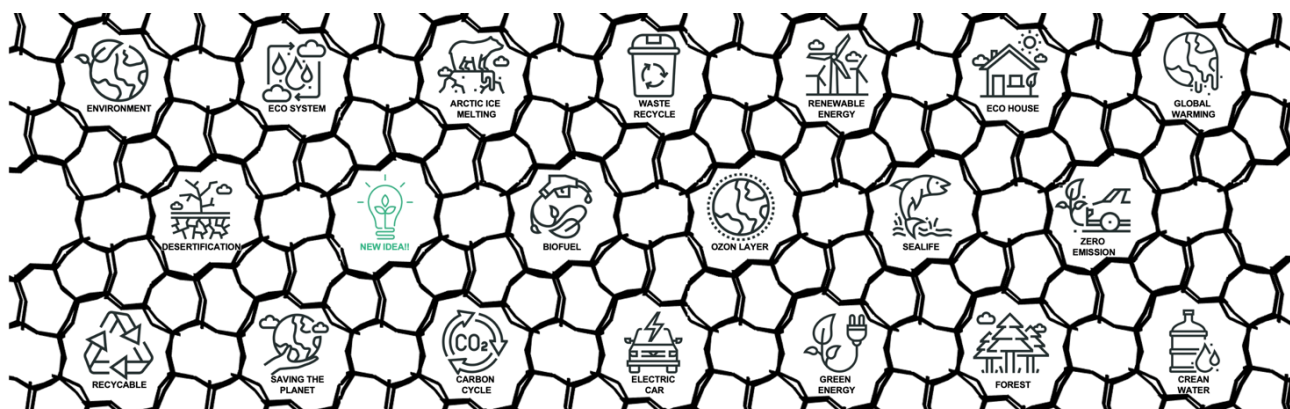


4th International Symposium on Porous Materials 2022

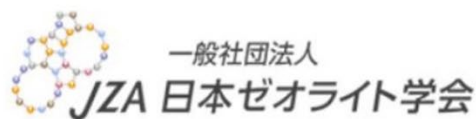
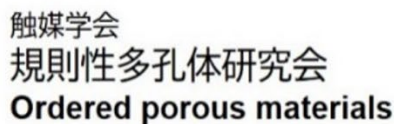


Oct. 12 - 14, 2022

Online / Tokyo site

Tokyo Tech Front, Tokyo Institute of Technology, Tokyo, Japan

Sponsors and Exhibitors



International Symposium on Porous Materials 2022

【主催】 International Symposium on Porous Materials 2022 実行委員会

東京工業大学 ナノ空間触媒研究ユニット

東京大学 大久保-脇原-伊與木研究室

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触媒学会 規則性多孔体研究会

触媒学会 固体酸塩基点の作用と設計研究会

【Special thanks】

Zhejiang University

Tsinghua University

Korea Advanced Institute of Science and Technology

National Taiwan University

Taiwan Catalysis Society

Organizing Committee

Toshiyuki Yokoi (Tokyo Institute of Technology)

Toru Wakihara (The University of Tokyo)

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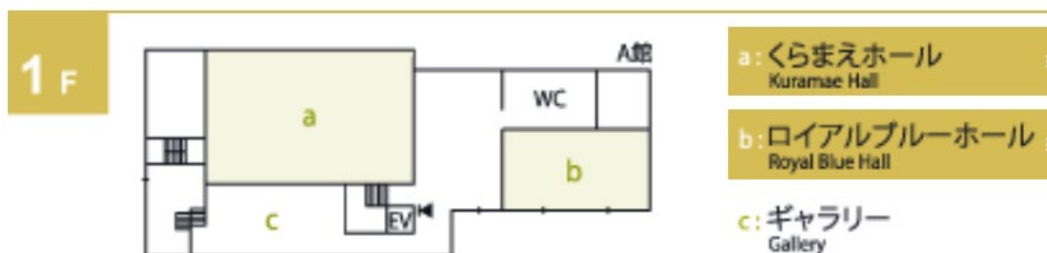
Kevin C.-W. Wu (National Taiwan University)

Dun-Yen Kang (National Taiwan University)

Venue

Online: Cisco Webex

Tokyo site: Kuramae Hall, Tokyo Tech Front,
Tokyo Institute of Technology, Tokyo, Japan
2-12-1 Ookayama, Meguro-ku, Tokyo, 152-8550



Program

Oct. 12 (Wed.)

