



Wen-Hui Sophia Cheng

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Education:

Ph.D. (2014~2020) Department of Applied Physics and Materials Science, California Institute of Technology, USA.

M.S. (2011~2013) Department of Materials Science and Engineering, National Cheng Kung University, Taiwan.

B.S. (2007~2011) Department of Materials Science and Engineering, National Cheng Kung University, Taiwan.

Experience:

(2020~2021) Postdoctoral Researcher, Tomkat Center, Stanford University.

Selective Honors & Awards:

1. Early Career Editorial Advisory Board of Applied Physics Letters (2025)
2. 2025 Future Tech Award (2025)
3. Outstanding Young Investigator Award, College of Engineering, NCKU (2022)
4. 2030 Cross-Generation Young Scholars Program - Emerging Young Scholars (2021)
5. Ministry of Education Yushan Young Scholar (2021)

Research Areas:

Solar fuels/Artificial photosynthesis; Light management in nanophotonic device; Plasmonic photo(electro)chemistry; Nanofabrication and surface/Interface characterization

Selected Publications:

1. Tzu-Hsiang Liu, Hung-Yi Wu, **Wen-Hui Sophia Cheng***. *Quasi-Bound State in the Continuum of the Intracoupled All-Dielectric Coherent Metasurface*. Nano Letters 26 (1), 288-295 (2026).
2. Hsin-An Lin, Sheng-Chang Wang, Jow-Lay Huang, Yu-Min Shen*, and **Wen-Hui Sophia Cheng***, *Engineering Doping and Vacancy in C_3N_4 Electrocatalyst with Ni_4Mo Cocatalyst for Efficient Alkaline Hydrogen Evolution*. ACS Omega 11 (2), 3390-3397 (2026).
3. Alexis Angelo R. Garcia, Cheng-An Mao, and **Wen-Hui Cheng***. *Realization of ultrastrong coupling between LSPR and Fabry-Pérot mode via self-assembly of Au-NPs on p-NiO/Au film*. Nanophotonics 13 (14), 2501-2512, (2024).
4. **Wen-Hui Cheng**, Matthias H. Richter, Ralph Müller, Michael Kelzenberg, Sisir Yalamanchili, Phillip R. Jähelka, Andrea N. Perry, Pin Chieh Wu, Rebecca Saive, Frank Dimroth, Bruce S. Brunschwig, Thomas

Hannappel, Harry A. Atwater. *Integrated solar-driven device with a front surface semitransparent catalysts for unassisted CO₂ reduction*. Advanced Energy Materials 12 (36), 2201062, (2022).