

2022 ICMMA



# The 16<sup>th</sup> International Conference on Multi-functional Materials and Applications



24-25 November 2022

Korea Institute of Ceramic Engineering and Technology,  
Jinju, KOREA, With on-line

## Co-organizers



Hanseon Univ.



Bengbu Univ.



Anhui Univ. Sci. Technol



Journal of Multifunctional Materials & Photoscience



Hefei Univ.



Yancheng Institute. Technol.



Anhui Jianzhu Univ.



Suzhou Univ. Sci. Technol.



KhonKean Univ.



Sun Moon Univ.



Inha Univ.



Nakhon Si Thammarat Rajabhat University



## Premium Thermal Solution

- Differential Scanning Calorimeter: -180°C to 2400°C
- Thermogravimetric Analyzer: 10°C to 1100°C
- Dynamic Mechanical Analyzer: -170°C to 1500°C
- Dilatometer: -180°C to 2800°C
- Laser Flash Analyzer: -125°C to 2800°C

**NETZSCH**  
Proven Excellence.



**LFA 467 HT *HyperFlash***<sup>®</sup>  
Suitable for thin samples and high thermal conductivity materials



**EPLEXOR**<sup>®</sup> **High Force DMA**  
Wide temperature range from -160°C to 1500°C  
High load, high temperature DMA capable of measuring up to 6000N



**Kinexus**<sup>®</sup> **Rotational Rheometer**  
Capable of measuring a wide range of rheological properties even at low torque with high accuracy and various accessories

< 회 사 소 개 >

(주)정민산업은 1978년 창업 이래 국내외 진공시스템(고진공 및 초고진공 산업 분야) 설비기술 개발에 주력해 왔습니다. 현재는 초고진공 및 진공소결로 등을 개발, 진공도 10-10Torr, 최고 가열 온도 3,000℃, 단축 가압 500톤, 반응 소결로 70bar 가스 가압 능력 등의 극한 기술을 습득했으며, 추가 기술 개발에 전력을 다하고 있습니다. 또한 SiC CVD, 진공 함침로, GPS, SPS, 진공 열처리로, 진공 증착 시스템 및 플라즈마 공정기술 개발을 통하여, 국내 대기업(삼성, LG, SKC), 국책 연구소나 대학교 연구실의 실험장비를 지속적으로 납품하고 있습니다. 앞으로도 지속적인 품질 개선을 통하여 우수한 품질 및 기술개발에 최선을 다하는 (주)정민산업이 될 것을 약속드립니다.

<주요생산품목>

- SiC CVD Furnace
- Spark Plasma Sintering Furnace (S.P.S)
- Gas Pressure Sintering Furnace (G.P.S)
- Vacuum Hot Press
- Vacuum Tube Furnace
- Vacuum Sintering Furnace
- Rapid Melting / Spinning Furnace
- Lamp / Bottle Vacuum Exhaust System
- Vacuum Coater
- Vacuum Brazing System
- R.F Etching & Plasma System



S.P.S



Vacuum Furnace



Hot Press



Tube Furnace



Sintering Furnace



G.P.S



Vacuum Coater



Brazing

서울시 영등포구 선유서로 23 (문래동 5가 23-2)  
 TEL : 02-871-1988-9                      Fax : 02-871-1987  
 http://www.jmvac.co.kr                      E-mail : [wjdalsc5@daum.net](mailto:wjdalsc5@daum.net)

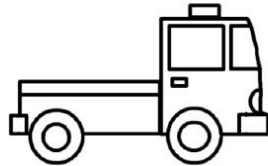


11th anniversary

Manufacture custom furnace and vacuum equipment



CUSTOM OF PRODUCT

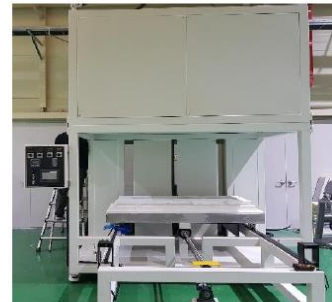


DELIVERY OF PRODUCT



AFTER SERVICE

# PRODUCT



9-1, Geumeo-ro 202beon-gil, Pogok-eup, Cheoin-gu, Yongin-si, Gyeonggi-do Republic of KOREA  
TEL) 031-335-1711 FAX) 031-335-1712  
E-MAIL) tnsvac2010@duam.net



## Biz & Life를 창조하는 주식회사엔젤럭스

우리가 꿈꾸는 미래기술을 현실로 바꾸어가고 있는 엔젤럭스의 첨단기술이 당신의 감성과 예술 그리고 꿈과 만남 때 세상을 아름답게 만들어 갑니다. 이제 엔젤럭스의 특화된 엔지니어링 서비스를 경험하실 수 있습니다.

제품디자인, 악성계, 3D프린팅 복합소재, 정밀가공, ICT융합 통해 해양레저분야에서부터 항공우주분야까지 혁신제품을 보다 빠르고 효율적으로 제작하는 엔지니어링 업무를 수행할 수 있습니다. 이와 같은 역량을 바탕으로 주식회사엔젤럭스는 융합의 가치 창출을 통해 조선해양분야에서 항공우주분야까지 비즈니스 아이디어를 발전시키고 성장시켜갈 든든한 파트너가 되겠습니다.

## 사업비전

오직 즐거움을  
위해 도전하라

<p><b>상생</b> 융합의 가치를 추구합니다</p>	<p><b>화합</b> 당신의 꿈을 함께합니다</p>	<p><b>나눔</b> 받고 건강한 미래를 만들어 갑니다</p>
--	---------------------------------------	---

## 사업분야

엔지니어링 서비스

<p><b>3D프린팅 서비스</b> 3D스캐닝, 역설계, 디자인목공, 3D프린팅</p>	<p><b>복합소재 실용화</b> 카누, 카약, 요트, 시뮬레이터, 자동차, 항공부품</p>	<p><b>정밀가공 서비스</b> CNC가공, 레이저조각, 전통목공, DIY</p>	<p><b>기술교육 서비스</b> 3D프린팅교육, 복합소재교육,정밀가공교육</p>
--	---	--	---

## 라파 300M(Rapha 300M) 25% 축소형 스케일기 모형

라파 300M은 2인용의 수륙양용 군용 에어택시 컨셉의 디자인이다. 탑승공간 상부에 로터시스템을 위치시켜 탑승과 비행시 군인을 더욱 안전하게 보호하며 지상과 수상에서 이착륙이 가능한 수륙양륙형 기체다. 통체 양쪽에는 항력을 최소화한 스테빌라이저(Stabilizer)를 장착하여 수상에서 수평안정성을 높였다. 통체 내부구조는 유선형의 링 구조(Ring Structure)로 추락시 충격 흡수와 내부구조를 단단히 잡아주는 형태이다. 후미쪽에 추력모터 2개를 장착해 비행 중이나 수상에서 후류를 이용해 비행과 운항에 도움이 된다.

## 라파 300H(Rapha 300H) 25% 축소형 스케일기 모형

라파 300H은 2인용의 수륙양용 의료용 에어택시 컨셉의 디자인이다. 탑승공간 상부에 로터시스템을 위치시켜 탑승과 비행시 환자를 더욱 안전하게 보호하며 지상과 수상에서 이착륙이 가능한 수륙양륙형 기체다. 통체 양쪽에는 항력을 최소화한 스테빌라이저(Stabilizer)를 장착하여 수상에서 수평안정성을 높였다. 통체 내부구조는 유선형의 링 구조(Ring Structure)로 추락시 충격 흡수와 내부구조를 단단히 잡아주는 형태이다. 후미쪽에 추력모터 2개를 장착해 비행 중이나 수상에서 후류를 이용해 비행과 운항에 도움이 된다.





**Be the  
Carbon Champion!**

*Introducing state of the  
art composite technologies*



## PRODUCT



### GRONIQ (Microwave Type)

- Quick heating to ultra-high temperature in response to the electromagnetic waves in the air
- For stability, it is provided in a form that SiC fiber, the raw material, is stored in Quartz ware.

**Product type** Circle and bar types



### GRONIQ (Electric Type)

- Quick heating to ultra-high temperature in response to the current in the air
- For stability, it is provided in a form that SiC textile, the raw material, is stored in Quartz ware.

**Product type** Bar type



### Applied Products

- Various applied products which use GRONIQ as the heater
- Low power consumption, compared to other ordinary metal and non-metal heater. Installed in a cartridge box,

**Product type** Dental furnace, dryer, hot air blower, electric stove, and other heating system

**Make-to-order support** Customized production service to meet customers' specific requirements



**DAEHO I&T Co., Ltd.**

**Address** 5F, Standard Factory 3, 211, Jayumyeok 3-gil, Masanhoewon-gu, Changwon-si, Gyeongsangnam-do

**Tel** 82-55-715-2233 **Fax** 82-55-715-2245 **Email** daehoint@daehoint.co.kr

GRONIQ's exceptional heat performance will give your product a competitive edge.

**The 16<sup>th</sup> International Conference on Multi-functional Materials and Applications (ICMMA 2022)**

**November 24-25, 2022**

**Korea Institute of Ceramic Engineering and Technology, Korea**

---

**[Conference Chairman]**

Dr. Kwang Youn Cho (Korea Institute of Ceramic Engineering and Technology, Korea)

**[Conference Vice Chairman]**

Prof. Jin Liu (Anhui Jianzhu University, China)

Prof. Won-Chun Oh (Hanseong University, Korea)

Dr. Dong Geun Shin (Korea Institute of Ceramic Engineering and Technology, Korea)

Dr. Man Tae Kim (Korea Institute of Ceramic Engineering and Technology, Korea)

**[Advisory Chairman]**

Prof. Mingxu Zhang (Anhui University of Science & Technology, China)

Prof. Zhigang Chen (Suzhou University of Science and Technology, China)

Prof. Saksit Chanthai (Khon Kaen University, Thailand)

Prof. Chuyang Xu (Anhui University of Science & Technology, China)

Dr. Hui-Jun Won (Korea Atomic Energy Research Institute, Korea)

Prof. Won-Chun Oh (Hanseong University, Korea)

Prof. Jin Liu (Anhui Jianzhu University, China)

Prof. Ding Ming (Bengbu University, China)

Prof. Shin Mukai (Hokkaido University, Japan)

Dr. Chong-Hun Jung (Korea Atomic Energy Research Institute, Korea)

Prof. Cheol Gyu Kim (Hanbat National University, Korea)

Prof. Heon-Chang Kim (Hoseo University, Korea)

Prof. Masahiro Toyoda (Oita University, Japan)

Prof. Chan-Kyung Kim (Inha University, Korea)

Prof. Daosung Sun (Hefei Normal University, China)

Prof. Ho-Seob Kim (Sunmoon University, Korea)

Dr. Kwang Yeon Cho (Korea Institute of Ceramic Eng. and Tech., Korea)

Prof. Zhaoqi Sun (Anhui University, China)

Prof. Chen-Hao Wang (National Taiwan University of Science and Technology, Taiwan)

**[Conference Local Chairman]**

Prof. Won-Kweon Jang (Hanseong University, Korea)

Prof. Hak-Soo Kim (Sun Moon University, Korea)

Prof. Estelle Léonard (ESCOM/UTC, France)

Dr. Suresh Sagadervan (Malaya University, Malaysia)

Prof. Feng-Jun Zhang (Anhui Jianzhu University, China)



Prof. Prawit Nuengmatcha (Nakhon Si Thammarat Rajabhat University, Thailand)  
Prof. Yin Liu, (Anhui University of Science and Technology, China)  
Prof. Cheol-Kyu Jun (Hoseo University, Korea)  
Prof. Minh-Vien Le (Ho Chi Minh City University of Technology, Vietnam)  
Prof. Is Fatimah (Universitas Islam Indonesia, Indonesia)  
Prof. Chang-Sung Lim (Hanseu University, Korea)  
Prof. Qinfang Zhang (Yancheng Institute of Technology, China)  
Prof. Seung-Kyu Park (Hoseo University, Korea)  
Prof. Ram Agarwal (AJC Editor Chief, India)  
Prof. Shao-Jie Feng (Anhui Jianzhu University, China)  
Prof. Dongtian Wang (Suzhou University of Science and Technology, China)  
Prof. Yanmao Dong (Suzhou University of Science and Technology, China)  
Dr. Hangkyo Jin (Korea Research Institute of Chemical Technology, Korea)  
Prof. Rachadaporn Benchawattananon (Khon Kaen University, Thailand)  
Prof. Kunhong Hu (Hefei University, China)  
Prof. Daming Gao (Hefei University, China)  
Prof. Chaowalit Hamontree (King Mongkut's Institute of Technology Ladkrabang, Thailand)

**[Committee Board Members]**

Dr. Jyothi Rajesh Kumar (Korea Institute of Geoscience and Mineral Resources, Korea)  
Prof. Hongzhi Liu (Shandong University, China)  
Prof. Jing Wang (Anhui University of Science and Technology, China)  
Prof. Vivek Polshittewar (Tata Institute of Fundamental Research, India)  
Prof. K. L. Ameta (Sardar Patal University, India)  
Prof. Lei Zhu (Yancheng Institute of Technology, China)  
Prof. Goutam Mukhopadhyay (B.C.D.A College of Pharmacy & Technology, India)  
Prof. Zainal Arifin Ahmad (University Sains, Malaysia)  
Prof. Chengbao Liu (Suzhou University of Science and Technology, China)  
Prof. Ze-Da Meng, (Suzhou University of Science and Technology, China)  
Prof. Sirinuch Loita (Khon Kaen University, Thailand)  
Prof. Gaofeng Wang (Inner Mongolia University of Science and Technology, China)  
Prof. Feng Liu (Nanchang University, China)  
Prof. Jiahong Fan (Beijing Huabei Dianli University, China)  
Prof. Tae-Ho Kim (Sun Moon University, Korea)  
Prof. Yong Wook Park (Sun Moon University, Korea)  
Prof. Youn Soo Shim (Sun Moon University, Korea)  
Prof. Jin Woo Kim (Sun Moon University, Korea)  
Prof. Jong-Sung Yu, (Daegu Gyeungbuk Institute of Science & Technology, Korea)  
Prof. Jae-Won Lee (Dankook University, Korea)  
Prof. Suriati Paiman (Universiti Putra Malaysia, Malaysia)  
Prof. Solhe F. Alshahateet (Aqaba University of Technology, Jordan)  
Prof. SOGA Tetsuo (Nagoya Institute of Technology, Japan)  
Prof. Shinichiroh Iwamura ((Hokkaido University, Japan)

**[Conference Academic Chairman]**

Dr. Kwang Yeon Cho, (Korea Institute of Ceramic Engineering and Technology, Korea)

Prof. Won-Chun Oh (Hanseong University, Korea)

Prof. Jin Liu (Anhui Jianzhu University, China)

**Theme field of the conference:**

- Materials: preparation, basic principle and characterization;
- Catalytic materials and mechanism;
- Environmental friendly materials and applications;
- Advanced composites and applications;
- Advanced building functional materials;
- Nanomaterials, sensors and applications;
- Materials related to biology, medical and human health;
- Photo-induced materials and applications;
- Others

## Conference Registration

Deadline	October 31 (Thursday), 2022
<b>All of presenters (Speakers) should be paid Registration fee.</b>	

## Registration fee

Forigner : 100USD (50USD) (On-site Attendee), 50USD (30USD) (Virtual Attendee)

Korean : 300,000KWN (100,000KWN)

- ( ) : Student rate

### <Bank Transfer>

Account number : 353568-11-000445

Name : WON-CHUN OH (IJPCS)

Bank Name : Kookmin Bank, Buldang branch

Swift code : CZNBKRSE

Address : Buldangdong, Seobukgu, Cheonan, Chungnam, Korea

## Venue: Korea Institute of Ceramic Engineering and Technology, Korea

Meeting Name	Meeting ID	PW	Breakout Room
ICMMA2022_KICET	477 967 3888	ICMMA2022	Zoom A
ICMMA2022_KICET	710 662 5033	ICMMA2022	Zoom B
ICMMA2022_KICET	947 539 6783	ICMMA2022	Zoom C
ICMMA2022_KICET	857 926 6363	ICMMA2022	Zoom D

## Presentation Guide

Plenary Lecture : 20 minutes speech, 5 minutes Q&A

Invited and Oral Lecture : 17 minutes speech, 3 minutes Q&A

Poster Presentation : 3 minutes speech, 2 minutes Q&A (Only 1)

## Full Paper Submission

### 1. Nanomaterials (SCIE) , ISSN: 1420-3049

APC : 2,200 CHF.

