



Xiaoguang Duan

Professor

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Education:

PhD (2013/8~2016/3) Chemical Engineering, Curtin University, Australia

B.S. (2008/9~2012/6) Chemical Engineering, China University of Petroleum, China

Experience:

Professor (2025/12 ~) School Chemical Engineering (SCE), Adelaide University, Australia

Associate Professor (2023/12 ~ 2025/12) SCE, The University of Adelaide, Australia

Lecture & Senior Lecturer (2021/01 ~ 2023/12), SCE, The University of Adelaide, Australia

Selective Honors & Awards:

1. Young Tall Poppy Science Award (2024).
2. James J. Morgan Award from Environmental Science & Technology (2023)
3. MIT Technology Review - Innovators Under 35 (2021)
4. ACS Catalysis Early Career Researcher Award (2018)
5. Editor of *Journal of Environmental Chemical Engineering* (2024-)
6. Associate Editor of *Applied Catalysis B: Environmental and Energy* (2025-)
7. Associate Editor of *Biochar* (2025-)

Research Areas:

Functional materials, green catalysis, clean fuels, and catalytic water purification technologies.

Selective Publications:

1. Multi-dimensional Engineering of Single-Atom Cobalt Catalysts for Ultrafast Fenton-like Reactions, *Nature Water* 2025, 3, 211-221.
2. Pulse-driven electrocatalysis with engineered wooden electrode for high-efficiency, energy-saving and sustainable water treatment. *Nature Water*, 2025, 3, 890–901
3. Best Practices for Advanced Oxidation Processes. *Nature Sustainability*, 2025, 8, 1428–1431.
4. Catalytic Resource Recovery for Transformation of Wastewater Industry. *Nature Water* 2025, 3, 1228–1242.
5. Neutral Microenvironment-Driven Catalytic Polymerization for Closed-Loop Wastewater Treatment and Resource Recovery. *Nature Water* 2025 (in press).