

## Ying-Chih Pu

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### Education

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|-------------|--------|--|
| 2008 – 2014 | Ph. D. | National Chiao Tung University (Materials Science and Engineering) |
| 2004 – 2006 | M. S.  | National Cheng Kung University (Chemistry)                         |
| 2000 – 2004 | B. S.  | National Chung Hsing University (Chemistry)                        |

### Professional Career

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| 2024.02 – Present | Professor, Dpt. of Materials Science, National University of Tainan, Taiwan.  |
| 2019.08 – 2024.01 | Associate Professor, Dpt. of Materials Science, National University of Tainan, Taiwan.  |
| 2015.08 – 2019.07 | Assistant Professor, Dpt. of Materials Science, National University of Tainan, Taiwan.  |
| 2014.02 – 2015.07 | Postdoctoral Researcher, Dpt. of Chemistry and Biochemistry, University of California, Santa Cruz, USA.   |
| 2012.08 – 2013.08 | Visiting Scholar, Dpt. of Chemistry and Biochemistry, University of California, Santa Cruz, USA   |
| 2006.10 – 2012.07 | Associate Researcher, Department of Polymer Hybrid, Material and Chemical Research Laboratories, Industrial Technology Research Institute (ITRI), Taiwan. |

### Selected Publications

1. K.-A. Tsai, Y.-J. Chang, Y.-C. Li, M.-W. Zheng, J.-C. Chang, S.-H. Liu, S.-W. Tseng, Y. Li, Y.-C. Pu\*, Nitrogen Configuration Effects on Charge Carrier Dynamics in CsPbBr<sub>3</sub>/Carbon Dots S-scheme Heterojunction for Photocatalytic CO<sub>2</sub> Reduction, *J. Phys. Chem. Lett.* 2024, 15, 5728-5737.
2. K.-A. Tsai, C.-C. Lai, Y.-H. Chen, I.-C. Leu, J.-C. Chang, C.-Y. Kuo, S.-W. Tseng, Y. Li and Y.-C. Pu\*, Exploring the Impact of Surface Oxygen Vacancies on Charge Carrier Dynamics in BiVO<sub>4</sub> Photoanodes through Atmospheric Pressure Plasma Jet Post-Treatment for Efficiency Improvement in Photoelectrochemical Water Oxidation, *Appl. Catal. B: Environ.*, 2024, 341, 123288.
3. Y.-H. Chen, K.-A. Tsai, T.-W. Liu, Y.-J. Chang, Y.-C. Wei, M.-W. Zheng, S.-H. Liu, M.-Y. Liao, P.-Y. Sie, J.-H. Lin, S.-W. Tseng and Y.-C. Pu\*, Charge Carrier Dynamics of CsPbBr<sub>3</sub>/g-C<sub>3</sub>N<sub>4</sub> Nanoheterostructures in Visible-Light-Driven CO<sub>2</sub>-to-CO Conversion, *J. Phys. Chem. Lett.* 2023, 14, 122-131.
4. C.-C. Lai, J.-W. Chen, J.-C. Chang, C.-Y. Kuo, Y.-C. Liu, J.-C. Yang, Y.-T. Hsieh, S.-W. Tseng, and Y.-C. Pu\*, Two-Step Process of a Crystal Facet-Modulated BiVO<sub>4</sub> Photoanode for Efficiency Improvement in Photoelectrochemical Hydrogen Evolution “*ACS Appl. Mater. Interfaces*, 2022, 14, 24919–24928.
5. Y.-H. Chen, J.-K. Ye, Y.-J. Chang, T.-W. Liu, Y.-H. Chuang, W.-R. Liu, S.-H. Liu and Y.-C. Pu\*, Mechanisms behind Photocatalytic CO<sub>2</sub> reduction by CsPbBr<sub>3</sub> Perovskite-Graphene-based Nanoheterostructures, *Appl. Catal. B: Environ.*, 2021, 284, 119751.

### **Research Interests**

1. Nanoheterostructures for Photoelectrochemical& Photocatalytic hydrogen evolution and CO<sub>2</sub> reduction.
2. *Ex-situ* & *In-situ* investigation of interfacial charge carrier dynamics via ultrafast laser spectroscopy.
3. Quantum Dots and their applications in lighting technologies.

### **Awards**

1. UTokyo Doctoral Student Special Incentives Program, SEUT-RA (2019)
2. UTokyo Doctoral Student Special Incentives Program, SEUT-RA (2018)
3. Japan-Taiwan Exchange Association Scholarship (2017)