon
Department of Science Education, Kangwon National

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Heesook Yoon, **Heesook Yoon**
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EDU.P-459 Study on the impact of epistemological beliefs about scientific knowledge on teachers' personal knowledge

Seounghey Paik*, **Kihyang Kim**[1]
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ENVR.P-427 Photophysical properties of a novel microplastic dye based on aggregation induced emission (AIE)
Jae Jun Lee, **Hyejin Nam**, Cheal Kim
Department of Fine Chemistry, Seoul National University of Science & Technology, Korea

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Wansu Bae, Minhyuk Jeon[1,*], Sungjun Park, Hohyoun Jang
Applied Chemistry, Konkuk University, Korea
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ENVR.P-429 Development of Dye-Sensitized Photo-Rechargeable Flow battery for indoor light recycling
So Yeon Yoon, Tae-Hyuk Kwon[1,*]
department of chemistry, Ulsan National Institute of Science and Technology, Korea
[1]Department of Chemistry, Ulsan National Institute of Science and Technology, Korea

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Miao Wang, Hyunwoong Park
School of Energy Engineering, Kyungpook National University, Korea

ENVR.P-431 Fluorescent staining reagent capable of detecting plastics
Chanwoo Song, Jae Jun Lee[1], Cheal Kim[1]
Department Fine Chemistry, Seoul National University of Science & Technology, Korea
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ENVR.P-432 AIE-based fluorescence staining reagent of various microplastic
Cheal Kim*, **Hyejin Nam**, Jae Jun Lee
Department of Fine Chemistry, Seoul National University of Science & Technology, Korea

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Seon Young Hwang, Juyoung Maeng, Choong Kyun Rhee, Youngku Sohn
Department of Chemistry, Chungnam National University, Korea

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Boeun Choi, Cheal Kim, Jae Jun Lee
Department of fine chemistry, Seoul National University of Science & Technology, Korea

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Soyoung Kim, Juyoung Maeng[1], Seon Young Hwang[1], Choong Kyun Rhee, Youngku Sohn
Department of Chemistry, Chungnam National University, Korea
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Soo Seong Lee, Jae Jun Lee, **Chanwoo Song**, Cheal Kim
Department of Fine Chemistry, Seoul National University of Science & Technology, Korea

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Ho Seong Yang, Seon Young Hwang, Juyoung Maeng, Choong Kyun Rhee, Youngku Sohn
Department of Chemistry, Chungnam National University, Korea

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Yunji Kwon, Juyoung Maeng[1], Seon Young Hwang, Gaeun Yun[1], Choong Kyun Rhee, Youngku Sohn
Department of Chemistry, Chungnam National University, Korea
[1]Chemistry, Chungnam National University, Korea

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Soo yeon Bae, Juyoung Maeng, Seon Young Hwang, Choong Kyun Rhee[1], Youngku Sohn[1]
Chemistry, Chungnam National University, Korea
[1]Department of Chemistry, Chungnam National University, Korea

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Gaeun Yun, Seon Young Hwang, Choong Kyun Rhee, Youngku Sohn
Department of Chemistry, Chungnam National University, Korea

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Jeong Kyeong Lee, Tae-Hyuk Kwon[1,*], Deok-Ho Roh[1], So Yeon Yoon[2]
Ulsan National Institute of Science and Technology, Korea
[1]Department of Chemistry, Ulsan National Institute of Science and Technology, Korea
[2]department of chemistry, Ulsan National Institute of Science and Technology, Korea

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Department of Fine Chemistry, Seoul National University of Science & Technology, Korea

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Ga Hyeon Ha, Taeho Shin[1,*]
Dynamics & Spectroscopy / Carbon Composites Convergence Materials Engineering, Jeonbuk National University, Korea
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Bupmo Kim, Wooyul Kim, Wonyong Choi
Institute for Environmental and Climate Technology, Korea Institute of Energy Technology (KENTECH), Korea

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HoSub Bae, Wonyong Choi[1,*]
Environmental Science & engineering, Pohang University of Science and Technology, Korea
[1]Institute for Environmental and Climate Technology, Korea Institute of Energy Technology (KENTECH), Korea, Korea