Submission : [https://www.mdpi.com/journal/nanomaterials/special\\_issues/multifunctional\\_nano\\_icmma](https://www.mdpi.com/journal/nanomaterials/special_issues/multifunctional_nano_icmma) Guest Editor (R. Editorial Board Member) : Prof. Won-Chun Oh ([wc\\_oh@hanseo.ac.kr](mailto:wc_oh@hanseo.ac.kr))



### 2. Journal Multifunctional Materials and Photoscience, ISSN: 2229-743x

APC : Free Registration fee for submitter

Editor-in-Chief (Submission) : Prof. Won-Chun Oh ([wc\\_oh@hanseo.ac.kr](mailto:wc_oh@hanseo.ac.kr))

**3. Korean Journal of Materials Research** (SCOPUS), ISSN : 1225-0562  
APC : 300USD  
Guest Editor (Submission) : Prof. Won-Chun Oh ([wc\\_oh@hanseo.ac.kr](mailto:wc_oh@hanseo.ac.kr))

**ICMMA2022-Opening Ceremony**  
(Host by Dr. Kwang Youn Cho)

09:00~09:10	<p>Opening address by Dr. <b>Kwang Youn Cho</b> (Voice President, Korea Institute of Ceramic Engineering and Technology, Korea)–Conference Chairman -</p>	
09:10~09:20	<p>Congratulation address by Dr. <b>Yeong Gil Jeong</b> (President of Korea Institute of Ceramic Engineering and Technology, Korea)</p>	
09:20~09:40	09:20~09:30	<p>ICMMA News by Prof. Dr. <b>Won-Chun Oh</b> (Hanseu University, Korea) – Conference Vice Chairman -</p>
	09:30~09:40	<p>ICMMA 2023_Address by Prof. <b>Dao Sheng Sun</b> (President, Anhui Jianzhu University, China) <b>Introduction of ICMMA2023</b></p>
09:40~09:50	<p><b>"Award of Appreciation Plaque"</b> Plaque to Prof. Dr. <b>Surasak Kaew-On</b> (Nakhon Si Thammarat Rajabhat University, Thailand)</p> <p><b>"Award of Appreciation Plaque to Retired Scientists"</b> Prof. Dr. <b>Chang Sung Lim</b> (Hanseu University, Korea) Prof. Dr. <b>Masahiro Toyoda</b> (Oita University, Japan) Dr. <b>Chong-Hun Jung</b> (Korea Atomic Energy Research Institute, Korea)</p> <p><b>"Best Paper Award – (Supported by Journal "Nanomaterials" : MDPI)"</b> Dr. <b>Kwang Youn Cho</b> (Korea Institute of Ceramic Engineering and Technology, Korea)</p> <div style="text-align: center;">  </div> <p><b>"JMMP Award"</b> Prof. Dr. <b>Jing Wang</b> (Anhui University of Science and Technology, China) Ass. Prof. Dr. <b>Yonrapach Areerob</b> (King Mongkut's Institute of Technology Ladkrabang, Thailand)</p> <div style="text-align: center;">  </div>	
09:50	<p>The conference chairman announces <b>ICMMA 2022</b> begins</p>	
09:55	<p>Group Photo</p>	
09:55~10:00	<p>Break</p>	

# Conference Program

**November 25 (Friday), 2022**

<b>Session I (Zoom A: 477 967 3888 , PW: ICMMA2022) (10:00-10:50)</b> <b>(Session Chairman : Prof. Dr. Won-Chun Oh (Hanseu University))</b>	
10:00-10:25	<b>Plenary Lecture 1</b> <b>Prof. Toyoda</b> , Department of Applied Chemistry, Graduate School of Engineering, Oita University, 700 Dannoharu, Oita 870-1192, Japan
10:25-10:50	<b>Plenary Lecture 2</b> <b>Prof. Shin R. Mukai</b> , Division of Applied Chemistry, Faculty of Engineering, Hokkaido University, N13N8 Kita-ku, Sapporo 060-8628, Japan
10:50-11:15 <b>Video</b>	<b>Plenary Lecture 3</b> <b>Prof. Leonard, Estelle<sup>a</sup>, Otani, Nao<sup>b</sup> ; Fayeulle, Antoine<sup>a</sup> ; Nakane, Daisuke<sup>b</sup> ; Akitsu, Takashiro<sup>b</sup></b> , <sup>a</sup> Université de technologie de Compiègne, ESCOM, TIMR (Integrated Transformations of Renewable Matter), Centre de recherche Royallieu - CS 60 319 - 60 203 Compiègne Cedex, France. <sup>b</sup> Department of Chemistry, Faculty of Science, Tokyo University of Science, 1-3 Kagurazaka, Shinjuku-ku, Tokyo 162-8601, Japan
11:10-11:30	<b>Invited Lecture 1</b> <b>Prof. Wen-Hui Wei, Afandi Yusuf, Hsin-Chih Huang, Chen-Hao Wang*</b> , Department of Materials Science and Engineering, National Taiwan University of Science and Technology, Taipei 106335, Taiwan
11:30-11:50	<b>Invited Lecture 2</b> <b>Prof. Wen Ji<sup>a</sup>, Xianbiao Wang<sup>a*</sup>, Tianqi Ding<sup>a</sup>, Soufian Chakir<sup>a</sup>, Yongfei Xu<sup>a</sup>, Xianhuai Huang<sup>b</sup>, Huanting Wang<sup>c</sup></b> , <sup>1</sup> Anhui Province International Research Center on Advanced Building Materials, School of Materials Science and Chemical Engineering, Anhui Jianzhu University, Hefei Anhui, PR China 230601; <sup>2</sup> Anhui Provincial Key Laboratory of Environmental Pollution Control and Resource Reuse, Anhui Jianzhu University, Hefei, PR China 230601; <sup>3</sup> Department of Chemical and Biological Engineering, Monash University, Clayton, VIC, Australia 3800
<b>11:50-13:00 Lunch Time</b>	
<b>Session II (Zoom A : No 477 967 3888, PW: ICMMA2022) (13:00-14:25)</b> <b>(Session Chairman : Prof. Is Fatimah (Islam University of Indonesia), Dr. Rajesh Kumar Jyothi (Korea Institute of Geosciences and Mineral Resources))</b>	
13:00-13:20	<b>Invited Lecture 3</b> <b>Prof. Suresh Sagadevan</b> , Nanotechnology & Catalysis Research Centre, University of Malaya, Kuala Lumpur 50603, Malaysia
13:20-13:40	<b>Invited Lecture 4</b> <b>Prof. Rajesh Kumar Jyothi</b> , Korea Institute of Geosciences and Mineral Resources (KIGAM), Daejeon 34132, Korea
13:40-13:55	<b>Oral Lecture 1</b> <b>Prof. Noor Haida Mohd Kaus* and Ahmad Fadhil Rithwan</b> , School of Chemical Sciences, Universiti Sains Malaysia, 11800, Penang MALAYSIA
13:55-14:10	<b>Oral Lecture 2</b> <b>Prof. Chiv Sinly<sup>1</sup>, Rutchyaporn Anurach<sup>1</sup>, Kiettipum Phontree<sup>1</sup>, Thanavit Thongsodsang<sup>1</sup>, Thatsanand Xayavong<sup>2</sup>, Theera Rittirod<sup>1,*</sup></b> , <sup>1</sup> Faculty of Pharmaceutical Sciences, Khon Kaen University, Khon Kaen, Thailand, <sup>2</sup> Faculty of pharmacy, University of Health sciences, Vientiane, Lao PDR
14:10-14:25	<b>Oral Lecture 3</b>

	<b>Prof. Chang-Min Yoon*</b> , Department of Chemical and Biological Engineering, Hanbat National University, 125 Dongseo-daero, Theera Rittirod <sup>1,*</sup> , <sup>1</sup> Faculty of Pharmaceutical Sciences, Khon Kaen University, Khon
14:25-14:35	<b>Coffee Break</b>
<b>Session II (Zoom A : No 477 967 3888, PW: ICMMA2022) (14:35-15:25)</b> (Session Chairman : Prof. Jing Wang (Ahui University of Science and Yechonology), Prof. Swat Nanan (Khon Kaen University))	
14:35-14:55	<b>Invited Lecture 5</b> <b>Prof., Jing Wang<sup>1*</sup>, Binqun Cao<sup>1</sup>, Xiao Chen<sup>1</sup>, Yu Tian<sup>1</sup>, Lei Zhang<sup>1</sup>, Chenwei Shang<sup>1</sup>, Zhou Zhou<sup>2</sup>, Chul Gyu Jhun<sup>2*</sup></b> , <sup>1</sup> College of Materials Science and Engineering, Anhui University of Science And Technology, Huainan, Anhui 232001, <sup>2</sup> School of Electronic Display Engineering, Hoseo University 20, Hoseo-ro 79beon-gil, Baebang-eup, Asan City 31499, Korea
14:55-15:10	<b>Oral Lecture 4</b> <b>Prof. Chiv Sinly<sup>1</sup>, Rutchyaporn Anurach<sup>1</sup>, Kiattipum Phontree<sup>1</sup>, Thanavit Thongsodsaeng<sup>1</sup>, Thatsanand Xayavong<sup>2</sup>, Rachadaporn Benchawattananon<sup>3</sup>, Theera Rittirod<sup>1,*</sup></b> , <sup>1</sup> Faculty of Pharmaceutical Sciences, Khon Kaen University, Khon Kaen, Thailand, <sup>2</sup> Faculty of pharmacy, University of Health sciences, Vientiane, Lao PDR, <sup>3</sup> Faculty of Science, Khon Kaen University, Khon Kaen, Thailand
15:10-15:25	<b>Oral Lecture 5</b> <b>Prof. Wimol Pararach<sup>1</sup>, Aphinya Thinthasit<sup>2</sup> and Rachadaporn Benchawattananon<sup>2*</sup></b> , <sup>1</sup> Medical Technician Loei hospital Muang Loei Province 42000 Daejeon 34158, Korea
<b>Session III (Zoom B : 710 662 5033, PW: ICMMA2022) (13:00-14:25)</b> (Session Chairman : Dr. Suresh Sagadevan (Malaya University), Prof. Zhishan Su (Sichuan University))	
13:00-13:20	<b>Invited Lecture 6</b> <b>Prof. Suwat Nanan</b> , Materials Chemistry Research Center, Department of Chemistry and Center of Excellence for Innovation in Chemistry (PERCH-CIC), Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand
13:20-13:40	<b>Invited Lecture 7</b> <b>Prof. Chang Sung Lim<sup>1*</sup>, Won-Chun Oh<sup>1</sup>, Aleksandr S. Aleksandrovsky<sup>2,3</sup>, Victor V. Atuchin<sup>4,5</sup>, Maxim S. Molokeyev<sup>6,7,8</sup>, Aleksandr S. Oreshon kov<sup>7,9</sup></b> , Department of Aerospace Advanced Materials Engineering, Hanseo University, Seosan 31962, Korea, <sup>2</sup> Laboratory of Coherent Optics, Kirensky Institute of Physics Federal Research Center KSC SB RAS, Krasnoyarsk 660036, Russia, <sup>3</sup> Institute of Nanotechnology, Spectroscopy and Quantum Chemistry, Siberian Federal University, Krasnoyarsk 660041, Russia, <sup>4</sup> Laboratory of Optical Materials and Structures, Institute of Semiconductor Physics, SB RAS, Novosibirsk, 630090, Russia, <sup>5</sup> Research and Development Department, Kemerovo State University, Kemerovo 650000, Russia, <sup>6</sup> Laboratory of Crystal Physics, Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Krasnoyarsk 660036, Russia, <sup>7</sup> Siberian Federal University, Krasnoyarsk 660041, Russia, <sup>8</sup> Department of Physics, Far Eastern State Transport University, Khabarovsk 680021, Russia, <sup>9</sup> Laboratory of Molecular Spectroscopy, Kirensky Institute of Physics Federal Research Center KSC SB RAS,
13:40-13:55	<b>Oral Lecture 6</b> <b>Prof. Trai Wongsiri<sup>1</sup>, Apinya Chotiyano<sup>2</sup> and Rachadaporn Benchawattananon<sup>3</sup></b> , <sup>1</sup> Department of Pathology, Faculty of Medicine, Khon Kaen University, THAILAND, <sup>2</sup> Unit of Pathology, Khon Kaen Hospital, Muang, Khon Kaen, THAILAND, <sup>3</sup> Department of Forensic Science, Faculty of Science, Khon Kaen University, THAILAND.
13:55-14:10	<b>Oral Lecture 7</b> <b>Prof. Md Nazmodduha Rafat and Won-Chun Oh*</b> , <sup>1</sup> Department of Advanced Materials Science & Engineering, Hanseo University, Seosan-si, Chungnam, Korea, 356-706 Science Forensic Science Faculty of Science
14:10-14:25	<b>Oral Lecture 8</b>

	<b>Prof. Zambaga Otgonbayar<sup>1</sup>, Won-Chun Oh<sup>1,2</sup></b> , <sup>1</sup> Department of Advanced Materials Science & Engineering, Hanseo University, Seosan-si, Chungnam, Korea, 356-706, <sup>2</sup> Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, College of Materials Science and Engineering, Anhui University of Science & Technology, Huainan 232001, PR China
14:25-14:35	<b>Coffee Break</b>
<b>Session III (Zoom B : 710 662 5033, PW: ICMMA2022) (14:35-15:25)</b> <b>(Session Chairman : Prof. Chan-Kyung Kim (Inha University), Prof. Daming Gao (Hefei University))</b>	
14:35-14:55	<b>Invited Lecture 8</b> <b>Prof. Is Fatimah</b> , Chemistry Department, Universitas Islam Indonesia, Kampus Terpadu UII, Jl. Kaliurang Km 14, Sleman, Yogyakarta, Indonesia, 55584
14:55-15:10	<b>Oral Lecture 9</b> <b>Optical Design of Energy Conversion Layer for high Photoelectric Conversion Efficiency of an Organic Solar Cell</b> , Liang Zhang, Chul Gyu Jhun, School of Electronics and Display Engineering, Hoseo University, Asan 31499, Korea
15:10-15:25	<b>Oral Lecture 10</b> <b>Prof. JU YONG CHO<sup>1</sup>, HANSEUL MA<sup>1</sup>, HYEONG JIN KIM<sup>1</sup>, AND WON KWEON JANG<sup>1,*</sup></b> , <sup>1</sup> Department of Aeronautic Electricity, Hanseo University, 46, Hanseo 1-ro, Seosan-si 31962, South Korea
<b>Session IV (Zoom C : 947 539 6783, PW: ICMMA2022) (13:00-14:25)</b> <b>(Session Chairman : Prof. K. L. Ameta (Mody University of Science and Technology), Prof. Theera Rittirod (Khon Kaen University))</b>	
13:00-13:20	<b>Invited Lecture 9</b> <b>Prof. Y.-L. Yang<sup>a</sup>, J.-Y. Yuan<sup>a</sup>, Z.-J. Zhang<sup>a</sup>, J.-T Zhao<sup>a,b*</sup></b> , <sup>a</sup> School of Materials Science and Technology, Shanghai University, China, <sup>b</sup> School of Materials Science and Technology, Guilin University of Electronic Technology, China
13:20-13:40	<b>Invited Lecture 10</b> <b>Prof. Ngoc Diep Pham<sup>1,2</sup>, Ngoc-Quoc-Duy Vo<sup>1,2</sup>, Ngoc Diem Trinh Huynh<sup>1,2</sup>, Ho Thi Ngoc Suong<sup>1,2</sup> and Minh-Vien Le<sup>1,2</sup></b> , <sup>1</sup> Faculty of Chemical Engineering, Ho Chi Minh city University of Technology, Ho Chi Minh City, 700000, Vietnam <sup>2</sup> Vietnam National University Ho Chi Minh City, Ho Chi Minh City, 700000
13:40-13:55	<b>Oral Lecture 11</b> <b>Prof. Xiwen Zeng<sup>a</sup>, Yanfen Wang<sup>a,b*</sup>, Guangming Zhao<sup>c</sup>, Xiang Cheng<sup>c</sup>, Shunjie Huang<sup>c</sup></b> , <sup>a</sup> School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>b</sup> Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, China, <sup>c</sup> Key Laboratory Sponsored Jointly by Ministry of Education and Anhui Province for Efficient and Safe Coal Mining, Anhui University of Science and Technology, Huainan, Anhui 232001, China
13:55-14:10	<b>Oral Lecture 12</b> <b>Prof. Zhenfei Lv<sup>a,b</sup>, Yukun Cao<sup>a</sup>, Yuhang Yang<sup>a</sup>, Chong Lan<sup>a</sup>, Yixian Yang<sup>a</sup>, Xiulin Shen<sup>a,b,*</sup></b> , <sup>a</sup> School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui, 232001, PR China, <sup>b</sup> Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, PR China
14:10-14:25	<b>Oral Lecture 13</b> <b>Prof. Jiali Shi, Xiuling Lin</b> , Department of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, China
14:25-14:35	<b>Coffee Break</b>
<b>Session IV (Zoom C : 947 539 6783, PW: ICMMA2022) (14:35-15:25)</b> <b>(Session Chairman : Prof. Minhvien Le (Ho Chi Minh city University of Technology), Prof. Chang-Min Yoon (Hanbat National University))</b>	



14:35-14:55	<b>Invited Lecture 11</b> <b>Prof. Tae Ho Shin*</b> , Hydrogen Energy Materials Centre, Korea Institute of Ceramic Engineering and Technology, Jinju-si, Gyeongsangnam-do 52851, Republic of Korea
14:55-15:10	<b>Oral Lecture 14</b> <b>Prof. Leilei Lan*</b> , <b>Juan Gao</b> , School of Mechanics and Optoelectronic Physics, Anhui University of Science and Technology, Huainan 232001, China
15:10-15:25	<b>Oral Lecture 15</b> <b>Prof. Lingcheng Zheng</b> , School of Mechanics and Photoelectric Physics, Anhui University of Science and Technology, Huainan 232001, PR China
15:25-15:40	<b>Oral Lecture 16</b> <b>Prof. Xiao Chen<sup>1</sup>, Lei Zhang<sup>1</sup>, Chenwei Shang<sup>1</sup>, Yu Tian<sup>1</sup>, Binqun Cao<sup>1</sup>, Yufei Li<sup>2</sup>, Lixin Xu<sup>2</sup>, Jing Wang<sup>1*</sup></b> , <sup>1</sup> School of Materials Science and Engineering, Anhui University of Technology, Huainan, Anhui 232001, China, <sup>2</sup> Pinghu Institute of Advanced Materials, Zhejiang University of Technology, Pinghu Zhejiang 314204, China
<b>Session V (Zoom D : 857 926 6363, PW: ICMMA2022) (13:00-14:25)</b> <b>(Session Chairman : Prof. Chen-Hao Wang (National Taiwan University of Science and Technology), Prof. Teguh Ariyanto (Universitas Gadjah Mada))</b>	
13:00-13:20	<b>Invited Lecture 12</b> <b>Prof. K. L. Ameta</b> , Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar-388120, Gujarat, India
13:20-13:40	<b>Invited Lecture 13</b> <b>Jiadong Zhao, Caiyu Ni, Zhihui Wang, Xiaoxiao Zhao, and Daming Gao*</b> , Department of Chemical Engineering, School of Energy Materials and Chemical Engineering, Hefei University, Hefei 230601, Anhui, China
13:40-13:55	<b>Oral Lecture 17</b> <b>Prof. Dimas Agung Pramudikto, Rochim Bakti Cahyono, Teguh Ariyanto*</b> , Department of Chemical Engineering, Universitas Gadjah Mada, Jl Grafika No 2 Kampus UGM 55281, Yogyakarta, Indonesia
13:55-14:10	<b>Oral Lecture 18</b> <b>Prof. Muhammad Dzikiy Dzikiy Robbi, Teguh Ariyanto, Imam Prasetyo*</b> , Department of Chemical Engineering, Gadjah Mada University,
14:10-14:25	<b>Oral Lecture 19</b> <b>Prof. Farah Khilma Yustica, Rochim Bakti Cahyono, Teguh Ariyanto*</b> , Department of Chemical Engineering, Universitas Gadjah Mada, Jl Grafika No 2 Kampus UGM 55281, Yogyakarta, Indonesia
14:25-14:35	<b>Coffee Break</b>
<b>Session V (Zoom D : 857 926 6363, PW: ICMMA2022) (14:35-15:40)</b> <b>(Session Chairman : Prof. Prawit Nuengmatcha (Nakhon Si Thammarat Rajabhat University), Prof. Feng-Jun Zhang (Anhui Jianzhu University))</b>	
14:35-14:50	<b>Oral Lecture 20</b> <b>Prof. Yonraphach Areerob<sup>a)</sup>*</b> , and <b>Won-Chun Oh<sup>b),c)**</sup></b> , <sup>a)</sup> Department of Industrial Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok 10520, Thailand, <sup>b)</sup> College of Materials Science and Engineering, Anhui University of Science & Technology, Huainan, 232001, PR China, <sup>c)</sup> Department of Advanced Materials Science & Engineering, Hanseo University, Seosan-si, Chungcheongnam-do, 31962, South Korea
14:50-15:05	<b>Oral Lecture 21</b> <b>Prof. Yu Tian<sup>1</sup>, Chenwei Shang<sup>1</sup>, Lei Zhang<sup>1</sup>, Xiao Chen<sup>1</sup>, Binqun Cao<sup>1</sup>, Yufei Li<sup>2</sup>, Lixin Xu<sup>2</sup>, Jing Wang<sup>1*</sup></b> , <sup>1</sup> School of Materials Science and Engineering, Anhui University of Technology, Huainan, Anhui 232001, China, <sup>2</sup> Pinghu Institute of Advanced Materials, Zhejiang University of Technology, Pinghu, Zhejiang
15:05-15:10	<b>Oral Lecture 22</b>

