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Education:

PhD (2010/9~2017/1) Materials Science and Engineering, National Chiao Tung University, Taiwan.

B.S. (2006/9~2010/6) Materials Science and Engineering, National Chiao Tung University, Taiwan.

Experience:

Visiting Scholar (2021/4-2022/2) Chemical Engineering, Stanford University, USA.

Postdoc (2017/2~2021/3) Materials Science and Engineering, National Chiao Tung University, Taiwan.

Research Areas:

Electrochemical biosensors, CO₂ electrocatalysis, Rechargeable aqueous zinc ion/air batteries

Selective Publications:

1. Hsin-Chiao Wu, Chia-Chen Lin, Yu-Jen Chou, Shu-Yu Lee, Shih-Han Wang, Tsan-Yao Chen, **Ta-Chung Liu***. Ultrathin Hybridized ZnOHF Nanowires with Enriched Oxygen Vacancies for High Selective CO₂-to-CO Electrocatalytic Conversion. ACS Applied Materials & Interfaces. 2025, 17, 52064-52076.
2. Hsin-Chiao Wu, Yu-Wei Huang, Yu-Chang Lin, Chu-Hsin Yang, **Ta-Chung Liu***. Enhanced Zn/ZnO Heterointerfaces via Pulsed-Potential Electrochemical Reconstruction for Highly Selective CO₂ Reduction. ACS Applied Materials & Interfaces. 2025, 17, 56991-57001.
3. Hsin-Chiao Wu, Chia-Chen Lin, Chu-Hsin Yang, Yu-Wei Huang, Chen-Hao Yeh, Yu-Jen Chou, **Ta-Chung Liu***. Enhanced electrocatalytic conversion of CO₂ to CO via a non-stoichiometric zinc-fluorine amorphous interface. Chemical Engineering Journal. 2025, 492, 155603.
4. Syuan-Jia Shin, Pei-Chen Lo, Yen-Ting Wu, Huai-Hsaun Shao, Dai-Jin Li, Yung-Cheng Weng, You-Yin Chen, **Ta-Chung Liu***. Tuning the localized microenvironment near a continuous glucose meter to ensure monitoring accuracy and longevity by plasma-induced grafting zwitterionic brushes. ACS Sensors. 2024, 9(12), 4717-4726.
5. **Ta-Chung Liu**, Sutarsis, Xin-Yan Zhong, Wei-Chen Lin, Syun-Hong Chou, Nindita Kirana, Pei-Yu Huang, Yu-Chieh Lo, Jeng-Kuei Chang, Pu-Wei Wu, San-Yuan Chen., An interfacial wetting water based hydrogel electrolyte for high-voltage flexible quasi solid-state supercapacitors. Energy Storage Materials. 2021, 38, 489-498.