**Curriculum Vitae**

**Name:** Ying GUO

**Academic qualifications**

**Ph.D.**, Materials Science and Engineering, City University of Hong Kong, Hong Kong, 2021
**M.Sc.**, Materials Engineering, University of Chinese Academy of Sciences, China, 2015
**B.E.**, Materials Science and Engineering, Chongqing University, China, 2012.

**Previous academic position held**

Assistant Professor, College of Materials Science and Engineering, Shenzhen University, 2022-2024
Postdoctoral Research follow, Materials Science and Engineering, City University of Hong Kong, 2021-2022
Research Assistant, College of Materials Science and Engineering, Shenzhen University, 2017-2018

**Present academic position held**

Assistant Professor, School of Interdisciplinary Studies, Lingnan University, since 2024

**Previous relevant research work**

1. **Energy storage devices:** zinc batteries, lithium batteries, aluminium batteries, *etc*.
2. **Electrocatalysis:** oxygen reduction, nitrogen fixation, water splitting, methanol oxidation, carbon dioxide reduction, *etc*.
3. **Fabrication of functional materials:** graphdiynes, carbon quantum dots, 2D MXenes, metal-based nanomaterials, *etc*.
4. **Research output:** Published over 60 papers in peer-reviewed international journals, including 19 ESI Highly Cited Papers (as of October 2026), and holds four patents. These publications have garnered more than 10,300 citations, resulting in an H-index of 51 (Google Scholar). Serves as a youth editorial board member for *Energy & Environmental Materials, Nano Materials Science* and *Nano Research Energy*, and was recognized in the Stanford/Elsevier Top 2% Scientists List for 2024-2026.

**Selected Recent Publications** (#: co-first author, *: Corresponding author)


1. **Guo, Y.**; Zhang, R.; Zhang, S.; Hong, H.; Li, P.; Zhao, Y.; Huang, Z.; Zhi, C., Steering sp-Carbon Content in Graphdiynes for Enhanced Two-Electron Oxygen Reduction to Hydrogen Peroxide. ***Angew. Chem. Int. Ed.*** 2024, 63, e202401501.
2. **Guo, Y**.; Liu, J.; Yang, Q.; Khemthong, P.; Huang, Z.; Zhao, Y.; Chen, Z.; Dong, B.; Fu, X.-Z.; Luo, J.-L.; Zhi, C., Regulating nitrogenous adsorption and desorption on Pd clusters by the acetylene linkages of hydrogen substituted graphdiyne for efficient electrocatalytic ammonia synthesis. ***Nano Energy*** 2021, 86, 106099.
3. **Guo, Y.**; Liu, J.; Yang, Q.; Ma, L.; Zhao, Y.; Huang, Z.; Li, X.; Dong, B.; Fu, X.-Z.; Zhi, C., Metal-Tuned Acetylene Linkages in Hydrogen Substituted Graphdiyne Boosting the Electrochemical Oxygen Reduction. ***Small*** 2020, 16, 1907341.

4. Yang, Q.[#]; **Guo, Y.[#]**; Yan, B.; Wang, C.; Liu, Z.; Huang, Z.; Wang, Y.; Li, Y.; Li, H.; Song, L.; Fan, J.; Zhi, C., Hydrogen-Substituted Graphdiyne Ion Tunnels Directing Concentration Redistribution for Commercial-Grade Dendrite-Free Zinc Anodes. ***Adv. Mater.*** 2020, 32, 2001755.
5. Yang, Q.[#]; **Guo, Y.[#]**; Gu, J.; Li, N.; Wang, C.; Liu, Z.; Li, X.; Huang, Z.; Wei, S.; Xu, S.; Song, L.; Fan, J.; Chen, Z.; Qiu, J.; Zhi, C., Scalable synthesis of 2D hydrogen-substituted graphdiyne on Zn substrate for high-yield $N_2$ fixation. ***Nano Energy*** 2020, 78, 105283.
6. Zhang, S.; Chen, D.; Zhang, R.; Yang, X.; Ma, X.; Li, C.; Cui, H.; Wei, Z.; Wang, Y.; Chen, P.; Guo, X.; Wang, S.; Ho, J. C.; **Guo, Y.***; Zhi, C., Artificial Frustrated Lewis Pairs for Ampere-Level Ammonia Synthesis and High-Power-Density Zinc-Nitrate Battery. ***J. Am. Chem. Soc.*** 2025, 147, 41433-41442.
7. Qiu, W.; **Guo, Y.***; Fu, X.-Z.; Luo, J.-L.*, Prussian Blue Derived High-Entropy Alloy Catalysts for Enhanced Electrochemical Nitrate Reduction to Ammonia. ***Adv. Funct. Mater.*** 2025, *35*, 2415970.
8. Zhang, R.; Hong, H.; Liu, X.; Zhang, S.; Li, C.; Cui, H.; Wang, Y.; Liu, J.; Hou, Y.; Li, P.; Huang, Z.; **Guo, Y.***; Zhi, C.*, Molecular Engineering of a Metal-Organic Polymer for Enhanced Electrochemical Nitrate-to-Ammonia Conversion and Zinc Nitrate Batteries. ***Angew. Chem. Int. Ed.*** 2023, 62, e202309930.
9. Zhang, R.; Li, C.; Cui, H.; Wang, Y.; Zhang, S.; Li, P.; Hou, Y.; **Guo, Y.***; Liang, G.; Huang, Z.; Peng, C.; Zhi, C.*, Electrochemical nitrate reduction in acid enables high-efficiency ammonia synthesis and high-voltage pollutes-based fuel cells. ***Nat. Commun.*** 2023, 14, 8036.
10. **Guo, Y.**; Zhang, R.; Zhang, S.; Hong, H.; Zhao, Y.; Huang, Z.; Han, C.; Li, H.; Zhi, C., Ultrahigh oxygen-doped carbon quantum dots for highly efficient $H_2O_2$ production via two-electron electrochemical oxygen reduction. ***Energy Environ. Sci.*** 2022, 15, 4167-4174.

**Patents**

1. R. Sun, **Y. Guo**, X. Fu. Palladium nanoparticle and preparation method therefor. PCT Patent, PCT/CN2015/084013
2. X. Fu, **Y. Guo**, R. Sun, Pd-based composite nanoparticle and preparation method therefor. PCT Patent, PCT/CN2015/084014
3. C. Zhi, **Y. Guo**, Q. Yang, Z. Tang, Method of preparing graphdiyne-based material and a substrate for use in such material preparation process; US Patent, US11407641
4. C. Zhi, Q. Yang, **Y. Guo**, Z. Tang, Method for Manipulating an Energy Storage Device, US Patent, US11283112