	<b>Prof. Xin Liang*</b> , <b>Lei Hu</b> , and <b>Sheng Liang</b> , School of Energy, Materials and Chemical Engineering, Hefei University, Hefei 230601, China
15:10-15:25	<b>Oral Lecture 23</b> <b>Prof. Yucheng Hao<sup>1*</sup></b> , <b>Yongjian Chen<sup>1</sup></b> , <b>Xin Cao<sup>1</sup></b> , <b>Kunhong Hu<sup>1</sup></b> , <b>Evgeny V. Alekseev<sup>2</sup></b> , <sup>1</sup> School of Energy Materials and Chemical Engineering, Hefei University, Hefei 230000, China, <sup>2</sup> Institute of Energy and Climate Research (IEK-9), Forschungszentrum Jülich GmbH, 52428 Jülich, Germany
15:25-15:40	<b>Oral Lecture 24</b> <b>Prof. Vivek Dhand<sup>1</sup></b> , <b>Mantae Kim<sup>2</sup></b> , <b>Jaehyeok Doh<sup>3</sup></b> , <b>Kyongyop Rhee<sup>4</sup></b> , <b>Sanghoon Kim<sup>1*</sup></b> , <sup>1</sup> Department of Mechanical Design Engineering, Chonnam National University, 50 Daehak-ro, Yeosu, Jeonnam 59626, Republic of Korea, <sup>2</sup> Ceramic Fiber and Composite Center, Korea Institute of Ceramic Engineering and Technology, Jinju, Gyeongsangnam, 52851, Republic of Korea, <sup>3</sup> School of Mechanical and Material Convergence Engineering, Gyeongsang National University, Jinju-si, Gyeongsangnam-do 52725, Republic of Korea, <sup>4</sup> Department of Mechanical Engineering, College of Engineering, Kyung Hee University, Yongin, 446-701, Republic of Korea
<b>15:40-17:40</b>	<b>PO1-PO39</b>
<b>Poster Session-1 (ZoomA: 477 967 3888, PW: ICMMA2022)</b> <b>(Session Chairman: Prof. Paweena Porrawatkul (Nakhon Si Thammarat Rajabhat University) and Prof. Rachadaporn Benchawattananon (Khon Kaen University))</b>	
<b>15:40-17:40</b>	<b>PO40-PO78</b>
<b>Poster Session-2 (ZoomB: 710 662 5033, PW: ICMMA2022)</b> <b>(Session Chairman: Prof. Yonrapach Areerob (King Mongkut's Institute of Technology Ladkrabang) and Prof. Jingtai Zhao (Guilin University of Electronic Technology))</b>	
<b>15:40-17:40</b>	<b>PO79-PO117</b>
<b>Poster Session-3 (ZoomC: 947 539 6783, PW: ICMMA2022)</b> <b>(Session Chairman: Prof. Xianbiao Wang (Anhui Jianzhu University) and Dr. Tae-Ho Shin (Korea Institute of Ceramic Engineering and Technology))</b>	
<b>15:40-17:40</b>	<b>PO118-PO157</b>
<b>Poster Session-3 (ZoomD: 857 926 6363, PW: ICMMA2022)</b> <b>(Session Chairman: Prof. Noor Haida Mohd Kaus (Universiti Sains Malaysia) and Dr. Woo-Sik Kim (Korea Institute of Ceramic Engineering and Technology))</b>	
<b>17:40-18:00</b>	<b>Closing Remark &amp; Ceremony – Zoom A : No 477 967 3888, PW: ICMMA2022)</b> <b>(Prof. Dao Sheng Sun (Anhui Jianzhu University))</b>
18:30 ~	<b>Banquet</b>

## Schedule List

11/25	Room1	Room2	Room3	Room4
09:00 – 10:00	<b>Opening Ceremony</b>			
10:10 – 11:50	<b>Session I</b> <b>(Zoom A, PW: ICMMA2022)</b>			
11:50 – 13:00	<b>Lunch Time</b>			
13:00 – 14:25	<b>Session II</b> <b>Zoom A</b> <b>No 477 967 3888</b> <b>PW: ICMMA2022</b>	<b>Session III</b> <b>Zoom B</b> <b>No 710 662 5033</b> <b>PW: ICMMA2022</b>	<b>Session IV</b> <b>Zoom C</b> <b>No 947 539 6783</b> <b>PW: ICMMA2022</b>	<b>Session V</b> <b>Zoom D</b> <b>No 857 926 6363</b> <b>PW: ICMMA2022</b>
14:25 – 14:35	<b>Coffee Break</b>			
14:35 – 15:40	<b>Session II</b> <b>Zoom A</b> <b>No 477 967 3888</b> <b>PW: ICMMA2022</b>	<b>Session III</b> <b>Zoom B</b> <b>No 710 662 5033</b> <b>PW: ICMMA2022</b>	<b>Session IV</b> <b>Zoom C</b> <b>No 947 539 6783</b> <b>PW: ICMMA2022</b>	<b>Session V</b> <b>Zoom D</b> <b>No 857 926 6363</b> <b>PW: ICMMA2022</b>
15:40 – 17:40	<b>PO1-PO39</b> <b>Zoom A</b> <b>No 477 967 3888</b> <b>PW: ICMMA2022</b>	<b>PO40-PO78</b> <b>Zoom B</b> <b>No 710 662 5033</b> <b>PW: ICMMA2022</b>	<b>PO79-PO117</b> <b>Zoom C</b> <b>No 947 539 6783</b> <b>PW: ICMMA2022</b>	<b>PO118-PO157</b> <b>Zoom D</b> <b>No 857 926 6363</b> <b>PW: ICMMA2022</b>
17:40 – 18:00	<b>Ending Ceremony</b> <b>(Zoom A, No 477 967 3888 PW: ICMMA2022)</b>			

# Presentation Guide

## Plenary Lectures

- PL1 **Preparation of few-layered graphene by exfoliation of ternary interlayer compounds**, Masahiro Toyoda, Department of Applied Chemistry, Graduate School of Engineering, Oita University, 700 Dannoharu, Oita 870-1192, Japan 1
- PL2 **Synthesis of Porous Monolithic Microhoneycombs with Various Functions Using Ice Crystals as the Template**, Shin R. Mukai, Division of Applied Chemistry, Faculty of Engineering, Hokkaido University, N13N8 Kita-ku, Sapporo 060-8628, Japan 2
- PL3 **Antimicrobial Aminoacid-Schiff base copper(II) complexes**, Leonard, Estelle<sup>\*a</sup>, Otani, Nao<sup>b</sup> ; Fayeulle, Antoine<sup>a</sup> ; Nakane, Daisuke<sup>b</sup> ; Akitsu, Takashiro<sup>b</sup>, <sup>a</sup>Université de technologie de Compiègne, ESCOM, TIMR (Integrated Transformations of Renewable Matter), Centre de recherche Royallieu - CS 60 319 - 60 203 Compiègne Cedex, France. <sup>b</sup>Department of Chemistry, Faculty of Science, Tokyo University of Science, 1-3 Kagurazaka, Shinjuku-ku, Tokyo 162-8601, Japan 3

## Invited Lectures

- IL1 **Porous Carbon with Iron Active Site Group for Oxygen Reduction Reaction in Anion Exchange Membrane Fuel Cell (AEMFC)**, Wen-Hui Wei, Afandi Yusuf, Hsin-Chih Huang, Chen-Hao Wang\*, Department of Materials Science and Engineering, National Taiwan University of Science and Technology, Taipei 106335, Taiwan 4
- IL2 **Electrospinning preparation of nylon-6@UiO-66-NH<sub>2</sub> fiber membrane for selective adsorption enhanced photocatalysis reduction of Cr(VI) in water**, Wen Ji<sup>a</sup>, Xianbiao Wang<sup>a\*</sup>, Tianqi Ding<sup>a</sup>, Soufian Chakir<sup>a</sup>, Yongfei Xu<sup>a</sup>, Xianhuai Huang<sup>b</sup>, Huanting Wang<sup>c</sup>, <sup>1</sup>Anhui Province International Research Center on Advanced Building Materials, School of Materials Science and Chemical Engineering, Anhui Jianzhu University, Hefei Anhui, PR China 230601; <sup>2</sup>Anhui Provincial Key Laboratory of Environmental Pollution Control and Resource Reuse, Anhui Jianzhu University, Hefei, PR China 230601; <sup>3</sup>Department of Chemical and Biological Engineering, Monash University, Clayton, VIC, Australia 3800 5
- IL3 **Graphitic Carbon Nitride/Metal Oxides Nanocomposites for the photocatalysis of degradation of organic pollutants**, Suresh Sagadevan, Nanotechnology & Catalysis Research Centre, University of Malaya, Kuala Lumpur 50603, Malaysia 6

- IL4 **Development of Processing Technology for Recovery of Strategic Metals from Spent Catalyst: Integrated Hydrometallurgical Approach**, Rajesh Kumar Jyothi, Korea Institute of Geosciences and Mineral Resources (KIGAM), Daejeon 34132, Korea 7
- IL5 **Green Chemical Process of Carbon-based Nanocomposites**, Jing Wang<sup>1\*</sup>, Binqian Cao<sup>1</sup>, Xiao Chen<sup>1</sup>, Yu Tian<sup>1</sup>, Lei Zhang<sup>1</sup>, Chenwei Shang<sup>1</sup>, Zhou Zhou<sup>2</sup>, Chul Gyu Jhun<sup>2\*</sup>, <sup>1</sup>College of Materials Science and Engineering, Anhui University of Science And Technology, Huainan, Anhui 232001, <sup>2</sup>School of Electronic Display Engineering, Hoseo University 20, Hoseo-ro 79beon-gil, Baebang-eup, Asan City 31499, Korea 8
- IL6 **ZnO-based heterojunction photocatalyst for sustainable removal of organic dyes and antibiotics in wastewater**, Suwat Nanan, Materials Chemistry Research Center, Department of Chemistry and Center of Excellence for Innovation in Chemistry (PERCH-CIC), Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand 9
- IL7 **Effects of Li<sup>+</sup> Substitution for Na<sup>+</sup> in Li<sub>x</sub>Na<sub>1-x</sub>CaGd<sub>0.5</sub>Ho<sub>0.05</sub>Yb<sub>0.45</sub>(MoO<sub>4</sub>)<sub>3</sub> Scheelite-Type Microcrystalline Structure and Their Upconversion Photoluminescence Properties**, Chang Sung Lim<sup>1\*</sup>, Won-Chun Oh<sup>1</sup>, Aleksandr S. Aleksandrovsky<sup>2,3</sup>, Victor V. Atuchin<sup>4,5</sup>, Maxim S. Molokeev<sup>6,7,8</sup>, Aleksandr S. Oreshonkov<sup>7,9</sup>, <sup>1</sup>Department of Aerospace Advanced Materials Engineering, Hanseo University, Seosan 31962, Korea <sup>2</sup>Laboratory of Coherent Optics, Kirensky Institute of Physics Federal Research Center KSC SB RAS, Krasnoyarsk 660036, Russia, <sup>3</sup>Institute of Nanotechnology, Spectroscopy and Quantum Chemistry, Siberian Federal University, Krasnoyarsk 660041, Russia, <sup>4</sup>Laboratory of Optical Materials and Structures, Institute of Semiconductor Physics, SB RAS, Novosibirsk, 630090, Russia, <sup>5</sup>Research and Development Department, Kemerovo State University, Kemerovo 650000, Russia, <sup>6</sup>Laboratory of Crystal Physics, Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Krasnoyarsk 660036, Russia, <sup>7</sup>Siberian Federal University, Krasnoyarsk 660041, Russia, <sup>8</sup>Department of Physics, Far Eastern State Transport University, Khabarovsk 680021, Russia, <sup>9</sup>Laboratory of Molecular Spectroscopy, Kirensky Institute of Physics Federal Research Center KSC SB RAS, Krasnoyarsk 660036, Russia 10
- IL8 **Magnetic Nanocomposites for Water Treatment Applications**, Is Fatimah, Chemistry Department, Universitas Islam Indonesia, Kampus Terpadu UII, Jl. Kaliurang Km 14, Sleman, Yogyakarta, Indonesia, 55584 11
- IL9 **CaZnOS-based Wide Band Gap Semiconducting Mechanoluminescence Materials and Their Potential Applications**, Y.-L. Yang<sup>a</sup>, J.-Y. Yuan<sup>a</sup>, Z.-J. Zhang<sup>a</sup>, J.-T Zhao<sup>a,b\*</sup>, <sup>a</sup>School of Materials Science and Technology, Shanghai University, China, <sup>b</sup>School of Materials Science and Technology, Guilin University of Electronic Technology, China 12

- IL10 **Silver-doped TiO<sub>2</sub>-coated cylindrical cordierite honeycomb monolith for organic degradation and *E. coli* disinfection applications**, Ngoc\_Diep Pham<sup>1,2</sup>, Ngoc-Quoc-Duy Vo<sup>1,2</sup>, Ngoc Diem Trinh Huynh<sup>1,2</sup>, Ho Thi Ngoc Suong<sup>1,2</sup> and Minh-Vien Le<sup>1,2</sup>, <sup>1</sup>Faculty of Chemical Engineering, Ho Chi Minh city University of Technology, Ho Chi Minh City, 700000, Vietnam  
<sup>2</sup>Vietnam National University Ho Chi Minh City, Ho Chi Minh City,700000, Vietnam 13
- IL11 **Strategies for Achieving high performance in Solid Oxide Electrochemical Devices using LSGM at KICET**, Tae Ho Shin\*, Hydrogen Energy Materials Centre, Korea Institute of Ceramic Engineering and Technology, Jinju-si, Gyeongsangnam-do 52851, Republic of Korea 14
- IL12 **Pyrimidine: A Privileged Bioactive Scaffold**, K. L. Ameta, Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar-388120, Gujarat, India 15
- IL13 **A Surface Open Mouth TiO<sub>2</sub> Hollow Sphere Nanoshell Layer with High-Dense Imprinting Sites for Selective Recognition and Photocatalytic Degradation of Chlorpyrifos**, Jiadong Zhao, Caiyu Ni, Zihui Wang, Xiaoxiao Zhao, and Daming Gao\*, Department of Chemical Engineering, School of Energy Materials and Chemical Engineering, Hefei University, Hefei 230601, Anhui, China 16

### Oral Lectures

- OL1 **New Insight into the Photocatalytic Degradation of Persistent Organic Pollutants (POPs) over Highly Integrated Reduced Graphene Oxide(rGO)/Bismuth Ferrite (BiFeO<sub>3</sub>)**, Noor Haida Mohd Kaus\* and Ahmad Fadhil Rithwan, School of Chemical Sciences, Universiti Sains Malaysia, 11800, Penang MALAYSIA 17
- OL2 **Evaluation of physicochemical characteristic of rifampicin extemporaneous suspension in specific time and conditions**, Chiv Sinly<sup>1</sup>, Rutchyaporn Anurach<sup>1</sup>, Kiettipum Phontree<sup>1</sup>, Thanavit Thongsodsang<sup>1</sup>, Thatsanand Xayavong<sup>2</sup>, Theera Rittirod<sup>1,\*</sup>, <sup>1</sup>Faculty of Pharmaceutical Sciences, Khon Kaen University, Khon Kaen, Thailand, <sup>2</sup>Faculty of pharmacy, University of Health sciences, Vientiane, Lao PDR 18
- OL3 **Introduction of Eco-friendly and Facile Synthesis Route of Various Carbon-based Supercapacitor Device**, Chang-Min Yoon\*, Department of Chemical and Biological Engineering, Hanbat National University, 125 Dongseo-daero, Yuseong-gu, Daejeon 34158, Korea 19
- OL4 **Stability of Rifampicin Extemporaneous Suspension in Thailand Climate Zone and Conditions**, Chiv Sinly<sup>1</sup>, Rutchyaporn Anurach<sup>1</sup>, Kiettipum Phontree<sup>1</sup>, Thanavit Thongsodsang<sup>1</sup>, Thatsanand Xayavong<sup>2</sup>, Rachadaporn Benchawattananon<sup>3</sup>, Theera Rittirod<sup>1,\*</sup>, <sup>1</sup>Faculty of Pharmaceutical Sciences, 20