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Woojung Jeon, Wonyong Choi[1,*]
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[1]Institute for Environmental and Climate Technology, Korea Institute of Energy Technology (KENTECH), Korea

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Yungyoon Kim, Wonyong Choi[1,*]
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[1]Chemical, Environmental & Climate Technology Laboratory, Korea Institute of Energy Technology (KENTECH), Korea

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Sohyeon Hong, Sunny Park, Ye Joo Kwon, Soo Min Kim
Chemistry, Sookmyung Women's University, Korea

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Luis Mario Rendon, Hasan Fareed[1], Seunghee Han[2,*]
ENVIRONMENTAL, GIST, Korea
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Hyuncheol Kim, Bomi Kim, Kitae Kim[1,*]
Research Unit of Cryogenic Novel Materia, University of Science & Technology, Korea Polar Research Institute School, Korea
[1]Research Unit of Cryogenic Novel Materia, Korea Polar Research Institute, Korea

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Hasan Fareed, Seunghee Han[1,*]
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ENVR.P-452 Computation study on the thermodynamic energies of HyBRID dissolution reaction considering Cu-hydrazine complex formation
Jihun Oh, Young-Kyu Han
Energy of Materials Engineering, Dongguk University, Korea

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Bomi Kim, Hyuncheol Kim, Kitae Kim[1,*]
University of Science & Technology, Korea
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Yun Hi Kim*, Bumjoon Kim[1,*], **Jingwan Kim**[2]
Department of Chemistry, Gyeongsang National University, Korea
[1]Department of Chemical Engineering & Biotechnology, Korea Advanced Institute of Science and Technology, Korea
[2]Gyeongsang National University, Korea

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Hwapyong Kim, Su Il In[1,*]
Energy Science & Engineering, Daegu Gyeongbuk Institute of Science & Technology, Korea
[1]Department of Energy Systems Engineering, Daegu Gyeongbuk Institute of Science & Technology, Korea

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Hwapyong Kim, Su Il In[1,*]
Energy Science & Engineering, Daegu Gyeongbuk Institute of Science & Technology, Korea
[1]Department of Energy Systems Engineering, Daegu Gyeongbuk Institute of Science & Technology, Korea

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Hwapyong Kim, Su Il In[1,*]
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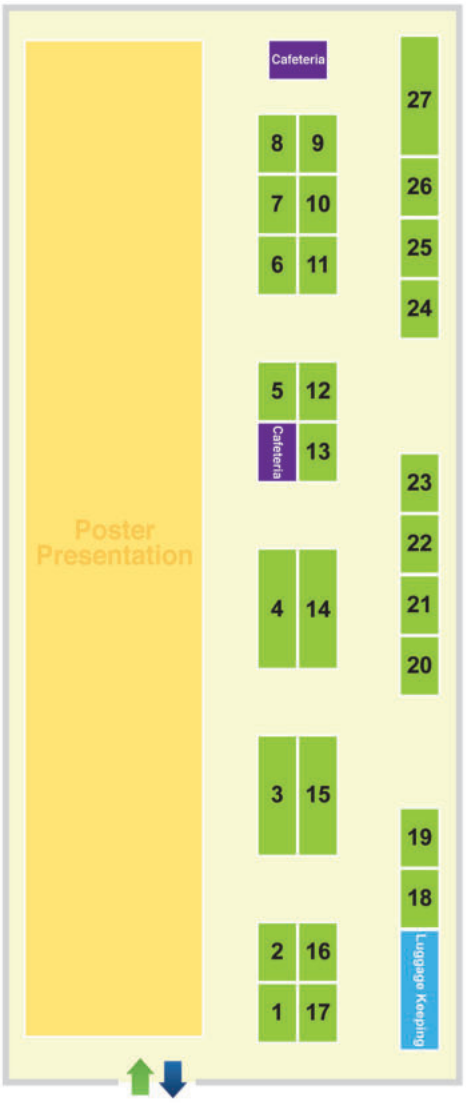

