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Education:

PhD (2021.07) Materials Science and Engineering, National Yang Ming Chiao Tung University, Taiwan

M.S. (2015.01) Applied Physics, Tunghai University, Taiwan

B.S. (2013.06) Applied Physics, Tunghai University, Taiwan

Experience:

Postdoc (2022.10 – 2024.09) Scientific Research Division, National Synchrotron Radiation Research Center (NSRRC), Taiwan

Research Areas:

- X-ray Spectroscopy
- *In-situ* / *Operando* X-ray Techniques Analysis

Selective Publications:

1. “Reverse hydrogen spillover accelerates electrocatalytic nitrate reduction to ammonia on Ru/WO_{3-x} in acidic media”, *Nat. Commun.*, (2026). (Co-first authors) (Tech.: *in-situ*/XAS)
2. “In Situ Identification of Spin Magnetic Effect on Oxygen Evolution Reaction Unveiled by X-ray Emission Spectroscopy”, *J. Am. Chem. Soc.*, 147 (2025), 13286-13295. (Co-author) (Tech.: *in-situ*/XES)
3. “Ceramic-Induced Polymer Reconstruction to Promote Li⁺ Migration in Electrolyte and Interphase Layers of Solid-State Lithium Batteries”, *Adv. Funct. Mater.*, (2025), e23316. (Co-author) (Tech.: *in-situ*/FTIR-ATR)
4. “Dual-plasmonic Au@Cu₇S₄ yolk@shell nanocrystals for photocatalytic hydrogen production across visible to near infrared spectral region”, *Nat. Commun.*, 15 (2024), 413. (Co-author) (Tech.: *in-situ*/XAS)
5. “Tailoring the surface oxygen engineering of a carbon-quantum-dot-sensitized ZnO@H-ZnO_{1-x} multijunction toward efficient charge dynamics and photoactivity enhancement”, *Appl. Catal. B Environ.*, 285 (2021), 119846. (First author) (Tech.: *in-situ*/XAS)
6. “Sandwich-nanostructured n-Cu₂O/AuAg/p-Cu₂O photocathode with highly positive onset potential for improved water reduction”, *ACS Appl. Mater. Interfaces*, 11 (2019), 38625-38632. (First author) (Tech.: *in-situ*/XAS)