- Khon Kaen University, Khon Kaen, Thailand, <sup>2</sup>Faculty of pharmacy, University of Health sciences, Vientiane, Lao PDR, <sup>3</sup>Faculty of Science, Khon Kaen University, Khon Kaen, Thailand
- OL5 **Development of staining Wright-Giemsa stain by Dip quick method.**, 21  
Wimol Pararach<sup>1</sup>, Aphinya Thinthasit<sup>2</sup> and Rachadaporn Benchawattananon<sup>2\*</sup>, <sup>1</sup>Medical Technician Loei hospital Muang Loei Province 42000 Thailand, <sup>2</sup>Integrated Science Forensic Science Faculty of Science Khon Kaen University, Khon Kaen, 40002, Thailand
- OL6 **THE PLANT EXTRACTS TO CONTROL GOLDEN APPLE SNAILS (Pomacea canaliculata)**, 22  
Trai Wongsiri<sup>1</sup>, Apinya Chotiyano<sup>2</sup> and Rachadaporn Benchawattananon<sup>3</sup>, <sup>1</sup>Department of Pathology, Faculty of Medicine, Khon Kaen University, THAILAND, <sup>2</sup>Unit of Pathology, Khon Kaen Hospital, Muang, Khon Kaen, THAILAND, <sup>3</sup>Department of Forensic Science, Faculty of Science, Khon Kaen University, THAILAND.
- OL7 **3D ternary LaCdSe-GO-TiO<sub>2</sub> nanocomposite synthesized with high powerasonic method and sonophotocatalytic efficiency for hydrogen evolution with different scavengers**, 23  
Md Nazmodduha Rafat and Won-Chun Oh\*, <sup>1</sup>Department of Advanced Materials Science & Engineering, Hanseo University, Seosan-si, Chungnam, Korea, 356-706
- OL8 **Selective Photocatalytic and electrochemical CO<sub>2</sub> reduction to Methanol on Graphene-based Ternary and Quaternary nanocomposite**, 24  
Zambaga Otgonbayar<sup>1</sup>, Won-Chun Oh<sup>1,2</sup>, <sup>1</sup>Department of Advanced Materials Science & Engineering, Hanseo University, Seosan-si, Chungnam, Korea, 356-706, <sup>2</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, College of Materials Science and Engineering, Anhui University of Science & Technology, Huainan 232001, PR China
- OL9 **Optical Design of Energy Conversion Layer for high Photoelectric Conversion Efficiency of an Organic Solar Cell**, 25  
Liang Zhang, Chul Gyu Jhun, School of Electronics and Display Engineering, Hoseo University, Asan 31499, Korea
- OL10 **Reconstruction of an interferogram in a static modulated Fourier transform spectrometer**, 26  
JU YONG CHO<sup>1</sup>, HANSEUL MA<sup>1</sup>, HYEONG JIN KIM<sup>1</sup>, AND WON KWEON JANG<sup>1,\*</sup>, <sup>1</sup>Department of Aeronautic Electricity, Hanseo University, 46, Hanseo 1-ro, Seosan-si 31962, South Korea
- OL11 **A novel and high-quality inorganic grouting material for full-length anchorage system**, 27  
Xiwen Zeng<sup>a</sup>, Yanfen Wang<sup>a,b\*</sup>, Guangming Zhao<sup>c</sup>, Xiang Cheng<sup>c</sup>, Shunjie Huang<sup>c</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, China, <sup>c</sup>Key Laboratory Sponsored Jointly by Ministry of Education and Anhui Province for Efficient and Safe Coal Mining, Anhui University of Science and Technology, Huainan, Anhui 232001, China

- OL12 **Mullite Ceramics Based on Waste High Alumina Sphere: Preparation, Characterization and Analysis**, Zhenfei Lv<sup>a,b</sup>, Yukun Cao<sup>a</sup>, Yuhang Yang<sup>a</sup>, Chong Lan<sup>a</sup>, Yixian Yang<sup>a</sup>, Xiulin Shen<sup>a,b,\*</sup>, <sup>a</sup> School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui, 232001, PR China, <sup>b</sup> Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, PR China 28
- OL13 **The influence of release medium on SA hydrogel release behavior**, Jiali Shi, Xiuling Lin, Department of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, China 29
- OL14 **Highly Sensitive Two-Dimensional Vanadium Carbide MXene-Based Surface-Enhanced Raman Scattering Platforms with Ultra-Rapid Molecular Enrichment Ability**, Leilei Lan\*, Juan Gao, School of Mechanics and Optoelectronic Physics, Anhui University of Science and Technology, Huainan 232001, China 30
- OL15 **Study on the preparation and photoelectrochemical performance of Cu<sub>2</sub>O-ZnO blended heterojunction granular films**, Lingcheng Zheng, School of Mechanics and Photoelectric Physics, Anhui University of Science and Technology, Huainan 232001, PR China 31
- OL16 **Preparation and modification of carbon quantum dots**, Xiao Chen<sup>1</sup>, Lei Zhang<sup>1</sup>, Chenwei Shang<sup>1</sup>, Yu Tian<sup>1</sup>, Binqun Cao<sup>1</sup>, Yufei Li<sup>2</sup>, Lixin Xu<sup>2</sup>, Jing Wang<sup>1\*</sup>, <sup>1</sup>School of Materials Science and Engineering, Anhui University of Technology, Huainan, Anhui 232001, China, <sup>2</sup>Pinghu Institute of Advanced Materials, Zhejiang University of Technology, Pinghu Zhejiang 314204, China 32
- OL17 **Sulfur-Modified Porous Carbon for Ethyl Levulinate Synthesis**, Dimas Agung Pramudikto, Rochim Bakti Cahyono, Teguh Ariyanto\*, Department of Chemical Engineering, Universitas Gadjah Mada, Jl Grafika No 2 Kampus UGM 55281, Yogyakarta, Indonesia 33
- OL18 **Electrochemical Performance of PANI/Porous Carbon in LiPF<sub>6</sub> Solution**, Muhammad Dzikiy Dziki Robbi, Teguh Ariyanto, Imam Prasetyo\*, Department of Chemical Engineering, Gadjah Mada University, 55281, Yogyakarta INDONESIA 34
- OL19 **Composite of Porous Carbon/Phenolic Resin for Dye Adsorption**, Farah Khilma Yustica, Rochim Bakti Cahyono, Teguh Ariyanto\*, Department of Chemical Engineering, Universitas Gadjah Mada, Jl Grafika No 2 Kampus UGM 55281, Yogyakarta, Indonesia 35
- OL20 **Synthesis of Novel MoWO<sub>4</sub> with ZnO Nanoflowers on Multi- Walled Carbon Nanotubes for Counter Electrode Application in Dye- sensitized Solar Sells**, Yonraphach Areerob<sup>a)\*</sup>, and Won-Chun Oh<sup>b),c)\*\*</sup>, <sup>a)</sup>Department of Industrial Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok 10520, Thailand, <sup>b)</sup>College of Materials Science and Engineering, Anhui University of Science & Technology, Huainan, 232001, PR China, <sup>c)</sup>Department of Advanced Materials Science & 36



- Engineering, Hanseo University, Seosan-si, Chungcheongnam-do, 31962, South Korea
- OL21 **Application of New Carbon Materials in Supercapacitors**, Yu Tian<sup>1</sup>, 37  
Chenwei Shang<sup>1</sup>, Lei Zhang<sup>1</sup>, Xiao Chen<sup>1</sup>, Binqun Cao<sup>1</sup>, Yufei Li<sup>2</sup>, Lixin Xu<sup>2</sup>, Jing Wang<sup>1\*</sup>, <sup>1</sup>School of Materials Science and Engineering, Anhui University of Technology, Huainan, Anhui 232001, China, <sup>2</sup>Pinghu Institute of Advanced Materials, Zhejiang University of Technology, Pinghu, Zhejiang 314204, China)
- OL22 **Study on key materials for high specific energy system of lithium-sulfur battery**, Xin Liang<sup>\*</sup>, Lei Hu, and Sheng Liang, School of Energy, Materials and Chemical Engineering, Hefei University, Hefei 230601, China 38
- OL23 **Alkaline metal Uranyl Borophosphate with Novel Microporous Structure and Exceptional Ionic Exchange Properties**, Yucheng Hao<sup>1\*</sup>, Yongjian Chen<sup>1</sup>, Xin Cao<sup>1</sup>, Kunhong Hu<sup>1</sup>, Evgeny V. Alekseev<sup>2</sup>, <sup>1</sup>School of Energy Materials and Chemical Engineering, Hefei University, Hefei 230000, China, <sup>2</sup>Institute of Energy and Climate Research (IEK-9), Forschungszentrum Jülich GmbH, 52428 Jülich, Germany 39
- OL24 **Improved tribo-mechanical behavior of bismuth-tin alloy nanoparticle deposited basalt fiber and its epoxy composite – A case study**, Vivek Dhand<sup>1</sup>, Mantae Kim<sup>2</sup>, Jaehyeok Doh<sup>3</sup>, Kyongyop Rhee<sup>4</sup>, Sanghoon Kim<sup>1\*</sup>, <sup>1</sup>Department of Mechanical Design Engineering, Chonnam National University, 50 Daehak-ro, Yeosu, Jeonnam 59626, Republic of Korea, <sup>2</sup>Ceramic Fiber and Composite Center, Korea Institute of Ceramic Engineering and Technology, Jinju, Gyeongsangnam, 52851, Republic of Korea, <sup>3</sup>School of Mechanical and Material Convergence Engineering, Gyeongsang National University, Jinju-si, Gyeongsangnam-do 52725, Republic of Korea, <sup>4</sup>Department of Mechanical Engineering, College of Engineering, Kyung Hee University, Yongin, 446-701, Republic of Korea. 40

## Posters

- PO1 **The semi-synthesis of olibergin A from Dalbergia stipulacea and their anti-cancer activity**, Supakorn Arthan<sup>\*a</sup>, Chavi Yenjai<sup>b</sup>, Priyapan Posri<sup>b</sup>, Sookkawath Walunchapruk<sup>c</sup> and Thanaset Senawong<sup>c</sup>, <sup>a</sup>Program of Chemistry, Faculty of Science and Technology, Sakon Nakhon Rajabhat University, Mueang District, Sakon Nakhon, 47000, Thailand, <sup>b</sup>Natural Products Research Unit, Department of Chemistry and Center of Excellence for Innovation in Chemistry, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand, <sup>c</sup>Natural Products Research Unit, Department of Biochemistry, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand. 41

- PO2 **The Kinetics Fermentation of Mao Wine Fermented by 3 Commercial yeasts of *Saccharomyces Cerevisiae* and Their Alpha-Amylase Inhibitions**, Nattawee Poomsuk<sup>1\*</sup>, Krittika Manochai<sup>1</sup>, Phummisak Singkhan<sup>1</sup>, <sup>1</sup>Department of Chemistry, Faculty of Science and Technology, Sakon Nakhon Rajabhat University, Sakon Nakhon 47000, Thailand 42
- PO3 **Investigating of Fingerprint Pattern of Ethnic Groups in Northeast Using Artificial Intelligence**, Nuttanan Boonkong, Rachadaporn Benchawattananon<sup>1\*</sup>, Pathapong Pongpatrakant<sup>2\*</sup>, Wibhu Kutanan<sup>3\*</sup>, <sup>1\*</sup> Integrated Science Forensic Science Faculty of Science Khon Kaen University, Khon Kaen, 40002, Thailand, <sup>2\*</sup>Bachelor of Education (Educational Technology and Communications), Naresuan University, Phitsanulok, 65000, Thailand, <sup>3\*</sup>Department of Biology, Faculty of Science, Khon Kaen University, Khon Kaen, 40002, Thailand 43
- PO4 **Development of staining Wright-Giemsa stain by Dip quick method**, Wimol Pararach<sup>1</sup> and Rachadaporn Benchawattananon<sup>2</sup>, <sup>1</sup>Medical Technician Loei hospital Muang Loei Province 42000 Thailand, <sup>2</sup>Integrated Science Forensic Science Faculty of Science Khon Kaen University, Khon Kaen, 40002, Thailand 44
- PO5 **Effect of ball milling time and calcination temperature on the photocatalytic performance of ZnO/CeO<sub>2</sub> nanocomposites prepared by mechanochemical method**, Zhou Zhoua, Jing Wangb<sup>\*</sup>, Chul Gyu Jhuna<sup>\*</sup>, <sup>a</sup>Department of Electronic and Display Engineering, Hoseo University, Asan 31499, Korea, <sup>b</sup>Department of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, China 45
- PO6 **Green synthesis and characterization of ZnO using lactic acid from *Nypa fruticans* as a reducing agent**, Paweena Porrawatkul<sup>1\*</sup>, Rungnapha Pimsen<sup>1</sup>, Prawit Nuengmatcha<sup>1</sup>, Nichapa Rattanakomon<sup>1</sup>, and Chanaichon Damsri<sup>2</sup>, <sup>1</sup>Nanomaterials Chemistry Research Unit, Faculty of Science and Technology, Nakhon Si Thammarat Rajabhat University, Nakhon Si Thammarat 80280, Thailand, <sup>2</sup>Business English Program, Faculty of Humanities and Social Sciences, Nakhon Si Thammarat Rajabhat University, Nakhon Si Thammarat 80280, Thailand 46
- PO7 **Bio-synthesis of sodium ion doped ZnO nanopowder using *Averrhoa carambola* fruit extract for deactivation of photocatalytic activity**, Paweena Porrawatkul<sup>\*1</sup>, Prawit Nuengmatcha<sup>1</sup>, Amnouy Noypha<sup>1</sup>, Rungnapha Pimsen<sup>1</sup> and Montakan Thongsom<sup>2</sup>, <sup>1</sup>Nanomaterials Chemistry Research Unit, Department of Chemistry, <sup>2</sup>Department of Biology Science, Faculty of Science and Technology, Nakhon Si Thammarat Rajabhat University, 80280, Thailand. 47
- PO8 **Investigating of Fingerprint Pattern of Ethnic Groups in Northeast Using Artificial Intelligence**, Nuttanan Boonkong, Rachadaporn Benchawattananon<sup>1\*</sup>, Pathapong Pongpatrakant<sup>2\*</sup>, Wibhu Kutanan<sup>3\*</sup>, <sup>1\*</sup> Integrated Science Forensic Science Faculty of Science Khon Kaen 48

- University, Khon Kaen, 40002, Thailand, <sup>2\*</sup>Bachelor of Education (Educational Technology and Communications), Naresuan University, Phitsanulok, 65000, Thailand, <sup>3\*</sup>Department of Biology, Faculty of Science, Khon Kaen University, Khon Kaen, 40002, Thailand
- PO9 **Analysis of automobile paint in forensic science**, Pongphiphat Boontarawa and Rachadaporn Benchawattananon, Integrated Science forensic Science Faculty of Science Khon Kaen University, Khon kaen , 40002, Thailand 49
- O10 **Synthesis and characterization carboxymethyl cellulose film from mangosteen peel**, Arnannit Kuyyogsuy<sup>1\*</sup>, Prawit Nuengmatcha<sup>1</sup>, Rungnapa Pimsen<sup>1</sup>, Paweena Porrawatkul<sup>1</sup>, and Nichapa Rattanakomon<sup>1</sup>, <sup>1</sup>Nanomaterials Chemistry Research Unit, Faculty of Science and Technology, Nakhon Si Thammarat Rajabhat University, Nakhon Si Thammarat 80280, Thailand 50
- PO11 **Polymer-based external light extraction scattering layers to improve organic light-emitting diode light extraction efficiency**, Geun Su Choi<sup>1</sup>, and Young Wook Park<sup>1\*</sup>, <sup>1</sup>Nano and Organic-Electronics Laboratory, Department of Display and Semiconductor Engineering, Sun Moon University, Asan, Chungcheongnam-do 31460, Republic of Korea 51
- PO12 **Progress of Novel Magnetic Sensors Based on Ferromagnetic Film**, Kehao Shi<sup>1</sup>, Yuqing Li<sup>1</sup>, Yicheng Zhang<sup>1</sup>, Jinxuan Guo<sup>1</sup>, Ling Ding<sup>1</sup>, Ying Liu<sup>1</sup>, Weizhou Xin<sup>1</sup>, Yunxiao Wang<sup>1</sup>, Xiulin Shen<sup>1,2\*</sup>, <sup>1</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>2</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, PR China 52
- PO13 **Fabrication of hybrid structure using MLA to improve light extraction efficiency of OLEDs**, Eun Jeong Bae<sup>1,2</sup>, Byeong-Kwon Ju<sup>2\*</sup>, and Young Wook Park<sup>1\*</sup>, <sup>1</sup>Nano and Organic-Electronics Laboratory, Department of Display and Semiconductor Engineering, Sun Moon University, Asan, Chungcheongnam-do 31460, South Korea, <sup>2</sup>Display and Nanosystem Laboratory, Department of Electrical Engineering, Korea University, 145, Anam-ro, Seoul 02841, South Korea 53
- PO14 **Fabrication of flexible dielectric/porous-metal/dielectric transparent electrode with improved transmittance and electrical conductivity**, Ga Eun Seo<sup>1</sup>, Eun Bi Jang<sup>1</sup>, and Young Wook Park<sup>1\*</sup>, <sup>1</sup>Nano and Organic-Electronics Laboratory, Department of Display and Semiconductor Engineering, Sun Moon University, Asan, Chungcheongnam-do 31460, South Korea 54
- PO15 **Investigation of Efficiency Roll-off Characteristics of Ultra-Thin Blue PHOLEDs**, Eun Bi Jang<sup>1</sup>, Shin Woo Kang<sup>1, 2</sup>, Byeong Kwon Ju<sup>2\*</sup>, and Young Wook Park<sup>1\*</sup>, <sup>1</sup>Nano and Organic-Electronics Laboratory, Department of Display and Semiconductor Engineering, Sun Moon 55