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Busan → Gwangju	3H 10 min	50~60 min	economy : 16,800 won excellent : 24,700 won late night economy : 18,400 won late night excellent : 27,100 won
Ulsan → Gwangju	3H 50min	60~70 min	economy : 19,500 won excellent : 29,000 won late night economy : 21,400 won late night excellent : 31,900 won
Daejeon → Gwangju	2H 20min	30~40 min	economy 11,100 won excellent 16,300 won late night economy: 12,200 won late night excellent : 17,900 won
Daegu → Gwangju	3H	40~50 min	economy : 13,100 won excellent : 19,200 won late night economy : 14,400 won late night excellent : 21,100 won

Transportation

▣ By Airplane

Route	Required time	Number of flights(per day)
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Jeju → Gwangju	50min	18~20

Gwangju airport → KDJ Center

Route	Required time
By Taxi	About 10 min (Estimated charge : 6,000 won)
By Subway	About 6 min (Line number 1)

▣ By Train

Train	
Departure	Time
Yongsan → Gwangjusongjeong	2h (by KTX)
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Daejeon → Gwangjusongjeong	1h 20m (by SRT)
	1h 40m (by KTX)
Suseo → Gwangjusongjeong	1h 50m (by SRT)
Yongsan → Gwangju	3h 30m (by KTX)
Daejeon → Gwangju	3h (by SRT)

Transportation

Train Station → KDJ Center

Gwangjusongjeong Station → Kimdaejung Convention Center	
By Taxi	About 10 min (Estimated charge : 7,000 won)
By Bus	seat 02 (5.18 Liberty Park Stop)
By Subway	About 15 min (Line number 1)

Gwangju Station → Kimdaejung Convention Center	
By Taxi	About 25 min (Estimated charge : 10,000 won)
By Bus	Circular 018, Seat 02 (5.18 Liberty Park Stop)

Transportation

▣ By Car

Seoul → Gwangju (Gyeonggi-do, Daejeon, Jeollabuk-do)	Using Yudeok tg(1,200 won) honam expressway → Sanwol Ic → 2nd beltway → Yudeok ta -> To Airport → To Gwangju Train Station → Kimdaejung Convention Center subway station → Kimdaejung Convention Center
Daegu → Gwangju (Gyeongju, pohang)	Honam expressway → Eastern Gwangju ic → Donglim ic → To Cityhall → Cityhall back gate → Sangmu incineration plant → Kimdaejung Convention Center
Busan → Gwangju (Suncheon, Yeosu)	Honam expressway → Eastern Gwangju ic → Donglim ic → To Cityhall → Cityhall back gate → Sangmu incineration plant → Kimdaejung Convention Center

Food

Map of Kimdaejung Convention Center District

❶ Kimdaejung Convention Center Station

❷ Sangmu Station

❸ Uncheon Station

Food

❶ Kimdaejung Convention Center Station (20)

Daegwang Restaurant

Korean food(Meat pancakes)

+82-62-226-3939

15, Sangmu-daero 695beon-gil, Seo-gu, Gwangju

Najung Sanghoe

Pork ribs

+82-62-944-1489

24, Sangmujayu-ro, Seo-gu, Gwangju

Gwangju Babjib

Korean food

+82-62-376-0050

8, Sangmuhwawon-ro 11beon-gil, Seo-gu, Gwangju

Cheongwon Buckwheat

Noodle

+82-62-381-1960

Sangmu Garden Road 1, Seo-gu, Gwangju

Leciel Blu

Italian food

+82-62-374-1555

718, Sangmu-daero, Seo-gu, Gwangju

Food

Haedonghwareo

Japanese Cuisine

+82-62-515-3344

653-1, Sangmu-daero, Seo-gu, Gwangju (Mareuk-dong)

Isanjung

Korean food

+82-62-375-3070

33, Wonmark 1-gil, Seo-gu, Gwangju

Babsim

Korean food

+82-62-385-8826

96-1, Marck-ro, Seo-gu, Gwangju

Sangmu Red Bean Porridge

Korean food

+82-62-385-5711

100 Marq-ro, Seo-gu, Gwangju

Woojeong Seolleongtang Galbitang

Korean food

+82-62-381-8225

4, Sangmu Hwawon-ro 11beon-gil, Seo-gu, Gwangju

Food

Daegwang Restaurant

Korean food

+82-62-371-9371

739, Sangmu-daero, Seo-gu, Gwangju

Mudeungsan Saenggogi

Korean food(Beaf)