- ~13:00 Connection test / Rehearsal
13:00 Opening remarks

Session 1, Chair: Minkee Choi, Korea Advanced Institute of Science and Technology

- 13:10 **IL1, Prof. Kevin Wu** (National Taiwan University)
“MOFs as effective solid catalysts for waste biomass and plastic conversion”
- 13:30 **IL2, Prof. Chung-Wei Kung** (National Cheng Kung University)
“Iridium-functionalized stable metal–organic framework-based materials for electrocatalysis”
- 13:50 **IL3, Prof. Dun-Yen Kang** (National Taiwan University)
“MOF membranes for gas and liquid separations”
- 14:10 **IL4, Prof. Yi-Pei Li** (National Taiwan University)
“Theoretical study of the hydrogenolysis and hydrodeoxygenation of furfuryl alcohol over cobalt single-site catalysts anchored on metal-organic frameworks”
- 14:30 Break

Session 2, Chair: Zhendong Liu, Tsinghua University

- 14:45 **GO1, Ruihan Yang** (Tsinghua University)
“Selective adsorption of liquid long-chain α -olefin/paraffin on FAU and LTA zeolites: experiments, simulations, and direct imaging”
- 15:00 **GO2, H. L. Yi** (Tsinghua University)
“Controllable preparation and catalytic performance study of alumina microspheres in microchannel”
- 15:15 **GO3, Qiangqiang Xue** (Tsinghua University)
“Experimental and DFT studies on hydrocarbon-steam-reforming to hydrogen over a bimetallic Rh–Ni-based mesoporous MgO–Al₂O₃ microsphere catalyst”
- 15:30 **IL5, Prof. Maiko Nishibori** (Tohoku University)
“Synchrotron X-ray absorption spectroscopy for heteroatoms in Fe-substituted zeolites by mechanochemical method”
- 15:50 **IL6, Prof. Ryota Osuga** (Tohoku University)
“Synthesis of high-silica CHA-type aluminosilicates by the seed-assisted aging treatment without fluoride media”
- 16:10 Break

Session 3, Chair: Kevin C.-W. Wu, National Taiwan University

- 16:20 **IL7, Prof. Zhendong Liu** (Tsinghua University)
“Ultrafast encapsulation of metal clusters into zeolites”
- 16:40 **IL8, Prof. Minkee Choi** (Korea Advanced Institute of Science and Technology)
“Hierarchical BEA zeolite with trimodal micro-/meso-/macroporosity as a selective and stable catalyst for isobutane/2-butene alkylation”
- 17:00 **PL1, Prof. Manuel Moliner** (Instituto de Tecnologia Quimica (ITQ))
“Designing microporous materials for catalytic applications”
- 17:50 Get together / Adjourn

Oct. 13 (Thu.)

9:00 Connection test / Rehearsal

Session 4, Chair: Hu Peidong, The University of Tokyo

- 9:20 **IL9, Prof. Kenta Iyoki** (The University of Tokyo)
“Stabilization of zeolites via post-synthetic, liquid-mediated modification with the aid of pore-fillers”
- 9:40 **IL10, Prof. Changbum Jo** (Inha University)
“Tailoring the molecular sieving property of zeolites by post-synthetic modification for olefin/paraffin separation”
- 10:00 **IL11, Prof. Zhen-An Qiao** (Jilin University)
“Refined mesoporous architectures: Synthesis, assembly and applications”
- 10:20 **IL12, Prof. Peng Guo** (Dalian Institute of Chemical Physics, Chinese Academy of Sciences)
“Structural characterizations of zeolites by X-ray and electron crystallography”
- 10:40 Break

Session 5, Chair: Takahiko Moteki, The University of Tokyo

- 11:00 **IL13, Prof. Yuni Krisnandi** (Universitas Indonesia)
“Conversion of palmitic acid into paraffin through deoxygenation reaction over Co-Mo oxides/SBA-15 catalysts”
- 11:20 **IL14, Prof. Rino R. Mukti** (Institut Teknologi Bandung)
“Interzeolite transformation by introducing confined-framework agent”
- 11:40 **IL15, Dr. Watcharop Chaikittisilp** (National Institute for Materials Science (NIMS))
“Accelerating the exploratory search of nanoporous materials for adsorption and catalysis: A data-driven approach”
- 12:00 **IL16, Prof. Chechia Hu** (National Taiwan University of Science and Technology)
“Modification of g-C₃N₄ through hydroxylation and Na intercalation for photocatalytic formaldehyde removal”
- 12:20 Lunch Break