- University, Asan, Chungcheongnam-do 31460, Republic of Korea, <sup>2</sup>Display and Nanosystem Laboratory, Department of Electrical Engineering, Korea University, 145, Anam-ro, Seongbuk-gu, Seoul 02841, Republic of Korea
- PO16 **Highly efficient blue phosphorescent OLEDs with ultra-thin emission layer and nanosize pixel-define layer**, Shin Woo Kang<sup>1,2</sup>, Seungwon Lee<sup>1</sup>, Byeong-Kwon Ju<sup>1\*</sup>, and Young Wook Park <sup>2\*</sup>, <sup>1</sup>*Display and Nanosystem Laboratory, Department of Electrical Engineering, Korea University, 145, Anam-ro, Seongbuk-gu, Seoul 02841, Republic of Korea*, <sup>2</sup>*Nano and Organic-Electronics Laboratory, Department of Display and Semiconductor Engineering, Sun Moon University, Asan, Chungcheongnam-do 31460, Republic of Korea* 56
- PO17 **Progress on polyaniline/graphene oxide composites**, Binqun Cao<sup>1</sup>, Chenwei Shang<sup>1</sup>, Lei Zhang<sup>1</sup>, Xiao Chen<sup>1</sup>, Yu Tian<sup>1</sup>, Yufei Li<sup>2</sup>, Lixin Xu<sup>2</sup>, Jing Wang <sup>1\*</sup>, <sup>1</sup>*School of Materials Science and Engineering, Anhui University of Technology, Huainan, Anhui 232001, China*, <sup>2</sup>*Pinghu Institute of Advanced Materials, Zhejiang University of Technology, Pinghu, Zhejiang 314204, China* 57
- PO18 **Preparation of NiMoO<sub>4</sub> nanomaterials and their electrochemical properties**, Chenwei Shang<sup>1</sup>, Yu Tian<sup>1</sup>, Lei Zhang<sup>1</sup>, Xiao Chen<sup>1</sup>, Binqun Cao<sup>1</sup>, Yufei Li<sup>2</sup>, Lixin Xu<sup>2</sup>, Jing Wang<sup>1\*</sup>, <sup>1</sup>*School of Materials Science and Engineering, Anhui University of Technology, Huainan, Anhui 232001, China*, <sup>2</sup>*Pinghu Institute of Advanced Materials, Zhejiang University of Technology, Pinghu, Zhejiang 314204, China* 58
- PO19 **Study on coating agent ratio of high-aluminum waste electroporcelain based high temperature resistant materials**, Yanghui Ke<sup>a</sup>, Zhenfei Lv<sup>a,b,\*</sup>, Yang Song<sup>a</sup>, Yixian Yang<sup>a</sup>, Junyi Qi<sup>a</sup>, Qianye Zhang<sup>a</sup>, Yin Hua<sup>a</sup>, Xiulin Shen<sup>a,b,\*</sup>, <sup>a</sup>*School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui, 232001, PR China*, <sup>b</sup>*Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, PR China* 59
- PO20 **situ generation of hydrogen peroxide by single-atom copper anchored on t-BaTiO<sub>3</sub> for Piezoelectric degradation of tetracycline**, Quanzi Pan<sup>1</sup>, Kai Chen<sup>1</sup>, Xin Ni<sup>1</sup>, Zeda Meng<sup>1\*</sup>, *Suzhou University Of Science and Technology, Su Zhou, 215009, P.R.China* 60
- PO21 **Study on the performance of humidity control of the geopolymer composite based on fly ash**, Ancheng Weng<sup>a</sup>, Jiao Guo<sup>a</sup>, Jinlang Hu<sup>a</sup>, Xianglong Wan<sup>a,b,\*</sup>, Yin Liu <sup>a,b</sup>, <sup>a</sup>*School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, China*, <sup>b</sup>*Anhui International Joint Research Center for Nanocarbon-based Materials and Environmental health, Huainan 232001, China* 61
- PO22 **Zinc phosphate-based glass incorporation in PMMA to prevent microbial adhesion**, Min-Ji Kim<sup>1</sup>, Myung-Jin Lee<sup>2</sup>, <sup>1</sup>*Department of Orthodontics, Institute of Craniofacial Deformity, Yonsei University* 62

- College of Dentistry, Seoul, Korea, 03722, <sup>2</sup>Department of Dental Hygiene, Division of Health Science, Baekseok University, Cheonan, Korea, 31065
- PO23 **Photocatalytic performance of graphene-MnO<sub>2</sub> binary composite for degradation of organic dye contaminants under visible light**, Prawit Nuengmatcha<sup>1</sup> and Kongsak Pattarith<sup>2\*</sup>, <sup>1</sup>Nanomaterials Chemistry Research Unit, Faculty of Science and Technology, Nakhon Si Thammarat Rajabhat University, Nakhon Si Thammarat 80280, Thailand, <sup>2</sup>Department of Chemistry, Faculty of Science, Buriram Rajabhat University, 31000, Thailand 63
- PO24 **Synthesis of hollow chitosan carboxymethyl cellulose composite as a high-performance adsorbent for heavy metal removal from wastewater**, Prawit Nuengmatcha<sup>1\*</sup>, Rungnapa Pimsen<sup>1</sup>, Paweena Porrawatkul<sup>1</sup>, Arnannit Kuyyogsuy<sup>1</sup>, Nichapa Rattanakomon<sup>1</sup>, Amnuay Noypha<sup>1</sup> and Anusorn Banluepuech<sup>2</sup>, <sup>1</sup>Nanomaterials Chemistry Research Unit, Faculty of Science and Technology, Nakhon Si Thammarat Rajabhat University, Nakhon Si Thammarat 80280, Thailand, <sup>2</sup>Science Center, Faculty of Science and Technology, Nakhon Si Thammarat Rajabhat University, Nakhon Si Thammarat, 80280, Thailand 64
- PO25 **Removal of methylene blue dye by Fenton and photo Fenton processes using ferrous sulfate coated with graphene quantum dot as catalyst**, Nongyao Teppaya<sup>1\*</sup>, Prawit Nuengmatcha<sup>1</sup>, Paweena Porrawatkul<sup>1</sup>, Arnannit Kuyyogsuy<sup>1</sup>, <sup>1</sup>Nanomaterials Chemistry Research Unit, Faculty of Science and Technology, Nakhon Si Thammarat Rajabhat University, Nakhon Si Thammarat 80280, Thailand 65
- PO26 **Efficient degradation of dye pollutant from wastewater via photocatalysis using a magnetic zinc oxide/graphene/iron oxide as catalyst**, Prawit Nuengmatcha<sup>1\*</sup>, Rungnapa Pimsen<sup>1</sup>, Arnannit Kuyyogsuy<sup>1</sup>, Paweena Porrawatkul<sup>1</sup>, Sumalee Liamthong<sup>1</sup> and Piyawan Nuengmatcha<sup>1,2</sup>, <sup>1</sup>Nanomaterials Chemistry Research Unit, Department of Chemistry, <sup>2</sup>Department of Environmental Science, Faculty of Science and Technology, Nakhon Si Thammarat Rajabhat University, Nakhon Si Thammarat 80280, Thailand. 66
- PO27 **Controllable shape and size micro hemisphere array structure for enhancing the light extraction of OLEDs**, Eun Jeong Bae<sup>1</sup>, Ho Seob Kim<sup>2,3</sup>, and Young Wook Park<sup>2</sup>, Dong-Hyun Baek<sup>2,3</sup>, <sup>1</sup>Display and Nanosystem Laboratory, Department of Electrical Engineering, Korea University, Seoul 02841, Korea, <sup>2</sup>Department of Display and Semiconductor Engineering, Sun Moon University, Asan, Chungcheongnam-do, South Korea, 31460, <sup>3</sup>Center for Next-Generation Semiconductor Technology, Sun Moon University, Asan Chungcheongnam-do, South Korea, 31460 67
- PO28 **Progress of Novel Magnetic Sensors Based on Ferromagnetic Film**, Kehao Shi<sup>1</sup>, Yuqing Li<sup>1</sup>, Yicheng Zhang<sup>1</sup>, Jinxuan Guo<sup>1</sup>, Ling Ding<sup>1</sup>, Ying Liu<sup>1</sup>, Weizhou Xin<sup>1</sup>, Yunxiao Wang<sup>1</sup>, Xiulin Shen<sup>1,2,\*</sup>, <sup>1</sup>School of Materials 68

- Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>2</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, PR China
- PO29 **Preparation and characterization of porous ceramics based on high alumina waste porcelain**, Yixian Yang<sup>a</sup>, Zhenfei Lv<sup>a,b,\*</sup>, Yuanhao Liu<sup>a</sup>, Yanghui Ke<sup>a</sup>, Xiulin Shen<sup>a,b,\*</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui, 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, PR China 69
- PO30 **Preparation of Waste Sanitary Ceramics Based High Temperature Resistant Materials by Modified Binder and Performance Optimization**, Zhenfei Lv<sup>a,b</sup>, Chong Lan<sup>a</sup>, Chen Yang<sup>a</sup>, Yukun Cao<sup>a</sup>, Yanghui Ke<sup>a</sup>, Xiulin Shen<sup>a,b,\*</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui, 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, PR China 70
- PO31 **Novel Synthesis of Ternary Nanocomposite with  $\beta$ -SiC Fiber, SnO<sub>2</sub> and In<sub>2</sub>O<sub>3</sub> for Atmospheric Gas Sensing under High Temperature Conditions**, Zambaga Otgonbayar<sup>1</sup>, Young Jun Joo<sup>3</sup>, Kwang Youn Cho<sup>3</sup>, Sang Yul Park<sup>4</sup>, Kwang Youl Park<sup>4</sup>, Won-Chun Oh<sup>1</sup>, <sup>1</sup>Department of Advanced Materials Science & Engineering, Hanseo University, Seosan-si, Chungnam, Korea, 356-706, <sup>2</sup>College of Materials Science and Engineering, Anhui University of Science & Technology, Huainan 232001, PR China, <sup>3</sup>Korea Institutes of Ceramic Engineering and Technology, Soho-ro, Jinju-Si, Gyeongsangnam-do, South Korea, <sup>4</sup>Daeho I&T, Changwon-si, Gyeongsangnam-do, 51338, Korea 71
- PO32 **A Comparative and Efficient Ammonia Gas Sensing Study with Self-assembly Synthesized Metal Oxide-SiC Fiber based Mesoporous SiO<sub>2</sub> Composites**, Md Nazmodduha Rafat<sup>1</sup>, Young Jun Joo<sup>3</sup>, Kwang Youn Cho<sup>3</sup>, Sang Yul Park<sup>4</sup>, Kwang Youl Park<sup>4</sup>, Won-Chun Oh<sup>1,2</sup>, <sup>1</sup>Department of Advanced Materials Science & Engineering, Hanseo University, Seosan-si, Chungnam, Korea, 356-706, <sup>2</sup>College of Materials Science and Engineering, Anhui University of Science & Technology, Huainan 232001, PR China, <sup>3</sup>Korea Institutes of Ceramic Engineering and Technology, Soho-ro, Jinju-Si, Gyeongsangnam-do, South Korea, <sup>4</sup>Daeho I&T, Changwon-si, Gyeongsangnam-do, 51338, Korea 72
- PO33 **Synthesis of barium hexaferrite magnetic nanoparticle for efficient removal of heavy metal from synthetic wastewater**, Parintip Rattanaburi<sup>1\*</sup>, Prawit Nuengmatcha<sup>1,2</sup>, <sup>1</sup>Creative Innovation in Science and Technology, <sup>2</sup>Nanomaterials Chemistry Research Unit, Department of 73

- Chemistry, Faculty of Science and Technology, Nakhon Si Thammarat Rajabhat University, 80280, Thailand.
- PO34 **Synthesis of NiO and TiO<sub>2</sub> Combined SiC Matrix Nanocomposite and Its Photocatalytic MB degradation**, Jun Hyeok Choi<sup>1</sup>, Jo Eun Kim<sup>1\*</sup>, Hyun Min Ju<sup>1</sup>, Hee Chul Choi<sup>1</sup>, Byung Jin Park<sup>1</sup>, Geun Chan Kim<sup>1</sup>, Yeonji Shin<sup>1</sup>, Zambaga Otgonbayar<sup>1</sup>, Won-Chun Oh<sup>1,2</sup>, <sup>1</sup>Department of Advanced Materials Science & Engineering, Hanseo University, Seosan-si, Chungnam, Korea, 356-706, <sup>2</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, College of Materials Science and Engineering, Anhui University of Science & Technology, Huainan 232001, PR China 74
- PO35 **Multi-functional MXene Based Sensors: An Updated Review**, Saikat Samadder<sup>1</sup>, Chang Sung Lim<sup>1</sup>, Yonrapach Areerob<sup>2</sup>, Won-Chun Oh<sup>1\*</sup>, <sup>1</sup>Department of Advanced Materials Science and Engineering, Hanseo University, Chungnam, 356-706, South Korea, <sup>2</sup>Faculty of Engineering, King Mongkul's Institute of Technology Ladkrabang, Bangkok 10520, Thailand 75
- PO36 **Remineralization effect of orthodontic adhesive containing zinc-bound phosphate-based glass**, Min-Ji Kim<sup>1</sup>, Ji-Young Seo<sup>1</sup>, Myung-Jin Lee<sup>2\*</sup>, <sup>1</sup>Department of Orthodontics, Institute of Craniofacial Deformity, Yonsei University College of Dentistry, Seoul, Korea, 03722, <sup>2</sup>Department of Dental Hygiene, Division of Health Science, Baekseok University, Cheonan, Korea, 31065 76
- PO37 **Enhanced Power Conversion Efficiency of Organic Photovoltaics Using Metal Oxide Nanoparticles**, Ye Eun Lee<sup>1</sup>, Jong Hyun Lim<sup>2</sup>, Woo Young Kim<sup>1,3</sup>, Chul Gyu Jhun<sup>1†</sup>, <sup>1</sup>school of Electronics and Display Engineering, Hoseo University, Asan 31499, Korea, <sup>2</sup>A-Pro.Co. Ltd, Siheung 15809, Korea, <sup>3</sup>Department of Engineering Physics, McMaster University, Hamilton, Canada 77
- PO38 **Thermal analysis to optimize the arrangement of LEDs in a power LED module**, JU YONG CHO<sup>1</sup>, HANSEUL MA<sup>1</sup>, HYEONG JIN KIM<sup>1</sup>, AND WON KWEON JANG<sup>1\*</sup>, <sup>1</sup>Department of Aeronautic Electricity, Hanseo University, 46, Hanseo 1-ro, Seosan-si 31962, South Korea 78
- PO39 **Effect of Interlayer Regulation on Electrochemical Properties of Layered Bimetal Hydroxide**, Lei Zhang<sup>1</sup>, Xiao Chen<sup>1</sup>, Chenwei Shang<sup>1</sup>, Yu Tian<sup>1</sup>, Binqun Cao<sup>1</sup>, Yufei Li<sup>2</sup>, Lixin Xu<sup>2</sup>, Jing Wang<sup>1\*</sup>, <sup>1</sup>School of Materials Science and Engineering, Anhui University of Technology, Huainan Anhui 232001, China, <sup>2</sup>Pinghu Institute of Advanced Materials, Zhejiang University of Technology, Pinghu, Zhejiang 314204, China 79
- PO40 **Preparation and electrochemical properties of cobalt selenide electrode material supported by palladium particles**, Chen Sun<sup>2,1</sup>, Wei Xie<sup>2,1</sup>, Mingxuan Han<sup>2,1</sup>, Hao Xu<sup>2,1</sup>, Lei Zhu<sup>1</sup> and Qinfang Zhang<sup>2,1\*</sup>, <sup>1</sup>Key Laboratory for Advanced Technology in Environmental Protection of

- Jiangsu Province, Yancheng Institute of Technology, Yancheng, 224051, P.R. China, <sup>2</sup>School of Materials Science and Engineering, Yancheng Institute of Technology, Yancheng 224051, P.R. China
- PO41 **Construction of superhydrophilic/underwater superoleophobic PVDF composite membrane by simple spraying method for oil-water emulsion separation**, Jian Xu, Atian Xie\*, Haotian Sun, Yuting Wu, Changguo Xue, Jiuyun Cui, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, PR China 81
- PO42 **Study on the sustainable development of a declining coal city by SD model**, Keyu Bao<sup>a</sup>, Gang He<sup>a,b</sup>, Yanna Zhu<sup>a</sup>, <sup>a</sup>College of Economy and Management, Anhui University of Science and Technology, Huainan, Anhui, 232001, China, <sup>b</sup>State Key Laboratory of Mining Response and Disaster Prevention and Control in Deep Coal Mines, Huainan, Anhui, 232001, China 82
- PO43 **Experimental investigation and thermodynamic modeling of the Cr–Zr–Si system**, Benfu Li<sup>a,b</sup>, Yunuo Yang<sup>a,b</sup>, Yuchao Shi<sup>a,b</sup>, Biao Hu<sup>a,b,\*</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui, 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, PR China 83
- PO44 **Thermodynamic database for multicomponent Cu alloys**, Biao Hu<sup>a,b</sup>, Yuchao Shi<sup>a,b</sup>, Benfu Li<sup>a,b</sup>, Chenggang Jin<sup>a,b</sup>, Gang Zeng<sup>a,b</sup>, Yong Du<sup>c</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, China, <sup>c</sup>State Key Laboratory of Powder Metallurgy, Central South University, Changsha, Hunan 410083, PR China 84
- PO45 **Effects of hydrostatic pressure and temperature on refractive index changes in tuned quantum dots under magnetic field**, Ceng Chang, Xuechao Li\*, Yiming Duan, Zhuang Zhao, Liangcheng Zhang, School of Mechanics and Photoelectric Physics, Anhui University of Science and Technology, Huainan 232001, China 85
- PO46 **Structure and Microwave Dielectric Properties of the Li<sub>2</sub>O-MgO-TiO<sub>2</sub> Systems**, Chang Li, Zhifen Fu, Zhonyi Yang, Qing Cheng, School of Mechanics and Optoelectronic Physics, Anhui University of Science & Technology, Huainan, 232001, China 86
- PO47 **Microwave dielectric properties of low-loss Mg<sub>2</sub>TiO<sub>4</sub> ceramics doped with LiF-<sub>2</sub>CaF<sub>2</sub>-2B<sub>2</sub>O<sub>3</sub> (LCB)**, Chen Chen, Zhifen Fu, Zhongyi Yang, Chang Li, Yubin She, Yu Zhang, School of Mechanics and Photoelectric Physics, Anhui University of Science and Technology, Huainan 232001, China 87
- PO48 **Experimental investigation of the Ag–Cu–Zr system**, Chenggang Jin<sup>a,b</sup>, Jing Xie<sup>a,b</sup>, Gang Zeng<sup>a,b</sup>, Biao Hu<sup>a,b,\*</sup>, Shaoding Sheng<sup>a,b,\*</sup>, <sup>a</sup>School of



- Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui 232001, PR China
- PO49 **Synthesis and characterization of spherical chain Co for broadband electromagnetic wave absorption**, Chongmei Wu, Zhenying Liu\*, Yan Wang, Guiyang Xian, Yin Liu\*, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, Anhui, China 89
- PO50 **First principles study on electronic structure and photocatalytic activity in metal (M=Al, In, Ga) doped SrTiO<sub>3</sub>**, Fuzhang Chen,<sup>1</sup> Lili Zheng,<sup>1</sup> Yueqin Wang<sup>1</sup>, <sup>1</sup>School of Mechanics and Optoelectronic Physics, Anhui University of Science and Technology, Huainan, 232001, Anhui, China 90
- PO51 **Experimental determination of the phase equilibria of the Cu-Cr-Zr-Y system**, Gang Zeng<sup>a,b</sup>, Xinyue Huang<sup>a,b</sup>, Hui Qiao<sup>a,b</sup>, Chenggang Jin<sup>a,b</sup>, Biao Hu<sup>a,b</sup>\*, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui 232001, PR China 91
- PO52 **Influence of applied magnetic field on the synthesis of ferrofluid**, Gao Ming, Li Jianjun\*, Department of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, China 92
- PO53 **Synthesis of porous hollow Ce-Co/C composites with efficient electromagnetic wave absorption**, Guiyang Xian, Zhaolin Zhu, Chongmei Wu, Yan Wang, Yin Liu\*, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, Anhui, China 93
- PO54 **Effect of adding magnesia-aluminum spinel hollow spheres on the properties of periclase-magnesium-aluminate spinel refractories**, Hanxin Zhang<sup>1</sup>, Zhenying Liu<sup>1\*</sup>, Nan Xie<sup>1</sup>, Shouwu Huang<sup>1</sup>, Kai cui Zhongde Yang<sup>2</sup>, <sup>1</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, Anhui, China, <sup>2</sup>Anhui CONCH- SCG Refractory Co., Ltd., Wuhu, China 94
- PO55 **Synergistic degradation of methylene blue by ZIF-67 and ZIF-8 in TiO<sub>2</sub> nanospheres**, Hanyong Cai, Juan Gao, School of Mechanics and Optoelectronic Physics, Anhui University of Science and Technology, Huainan 232001, China 95
- PO56 **A novel TiO<sub>2</sub> nanorod array film co-decorated by Ag nanoparticles and ZIF-8 with robust photocatalytic and photoelectrochemical properties**, Jiale Deng<sup>†1</sup>, Juan Gao<sup>1†\*</sup>, <sup>1</sup>School of Mechanics and Photoelectric Physics, Anhui University of Science and Technology, Huainan, 232001, P. R. China 96
- PO57 **Controllable synthesis of Metal Cobalt under Magnetic Field**, Jin Mingyan, Wang Lei, Gao Ming, Hu Tianyu, Li Jianjun\*, School of Materials 97

- Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, China
- PO58 **The isothermal section of the Cu-Zr-V ternary system at 900°C**, Jing Xie<sup>a,b</sup>, Chenggang Jin<sup>a,b</sup>, Xinyue Huang<sup>a,b</sup>, Yue Li<sup>a,b</sup>, Biao Hu<sup>a,b,\*</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui 232001, PR China 98
- PO59 **Preparation and performance of geopolymer foams based on fly ash**, Jinlang Hu<sup>a</sup>, Guoxin Ding<sup>a,b</sup>, Xiaorui Wang<sup>a</sup>, Ancheng Weng<sup>a</sup>, Xianglong Wan<sup>a,b,\*1</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, China, <sup>b</sup>Anhui International Joint Research Center for Nanocarbon-based Materials and Environmental health, Huainan 232001, China 99
- PO60 **Preparation of multifunctional PVDF imprinted composite membranes via surface segregation approach for selective TC and oil/water emulsion separation**, Jian Xu, Jiuyun Cui\*, Haotian Sun, Yuting Wu, Changguo Xue, Atian Xie, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, PR China 100
- PO61 **The wettability of sodium dodecyl sulfonate solutions by inorganic salt additives**, Junfeng Zhang, Changguo Xue\*, He Feng, Yiting Xu, Jianjun Li, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, PR China 101
- PO62 **Enhanced Degradation of Organic Dye with Peroxymonosulfate Activation by CoFe<sub>2</sub>O<sub>4</sub>@zeolite**, Lei Wang, Tianyu Hu, Zhanqun Zhang, Mingyan Jin, Jianjun Li\*, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, China 102
- PO63 **Microstructure and properties of geopolymers prepared from uncalcined gangue**, Longtao Zhu<sup>a</sup>, Qingping Wang<sup>a,b,\*</sup>, Chunyang Lu<sup>a</sup>, Yuxin Liu<sup>a</sup>, Shuai Chen<sup>a</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>b</sup>State Key Laboratory of Mining Response and Disaster Prevention and Control in Deep Coal Mines, Anhui University of Science and Technology, Huainan 232001, Anhui, China 103
- PO64 **Construction of Ag nanoparticle decorated AgBr/BiVO<sub>4</sub> core/shell structure plasmonic photocatalysts towards high photocatalytic elimination of contaminations under visible light**, Mei Liu\*, Lingcheng Zheng, Juan Gao, School of Mechanics and Photoelectric Physics, Anhui University of Science and Technology, Huainan 232001, PR China 104
- PO65 **Study on the extraction of Silicon and aluminum from fly ash and preparation of molecular sieve for adsorption in wastewater**, Mengting Li<sup>\*a</sup>, Longqian Ni<sup>a</sup>, Bohan Zhou<sup>b</sup>, <sup>a</sup>School of Materials Science and 105

- Engineering, Anhui University of Science and Technology, Huainan 232001, PR China, <sup>b</sup>Huainan Institute of Standardization, Huainan 232001, PR China
- PO66 **Preparation and Properties of Cross-linked Poly(vinyl Alcohol) Composite Film**, Mingyue Zhang<sup>a</sup>, Ruobin Li<sup>a</sup>, Yue Wu<sup>a</sup>, Ya Wang<sup>a</sup>, Xianglong Wan<sup>a,b,\*1</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, China, <sup>b</sup>Anhui International Joint Research Center for Nanocarbon-based Materials and Environmental health, Huainan 232001, China 106
- PO67 **Effect of ZrO<sub>2</sub> additives on sintering properties of Mullite-based Composite Ceramics**, Nan Xie, Zhenying Liu<sup>\*</sup>, Shouwu Huang, Hanxin Zhang, Kai Cui, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, Anhui, China 107
- PO68 **2D/2D heterostructure of C, N, S-TiO<sub>2</sub>/g-C<sub>3</sub>N<sub>4</sub> nanosheets for Photocatalytic degradation of organic pollutants**, Pingping Wei<sup>\*</sup>, Juan Gao, School of Mechanics and Optoelectronic Physics, Anhui University of Science and Technology, Huainan 232001, China 108
- PO69 **Hickory preparation of porous microwave absorbing materials**, Shi Qiong, Li Mengyu, Li Zongru, Zhao Yan<sup>\*</sup>, School of Material Engineering and Science, Anhui University of Science and Technology, Huainan, Anhui 232000, China 109
- PO70 **PREPARATION AND PROPERTIES OF NANO MONTMORILLONITE MODIFIED POLYETHYLENE**, Rongcheng Huang, Xin Chen, Jianxun Gong, Junshan Gao<sup>\*</sup>, *School of Materials Science and Engineering, Anrui U niversity of Science and Tecnolog y, Huainan, 232001, PR China.* 110
- PO71 **Conversion of methane to methanol catalyzed by Fe<sub>2</sub>O<sub>3</sub>/g-C<sub>3</sub>N<sub>4</sub> and H<sub>2</sub>O<sub>2</sub>**, Shuli Deng, Qingbo Yu, School of materials science and technology, Anhui university of science and technology, China, 232001 111
- PO72 **Surface-enhanced Raman spectroscopy based on stretchable and flexible micro-nano substrates for the detection of organic dyes**, Yuanhang Tan, Changguo Xue<sup>\*</sup>, Ziyu Zhou, Yaxuan Wang, He Wang, Atian Xie, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, PR China 112
- PO73 **Preparation of Li<sub>4</sub>SiO<sub>4</sub>-based adsorbents from diatomite for high-temperature CO<sub>2</sub> capture**, WANG Jinxiang, WANG Yaxuan, School of Material Science and Engineering, Anhui university of Science and Technology, AnHui Huainan 232001, China 113
- PO74 **Study on Late Comprehensive Performance Modification of Tailings Blended with Mineral Powder**, Xiang Zhang, Zifang Xu, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>b</sup>Anhui International Joint

- Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui 232001, PR China
- PO75 **Re-doped FeCo zeolite imidazole and derived porous carbon polyhedral catalysts as efficient bifunctional catalysts for zinc-air batteries**, Xiaofei Li<sup>1</sup>, Zijian Zhu, Yanyan Zhang, Kejian Shi, Yang li\* 115
- PO76 **Construction of B-doped g-C<sub>3</sub>N<sub>4</sub>/MoO<sub>3</sub> Photocatalyst to Promote Light Absorption and Z-scheme Charge Transfer**, Xinxin Chen, Changzhao Chen, School of Mechanics and Optoelectronic Physics, Anhui University of Science and Technology, Huainan 232001, China 116
- PO77 **Influence of alkali activator concentration on microstructure and strength of fly ash based geopolymer grouting materials**, Wei Xu<sup>a</sup>, Qingping Wang<sup>a,b,\*</sup>, Siyu Zhang<sup>a</sup>, Shuai Chen<sup>a</sup>, Longtao Zhu<sup>a</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, Anhui, China, <sup>b</sup>State Key Laboratory of Mining Response and Disaster Prevention and Control in Deep Coal Mines, Anhui University of Science and Technology, Huainan, 232001, Anhui, China 117
- PO78 **Study on Preparation and Electrochromic Properties of La<sup>+3</sup>-Doped TiO<sub>2</sub> Film**, Xu Zifang, Dai Yan, Fan Yong, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan232001, China 118
- PO79 **Preparation and Properties of N-Doped TiO<sub>2</sub> Electrode Supported on Copper Film**, Ya Wang<sup>a</sup>, Guoxin Ding<sup>a</sup>, Zhen Li<sup>a</sup>, Mingyue Zhang<sup>a</sup>, Yue Wu<sup>a</sup>, Xianglong Wan<sup>a,b,\*1</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, China, <sup>b</sup>Anhui International Joint Research Center for Nanocarbon-based Materials and Environmental health, Huainan 232001, China 119
- PO80 **Preparation and characterization of functionalized lanthanum oxide composite polyaniline electrochromic films**, Yan DAI\*, Zifang XU, Yuhao FU, Xiang ZHANG, School of Civil Engineering and Architecture, Anhui University of Science and Technology, Huainan 232001, Anhui, China 120
- PO81 **Nitrogen-doped polyaniline-based carbon/Ni<sub>3</sub>Fe as high-performance microwave absorbers**, Yan Wang, Chongmei Wu, Guiyang Xian, Zhaolin Zhu, Yin Liu\*, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, Anhui, China 121
- PO82 **An ultra-sensitive and recyclable SERS substrate with core-shell Ag/ZnO microstructures**, Yanfen Wang<sup>a,b</sup>, Ziwei Liu<sup>a</sup>, Xiwen Zeng<sup>a</sup>, Jie Ai<sup>a</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, China 122

- PO83 **Study on coating agent ratio of high-aluminum waste electroporcelain based high temperature resistant materials**, Yanghui Ke<sup>a</sup>, Zhenfei Lv<sup>a,b,\*</sup>, Yang Song<sup>a</sup>, Yixian Yang<sup>a</sup>, Junyi Qi<sup>a</sup>, Qianye Zhang<sup>a</sup>, Yin Hua<sup>a</sup>, Xiulin Shen<sup>a,b,\*</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui, 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, PR China 123
- PO84 **Preparation and performance study of polyurethane/coal gasification fine slag composites**, Yanhua Teng\*, Kangli Li, Qiming Wang, Changguo Xue, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, PR China 124
- PO85 **Humidity sensors based on clay minerals films microcantilevers**, Yiting Xu, Changguo Xue\*, Ninghong Zhou, Qiming Wang, Jun Chen, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, PR China 125
- PO86 **Preparation and characterization of porous ceramics based on high alumina waste porcelain**, Yixian Yang<sup>a</sup>, Zhenfei Lv<sup>a,b,\*</sup>, Yuanhao Liu<sup>a</sup>, Yanghui Ke<sup>a</sup>, Xiulin Shen<sup>a,b,\*</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui, 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, PR China 126
- PO87 **Coal-based carbon /NiFe<sub>2</sub>O<sub>4</sub> composites with excellent microwave absorption performance were prepared from anthracite**, Yongli Meng, Yin Liu\*, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, Anhui, China 127
- PO88 **Structural analysis and optical performance of Ce<sup>3+</sup>/Ce<sup>4+</sup>doped SnO<sub>2</sub> nanoparticles**, YuYang, Changzhao Chen, School of Mechanics and Optoelectronic Physics, Anhui University of Science and Technology, Huainan 232001, China 128
- PO89 **Effect of adding LiF and SrTiO<sub>3</sub> on structure and properties of Li<sub>3</sub>Mg<sub>2</sub>NbO<sub>6</sub> ceramics**, Yu Zhang, Jianli Ma, Qing Cheng, School of Mechanics and Photoelectric Physics, Anhui University of Science and Technology, Huainan 232001, China 129
- PO90 **The mechanical properties of PP/PA6 and PP/PA6/CaCO<sub>3</sub> blends**, Yuanyuan Wang\*, Zelong Wu, Junshan Gao 130
- PO91 **Study on mechanical properties of PP/PA6 blends**, Yuanyuan Wang\*, Zelong Wu, Junshan Gao 131
- PO92 **Novel temperature-stable MgTi<sub>0.95</sub>Sn<sub>0.05</sub>O<sub>3</sub>-based microwave dielectric ceramics**, Zhifen Fu, Yubin She, Zhongyi Yang, College of Mechanics and Optoelectronic physics, Anhui University of Science and Technology, Huainan, 232001, China 132

- PO93 **Experimental investigation and thermodynamic description of the Ni–Zr–V system**, Yuchao Shi<sup>a,b</sup>, Min Luo<sup>a,b</sup>, Benfu Li<sup>a,b</sup>, Biao Hu<sup>a,b,\*</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui 232001, PR China 133
- PO94 **Preparation and performance of a flexible electrode based on PANI/N-TiO<sub>2</sub> composite**, Yue Wu<sup>a</sup>, Jiale Qiao<sup>a</sup>, Mingyue Zhang<sup>a</sup>, Ya Wang<sup>a</sup>, Xianglong Wan<sup>a,b,\*1</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui 232001, China, <sup>b</sup>Anhui International Joint Research Center for Nanocarbon-based Materials and Environmental health, Huainan 232001, China 134
- PO95 **Adsorption of copper ions on porous ceramsite prepared by diatomite, fly ash and manganese slag**, Yuhao Fu, Zifang Xu<sup>\*</sup>, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, Anhui, China 135
- PO96 **Effect of silane coupling agent content and hollow glass microspheres on epoxy composites**, Zhaolin Zhu, Guiyang Xian, Chongmei Wu, Yan Wang, Yin Liu<sup>\*</sup>, School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, Anhui, China 136
- PO97 **Preparation of Waste Sanitary Ceramics Based High Temperature Resistant Materials by Modified Binder and Performance Optimization**, Zhenfei Lv<sup>a,b</sup>, Chong Lan<sup>a</sup>, Chen Yang<sup>a</sup>, Yukun Cao<sup>a</sup>, Yanghui Ke<sup>a</sup>, Xiulin Shen<sup>a,b,\*</sup>, <sup>a</sup>School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan, Anhui, 232001, PR China, <sup>b</sup>Anhui International Joint Research Center for Nano Carbon-based Materials and Environmental Health, Huainan, Anhui, 232001, PR China 137
- PO98 **Comparison and analysis of the synthesis of bisphenol-type polyarylate by interfacial polymerization with mechanical and magnetic stirring**, Zhoufeng Wang<sup>\*</sup>, Bolin Wang, Yingying Liu, Junwei Hu, Xiubo Long, *School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, PR China* 138
- PO99 **Preparation and properties of Bisphenol A, Bisphenol B and Bisphenol A/B Polyarylates**, Zhoufeng Wang<sup>\*</sup>, Yingying Liu, Bolin Wang, Junwei Hu, Xiubo Long, *School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, PR China* 139
- PO100 **Synthesis of Fe-doped Co, Zn Bilayer Metal-Organic Frameworks for Bifunctional Electrocatalysts for Efficient Oxygen Reduction and Oxygen Evolution Reactions**, Zijian Zhu, Xiaofei Li, Li Yang, School of Mechanics and Optoelectronic Physics, Anhui University of Science and Technology, Huainan, 232001, Anhui, China 140

