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Education

1994 – 1997 D. E. Hokkaido University (Dpt. Mol. Chem.)

1992 – 1994 M. S. Hokkaido University (Dpt. Chem.)

Professional Career

2020.04– Present Director, ReHES, Tokyo Metropolitan University

2015.01– Present Fellow of the Royal Society of Chemistry (FRSC)

2013.04– Present Professor, Dpt. Appl. Chem. Env., Tokyo Metropolitan University

2005.12 – 2013.04 Associate Professor, Dpt. Mol. Eng., Kyoto University

2003.04 – 2005.11 Associate Professor, Dpt. Chem., Tokyo Gakugei University

1997.04 – 2003.03 Assistant Professor, Dpt. Appl. Chem., Hiroshima University

Selected Publications

1. Design of supported metal/metal oxide catalysts for low-temperature ethanol production by CO₂ hydrogenation, Z. Wei, Y. Kamiya, B. Ding, T. Sato, T. Hayashi, H. Miura, T. Shishido, *Appl. Catal. A: General*, 2025, 708, 120586.
2. Optimization of Metal–Support Cooperation for Boosting the Performance of Supported Gold Catalysts for the Borylation of C–O and C–N Bonds, H. Miura, K. Imoto, H. Nishio, A. Junkaew, Y. Tsunesada, Y. Fukuta, M. Ehara, T. Shishido, *J. Am. Chem. Soc.*, 2024, 6, 40, 27528–27541.
3. Phosphorus-Enhanced Ru/TiO₂ Catalysts: A Leap in Selective CO₂ to CO Conversion, M. Li, H. Miura, T. Shishido, *Energy & Fuels*, 2024, 38, 10050.
4. Inhibitory effect of trace impurities on methanol reforming by Cu/ZnO/Al₂O₃ catalyst: Steam reforming and autothermal reforming of model bio-methanol, K. Nomoto, H. Miura, and T. Shishido, *Appl. Catal. B Environmental*, 2023, 325, 122374.
5. Continuous production of lactic acid from glycerol over bifunctional catalysts under base-free conditions by using a liquid-phase flow reactor, H. Miura, T. Shishido et al., *ACS Sus. Chem. Eng.*, 2022, 10, 12072.

Research Interests

1. Heterogeneous Catalysis. (supported metal/metal oxide catalysts, solid acid-base catalysts)
2. Hydrogen production and storage
3. Chemical Looping CO₂
4. Biomass conversion.

Awards

1. Catalyst Society of Japan 「Award for Young Researchers」
2. The Japan Petroleum Institute 「Award for Encouragement of Research and Development」
3. 2022, 2023 The Japan Petroleum Institute Award for Distinguished Papers