0+82-62-376-9916

2, Sangmu Hwawon-ro 18beon-gil, Seo-gu, Gwangju

Jonggazip Kongnamul Gookbap

Korean food

+82-62-383-5989

5, Sangmu Hwawon-ro 12beon-gil, Seo-gu, Gwangju

Eat Pho

Southeast Asian restaurant

+82-62-383-1448

71, Marck-ro, Seo-gu, Gwangju

Ondeblack Sangmujum

Pork ribs

+82-62-226-5432

2nd floor of 12 Inae Building, Sangmu Park-ro, Seo-gu, Gwangju

Food

Little Cook

Spaghetti

+82-62-372-3997

1310-3 Chipyeong-dong, Seo-gu, Gwangju

Duffrey

Korean food

+82-62-381-3788

1, Sangmu Hwawon-ro 17beon-gil, Seo-gu, Gwangju

Bareunhanwoo

Korean food

+82-62-385-6632

Sangmu Park Road 1, Seo-gu, Gwangju

Nanaman Star

Italian food

+82-62-383-6002

221st floor, Sangmu Nuri-ro, Seo-gu, Gwangju

Chincheu

Southeast Asian restaurant

+82-62-383-2046

Gwangju, Seo-gu, Sangmunuri-ro, 15 2F

Food

❷ Sangmu Station (15)

Dareuda Gimbap Jumeokbap

Korean food

+82-62-381-1127

86, Chipyeong-ro, Seo-gu, Gwangju

Hyeonwandangyeom Sangchutwigim

Korean food(Fried Lettuce)

+82-62-375-3721

18 Chipyeong-ro, Seo-gu, Gwangju

Yehyanggyejeol Hanjeongsik

Korean food

+82-62-381-8700

2F, 131 Sangmupyeonghwa-ro, Seo-gu, Gwangju (Chipyeong-dong)

Okatsu

Japanese Cuisine

+82-62-373-3355

112, Chipyeong-ro, Seo-gu, Gwangju (Jeongyeon High Ville, Chipyeong-dong)

Okgwa Hanuchon Sangmujum

Korean food

+82-62-383-1592

39-1, Naebang-ro, Seo-gu, Gwangju (Chipyeong-dong)

Food

Bada of Haynggi

Japanese Cuisine

+82-62-376-5147

118, Marck-ro, Seo-gu, Gwangju

Old-fashioned pork belly

Korean food

+82-62-384-3898

33, Sangmu Hwawon-ro 32beon-gil, Seo-gu, Gwangju

Seoul Jokbal Bossam

Korean food

+82-62-373-7211

13-18 Sangmu Hwawon-ro 32beon-gil, Seo-gu, Gwangju

Eight Eight Small Tripe

Korean food

+82-62-385-4679

29-9, Sangmu Hwawon-ro 32beon-gil, Seo-gu, Gwangju

Sanil Sangmujum

Korean food

0507-1339-5223

165-9 Mareuk-dong, Seo-gu, Gwangju

Food

Naegohyang Cheongbori Hanu

Korean food

+82-62-385-9292

80 Mareukbokgae-ro, Seo-gu, Gwangju

Sangmu Mudeungban Branch

Chinese Cuisine

+82-62-383-6692

33, Sangmu Hwawon-ro 32beon-gil, Seo-gu, Gwangju

Gyodong Jjamppong

Chinese Cuisine

+82-62-373-7793

13, Sangmu Hwawon-ro 32beon-gil, Seo-gu, Gwangju

Bongchobab

Japanese Cuisine

+82-62-371-5544

25-11 Yuseong Building, Sangmu Hwawon-ro 32beon-gil, Seo-gu, Gwangju

Sangmu Seasonal Restaurant

Korean food

+82-62-373-0852

6-14 Sangmu Jungang-ro, Seo-gu, Gwangju

Food

❸ Uncheon station (10)

Mindeulle

Korean food

+82-62-374-8760

137 Sangmupyeonghwa-ro, Seo-gu, Gwangju (Chipyeong-dong)

Yukjeonmyeongga

Korean food(Meat pancakes)