- PO101 **Highly toughened and heat-resistant poly(L-lactide)/ polyvinylidene fluoride materials through simply interfacial interaction control via epoxy chain extender**, Xinliang Chen<sup>1</sup>, Bingyu Fan<sup>1</sup>, Ping Wang<sup>1,2</sup>, Jin Liu<sup>1,2,\*</sup>, <sup>1</sup>Anhui Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei Anhui, PR China 230601; <sup>2</sup>Key Laboratory of Functional Molecule Design and Interface Process, Anhui Jianzhu University, Hefei Anhui, PR China 230022 141
- PO102 **Synthesis of bifunctional composites Ag/BiOCl/diatomite: Degradation of tetracycline and evaluation of antimicrobial activity**, Jing Chen<sup>a,c</sup>, Qifang Ren<sup>c</sup>, Yi Ding<sup>a,b,c,\*</sup>, Chunyu Xiong<sup>c</sup>, Wanmi Guo<sup>c</sup>, <sup>a</sup>Anhui Advanced Building Materials Engineering Laboratory, Anhui Jianzhu University, Hefei 230601, Anhui, China, <sup>b</sup>Anhui Provincial Key Laboratory of Environmental Pollution Control and Resource Reuse, Anhui Jianzhu University, China, <sup>c</sup>Key Laboratory of Huizhou Architecture in Anhui Province, Anhui Jianzhu University, Hefei 230022, Anhui, China 142
- PO103 **Spirobifluorene with a Magnetic controllable conjugation system mediating the spin-spin coupling of Nitronyl Nitroxide Diradicals**, Zheng Yue<sup>1</sup>, Jin Liu<sup>1\*</sup>, Di Wang<sup>1\*</sup>, <sup>1</sup>Anhui Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei Anhui, PR China 230601 143
- PO104 **A bluefluorescent waterborne polyurethane with antibacterial properties based on Schiff base zinc complexes**, Xiang Luo<sup>1,xianhai Hu<sup>1,2,3,\*</sup></sup>, Yuqing Yang<sup>1</sup> Bo Cheng<sup>1</sup>, Hongrui Hu<sup>1</sup>, Zhuqing Li<sup>1</sup>, Kaixuan Shao<sup>1</sup>, Xiaojun She<sup>1</sup>, <sup>1</sup>Anhui Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei Anhui, PR China 230601 ; <sup>2</sup>Key Laboratory of Functional Molecule Design and Interface Process, Anhui Jianzhu University, Hefei Anhui, PR China 230022; <sup>3</sup>Anhui Province International Research Center on Advanced Building Materials,Hefei Anhui, PR China 230022 144
- PO105 **A waterborne polyurethane-based rare earth complex with tunable fluorescence and antibacterial activity**, Yuqing Yang<sup>1</sup>, xianhai Hu<sup>1,2,3,\*</sup>, Xiang Luo<sup>1</sup>, Bo Cheng<sup>1</sup>, Hongrui Hu<sup>1</sup>, Zhuqing Li<sup>1</sup>, Kaixuan Shao<sup>1</sup>, Xiaojun She<sup>1</sup>, <sup>1</sup>Anhui Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei Anhui, PR China 230601 ; <sup>2</sup>Key Laboratory of Functional Molecule Design and Interface Process, Anhui Jianzhu University, Hefei Anhui, PR China 230022; <sup>3</sup>Anhui Province International Research Center on Advanced Building Materials,Hefei Anhui, PR China 230022 145
- PO106 **Metallization, microstructure and sealing properites of a high purity Al<sub>2</sub>O<sub>3</sub> ceramic**, Cangbao He, Dongcai Li<sup>\*</sup>, Wei Su, Fengjun Zhang, Haiyan Xu, Anhui Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei Anhui, PR China 230601 146

- PO107 **Super-tough poly(lactide)/ethylene-methyl acrylate-glycidyl methacrylate random terpolymer blends via efficient catalytic interfacial crosslinking of environmentally friendly carboxyl-functionalized ionic liquids**, Jie Song<sup>a,c</sup>, Ping Wang<sup>a,c\*</sup>, Tao Song<sup>a,c</sup>, Shang Gao<sup>a,c</sup>, Min Shi<sup>d</sup>, Bihua Xiao<sup>a,c</sup>, Yiyang Zhou<sup>b</sup>, Xinliang Chen<sup>a,c</sup>, Jiacheng Ling<sup>a,c</sup>, Li Yang<sup>a,c</sup>, Jin Liu<sup>a,c</sup>, Shaojie Feng<sup>a,c</sup>, Tian Cao<sup>a,c</sup>, Yunsheng Ding<sup>b</sup>, <sup>a</sup>Anhui Province International Research Center on Advanced Building Materials, School of Materials and Chemical Engineering, Anhui Jianzhu University, Hefei 230601, China; <sup>b</sup>Department of Polymer Science and Engineering, School of Chemistry and Chemical Engineering, and Anhui Key Laboratory of Advanced Functional Materials and Devices, Hefei University of Technology, Hefei 230009, China; <sup>c</sup>Anhui Province Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei 230601, China; <sup>d</sup>School of Mathematics and Physics, Anhui Jianzhu University, Hefei 230601, China 147
- PO108 **Micro/nanostructured MgO hollow spheres with selective adsorption performance and their application for fluoride monitoring in water**, Renwu Zhu<sup>1</sup>, Xianbiao Wang<sup>1\*</sup>, Jared G. Panther<sup>2</sup>, Qiang Wang<sup>1</sup>, Soufian Chakir<sup>1</sup>, Yan Ding<sup>1</sup>, YuanyuanHuang<sup>1</sup>, HuantingWang<sup>3</sup>, <sup>1</sup>Anhui Province International Research Center on Advanced Building Materials, School of Materials Science and Chemical Engineering, Anhui Jianzhu University, Hefei Anhui, PR China 230601; <sup>2</sup>Centre for Clean Environment and Energy, Gold Coast Campus, Griffith University, Queensland, Australia 4222; <sup>3</sup>Department of Chemical and Biological Engineering, Monash University, Clayton, VIC, Australia 3800 148
- PO109 **Micro/nanostructured ZnFe2O4 Hollow Sphere/GO Composite for Structurally Enhanced Photocatalysis Performance**, Yang-Yang Zhao<sup>1</sup>, Xian-Biao Wang<sup>1,2\*</sup>, Qian-Kun Xu<sup>1</sup>, Soufian Chakir<sup>1</sup>, Yong-Fei Xu<sup>3</sup>, Bao Xu<sup>1</sup>, Yong-Hua Hu<sup>4</sup>, <sup>1</sup>School of Materials Science and Chemical Engineering, Anhui Jianzhu University, Hefei, China 230601; <sup>2</sup>Institute of Solid State Physics, Chinese Academy of Sciences, Hefei, China 230031; <sup>3</sup>Anhui Institute of Building Science Research & Design, Hefei, China 230031; <sup>4</sup>Anhui Key Laboratory of Tobacco Chemistry, Hefei, China 230088 149
- PO110 **Construct N-Cu-S interface chemical bonds over SnS<sub>2</sub> for efficient solar-driven photoelectrochemical water splitting**, Chengming Zhang<sup>1‡</sup>, Meng Wang<sup>1‡</sup>, Zhi Tang<sup>2</sup>, Kaiyue Gao<sup>1</sup>, Haibao Zhu<sup>1</sup>, Jie Ma<sup>1</sup>, Xiaolong Fang<sup>1</sup>, Xiufang Wang<sup>1\*</sup>, Yi Ding<sup>1\*</sup>, Xiaoli Zhao<sup>2\*</sup>, <sup>1</sup>Key Laboratory of Functional Molecule Design and Interface Process, Anhui Jianzhu University, Hefei Anhui, PR China 230601; <sup>2</sup>State Key Laboratory of Environmental Criteria and Risk Assessment Chinese Research Academy of Environmental Sciences Beijing China, Beijing, PR China 100085 150



- PO111 **Ca-Doped NaV<sub>6</sub>O<sub>15</sub> Film Electrodes as High-Performance Cathodes for Sodium-ion Batteries**, Fang-Lin Liu<sup>1</sup>, Yang He<sup>1</sup>, Han-Xiao Bian<sup>1</sup>, Dong-Cai Li<sup>1,2</sup>, Hai-Yan Xu<sup>1,3\*</sup>, <sup>1</sup>School of Materials and Chemical Engineering, Anhui Jianzhu University, Hefei 230601, China; <sup>2</sup>Anhui Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei, Anhui, 230022, P. R.China; <sup>3</sup>Key Laboratory of Functional Molecule Design and Interface Process, Anhui Jianzhu University, Hefei, Anhui, 230601, P. R.China 151
- PO112 **Facile formation of Mo-vacancy defective MoS<sub>2</sub>/CdS nanoparticles enhanced efficient hydrogen production**, Jing-Jing Jiang<sup>1</sup>, Feng-Jun Zhang<sup>1,2\*</sup>, Meng-Yuan Zhu<sup>1</sup>, Chao Liu<sup>1</sup>, Yu-Hong Niu<sup>1</sup>, <sup>1</sup>Key Laboratory of Functional Molecule Design and Interface Process, Anhui Jianzhu University, Hefei Anhui, PR China 230022; <sup>2</sup>Anhui Province International Research Center on Advanced Building Materials, Anhui Jianzhu University, Hefei Anhui, PR China 230601. 152
- PO113 **Defect MoS<sub>2</sub> and Ti<sub>3</sub>C<sub>2</sub> nanosheets co-assisted CdS to enhance visible-light driven photocatalytic hydrogen production**, Chao Liu<sup>1</sup>, Feng-Jun Zhang<sup>1,2\*</sup>, Meng-Yuan Zhu<sup>1</sup>, Jing-Jing Jiang<sup>1</sup>, Yu-Hong Niu<sup>1</sup>, <sup>1</sup>Key Laboratory of Functional Molecule Design and Interface Process, Anhui Jianzhu University, Hefei Anhui, PR China 230022; <sup>2</sup>Anhui Province International Research Center on Advanced Building Materials, Anhui Jianzhu University, Hefei Anhui, PR China 230601 153
- PO114 **A novel I-type 0D/0D ZnS@Cu<sub>3</sub>P heterojunction for photocatalytic hydrogen evolution**, Meng-Yuan Zhu<sup>1</sup>, Feng-Jun Zhang<sup>1,2\*</sup>, Chao Liu<sup>1</sup>, Jing-Jing Jiang<sup>1</sup>, Yu-Hong Niu<sup>1</sup>, <sup>1</sup>Key Laboratory of Functional Molecule Design and Interface Process, Anhui Jianzhu University, Hefei Anhui, PR China 230022, <sup>2</sup>Anhui Province International Research Center on Advanced Building Materials, Anhui Jianzhu University, Hefei Anhui, PR China 230601 154
- PO115 **RAFT Synthesis, Characterization and Application of Novel Water- and Oil-Resistant, Flame-Retardant Acrylic Polyethylene Glycol Ester Copolymer Energy Storage Materials**, Zhong-Qiong Qin<sup>a,b</sup>, Wen-Zong Xu<sup>b</sup>, Feng-Jun Zhang<sup>b</sup>, Yuan Hu<sup>a</sup>, Lei Song<sup>a\*</sup>, <sup>a</sup>State Key Laboratory of Fire Science, University of Science and Technology of China, 96 Jinzhai Road, Hefei, Anhui 230026, PR China. <sup>b</sup>Anhui Jianzhu University, He fei, 230601 China 155
- PO116 **Enhancing the performance of geopolymer-based coral concrete through phosphoric acid micro-corrosion technology**, Wang Aiguo, Wang Xingyao, Sun Daosheng\*, Liu Kaiwei, Guan Yanmei, Chu Yingjie, Anhui Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei Anhui, P. R. China, 230022 156
- PO117 **Preparation of ZnO Nanoparticles Composite WPUA Emulsion and Study on Properties of UV Cured Coating**, Yun Shen<sup>1</sup>, Jin Liu<sup>1,2,\*</sup>, Zhen 157

- Li<sup>1, 2</sup>, Jialu Luo<sup>1</sup>, Shiwu Wang<sup>1</sup>, Jinyang Tang<sup>1</sup>, Ping Wang<sup>1</sup>, Di Wang<sup>1</sup>, Xianbiao Wang<sup>1</sup>, Xianhai Hu<sup>1</sup>, Fengjun Zhang<sup>1</sup>, <sup>1</sup>School of Materials Science and Chemical Engineering, Anhui Jianzhu University, Hefei 230601, PR China; <sup>2</sup>Anhui Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei 230601, PR China
- PO118 **Preparation and Tribological Behavior of Copper Base Biomass Carbon Dot Films**, Enzhu Hu, Hua Zhong, and Kunhong Hu, Enhao Su, School of Energy Materials and Chemical Engineering, Hefei University, Hefei 230000, China 158
- PO119 **Multi-functional nano-MoS<sub>2</sub>/sericite nanomaterials for applications in catalysis and lubrication**, Kunhong Hu<sup>1</sup>, Zhixiang Li, School of Energy Materials and Chemical Engineering, Hefei University, Hefei 230000, China 159
- PO120 **Evaluation of fracture toughness behavior in epoxy-carbon fiber composite with polyamide 6**, Kyo-Moon Lee<sup>1,2</sup>, Sung-Youl Bae<sup>2\*</sup>, <sup>1</sup>Major of Materials Engineering, Department of Marine Equipment Engineering, Korea, Maritime and Ocean University, 727 Taejong-ro, Yeongdo-gu, Busan 49112, Republic of Korea, <sup>2</sup>Emerging Materials R&D Division, Korea Institute of Ceramic Engineering & Technology, 101, Soho-ro, Jinju-si, Gyeongsangnam-do, Republic of Korea 160
- PO121 **Characteristics of graphite composites BP with improved conductive networking through addition of GO**, Jinuk Hwang<sup>1,2</sup>, Woo Seong Tak<sup>1,2</sup>, Yongjun Jo<sup>1,2</sup>, Kyungwon Kim<sup>1,2</sup>, Young-Keun Jeong<sup>1</sup> and Woo Sik Kim<sup>2+</sup>, <sup>1</sup>Graduated School of Convergence Science, Pusan National University, Pusan 46241, Republic of Korea, <sup>2</sup>Convergence Transport Materials Center, Korea Institute of Ceramic Engineering and Technology, Jinju 52851, Republic of Korea 161
- PO122 **Reduced graphene oxide-coated carbon fiber**, Woo-Seong Tak<sup>a,b</sup>, Jin Uk Hwang<sup>a,b</sup>, Woo Sik Kim<sup>a\*</sup>, <sup>a</sup>Convergence Transport Materials Center, Korea Institute of Ceramic Engineering and Technology (KICET), <sup>b</sup>Graduate School of Convergence Science, Pusan National University 162
- PO123 **High-temperature tensile and fracture behaviors of polycrystalline SiC fiber derived from precursor route**, Hyuk Jun Lee<sup>1,2</sup>, Young Jin Shim<sup>1,2</sup>, Sang Hyun Joo<sup>1</sup>, Myung Chang Kang<sup>2</sup>, Kwang Youn Cho<sup>1\*</sup>, Young Jun Joo<sup>1\*</sup>, <sup>1</sup>Convergence Transport Materials Center, Emerging Materials R&D Division, Korea Institute of Ceramic Engineering and Technology, Jinju 52858, South Korea, <sup>2</sup>Graduate School of Convergence Science, Pusan National University, Busan 46241, Korea 163
- PO124 **Microwave-Assisted DeNOx System using SiC Composite Fibers as a Catalyst and Heating Elements**, Sang Hyun Joo<sup>1</sup>, Hyuk Jun Lee<sup>1,2</sup>, Young Jin Shim<sup>1,2</sup>, Kwang Youn Cho<sup>1</sup>, Young Jun Joo<sup>1\*</sup>, <sup>1</sup>Convergence Transport Materials Center, Korea Institute of Ceramic Engineering and Technology, Jinju 52851, Korea, <sup>2</sup>Graduate School of Convergence Science, Pusan National University, Busan 46241, Korea 164

- PO125 **The microwave heating performance and degradation of polymer-derived SiC ceramics**, Young Jin Shim<sup>1</sup>, Sang Hyun Joo<sup>1</sup>, Hyuk Jun Lee<sup>1</sup>, Kwang Youn Cho<sup>1\*</sup>, Young Jun Joo<sup>1\*</sup>, <sup>1</sup>Convergence Transport Materials Center, Emerging Materials R&D Division, Korea Institute of Ceramic Engineering and Technology, Jinju 52858, South Korea 165
- PO126 **Recovery and Standardization of Spent Activated Carbon Sample obtained from the Refined Sugar Plant**, Jirapat Janshongsawang and Saksit Chanthai\*, Materials Chemistry Research Center, Department of Chemistry and Center of Excellence for Innovation in Chemistry, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand 166
- PO127 **Investigation of Electrical Percolation for Straight CNTs-Infused Polymer Nanocomposites via Electromechanical Analysis**, Jaehyeok Doh<sup>1\*</sup>, Kihoon Lim<sup>1</sup>, Sang-in Park<sup>2</sup>, Nagarajan Raghavan<sup>3</sup>, Mantae Kim<sup>4</sup>, Sanghoon Kim<sup>5</sup>, <sup>1</sup>School of Mechanical and Material Convergence Engineering, Gyeongsang National University, Jinju-si, Gyeongsangnam-do 52725, Republic of Korea, <sup>2</sup>Department of Mechatronics Engineering, Incheon National University, Incheon, 22012, Republic of Korea, <sup>3</sup>Engineering Product Development Pillar, Singapore University of Technology and Design, 487372, Singapore, <sup>4</sup>Ceramic Fiber and Composite Center, Korea Institute of Ceramic Engineering and Technology, Jinju, Gyeongsangnam, 52851, Republic of Korea, <sup>5</sup>School of Mechanical Design Engineering, Chonnam National University, Yeosu, Jeollanam, 59626, Republic of Korea 167
- PO128 **Fabrication and Application of Anti-dust PM 2.5 and Antimicrobial Activity for Herbal Face Mask of Bagasse Fiber based Composites Filter Membrane**, <sup>1</sup>Chanthai, S\* . , <sup>1</sup>Pimsin, N. , <sup>1</sup>Aduntreerasophon, T. , <sup>1</sup>Keawprom, C. , <sup>2</sup>Sawaengkaew, J. , <sup>2</sup>Mahakhan, P. , <sup>3</sup>Nuengmatcha, P. , <sup>4</sup>Sricharoen, P., <sup>5</sup>Limchoowong, N., <sup>6</sup>Areerob, Y., and <sup>7</sup>Puttijitamornkul, T., <sup>1</sup>Materials Chemistry Research Center, Department of Chemistry and Center of Excellence for Innovation in Chemistry, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand, <sup>2</sup>Department of Microbiology, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand, <sup>3</sup>Nanomaterials Chemistry Research Unit, Department of Chemistry, Faculty of Science and Technology, Nakhon Si Thammarat Rajabhat University, Nakhon Si Thammarat 80280, Thailand, <sup>4</sup>Pre-Medical Science Division, Faculty of Medicine, Bangkokthonburi University, Thawi Watthana 10170, Thailand, <sup>5</sup>Department of Chemistry, Faculty of Science, Srinakharinwirot University, Bangkok 10110, Thailand, <sup>6</sup>Department of Industrial Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok 10520, Thailand, <sup>7</sup>School of Industrial Technology and Innovative Management, Faculty of Science and Technology, Pathumwan Institute of Technology, Pathumwan 10330, Thailand. 168

