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Date of Birth: Nov 21st 1978



Academic Qualifications:

- **Ph.D.** in Materials Science and Engineering, May 2009, UC Berkeley, U.S.A.
- **Intel Foundation Ph.D. Fellow**, 2007-2009, Intel Corporation, Oregon, U.S.A.
- **M.S.** in Materials Science and Engineering, May 2005, UC Berkeley, U.S.A.
- **B.S.** with High Honors in Chemical Engineering, May 2002, UC Berkeley, U.S.A.

Present Academic Position:

- **Director**, Knowledge Transfer Office, City Univ. of Hong Kong, Hong Kong (Oct 2022 – Present)
- **Acting Director**, Knowledge Transfer Office, City Univ. of Hong Kong, Hong Kong (Jan. 2022 – Sept 2022)
- **Associate Head**, Dept. of Materials Science and Engineering, City Univ. of Hong Kong, Hong Kong (Oct. 2019 – Present)
- **Professor**, Dept. of Materials Science and Engineering, City Univ. of Hong Kong, Hong Kong (Jul. 2020 – Present)
- **Professor** (Cross Appointment), Institute for Materials Chemistry and Engineering, Kyushu University, Japan (Jul. 2019 – Present)

Previous Academic Positions:

- **Associate Professor**, Dept. of Materials Science and Engineering, City Univ. of Hong Kong, Hong Kong (July 2016 – June 2020)
- **Assistant Professor**, Dept. of Physics and Materials Science, City Univ. of Hong Kong, Hong Kong (Mar. 2010 – Jun. 2016)
- **Postdoctoral Fellow**, Nanoscale Synthesis and Characterization Laboratory, Lawrence Livermore National Laboratory, California, U.S.A. (May 2009 – Feb. 2010)
- **Adjunct Lecturer**, Dept. of Chemical and Materials Engineering, San José State Univ., California, U.S.A. (Aug. 2009 – Dec. 2009)

Current Research Interest:

- Synthesis and characterization of fundamental properties of semiconductor nanomaterials
- Development of new nanoscale device fabrication processes
- Heterogeneous and large-scale integration of nanomaterials for high-performance energy-harvesting, electronic and optoelectronic devices

Research Funding Records

- Secured an amount of ~HKD\$27.7 million [~USD\$3.5 million] in the role of Principal Investigator and ~HKD\$49.1 million [~USD\$6.3 million] in the role of Co-Investigator (2010 – present)

Publication Records: (Total >240 publications; H-Index =65; Citation >15,700 as at Mar 16th 2023 Google Scholar)

Recent Five Years

1. Wang W., Meng Y., Zhang Y., Zhang Z., Wang W., Lai Z., Xie P., Li D., Chen D., Quan Q., Yin D., Liu C., Yang Z., Yip S.P., Ho J.C. "Electrically Switchable Polarization in Bi₂O₂Se Ferroelectric Semiconductors", *Advanced Materials*, in press, 2023. (DOI: 10.1002/adma.202210854)
2. Quan Q., Zhang Y., Wang F., Bu X., Wang W., Meng Y., Xie P., Chen D., Wang W., Li D., Li C., Yip S.P., Ho J.C. "Topochemical Domain Engineering to Construct 2D Mosaic

Heterostructure with Internal Electric Field for High-Performance Overall Water Splitting", *Nano Energy*, 101, 107566, 2022.

- Meng Y., Li F., Lan C., Bu X., Kang X., Wei R., Yip S., Li D., Wang F., Takahashi T., Hosomi T., Nagashima K., Yanagida T., Ho J.C. "Artificial Visual Systems Enabled by Quasi-Two-Dimensional Electron Gases in Oxide Superlattice Nanowires", *Science Advances*, 6, eabc6389, 2020.
- Bu X., Li Y., Ho J.C. "Efficient and Stable Electrocatalysts for Water Splitting", *MRS Bulletin*, 45, 531-538, 2020. [Front Cover Article]
- Li D., Lan C., Manikandan A., Yip S.P., Zhou Z., Liang X., Shu L., Chueh Y.L., Han N., Ho J.C. "Ultra-Fast Photodetectors based on High-Mobility Indium Gallium Antimonide Nanowires", *Nature Communications*, 10, 1664, 2019.

Beyond Five Years

- Lan C., Dong R., Zhou Z., Shu L., Li D., Yip S.P., Ho J.C. "Large-Scale Synthesis of Freestanding Layer-Structured PbI₂ and MAPbI₃ Nanosheets for High-Performance Photodetection", *Advanced Materials*, 29, 1702759, 2017.
- Yang Z., Han H., Fang M., Lin H., Cheung H.Y., Yip S.P., Wang E.R., Hung T.F., Wong C.Y., Ho J.C. "Surfactant-assisted Chemical Vapor Deposition of High-performance Small-diameter GaSb Nanowires", *Nature Communications* 5, 5249, 2014.
- Han N., Hou J.J., Wang F.Y., Yip S.P., Yen T.Y., Yang Z., Dong G., Hung T.F., Chueh Y.L., Ho J.C. "GaAs Nanowires: From Manipulation of Defect Formation to Controllable Electronic Transport Properties", *ACS Nano*, 7, 9138, 2013.
- Han N., Wang F.Y., Hou J.J., Yip S.P., Lin H., Xiu F., Fang M., Yang Z., Shi X., Dong G., Hung T.F., Ho J.C. "Tunable Electronic Transport Properties of Metal-Cluster-Decorated III-V Nanowire Transistors", *Advanced Materials*, 25, 4445, 2013.
- Wahl R.E., Wang F.Y., Chung H.E., Kunnen G.R., Yip S.P., Lee E.H., Raupp G.B., Allee D.R., Ho J.C. "Stability and low-frequency noise in InAs NW parallel array thin-film transistors", *IEEE Electron Device Letters*, 34, 765-767, 2013

Number of Research Staff and Students Supervised:

- Supervised 12 post-doc (4 ongoing), 25 PhD students (13 ongoing), 20 MSc students (5 ongoing), 5 research assistants, 42 Undergraduate final year students (2 ongoing)

Recently Selected Awards and Honors:

- Named as a Fellow of the Institute of Materials, Minerals and Mining (FIMMM, 2022)
- Named as a Fellow of the Royal Society of Chemistry (FRSC, 2021)
- Appointed as a Committee Member for Final Editor-in-Chief Search for *ACS Nano*, American Chemical Society, 2021 (only seven members worldwide appointed by American Chemical Society; *ACS Nano* has an impact factor of 18.027, ranks top 5.8% (20/345) in Materials Science, Multidisciplinary);
- Nano Research Top Papers Award, Springer (2020)
- Hong Kong Research Grant Council (RGC) Research Fellow Award (2020)
- Qingdao Science and Technology Award – Second Class Award (2020)
- The President's Awards, City University of Hong Kong (2020 and 2016)
- Elected Founding Member (only 31 in the entire HK), The Young Academy of Sciences of Hong Kong, Under the Academy of Sciences of Hong Kong (2018)
- World Cultural Council (WCC) Special Recognition Award (2018)
- CityU Outstanding Supervisor Award (2017-2019)
- CityU Outstanding Research Award for Junior Faculty (2018)