

# 低维固体材料课题组

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## 4. 论文

- 1) Kai Zheng, Yang Wu, Zexun Hu, Sumin Wang, Xingchen Jiao, Junheng Zhu, Yongfu Sun,\* and Yi Xie\*; Progress and Perspective for Conversion of Plastic Wastes into Valuable Chemicals. Chem. Soc. Rev. 2023, 52, 8-29
- 2) Xingchen Jiao, Kai Zheng, Liang Liang, Xiaodong Li, Yongfu Sun,\* and Yi Xie\*; Fundamentals and challenges of ultrathin 2D photocatalysts in boosting CO<sub>2</sub> photoreduction. Chem. Soc. Rev. 2020, 49, 6592-6604

9) Xingchen Jiao, Kai Zheng, Qingxia Chen, Xiaodong Li, Yunqi Xu, Weiwei Shao, Jian Xu, and Yi Xie\*; Selective CO<sub>2</sub> Photoreduction to C<sub>2</sub>H<sub>4</sub> Enabled by Oxygen-Mediated Triamine Sites in Partially Oxidized SnS<sub>2</sub> Atomic Layers. J. Am. Chem. Soc. 2017, 139, 7586-7594

10) Xingchen Jiao, Kai Zheng, Liang Liang, Xiaodong Li, Yunqi Xu, Weiwei Shao, Jian Xu, Junfa Zhu, Yang Pan, Wensheng Yan, Yue Lin, and Yi Xie\*; Partially Oxidized SnS<sub>2</sub> Atomic Layers Achieving Efficient Visible-Light-Driven CO<sub>2</sub> Reduction. J. Am. Chem. Soc. 2017, 139, 18044-18051

6) Qingxia Chen, Yinghuan Liu, Xiaozhuo Qi, Jianwei Liu, Huijun Jiang, Jinlong Wang, Zhen He, Xifeng Ren, Zhonghui Hou, and Shuhong Yu\*; Ordered Nanostructure Enhances Electrocatalytic Performance by Directional Micro-Electric Field. J. Am. Chem. Soc. 2019, 141, 10729-10735

7) Qingxia Chen, Yinghuan Liu, Zhenyi He, Junlong Wang, Jianwei Liu, Huijun Jiang, and

8) Xingchen Jiao, Kai Zheng, Qingxia Chen, Xiaodong Li, Yunqi Xu, Weiwei Shao, Jian Xu,

9) Yang Wu, Qingxia Chen, Junheng Zhu, Kai Zheng, Mingyan Wu, Minghui Fan, Wensheng Yan, Jun Hu, Junfa Zhu, Yang Pan, Xingchen Jiao,\* Yongfu Sun,\* and Yi Xie; Selective CO<sub>2</sub>-to-C<sub>2</sub>H<sub>4</sub> Photoconversion Enabled by Oxygen-Mediated Triamine Sites in Partially Oxidized SnS<sub>2</sub> Atomic Layers. Chem. Soc. Rev. 2023, 52, e202301075

10) Xingchen Jiao, Kai Zheng, Zexun Hu, Shan Zhu, Yongfu Sun,\* and Yi Xie\*; Conversion of Waste Plastics into Value-Added Carbonaceous Fuels under Mild Conditions. Adv. Mater. 2021, 33, 2005192

## 三、代表性成果 / Representative Achievements

### 1. 项目

- 1) 科技部国家重点研发计划子课题, 2022YFA1502904, 2023.01-2027.12

### 2. 论著

- 1) 中国科学院优秀博士学位论文
- 2) 中国科协青年科技奖

### 3. 专利

- 1) 焦星辰, 丁金钰, 陈庆霞; 钯掺杂的 Co<sub>3</sub>O<sub>4</sub> 纳米片及其在光催化还原 CO<sub>2</sub> 产乙酸中的应用; 申请号: 2023111546954
- 2) 焦星辰, 胡秦源, 陈庆霞; 一种氮掺杂的钛酸铜纳米片及其制备方法和应用; 申请号: 2023110180724