- PO129 **Molecular Dynamics Study of H<sub>4</sub>TTP Crystal Morphology**, Jun Li<sup>1</sup> and Chan Kyung Kim<sup>\*2</sup>, <sup>1</sup>School of Chemical Engineering and Technology, North University of China, Taiyuan, P. R. China, <sup>2</sup>Department of Chemistry and Chemical Engineering, Inha University, 100 Inha-ro, Michuhol-gu, Incheon 22212, Korea. 169
- PO130 **Evolution of Microstructure and Mechanical Properties of Al-Zn-Mg-Cu Alloy by Extrusion and Heat Treatment**, Jun Li,<sup>1</sup> Xi Zhao,<sup>2\*</sup> and Chan Kyung Kim<sup>3\*</sup>, <sup>1</sup>School of Chemical Engineering and Technology, North University of China, Taiyuan, P. R. China,<sup>2</sup>College of Mechatronics Engineering, North University of China, Taiyuan 030051, P. R. China. <sup>3</sup> Department of Chemistry and Chemical Engineering, Inha University, 100 Inha-ro, Michuhol-gu, Incheon 22212, Korea. 170
- PO131 **Theoretical Investigation on Enantioselective [1,2]-Stevens Rearrangement of Thiosulfonates Catalyzed by Guanidine/CuCl**, Yihua Fu, Cidan Lv, Changwei Hu, Zhishan Su<sup>\*</sup>, Key Laboratory of Green Chemistry and Technology, Ministry of Education, College of Chemistry, Sichuan University, Chengdu, Sichuan 610064, P. R. China 171
- PO132 **Theoretical Study on the Cleavage of  $\beta$ -O-4 Linkage in Lignin Dimer Catalyzed by Rh-Complex**, Yan Zhang<sup>1,2</sup>, Changwei Hu<sup>1</sup>, Dianyong Tang<sup>\*2</sup>, Chan Kyung Kim<sup>\*3</sup>, Zhishan Su<sup>\*1</sup>, <sup>1</sup>Key Laboratory of Green Chemistry and Technology, Ministry of Education, College of Chemistry, Sichuan University, Chengdu, Sichuan 610064, P. R. China, <sup>2</sup>College of Pharmacy & International Academy of Targeted Therapeutics and Innovation, Chongqing University of Arts and Sciences, Chongqing 402160, PR China,<sup>3</sup>Department of Chemistry and Chemical Engineering, Center for Design and Applications of Molecular Catalysts, Inha University, 100 Inha-ro, Michuhol-gu, Incheon 22212, Korea 172
- PO133 **Nematic liquid crystal alignment based biosensor for plant pathogen detection**, Pemika Hirankittiwong<sup>1\*</sup>, Sirikanjana Thongmee<sup>2</sup>, Praphat Kawicha<sup>3</sup>, <sup>1</sup>Department of General Science, Faculty of Science and Engineering, Kasetsart University, Chalermphrakiat Sakon Nakhon Province Campus, Sakon Nakhon 47000, Thailand, <sup>2</sup>Department of Physics, Faculty of Science, Kasetsart University, Bangkok 10900, Thailand, <sup>3</sup>Plant Pest and Biocontrol Research Unit, Department of Agriculture and Resources, Faculty of Natural Resources and Agro-Industry, Kasetsart University, Chalermphrakiat Sakon Nakhon Province Campus, Sakon Nakhon 47000, Thailand 173
- PO134 **Efficient degradation of atrazine residues in wastewater by persulfate assisted Ag<sub>3</sub>VO<sub>4</sub>/Bi<sub>2</sub>MoO<sub>6</sub>/diatomite under visible light**, Jing Chen <sup>a,c</sup>, Haitao Zhu <sup>b</sup>, Qifang Ren <sup>d</sup>, Shaohua Chen <sup>a,c,d</sup>, Yi Ding <sup>a,c,d,\*</sup>, Zhen Jin <sup>a,c,d</sup>, Chunyu Xiong <sup>d</sup>, Wanmi Guo <sup>d</sup>, Xinyu Jia <sup>d</sup>, <sup>a</sup> Anhui Advanced Building Materials Engineering Laboratory, Anhui Jianzhu University, Hefei 230601, Anhui, China, <sup>b</sup> Technology Center of Hefei Customs, Hefei 230022, Anhui, 174

- China, <sup>c</sup> Anhui Provincial Key Laboratory of Environmental Pollution Control and Resource Reuse, Anhui Jianzhu University, China, <sup>d</sup> Key Laboratory of Huizhou Architecture in Anhui Province, Anhui Jianzhu University, Hefei 230022, Anhui, China
- PO135 **Effect of nano-silica and silicone oil paraffin emulsion composite waterproofing agent on the water resistance of flue gas desulfurization gypsum**, Jinpeng Li <sup>a,b</sup>, Jingyu Cao <sup>a,b</sup>, Qifang Ren <sup>a,b,c</sup>, Yi Ding <sup>a,b,c,\*</sup>, Haitao Zhu <sup>a,b</sup>, Chunyu Xiong <sup>a,b</sup>, Ranran Chen <sup>a,b</sup>, <sup>a</sup>Anhui Province Engineering Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei, Anhui 230601, China, <sup>b</sup>Anhui Province Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei, Anhui 230601, China, <sup>c</sup>Key Laboratory of Huizhou Architecture in Anhui Province, Anhui Jianzhu University, Hefei, Anhui 230601, China 175
- PO136 **Ag<sub>3</sub>VO<sub>4</sub>/g-C<sub>3</sub>N<sub>4</sub>/diatomite ternary compound reduces Cr(VI) ion in aqueous solution effectively under visible light**, Zhuhuan Jiang<sup>†ad</sup>, Haitao Zhu<sup>†b</sup>, Wanmi Guo<sup>acd</sup>, Qifang Ren<sup>acd</sup>, Yi Ding<sup>acd</sup>, Shaohua Chen<sup>b</sup>, Jing Chen<sup>d</sup> and Xinyu Jia<sup>d</sup>, <sup>a</sup>Anhui Province International Research Center on Advanced Building Materials, Anhui Jianzhu University, Hefei 230022, Anhui, China, <sup>b</sup>Technology Center of Hefei Customs District, Hefei 230022, Anhui, China, <sup>c</sup>Anhui Provincial Key Laboratory of Environmental Pollution Control and Resource Reuse, Anhui Jianzhu University, Hefei 230022, Anhui, China, <sup>d</sup>Anhui Province Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei 230022, Anhui, China 176
- PO137 **Multifunctional Co<sub>x</sub>Zn<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub>/diatomite composites with antibacterial and microwave adsorption properties**, Wanmi Guo <sup>a</sup>, Haitao Zhu <sup>b</sup>, Qifang Ren <sup>a</sup>, Shaohua Chen <sup>a</sup>, Yi Ding <sup>a,c,d</sup>, Chunyu Xiong <sup>c</sup>, Jinpeng Li <sup>c</sup>, Jing Chen <sup>d</sup>, Yuelei Zhu <sup>d</sup>, <sup>a</sup>Anhui Province International Research Center on Advanced Building Materials, Anhui Jianzhu University, Hefei 230022, Anhui, China, <sup>b</sup>Technology Center of Hefei Customs District, Hefei 230022, Anhui, China, <sup>c</sup>Anhui Provincial Key Laboratory of Environmental Pollution Control and Resource Reuse, Anhui Jianzhu University, Hefei 230022, Anhui, China, <sup>d</sup>Anhui Province Key Laboratory of Advanced Building Materials, Anhui Jianzhu University, Hefei 230022, Anhui, China 177
- PO138 **Microwave absorption and photocatalytic activity of Mg<sub>x</sub>Zn<sub>1-x</sub> ferrite /diatomite composites**, Wanmi Guo <sup>1</sup>, Sulei Wang <sup>1</sup>, Qifang Ren <sup>1</sup>, Zhen Jin <sup>1</sup>, Yi Ding <sup>1,2,3</sup>, Chunyu Xiong <sup>2</sup>, Jinpeng Li <sup>2</sup>, Jing Chen <sup>3</sup>, Yuelei Zhu <sup>3</sup>, Won-Chun Oh <sup>4</sup>, <sup>1</sup>Anhui Advanced Building Materials Engineering Laboratory, Anhui Jianzhu University, Hefei 230601, Anhui, China, <sup>2</sup>Key Laboratory of Huizhou Architecture in Anhui Province, Anhui Jianzhu University, Hefei 230022, Anhui, China, <sup>3</sup>Anhui Provincial Key Laboratory of Environmental Pollution Control and Resource Reuse, Anhui Jianzhu University, Hefei 230022, Anhui, China, <sup>4</sup>Department of Advanced 178

- Materials Science and Engineering, Hanseo University, Seosan 31962, Republic of Korea
- PO139 **Application Research on Mechanical Strength and Durability of Porous Basalt Concrete**, Yuelei Zhu <sup>1</sup>, Jingchun Li <sup>2</sup>, He Zhu <sup>2</sup>, Long Jin <sup>2</sup>, Qifang Ren <sup>1</sup>, Yi Ding <sup>1</sup>, Jinpeng Li <sup>1</sup>, Qiqi Sun <sup>1</sup>, Zilong Wu <sup>1</sup>, Won- Chun Oh <sup>3</sup>, <sup>1</sup>Anhui Advanced Building Materials Engineering Laboratory, Anhui Jianzhu University, Hefei 230601, Anhui, China, <sup>2</sup>Anhui Road and Bridge Engineering Group Co., Ltd, <sup>3</sup>Department of Advanced Materials Science and Engineering, Hanseo University, Seosan 31962, Republic of Korea 179
- PO140 **Adsorption of volatile Organic Compounds by Inorganic Adsorbents**, A Yeon Kim, Yong Chan Kim, Ji Yeon Kim<sup>1</sup>, and Seung Kyu Park\*, Department of Chemical Engineering, Hoseo University, Asan 336-795, Korea 180
- PO141 **Constructing Microporous Metal–Organic Frameworks Based on Pyrazole Ligand: Structure and supercapacitive performance**, Chao Feng<sup>\*1</sup>, Jing-Jing Guo<sup>1</sup>, Zong-Qun Li<sup>1</sup> <sup>1</sup>School of Material and Chemical Engineering, Bengbu University, Bengbu, 233030, PR China 181
- PO142 **Novel Co(II) and Ni(II) complexes based on a tripodal ligand: Crystal structure, Magnetic property and Hirshfeld surface analysis**, Jing-Jing Guo<sup>1</sup>, Chao Feng<sup>\*2</sup> <sup>1</sup>School of Mechanical and Vehicle Engineering, Bengbu University, Bengbu, China <sup>2</sup> School of Material and Chemical Engineering, Bengbu University, Bengbu, 233030, PR China 182
- PO143 **Synthesis of titanium carbide nanocrystals by SHS method and its photocatalysis performance**, Zong-Qun Li<sup>1</sup> <sup>1</sup>School of Material and Chemical Engineering, Bengbu University, Bengbu, 233030, PR China 183
- PO144 **Diffusion Mechanism Control between Multilayer Films based on Thick Film Technology**, Jun Fang<sup>\*a,b</sup>, <sup>a</sup>School of Material and Chemical Engineering, Bengbu University, Anhui, 233030, China <sup>b</sup>Anhui Provincial Engineering Laboratory of Silicon-based Materials, Anhui, 233030, China 184
- PO145 **Two high toughness and flame retardant DOPO-containing polybenzoxazines based on polyether-urea**, Linlin Zhu<sup>1,2</sup>, Xiangyang Yang<sup>2</sup>, Yongbin Si<sup>3</sup>, Liyuan Zhang<sup>1</sup>, Xi Li<sup>1</sup> and Lingling Hou<sup>2</sup> <sup>1</sup>Anhui Provincial Engineering laboratory of Silicon-based Materials, School of Materials and Chemical Engineering of Bengbu University, Bengbu, 233000, People's Republic of China. <sup>2</sup>Bengbu Qingquan Environmental Protection Co., LTD. Bengbu, 233000, People's Republic of China. <sup>3</sup>School of Resource and Environment of Anhui Agricultural University, Hefei, 230009, People's Republic of China. 185
- PO146 **Long-cycle-life energy storage with holey graphene supported TiNb<sub>2</sub>O<sub>7</sub> nanostructure for supercapacitors**, Shu Ye School of Material and Chemical Engineering, Bengbu University, Bengbu, 233030, PR China 186
- PO147 **Microwave-assisted preparation of modified chitosan and its adsorption of methyl orange**, WANG Ke, ZHANG Guiyan, YIN Na, LI Zongqun, 187

- Anhui Provincial Engineering Technology Research Center of Silicon-Based Materials, Bengbu University, China 233000
- PO148 **Preparation and Properties of Naproxen-Loaded Poly(Lactic Acid) Microspheres by Electrospray Method**, Wenjing Ji<sup>1</sup>, Yangcui Ou<sup>1</sup>, Yanchao Hu<sup>1</sup>, Mi Zhou<sup>1</sup> \*Functional powder material laboratory of Bengbu City, Bengbu University, Bengbu, 233030, Anhui, China; 188
- PO149 **Synthesis of core-shell structure of Boron-doped Mesoporous C/SiO<sub>2</sub> Composite and CO<sub>2</sub> Adsorption Application**, Jin Xiaoqi\*, Ge Jinlong, Zhu Linlin, Zhang Liyuan, Xiong Mingwen, Meng Xiaolin Anhui Provincial Engineering Laboratory of Silicon-based Materials, School of Material and Chemical Engineering, Bengbu University, Bengbu, 233030, PR China 189
- PO150 **Research on the preparation and characterization of rifampicin-loaded ethyl cellulose composites**, Yangcui Ou<sup>1</sup>, Wenjing Ji<sup>1</sup>, Yanchao Hu<sup>1</sup>, Xi Li<sup>2\*</sup> Functional powder material laboratory of Bengbu City, Bengbu University, Bengbu, 233030, Anhui, China; 190
- PO151 **Adsorption removal of heavy metal Cd (II) in wastewater using bimetallic MOFs**, YIN Na, WANG Ke, CAO Ziyi, LI Zongqun, Anhui Provincial Engineering Technology Research Center of Silicon-Based Materials, Bengbu University, China 233000 191
- PO152 **Research on the miscibility of PMMA/FX blending systems**, Yufei Gu<sup>1</sup>, Xiaolong Zhu<sup>1</sup>, Xinchun Cui<sup>1</sup>, Xi Li<sup>1,2</sup>. 1. School of Materials and Chemical Engineering, Bengbu University, Bengbu, Anhui, People's Republic of China 2. School of Chemical Engineering, Nanjing University of Science and Technology, Nanjing, Jiangsu, People's Republic of China 192
- PO153 **The phase and microstructure in in-situ oxidized SiC/Al composite**, Yuhong Jiao, Chunjie Shi Anhui Provincial Engineering Laboratory of Silicon-based Materials, School of Material and Chemical Engineering, Bengbu University, Bengbu, 233030, PR China 193
- PO154 **Evaluation of suitability for Weibull distribution of silicon oxycarbide fiber**, Sanghun Kim<sup>a,b</sup>, Seong-Gun Bae<sup>a,b</sup>, Yeong-Geun Jeong<sup>b</sup> and Dong-Geun Shin<sup>aa</sup>Convergence Transport Materials Center, Korea Institute of Ceramic Engineering & Technology, Jinju 52851, Republic of Korea<sup>b</sup>Department of Convergence, Pusan National University, Busan 46241, Republic of Korea 194
- PO155 **High-temperature performance SiC-HfC nanocomposite fiber derived from metal-modified polycarbosilane**, Seong-Gun Bae<sup>1</sup>, Sanghun<sup>1</sup> KimYoonjoo Lee<sup>2</sup>, and Dong-Geun Shin<sup>1\*</sup>, <sup>1</sup>Convergence Transport Materials Center, Korea Institute of Ceramic Engineering & Technology, Jinju 52851, Republic of Korea, <sup>2</sup>Semiconductor Materials Center, Korea Institutes of Ceramic Engineering & Technology, Jinju 52851, Republic of Korea 195

- PO156 **Generation of Hydrogen Peroxide by Single-atom Cu on BaTiO<sub>3</sub> for Piezoelectric degradation of antibiotic**, Xin Ni<sup>1</sup>, Kai Chen<sup>1</sup>, Bo Zhang<sup>1</sup>, Shaocong Ni<sup>1</sup>, Zeda Meng<sup>1†</sup>, Shouqing Liu<sup>1</sup>, Won-Chun Oh<sup>2</sup> <sup>1</sup>Suzhou University of Science and Technology, Suzhou 215009, China, <sup>2</sup>Department of Advanced Materials Science & Engineering, Hanseo University, Seosan 31962, Republic of Korea 196
- PO157 **Single-atom Pd anchored on t-BaTiO<sub>3</sub> for Piezoelectric degradation of tetracycline**, Kai Chen<sup>1</sup>, Xin Ni<sup>1</sup>, Bo Zhang<sup>1</sup>, Shaocong Ni<sup>1</sup>, Zeda Meng<sup>1†</sup>, Shouqing Liu<sup>1</sup>, Won-Chun Oh<sup>2</sup> <sup>1</sup>Suzhou University of Science and Technology, Suzhou 215009, China, <sup>2</sup>Department of Advanced Materials Science & Engineering, Hanseo University, Seosan 31962, Republic of Korea 197



## ◆ Hotel information

- New Raon Stay Hotel
- <https://www.raonstay2.com/index.php>
- Hotel rate : KWN55,000₩ (without Breakfast)  
KWN63,000₩ (with Breakfast)
- Address : Kyungnam, Jinju-si, Youngchengang-ro #166
- Tel : 055-751-1111

## ◆ Traffic information

- Incheon Airport → Busan (Kimhae) Airport (1 hour) → Shuttle bus (1 hour)
- Busan (Kimhae) Airport → Jinju Bus terminal (1 hour and 15 min.)
- Gimpo Airport → Sacheon Airport → Hotel (20 min.)

## ◆ Conference Events

- Welcome Reception : 24 November
- Committee Board Member Meeting : 24 Nov. 20:00
- Banquet : Wedding Convention Center (Jinju Sports Complex) 25 Nov. 18:00



<Traditional Samuloli and Sword dance>

## ◆ Conference Events

- Conference Tour : 26 November



← (1) Songkwang Temple

(2) Nakan Castle & Folk village



← (3) Kwangyang Ironworks