

Miho Yamauchi



Professor

Institute for Materials and Industry, Kyushu University

Motooka 744, Nishi-ku, Fukuoka 819-0395, Japan

Office: CE41

Tel: +81-92-80264543

Email: yamauchi@ms.ifoc.kyushu-u.ac.jp

Webpage: <https://yamauchi-lab.com/>

Education:

PhD (1996/4~2001/3) Chemistry, Tsukuba University, Japan

B.S. (1992/4~1996/3) Chemistry, Tsukuba University, Japan

Experience:

Postdoc (2001/4~2003/5) Chemistry, Tsukuba University, Japan

Assistant Professor (2003/6~2008/6) Chemistry, Kyushu University, Japan

Associate Professor (2008/7~2011/12) CRC, Hokkaido University, Japan

Associate Professor (2012/1~2017/3) WPI-I²CNER, Kyushu University, Japan

Professor (2017/4~2022/3) WPI-I²CNER, Kyushu University, Japan

Professor (2020/5~) WPI-AIMR, Tohoku University, Japan

Professor (2022/4~) IMCE, Kyushu University, Japan

Selective Honors & Awards:

International Advisory Editorial Board Member of *Energy Z* (July 20254~)

Research Areas:

nano-material science, catalysis, electrochemistry, operando spectroscopy

Selective Publications:

1. "Cooperation of Two Metal Centers in a CO₂ Electroreduction Catalyst: Flexible Electron Manipulation and Adaptive Coordination on a Dinuclear Cobalt Complex", *Adv. Sci.*, 12 (2025) e08361.
2. "In-Situ Observation of Post-CO Intermediates to Decode C–C Coupling Pathways in CO₂ Electroreduction", *Angew. Chem. Int. Ed.*, 64 (2025) e20250740.
3. "A flow cell designed for in situ/operando observation of electrocatalyst surfaces by attenuated total reflection infrared spectroscopy", *Rev. Sci. Instrum.*, 96 (2025) 075202.
4. "Gas Diffusion Enhanced Electrode with Ultrathin Superhydrophobic Macropore Structure for Acidic CO₂ Electroreduction", *Nat. Comm.*, 15 (2024) 491.
5. "In situ electrochemical regeneration of active 1,4-NADH for enzymatic lactic acid formation via concerted functions on Pt-modified TiO₂/Ti", *Chem. Sci.*, 15 (2024) 3240.
6. "Modulating Electronic States of Cu in Metal-Organic Frameworks for Emerging Controllable CH₄/C₂H₄ Selectivity in CO₂ Electroreduction", *Adv. Sci.*, 11 (2024) 2404931.