

## 《 レポート 》

Report on the 5<sup>th</sup> Euro-Asia Zeolite Conference in Busan, KoreaOkubo-Wakihara-Iyoki Lab, The University of Tokyo  
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## Introduction

The 5<sup>th</sup> Euro-Asia Zeolite Conference in Busan, Korea focused on “Zeolites as Materials for Energy and Environmental Sustainability”. The conference aimed to gather experts from academia, industry, and government to discuss recent advances in zeolite chemistry. This report summarizes my experience attending the conference, including the sessions I joined, key takeaways, and recommendations for future attendees.

## Sessions Attended

I attended all sessions of the 5<sup>th</sup> Euro-Asia Zeolite Conference, which addressed various topics related to zeolite chemistry and its applications in energy and environmental sustainability. These included MOF and porous materials, hierarchical zeolites, synthesis, adsorption and separation, characterization and modeling, catalysis, industrial session, and zeolite-templated carbons.

The session on catalysis was particularly interesting to me and I presented my research on using zeolites to catalyze the conversion of carbon dioxide into valuable products. I discussed the use of thermal catalysis and tandem catalysts to maximize the yield of olefins and long-chain hydrocarbons while minimizing by-products. The audience was engaged and had many questions about the catalysts and reaction mechanism, with one key comment being the need to consider the energy balance for overall sustainability. I received valuable feedback and suggestions from experts in the field.

The session on catalysis provided me with valuable insights into the latest research on using zeolites in petrochemicals, environmental catalysis, and biomass conversion. The other sessions were also engaging, with experts from academia, industry, and government presenting their latest research and insights on various zeolite-related topics.

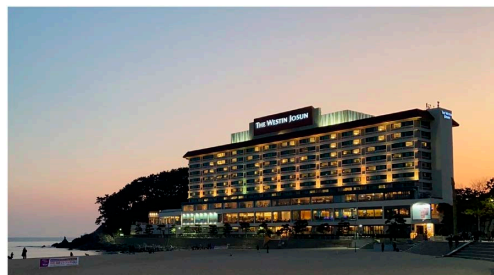


Fig. 1. The appearance of the venue

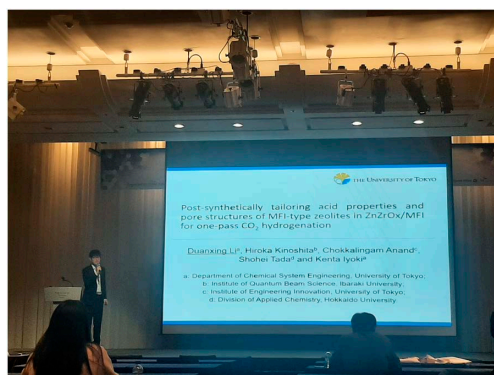


Fig. 2. Oral presentation of my research work

## Key Takeaways

Attending the 5<sup>th</sup> Euro-Asia Zeolite Conference provided me with valuable insights. I gained a deeper understanding of zeolite chemistry and its applications, particularly in catalysis for petrochemicals, environmental sustainability, and biomass conversion. Additionally, the conference provided me with the opportunity to network with experts from different countries, leading to potential collaborations in the future. The conference highlighted the significance of zeolites as materials for energy and environmental sustainability and provided me with a global perspective on zeolite research beyond Japan. The discussions and presentations on zeolite catalysis for

carbon dioxide conversion were particularly insightful. Overall, attending the conference was a valuable experience for gaining knowledge, networking, and building potential collaborations.

### New Connections

At the conference, I had the privilege of meeting Dr. Svetlana Mintova, the President of the International Zeolite Association, and gained valuable insights into the direction of international zeolite research. I also connected with several other experts in the field, which will undoubtedly prove useful for future collaborations and projects.

Prof. Kang and Prof. Minkee both work on zeolite synthesis and catalysis applications, which complements my research on converting carbon dioxide to value-added products. Prof. Minkee's presentation on zeolite-templated carbon materials was engaging. In my research, I learned to prepare zeolite nanosheet from his method. In the conference, we discussed the current situation of zeolite nanosheet synthesis, and he highlighted the challenge of reducing the cost of organic structure-directing agents (OSDAs) for industrial production. His insights on potential strategies and alternative OSDAs were thought-provoking. Prof. Minkee's research has contributed significantly to the field, and I appreciate the opportunity to learn from his expertise. It was valuable to exchange ideas and perspectives with them and other young researchers from POSTECH University. Discussing our current research topics and future research goals was

inspiring and motivating, and exchanging feedback on posters and insights on the latest research was helpful. The informal interactions, such as exploring Busan and visiting a coffee shop together, were just as valuable as the conference sessions as they allowed me to build relationships and connect personally with others in the field. These new connections will lead to potential collaborations in the future, and it's exciting to see where they may lead.

### Recommendations for Future Attendees

For future attendees of the Euro-Asia Zeolite Conference, I recommend taking advantage of the networking opportunities provided by the conference. Here are some specific examples of networking opportunities at the conference, such as poster sessions, coffee breaks, or social events. Such networking is quite important in the field of zeolites and it can lead to potential collaborations, job opportunities, or research partnerships.

It is also important to plan in ahead and carefully choose which sessions and workshops to attend to make the most out of the conference. Here are some tips on how attendees can plan their schedules, such as using the conference program, prioritizing sessions based on their interests, or attending talks by renowned speakers.

Additionally, submitting an abstract and giving a presentation is a great way to share research with the zeolite community and receive valuable feedback from experts. To prepare a successful abstract and presentation, it is important to focus on the main contributions of the



Fig. 3. Networking with young researchers from Tokyo Institute of Technology and POSTECH University



Fig. 4. The appearance of night market in Busan

research, use clear and concise language, and engage the audience with interactive elements. Finally, attendees should aim to receive awards for the best presentations, posters, or abstracts as this can enhance their professional profile in the field.

#### Conclusion

In summary, attending the 5<sup>th</sup> Euro-Asia Zeolite Conference in Busan, Korea provided me with a better understanding of zeolite chemistry and catalysis, as well as the opportunity to network with experts in the field. I highly recommend this conference to anyone interested in zeolite chemistry. I would like to express my gratitude to the Japanese Zeolite Society for their financial support, as attending the conference would not have been possible without them.