**Rationally designed nanomaterials for high-performance energy storage**

陈俊松

电子科技大学，材料与能源学院，610054

Email: jschen@uestc.edu.cn

**关键词:** nanostructured materials, energy storage, lithium-ion batteries, supercapacitors

**摘要：**

Design of new materials has been an important focus for the development of next generation energy storage devices. In this talk, different materials with unique nanostructures for energy storage, such as lithium-ion batteries (LIB), or supercapacitors, will be discussed. First, anatase TiO2 nanosheets with exposed (001) high-energy facets for high-power LIBs will be introduced, followed by self-supported nickel-based nanoarrays for supercapacitors with high energy density. By setting these two types of materials as examples, the importance of rational design of nanomaterials to improve their electrochemical properties is emphasized.

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**个人简介**



陈俊松，男，教授，2012年博士毕业于新加坡南洋理工大学。2013-2014年于德国马克思普朗克研究所任洪堡学者。于2017年7月全职加入电子科技大学。主要从事新型纳米功能材料的设计以及其在能源与催化领域的应用，并在该领域取得一系列创新性成果。在材料化学类杂志上发表学术论文64篇，其中第一作者或通讯作者37篇（包括Journal of the American Chemical Society 4篇，Angewandte Chemie International Edition 1篇），SCI引用达到10000多次，其中多篇入选ESI高被引文章，H-index为46。于2015、2016、2018年3次入选科睿唯安（原汤森路透）全球高被引科学家，2017、2018年入选Elsevier中国高被引学者榜。于2016年入选第13批国家特聘青年专家，同年入选了四川省“千人计划”青年人才，2018年入选“蓉漂计划”创新人才。