+82-62-384-6767

174 Sangmujayu-ro, Seo-gu, Gwangju (Chipyeong-dong, (2F))

Dogdojib

Korean food

010-9265-9682

11, Sangmu-daero 876beon-gil, Seo-gu, Gwangju

Daesoyang

Korean food

+82-62-363-9292

4, Sangmu Minju-ro, Seo-gu, Gwangju

Mudeung King Tonkasu

Korean food

+82-62-384-0502

173, Sangmu Free Road, Seo-gu, Gwangju, 1st floor of Velika

Food

Nanabangkok

Thailand food

+82-62-381-7500

1244-1 Chipyeong-dong

Dayeon Cicken Galbi

Korean food

+82-62-953-3236

23-1 Sangmuminju-ro, Seo-gu, Gwangju

Hwang Chil Korea

Korean food

+82-62-374-3737

70 1st floor, Markbokgaero, Seo-gu, Gwangju

Gwangyang Charcoal Fire Gui

Korean food

+82-62-375-9292

23, Sangmu-daero 867beon-gil, Seo-gu, Gwangju

Hanoioi Sangmu

Southeast Asian restaurant

+82-62-383-4024

14 1 202 Chipyeong-dong, Seo-gu, Gwangju

힐링 여행지
광주관광
투어

양림역사문화마을권

예상 소요시간 2시간 30분

세부일정

1 이이남스튜디오
60분 소요

광주를 넘어 세계적인 미디어아티스트로 부상한 이이남 작가의 창작 스튜오로 자각의 작업실과 미디어아트 뮤지엄, 미디어카페테리아 등으로 이뤄진 복합문화공간입니다. 전시뿐만 아니라 세미나와 공연 등 다양한 문화예술 프로그램을 운영할 계획

주소 광주 남구 제중로47번길 10

2 호랑가시나무길
20분 소요

호랑가시나무아트폴리곤

옛 선교사 사택과 아트폴리곤, 호랑가시나무창작소 등 다양한 문화공간과 관광지자 위치해있다. 양림동의 이 나무는 높이가 6m 정도이며 근원부의 간주가 115㎝로 이 수종에서는 좀처럼 보기 힘든 거목이다. 수관의 너비는 남북 7m, 동서 5m 이며 가슴 높이에서 두 갈래로 갈라져 있다. 원래 야생식물로 자란 것을 관상용으로 보호해왔으며 주변에 어린 나무들이 자생하고 있다.

주소 광주 남구 양림동 225-25

3 우일선 선교사사택
10분 소요

양림산 기슭에 동향으로 세워진 2층 벽돌 건물로 광주에 현존하는 양식 주택으로는 가장 오래된 건물이다. 미국인 선교사 우일선에 의해 1920년대에 지어졌다고 전해올 뿐 정확한 건립 연대는 알 수 없다. 현재 내부를 개조하여 대한예수교 장로회 사무실로 사용하고 있으며, 한국 근대 건축의 흐름을 이해하는 데 도움이 되는 귀중한 자료이다.

주소 광주 남구 제중로 47번길 20

4 오웬기념각
15분 소요

기독간호대학교 내에 있는 오웬기념각은 배유지 목사와 함께 전남 최초의 선교사로 들어와 광주에서 순교한 오웬선교사를 기념하기 위하여 미국 친지들이 보낸 기금 4,200달러로 1914년에 세워진 연면적 434평방미터(부속건물 포함)인 양옥건물이다.

주소 광주 남구 백서로 70번길 6

5 이장우가옥
15분 소요

양림동은 영화나 드라마 촬영 장소로 각광을 받고 있다. 특히 이장우 가옥은 전형적인 근대시기 남도의 상류층 가옥으로 영화 촬영 명소로 거듭나고 있다. 〈위험한 상견례〉(2011), 〈해어화〉(2016) 등에 배경이 될 정도로 단정하면서도 수려한 풍경을 자랑한다.

주소 광주 남구 양촌길 21

4 펭귄마을
30분 소요

양림동 주민 센터 뒤에 펭귄모양의 이정표를 따라 좁은 골목길을 들어가면 70, 80년대 마을이 전시장으로 변모하고 있다. 무릎이 불편한 어르신이 뒤뚱뒤뚱 걷는 모습이 펭귄 같다고 하여 이름 지어진 마을. 마을 주민들은 과거에 화재로 타 방치되어 있던 빈집을 치우고 버려진 물건을 가져와 동네 벽에 전시하기 시작했다.

