

Minkee Choi

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Education

2004. 03 – 2007. 02	Ph. D.	Chemistry, KAIST
2002. 03 – 2004. 02	M.S.	Chemistry, KAIST
1998. 03 – 2002. 02	B. S.	Chemistry, KAIST

Professional Career

2007. 03 – 2009. 03	Postdoc.	Chemistry, KAIST
2009. 04 – 2010. 10	Postdoc.	Chemical Engineering, UC Berkeley
2010. 12 – present	Prof.	Chemical & Biomolecular Eng., KAIST

Selected Publications

1. J. Seok, N. T. Yen Phan, J.-C. Kim, H. Shin*, M. Choi*, Catalytic Synergy between Lewis Acidic Alumina and Pt in Hydrodechlorination for Plastic Chemical Recycling, *J. Am. Chem. Soc.*, 2024, 146, 23881.
2. Y. Baik, M. Kwen, K. Lee, S. Chi, S. Lee, K. Cho, H. Kim*, M. Choi*, Splitting of Hydrogen Atoms into Proton-Electron Pairs at BaO-Ru Interfaces for Promoting Ammonia Synthesis under Mild Condition, *J. Am. Chem. Soc.*, 2023, 145, 11364.
3. S. Lee, Y. Park, Y. Baik, Y. Lee*, M. Choi*, Hierarchical LTL Zeolite as an Efficient and Sustainable Solid Acid Catalyst for Replacing HCl in the Production of Polyurethane Intermediates, *Angew. Chem. Int. Ed.*, 2023, 62, e202304244.
4. C. Kim, D.-Y. Koh, Y. Lee, J. Choi, H. S. Cho, M. Choi*, Bottom-up Synthesis of Two-Dimensional Carbon with Vertically Aligned Ordered Micropores for Ultrafast Nanofiltration, *Science Advances*, 2023, 9, eade7871.
5. K. Hyun, Y. Park, S. Lee, J. Lee, Y. Choi, S.-J. Shin, H. Kim, M. Choi*, Tailoring dynamic metal-polymer interaction to improve catalyst selectivity and longevity in hydrogenation, *Angew. Chem. Int. Ed.*, 2021, 60, 12482.
6. S. Lee, S.-J. Shin, H. Baek, Y. Choi, K. Hyun, M. Seo, K. Kim, D.-Y. Koh, H. Kim,* M. Choi*, Dynamic metal-polymer interaction for the design of chemoselective and long-lived hydrogenation catalysts, *Science Advances*, 2020, 6, eabb7369.

Research Interests

1. Heterogeneous catalysis
2. CO₂ capture and molecular separation
3. Zeolite and porous material design

Awards

1. President of Republic of Korea, 「Top Young Scientist Award 2023」
2. Korean Academy of Science and Technology, 「Y-KAST 2019」
3. Chinese Academy of Sciences (CAS), Lee Hsun Young Scientist Lecture Award 2017」
4. KAIST, 「KAIST Technology Innovation Award 2016」