

Assistant Professor Ou Qingdong

Department of Materials Science and Engineering/
Macao Institute of Materials Science and Engineering
Faculty of Innovation Engineering, Macau University of Science and Technology



Office: P27-121

Tel.: +853-8897 3267

E-mail: qdou@must.edu.mo

Academic Qualification:

Ph.D. in Materials Engineering, Monash University, 2019

M.Sc. in Chemistry, Soochow University, 2015

B.Sc. in Chemistry, Soochow University, 2012

Teaching Area

Materials Science and Engineering

Research Area

Nanophotonics, plasmonics and optoelectronics

Low-dimensional materials and devices

Working Experience

Assistant Professor, Macau University of Science and Technology, 2022 - present

Research Fellow, Monash University, 2019 - 2022

Selected Journal Papers

G. Hu†, Q. Ou†, G. Si, Y. Wu, J. Wu, Z. Dai, A. Krasnok, Y. Mazor, Q. Zhang, Q. Bao*, C.-W. Qiu*, A. Alu*, Topological polaritons and photonic magic angles in twisted α -MoO₃ bilayers. **Nature** 2020, 582, 209. (Selected as Top 10 Breakthrough of the Year by *Physics World*)

Q. Zhang†, Q. Ou*†, G. Si, G. Hu, S. Dong, Y. Chen, J. Ni, C. Zhao, M. S. Fuhrer, Y. Yang, A. Alu*, R. Hillenbrand*, C. W. Qiu*, Unidirectionally excited phonon polaritons in high-symmetry orthorhombic crystals. **Science Advances** 2022, 8, eabn9774.

Y. Wu†, Q. Ou*†, S. Dong†, G. Hu, G. Si, Z. Dai, C. W. Qiu, M. S. Fuhrer, S. Mookapati*, Q. Bao*, Efficient and Tunable Reflection of Phonon Polaritons at Built - In Intercalation Interfaces. **Advanced Materials** 2021, 33, 2008070.

Q. Zhang†, Q. Ou*†, G. Hu, J. Liu, Z. Dai, M. S. Fuhrer, Q. Bao*, C. W. Qiu*, Hybridized Hyperbolic Surface Phonon Polaritons at α -MoO₃ and Polar Dielectric Interfaces. **Nano Letters** 2021, 21, 3112.

Y. Wu†, Q. Ou†, Y. Yin, Y. Li, W. Ma, W. Yu, G. Liu*, X. Cui, X. Bao, J. Duan, G. Álvarez-Pérez, Z. Dai, B. Shabbir, N. Medhekar, X. Li*, C.-M. Li, P. Alonso-González, Q. Bao*, Chemical switching of low-loss phonon polaritons in α -MoO₃ by hydrogen intercalation. **Nature Communications** 2020, 11, 2646.

Q. Ou†, Y. Zhang*†, Z. Wang, J. A. Yuwono, R. Wang, Z. Dai, W. Li, C. Zheng, Z. Q. Xu, X. Qi, S. Duhm, N. V. Medhekar, H. Zhang*, Q. Bao*, Strong Depletion in Hybrid Perovskite p-n Junctions Induced by Local Electronic Doping. **Advanced Materials** 2018, 30, 1705792. (Selected as Front Cover)

Q. Ou, Y.-Q. Li*, J.-X. Tang*, Light Manipulation in Organic Photovoltaics. **Advanced Science** 2016, 3, 1600123. (Selected as Back Cover)

Q. Ou†, L. Zhou†, Y.-Q. Li*, S. Shen, J.-D. Chen, C. Li, Q.-K. Wang, S.-T. Lee, J.-X. Tang*, Extremely Efficient White Organic Light-Emitting Diodes for General Lighting.

Advanced Functional Materials 2014, 24, 7249. (Selected as Back Cover)

Selected Conference Papers

Professional Society Membership

Member, Australian Materials Research Society (AMRS)

Associate Editor (2021-), *Frontiers in Electronic Materials / Optoelectronic Materials*

Associate Editor (2022-), *Journal of Modern Polymer Chemistry and Materials*

Associate Editor (2022-), *Electronics and Signal Processing*

Topic Editor (2021-), *Energies*