

Po-Han Tseng (Robert Tseng)

National Yang Ming Chiao Tung University
College of Electrical and Computer Engineering
No. 1001, Daxue Rd., East Dist.
Hsinchu City 300, Taiwan

Email: robert10096901@gmail.com
Office: (03)5712121-54205
Cell: +886963099980

- **Ph.D. candidate at College of Electrical and Computer Engineering** of National Yang Ming Chiao Tung University.
- **4** published SCI papers, **1** under reviewing SCI papers and **2** talks presented in the conference.
- Future focus will be on **(a)** quasi-2D materials electronics **(b)** High-performance electronic device fabrication **(c)** Simulations of percolation transport.

Education

- 2025 – Present **University of California, Berkeley (UC Berkeley),**
Electrical Engineering and Computer Sciences
Visiting Scholar in College of Electrical and Computer Engineering
- 2020 – Present **National Yang Ming Chiao Tung University (NYCU),**
College of Electrical and Computer Engineering
Ph.D. candidate in College of Electrical and Computer Engineering
- 2017 – 2020 **National Tsing-Hua University (NTHU),**
Materials Science and Engineering
B.E. in Materials Science and Engineering
- 2016 – 2017 **National Taipei University of Technology (NTUT),**
Materials Science and Engineering
B.E. in Molecular Science and Engineering

Honor & Award

FMS Outstanding Poster Awards

International Symposium on Frontiers in Materials Science (FMS), Taiwan, 2024

Reward for Outstanding Student Research

National Yang Ming Chiao Tung University 2023

Ph.D. Scholarship

National Yang Ming Chiao Tung University 2020
College of Electrical and Computer Engineering

Certificate of Excellence (4 semesters)

National Yang Ming Chiao Tung University 2020 (1 semester)
National Tsing-Hua University, 2019 (1 semester)
National Taipei University of Technology 2016(2 semester)

Skills

- Technical Skills Device fabrication
Synthesis of amorphous oxide
Transfer techniques for 2D materials
Optical measurement
- Computer Skills Programming (Labview, Python)
Simulation (COMSOL, Spice)
Animation & graphics (Origin, 3Ds Max)

Journal Papers

1. [Robert Tseng](#), S. T. Wang, T. Ahmed, et al., "Wide-range and area-selective threshold voltage tunability in ultrathin indium oxide transistors." **Nature communications** 14, 5243 (2023). (IF : 16.6)
2. [Robert Tseng](#), Y. H. Kuo, z. H. Li, et al., "Percolation-governed dimensional scaling effect in amorphous semiconductors". (Under review)
3. S. T. Wang, L. C. Lin, L. R. Lee, Y. C. Chang, [Robert Tseng](#), et al. "Reversible Charge Transfer Doping in Atomically Thin In₂O₃ by Viologens." **ACS Applied Materials & Interfaces** 16,4 (2023). (IF : 9.5)
4. Y. Y. Pan, M. J. Kuo, S. J. Chen, Tanveer Ahmed, [Robert Tseng](#), et al. "Electronic impact of high-energy metal deposition on ultrathin oxide semiconductors." **Nano letters** 25.7 (2025): 2655-2661. (IF : 9.1)
5. T. J. Lin, S. C. Chen, Y. T. Lee, S. L. Cheng, [Robert Tseng](#), et al. "Origin of threshold voltage instabilities in ultrathin oxide transistors. **ACS Applied Materials & Interfaces** (2026). (IF : 9.5)

Conferences

1. [Robert Tseng](#), Der-Hsien Lien, "Precise control of threshold voltage in ultra-thin quasi-2D oxide semiconductor-based transistors", International Society for Optics and Photonics (SPIE), San Diego (2023)
2. [Robert Tseng](#), S. T. Wang, T. Ahmed, et al., "Wide-range and area-selective threshold voltage tunability in quasi-2D oxide semiconductors." International Symposium on Frontiers in Materials Science (FMS), Taiwan (2023).
3. [Robert Tseng](#), Der-Hsien Lien, " Precise and reversible control of doping concentration in ultra-thin (2 nm) quasi-2D oxide semiconductors", Physical Society of Taiwan (TPS), Taiwan (2023)

References

Professor Der-Hsien Lien
Associate Professor
National Yang Ming Chiao Tung University
E-mail: dhlien@nycu.edu.tw Tel: +886-3-571-2121#54137