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研究方向

研究领域：

- (1) 能量储存和转化，包括锂离子电池、钠离子电池、锂-硫电池、锂-空电池、全固态电池和超级电容器等
- (2) 纳米材料及其在储能系统中的应用
- (3) 有机功能材料及其在储能系统中的应用
- (4) 储能电化学过程

承担项目

主要承担项目：

1. 新型纳微多孔碳/硫复合正极材料的制备及其性能研究，基金委面上项目，2017-2020。
2. 高性能锂-硫电池碳/硫复合正极材料的制备及其性能研究，天津市科委面上项目，2016-2019。

标志性成果

主要学术成就、获奖及荣誉：

主要从事储能材料和有机光电材料及器件等前沿技术的研究与开发，做出了系列原创性成果，具有坚实的研究基础和丰富的研究经验。已发表论文60余篇，其中20余篇发表在影响因子大于10的一流学术期刊上。论文被他人引用4500余次，多篇论文被Web of Science列为热点和高被引论文（至2017年11月）。获授权中国专利4项，美国专利两项。获得主要荣誉和奖励包括：

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发表文章、专利、专著 (代表作) :

69. Honglin Luo, Peixun Xiong, Jing Xie, Zhiwei Yang, Yuan Huang, Jimin Hu,* Yizao Wan,* **Yunhua Xu,*** Uniformly dispersed free-standing carbon nanofiber/graphene electrodes made by a scalable biological method for high-performance flexible supercapacitors, **Advanced Functional Materials**, accepted.
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66. Peixun Xiong, Panxing Bai, Shuibin Tu, Mingren Cheng, Jinfeng Zhang, Jie Sun, **Yunhua Xu,*** Red phosphorus nanoparticle@3D interconnected carbon nanosheet framework composite for potassium-ion battery anodes, **Small**, 2018, DOI: 10.1002/sml.201802140.
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