Session 6, Chair: Kenta Iyoki, The University of Tokyo

- 13:30 **GO4, M. J. Mendoza-Castro** (Universidad de Alicante/The University of Tokyo)
“Hierarchical catalyst in the FAU to BEA interzeolite transformation”
- 13:45 **GO5, Yao Lu** (Tokyo Institute of Technology)
“Synthesis of green CHA zeolite from rice husk charcoal and its applications”
- 14:00 **GO6, H. Goto** (Tokyo Institute of Technology)
“Ethane dehydroaromatization by dualfunctional catalyst Fe/Ag@MFI”

- 14:15 **GO7, Dr. Shih-Yuan Chen** (AIST)
“A Cs-promoted Ru/SGCNT catalyst for intermittent ammonia synthesis”
- 14:30 Break

Session 7, Chair: Xiangju Meng, Zhejiang University

- 14:40 **IL17, Prof. Kang Cheng** (Xiamen University)
“Distance effect in bifunctional metal-acid catalysis”
- 15:00 **IL18, Prof. Duangamol N. Tungasmita** (Chulalongkorn University)
“Porous catalysis for biomass valorization”
- 15:20 **IL19, Prof. Chawalit Ngamcharussrivichai** (Chulalongkorn University)
“Selective synthesis of renewable bio-jet fuel precursors from furfural and 2-butanone via heterogeneously catalyzed aldol condensation”
- 15:40 Break

Session 8, Chair: Toshiyuki Yokoi, Tokyo Institute of Technology

- 16:00 **PL2, Prof. Shunai Che** (Shanghai Jiao Tong University)
“Synthesis of Ultrasmall Multi-metallic Nanoparticles (UMMNs) Confined Mesoporous MFI Zeolite”
- 16:50 **PL3, Prof. Naonobu Katada** (Tottori University)
“YNU-5 Zeolite with strong brønsted acid sites accessible from 12-ring pores”
- 17:40 Poster Session (Tokyo site)
- 18:30 Get together / Adjourn

Oct. 14 (Fri.)

9:00 Connection test / Rehearsal

Session 9, Chair: Dun-Yen Kang, National Taiwan University

- 9:20 **IL20, Prof. Yongjin Lee** (Inha University)
“Development of nanoporous materials using computational modeling combined with machine learning”
- 9:40 **IL21, Prof. Hae Sung Cho** (Chung-Ang University)
“Physicochemical understanding of adsorption in porous crystal through gas adsorption crystallography”
- 10:00 **IL22, Prof. Qiming Sun** (Soochow University)
“Zeolite-encaged metal catalysts: Synthesis and applications”
- 10:20 **IL23, Prof. Le Xu** (Nanjing Tech Univeristy)
“Construction of new zeolites via rational manipulation of MWW zeolitic layers”
- 10:40 Break

Session 10, Chair: Toru Wakihara, The University of Tokyo

- 10:50 **IL24, Prof. Wen-Yeuh Yu** (National Taiwan University)
“Spectroscopy characterization of active Cu species in Cu-exchanged Ce-modified Y-zeolite for selective catalytic reduction of NO with NH₃”
- 11:10 **PL4, Prof. Chia-Min Yang** (National Tsing Hua University)
“Nanosheet-based hierarchical zeolites for catalytic and adsorption applications”
- 12:00 **SL, Prof. Atsushi Muramatsu** (Tohoku University)
“Outline of next generation synchrotron radiation facility, NanoTerasu, and strategy of Tohoku University”
- 12:30 Closing remarks
- 12:40 End

