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Education:

PhD (2008/8~2012/7) Materials Science and Engineering, National Tsing Hua University, Taiwan
M.S. (2001/8~2003/7) Materials Science and Engineering, National Tsing Hua University, Taiwan
B.S. (1997/9~2001/6) Materials Science and Engineering, National Tsing Hua University, Taiwan

Experience:

Associate Professor (2023 ~) National Chung Hsing University, Taiwan.
Assistant Professor (2016~2023) National Chung Hsing University, Taiwan.
Postdoc. (2012~2016) National Chiao Tung University, Taiwan.
Research Assistant (2003~2007) National Synchrotron Radiation Research Center, Taiwan.

Research Areas:

(1). Low-dimensional ceramic materials, (2). Electrocatalytic/photoelectrochemical water splitting, (3). X-ray based analytic techniques, (4). Thin film process and hydrothermal synthesis

Membership and Academic Activities:

Members of (1). The American Ceramic Society (ACerS), (2). Materials Research Society of Taiwan (3). The Physical Society of Taiwan, (4). Taiwan Ceramic Society, (5). Taiwan Vacuum Society, (6). Taiwan Association for Coating and Thin Film Technology

Selective Publications:

1. Mahalakshmi Vedanarayanan, Utkarsh Kumar, Cheng-Wei Lee, Hsiu-Fu Nien, Roshni Yadav, Wei-Chen Peng, Wei-Chun Yang, Chiu-Hsien Wu, Ying-Chih Lai*, Heng-Jui Liu*, “Mechanistic insight into mechanically-driven catalysis through modulation of surface electrostatics in high-entropy perovskites”, ***Nano Energy***, 2026, 150, 111756
2. Chih-Hung Wu, Keng-Hung Chang, Yu-Hao Tu, Chen-Hao Yeh and Heng-Jui Liu*, “Design of orthogonally jointed 2D transition metal dichalcogenide heterojunctions for enhanced photoelectrochemical water reduction”, ***Physical Chemistry Chemical Physics,*** 2025, 27(44), 23789-23801.
3. Chandrasekaran Pitchai, Mahalakshmi Vedanarayanan, Yi-Cheng Kuo, Heng-Jui Liu* and Chih-Ming Chen*, “Effect of entropy stabilization on high entropy brownmillerites for boosting oxygen evolution reaction”, ***Electrochimica Acta***, 2025, 538(20), 146960.
4. Yun-Wei Tsai, Roshni Yadav, Heng-Jui Liu*, “Unraveling the role of piezopotential on dye

degradation efficiency using high entropy perovskite piezocatalysts", ***Materials Chemistry and Physics***, 2025, 334, 130467.

5. Feng-Shuo Li, Yue-Wen Fang*, Yi-Ting Wu, Shu-Wei Wu, Sheng-Zhu Ho, Chih-Yen Chen, Ching-Yu Chiang, Yi-Chun Chen, and Heng-Jui Liu*,"Self-Enhancement of Water Electrolysis by Electrolyte-Poled Ferroelectric Catalyst", ***ACS Nano***, 2023, 17, 16, 16274–16286.