

## Chunying Duan

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### ● Educational Background

1989–1992 Ph.D., Inorganic Chemistry, Nanjing University (NJU)

1986–1989 M.S., Physical Chemistry, Jilin University (JLU)

1982–1986 B.S., Environmental Chemistry, Jilin University (JLU)

### ● Professional Career

2006-present Professor, State Key Lab. of Fine Chemicals, DLUT

2000–2006 Professor, State Key Lab. of Coordination Chemistry, NJU.

1999–2000 Distinguish Visiting Scholarship of Nottingham University, England.

1995–1996 Visiting Scholarship of Chinese Univesity of Hong Kong.

### ● Research Interests

Chemistry of Werner Type Architectures, focusing on the Biomimetic Sensing and Molecular Imaging, Asymmetric Catalysis and Enzyme-inspired Catalysis, including:

1. Self-assembly of Metal-organic Frameworks and Cages.
2. Asymmetric Catalysis within Confined Environments.
3. Supramolecular Photocatalysis and Enzyme-inspire Catalysis.

### Selected Research Papers:

1. Tiexin Zhang, Xiangyang Guo, Yusheng Shi, Cheng He, **Chunying Duan\***. Dye-incorporated Coordination Polymers for Direct Photocatalytic Trifluoromethylation of Aromatics at Metabolically Susceptible Positions. *Nat. Commun.* **2018**, 9, 4024.
2. Xu Jing, Yang Yang, Cheng He, Zhiduo Chang, Joost N. H. Reek, **Chunying Duan\***. Control of Redox Events by Dye Encapsulation Applied to Light-Driven Splitting of Hydrogen Sulfide. *Angew. Chem. Int. Ed.* **2017**, 56, 11759-11763.
3. Zhengqiang Xia, Cheng He, Xiaoge Wang, **Chunying Duan\***. Modifying Electron Transfer between Photoredox and Organocatalytic Units via Framework Interpenetration for beta-Carbonyl Functionalization. *Nat. Commun.* **2017**, 8: 361, doi:10.1038/s41467-017-00416-8.
4. Liang Zhao, Jianwei Wei, Junhua Lu, Cheng He\*, **Chunying Duan\***. Renewable Molecular Flasks with NADH Models: Combination of Light-Driven Proton Reduction and Biomimetic Hydrogenation of Benzoxazinones. *Angew. Chem. Int. Ed.* **2017**, 56, 8692-8696.
5. Bo Qi, Xiangyang Guo, Yunyi Gao, Dong Li, Jiancheng Luo, Hui Li, Seyed Ali Eghtesadi, Cheng He, **Chunying Duan\***, Tianbo Liu\*. Strong Co-Ion Effect via Cation-pi Interaction on the Self-Assembly of Metal-Organic Cationic Macrocycles. *J. Am. Chem. Soc.* **2017**, 139, 12020-12026.
6. Le Zeng, Tao Liu, Cheng He, Dongying Shi, Feili Zhang, and **Chunying Duan\***. Organized Aggregation Makes Insoluble Perylene Diimide Efficient for the Reduction of Aryl Halides via

- Consecutive Visible Light-Induced Electron-Transfer Processes. *J. Am. Chem. Soc.* **2016**, *138*, 3958-3961.
7. Qiuxia Han, Bo Qi, Weimin Ren, Cheng He, Jingyang Niu, and **Chunying Duan\***. *Nat. Commun.* **2016**, *6*: 10007, doi:10.1038/ncomms10007.
  8. Zhen Zhou, Cheng He, Jinghai Xiu, Lu Yang, and **Chunying Duan\***. Metal–Organic Polymers Containing Discrete Single-Walled Nanotube as a Heterogeneous Catalyst for the Cycloaddition of Carbon Dioxide to Epoxides. *J. Am. Chem. Soc.* **2015**, *137*, 15066-15069.
  9. Xu Jing, Cheng He, Yang Yang, and Chunying Duan\*. A Metal–Organic Tetrahedron as a Redox Vehicle to Encapsulate Organic Dyes for Photocatalytic Proton Reduction. *J. Am. Chem. Soc.* **2015**, *137*, 3967.
  10. Qiuxia Han, Cheng He, Min Zhao, Bao Qi, Jingyang Niu, and Chunying Duan\*, Engineering Chiral Polyoxometalate Hybrid Metal-Organic Frameworks for Asymmetric Dihydroxylation of Olefins, *J. Am. Chem. Soc.* **2013**, *135*, 10186 -10190.
  11. Pengyan Wu, Cheng He, Jian Wang, Xiaojun Peng, Xiaozhao Li, Yonglin An and Chunying Duan\*, Photoactive Chiral Metal-Organic Frameworks for Light-Driven Asymmetric alpha-Alkylation of Aldehydes, *J. Am. Chem. Soc.* **2012**, *134*, 14991-14999.

#### **Selected Reviews and Perspectives:**

12. Xu Jing, Cheng He, Liang Zhao, Chunying Duan, Photochemical Properties of Host–Guest Supramolecular Systems with Structurally Confined Metal–Organic Capsules, *Acc. Chem. Res.* **2019**, *52*, 100-109.
13. Tiexin Zhang, Yunhe Jin, Yusheng Shi, Mochen Li, Jianing Li, Chunying Duan\*, Modulating photoelectronic performance of metal–organic frameworks for premium photocatalysis, *Coordin. Chem. Rev.* **2019**, *380*, 201-229.