Poster session on Oct. 13 (Thu.) at Tokyo Site

- P1, M. J. Mendoza-Castro** (Universidad de Alicante/The University of Tokyo)
“Hierarchical catalyst in the FAU to BEA interzeolite transformation”
- P2, Yao Lu** (Tokyo Institute of Technology)
“Synthesis of green CHA zeolite from rice husk charcoal and its applications”
- P3, H. Goto** (Tokyo Institute of Technology)
“Ethane Dehydroaromatization by dualfunctional catalyst Fe/Ag@MFI”
- P4, Shih-Yuan Chen** (AIST)
“A Cs-promoted Ru/SGCNT Catalyst for Intermittent Ammonia Synthesis”
- P5, Yuto Higuchi** (Kansai University)
“The synthesis of CHA/PHI composite zeolite showing gate-opening type CO₂ adsorption behavior”
- P6, Misaki Endo** (Tokyo Institute of Technology)
“Development of zeolite-encapsulated Pt catalyst with excellent sintering resistance and molecular sieving ability”
- P7, Taiki Hayashi** (Waseda University)
“Cage Germoxanes as Selectively Removable Building Blocks for Construction of Nanoporous Materials”
- P8, Ryoma Michinobu** (Tohoku University)
“Synthesis of Ga-Substituted Zeolites by Mechanochemical Method and Their Application to Methane Reforming Reaction”
- P9, Yoshiyasu Imanishi** (Tohoku University)
“Transcription-induced synthesis of zeolites with paired Al sites from Al-rich amorphous aluminosilicate precursor”
- P10, Kakeru Ninomiya** (Tohoku University)
“X-ray spectroscopy for the distribution analysis of heteroatoms in the zeolite”
- P11, Peipei Xiao** (Tokyo Institute of Technology)
“Effects of Al distribution in the Cu-exchanged AEI zeolites on the reaction performance of continuous oxidation of methane”
- P12, Yilin Wang** (Tokyo Institute of Technology)
“Tailoring the arrangement of framework aluminum in ZSM-5 zeolite to regulate reaction route for alkylation of benzene with methanol”
- P13, Tahta Muslim Karim** (Tokyo Institute of Technology)
“Effect of The Hydrothermal Temperature on the Hierarchical ZSM-5 Synthesized Using Cetyltrimethylammonium Bromide”
- P14, Yibing Cai** (Tokyo Institute of Technology)
“Influence of Synthesis Conditions on the Crystallization of SFH Type Zeolite”

- P15, Liu Yin** (Tokyo Institute of Technology)
“Core-shell structure zeolite supported Ru_{0.2}Ni_{0.8} bimetallic catalyst assisted hydrodeoxygenation of vanillin to p-cresol”
- P16, Hiroto Toyoda** (Tokyo Institute of Technology)
“Comparative study of acid site location in MSE-type aluminosilicate zeolites”
- P17, Yuqin Sun** (Tokyo Institute of Technology)
“Comparison of physicochemical properties and catalytic performance of aluminosilicate ERI-type zeolites from different synthesis methods”
- P18, Nandkishor Urkude** (Tokyo Institute of Technology)
“Synthesis of Metal Encapsulated Zeolite Based Hybrid Catalyst for Enhancement of the Olefins Selectivity During Light-Naphtha Cracking”
- P19, Chuang Liu** (The University of Tokyo)
“Synthesis of zeolite@MOF core-shell particle as the adsorbent of 1,3-butadiene”
- P20, Yuki Nakamura** (The University of Tokyo)
“Immobilization of Lipase onto Surface-Modified SBA-15”
- P21, Takahiko Moteki** (The University of Tokyo)
“Relationship between the type of reactant and the lifetime of catalyst in olefins formation reaction over LTA-type zeolite”
- P22, Shengxiang Zhang** (Yokohama National University)
“Preparation of hierarchical titanosilicate [Ti]-YNU-5 and its catalytic application”
- P23, Keisuke Nishimura** (Yokohama National University)
“Solid acid catalytic properties of YNU-5 zeolite for various catalytic cracking reactions”
- P24, Jingyun Yu** (The University of Tokyo)
“Fe-loaded Al-rich *BEA-type Zeolite for NH₃-SCR Catalyst: Effect of Stabilization Treatment”
- P25, M. Takemura** (The University of Tokyo)
“Amorphous aluminosilicates as efficient ion exchangers for ammonium cations from aqueous solutions”
- P26, T. Yoshioka** (The University of Tokyo)
“Pore widening during dealumination of AFX-type zeolite”
- P27, T. Wakihara** (The University of Tokyo)
“Synthesis of CON-type Zeolite Nanocatalyst toward Prolonged Lifetime in Methanol-to-Olefins Reaction via Bead-milling, Recrystallisation and Defect-healing Treatments”