주소 광주 남구 양림동 201-64

광주광역시관광공사
Gwangju Tourism Organization

힐링 여행지
광주관광
투어

어서오세요

광주 담양
자연 힐링투어

예상 소요시간 3시간

세부일정

① 광주 ⟷ ② 담양

30분 이동 ⟶
⟵ 30분 이동

광주호 호수생태원

60분 소요

한국관광공사 추천 '비대면 관광지'
유네스코 세계지질공원(UNESCO Geopark)

광주호 호숫가 인근에 자연관찰원, 자연학습장, 잔디휴식광장, 수변 습지 등 테마별 단지로 조성된 생태공원이다. 전체적으로 조용하고 시원한 느낌을 받는 공원으로, 추운 날씨가 아니라면 꽃이나 동·식물들의 생태자료를 직접 볼 수 있다.

주소 광주 북구 충효동 905

담양 죽녹원

60분 소요

담양군이 성인산 일대에 조성하여 2003년 5월 개원한 대나무 정원으로, 죽림욕을 즐길 수 있는 산책로는 운수대통길·죽마고우길·철학자의 길 등 8가지 주제의 길로 구성된다. 전망대에서는 담양천을 비롯하여 수령 300년이 넘은 고목들로 조성된 담양 관방제림과 담양의 명물인 메타세쿼이아 가로수길 등이 한눈에 내려다보인다. 생태전시관, 인공폭포, 생태연못, 야외공연장이 있으며 밤에도 산책을 할 수 있도록 대숲에 조명을 설치했다.

광주광역시관광공사
Gwangju Tourism Organization

힐링 여행지
광주관광
투어

광주 비엔날레 투어

예상 소요시간 3시간

세부일정

① 광주디자인비엔날레 — 120분 소요

② 국립광주박물관 — 60분 소요

광주 디자인비엔날레

'디자인을 만나다'는 주제로 열리는 2023 제10회 광주 디자인비엔날레는 기술, 라이프스타일, 문화, 산업 등 4개 분야에서 디자인의 확정성을 살펴볼 수 있습니다.

'만나다'(meet)'는 주제는 코로나 팬데믹 이후 처음으로 100% 대면 행사로 디자인비엔날레를 만난다는 뜻 또한 포함하고 있습니다.

이용시간 매일 09:00~18:00 (입장은 5:30까지) / 월요일 휴관
주소 광주 북구 비엔날레로11

국립광주박물관

'국립광주박물관은 광복 이후 우리 손으로 지은 최초의 지방 국립박물관으로 광주·전남지역의 전통 문화를 널리 알리기 위해 1978년 12월 6일에 개관하였습니다.

활발한 기획 전시와 상설 전시로 관람객을 맞이하고 있으며 가을에는 플라타나스 나무의 단풍이 경치를 이루고 있습니다.

이용시간 매일 10:00~18:00 (입장은 5:30까지)
야간개장 18:00~20:00 / 4~10월 매주 토요일

광주광역시관광공사
Gwangju Tourism Organization

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새로운 아이디어로 충만한

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디스플레이 전자 재료 및 화학 분야의

GLOBAL COMPANY

동우화인켐은 LCD, OLED 등의 필수 소재인 편광필름과 컬러필터, 터치센서, 고순도 첨단 프로세스 케미컬 등의 원천기술을 확보하고 있으며, 이를 통해 보다 나은 미래를 열어가고 있습니다.

동우화인켐은 글로벌 화학회사인 스미토모화학의 자회사이며, 핵심기술을 보유한 매출 2조원의 대기업으로서, 정보전자소재의 글로벌 리더로 성장하고 있습니다.

지속적인 연구개발과 체계적인 설비투자를 통해 차별화된 품질과 서비스를 제공하고, 회사 창립시부터 지켜온 이념인 윤리경영과 사회공헌을 바탕으로 업계 최고의 파트너, 동우화인켐으로 인정받겠습니다.

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