



所属学院 材料科学与工程学院

学科领域 材料科学与工程

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个人简介

2008 年 12 月至今 华东理工大学，教授 / 博导

2007 年 04 月至 2008 年 11 月 澳大利亚昆士兰大学，博士后

2005 年 01 月至 2007 年 03 月 美国通用电气新材料集团，研发科学家

2004 年 09 月至 2004 年 12 月 新加坡制造技术研究院，研发工程师

2001 年 09 月至 2004 年 07 月 新加坡国立大学，化学与生物分子工程系，博士

1999 年 07 月至 2001 年 07 月 华东理工大学，技术化学物理研究所，助理研究员

1996 年 09 月至 1999 年 07 月 华东理工大学，化学工程系，硕士

1992 年 09 月至 1996 年 07 月 青岛大学，应用化学系，学士

研究方向

以太阳能转换与储存为背景，致力于新型清洁能源领域关键功能材料（催化剂）及其器件的理论设计、制备组装和应用基础研究。

1、金属与半导体氧化物晶态材料的可控制备与生长机理研究；

2、新概念光伏器件及其关键材料；

3、人工光合成：太阳能光 / 光电 / 电催化分解水产氢及 CO₂ 等小分子激活与还原反应。

研究成果及主要发表文章

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3. Shuang Yang, Yun Wang, Porun Liu, Yi Bing Cheng, Hui Jun Zhao*, Hua Gui Yang*, Functionalization of perovskite thin films with moisture-tolerant molecules, *Nat. Energy*, 2016, 1: 15016.
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5. Xue Lu Wang, Wenqing Liu, Yan-Yan Yu, Yanhong Song, Wen Qi Fang, Daxiu Wei, Xue-Qing Gong*, Yefeng Yao*, Hua Gui Yang*, Operando NMR spectroscopic analysis of proton transfer in heterogeneous photocatalytic reactions, *Nat. Commun.*, 2016, 7: 11918.
6. Chong Wu Wang, Shuang Yang, Wen Qi Fang, Porun Liu, Huijun Zhao*, Hua Gui Yang*, Engineered hematite mesoporous single crystals drive drastic enhancement in solar water splitting, *Nano Lett.*, 2016, 16: 427.
7. Bo Zhang, Xueli Zheng, Oleksandr Voznyy, Riccardo Comin, Michal Bajdich, Max García-Melchor, Jixian Xu, Min Liu, F. Pelayo García de Arquer, Cao Thang Dinh, Fengjia Fan, Mingjian Yuan, Emre Yassitepe, Alyf Janmohamed, Ning Chen, Tom Regier, Lili Han, Pengfei Liu, Yu Hang Li, Phil De Luna, Huolin L. Xin, Lirong Zheng, Huagui Yang, Aleksandra Vojvodica*, Edward H. Sargent*, Homogeneously-dispersed multi-metal oxygen-evolving catalysts, *Science*, 2016, 352: 333-337.
8. Yu Hang Li, Peng Fei Liu, Lin Feng Pan, Hai Feng Wang*, Zhen Zhong Yang, Li Rong Zheng, P. Hu, Hui Jun Zhao, Lin Gu, Hua Gui Yang*, Local atomic structure modulations activate metal oxide as electrocatalyst for hydrogen evolution in acidic water, *Nat. Commun.*, 2015, 6: 8064.
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10. Shuang Yang, Bing Xing Yang, Long Wu, Yu Hang Li, Porun Liu, Huijun Zhao, Yan Yan Yu, Xue Qing Gong*, Hua Gui Yang*, Titania single crystals with a curved surface, *Nat. Commun.*, 2014, 5: 5355.
11. Gang Liu, Hua Gui Yang, Jian Pan, Yong Qiang Yang, Gao Qing (Max) Lu*, Hui-Ming Cheng*, Titanium dioxide crystals with tailored facets, *Chem. Rev.*, 2014, 114: 9559-9612.
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18. Hua Gui Yang, Hua Chun Zeng*, Synthetic architectures of TiO₂/H₂Ti₅O₁₁.H₂O, ZnO/H₂Ti₅O₁₁.H₂O, ZnO/TiO₂/H₂Ti₅O₁₁.H₂O and ZnO/TiO₂ nanocomposites, *J. Am. Chem. Soc.*, 2005, 127: 270-278.
19. Hua Gui Yang, Hua Chun Zeng*, Creation of intestine-like interior space for metal-oxide nanostructures with a quasi-reverse emulsion, *Angew. Chem. Int. Ed.*, 2004, 43: 5206-5209.
20. Hua Gui Yang, Hua Chun Zeng*, Self-construction of hollow SnO₂ octahedra based on two-dimensional aggregation of nanocrystallites, *Angew. Chem. Int. Ed.*, 2004, 43: 5930-5933.