

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

1986年7月本科合肥工业大学高分子化工专业，获学士学位；1989年7月硕士研究生毕业于华东理工大学高分子材料专业，获工学硕士学位；此后留在华东理工大学材料学院工作，并在职获得博士学位。1996年11月晋升副教授，2006年9月晋升教授。现任高分子物理教研室主任。

研究方向

1. 导电高分子及其碳基功能复合材料的合成以及在电化学储能（超级电容器、锂离子电池等）、透明导电和绿色防腐领域的应用；
2. 凝胶或准固态聚合物电解质的制备及其在电化学储能器件（超级电容器、锂离子电池、锂硫电池等）上应用；
3. 石墨烯的清洁制备及其应用开发；
4. 聚合物功能复合材料制备及其器件开发,包括电阻敏感性、电磁屏蔽、介电储能等功能。
5. 相变储能材料的制备与应用；
6. 绿色阻燃与防火高分子材料的开发。

研究成果及主要发表文章

- Shuangmin Yu, Fan Qin, Gengchao Wang*. Improving dielectric properties of poly(vinylidene fluoride)composites induced by poly(vinyl pyrrolidone)-encapsulated polyaniline nanorods. Journal of Materials Chemistry C, 2016, 4, 1504-1510.
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- Lei Cao, Qianqiu Tang, Gengchao Wang*. Synthesis and performance of cross-linked PEDOT:MOI-P(SS-HEA) transparent conductive films by UV irradiation. RSC Advances, 2016, 6, 29592-29597.
- 周晓, 孙敏强, 王庚超*. 石墨烯负载新型 π -共轭聚合物纳米复合电极材料的合成及其超级电容特性, 物理化学学报, 2016, 32(4), 975-982.
- Chongyang Yang, Minqiang Sun, Xi Wang, Gengchao Wang*. A novel flexible supercapacitor based on cross-Linked PVDF-HFP porous organogel electrolyte and carbon nanotube paper@ π -conjugated polymer film electrodes. ACS Sustainable Chemistry & Engineering, 2015, 3(9), 2067-2076
- Qianqiu Tang, Mingming Chen, Chongyang Yang, Wenqiang Wang, Hua Bao, Gengchao Wang*. Enhancing the energy density of asymmetric stretchable supercapacitor based on wrinkled CNT@MnO₂ cathode and CNT@polypyrrole anode. ACS Applied Materials & Interfaces, 2015, 7(28), 15303-15313
- Minqiang Sun, Han Li, Jian Wang, Gengchao Wang*. Promising graphene/carbon nanotube foam@ π -conjugated polymer self-supporting composite cathodes for high-performance rechargeable lithium batteries. Carbon, 2015, 94, 864-871
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- Qianqiu Tang, Wenqiang Wang, Gengchao Wang*. The perfect matching between low-cost Fe₂O₃ nanowires anode and NiO nanoflakes cathode significantly enhances the energy density of asymmetric supercapacitors. Journal of Materials Chemistry A, 2015, 3, 6662-6670
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- Dechao Lv, Jiali Shen, Gengchao Wang*. A post-oxidation strategy for the synthesis of graphene/carbon nanotube-supported polyaniline nanocomposites as advanced supercapacitor electrodes. RSC Advances, 2015, 5, 24599-24606
- Han Li, Minqiang Sun, Tao Zhang, Yuqian Fang and Gengchao Wang*Improving the performance of PEDOT-PSS coated sulfur@activated porous graphene composite cathodes for lithium-sulfur batteries. Journal of Materials Chemistry A, 2014, 2, 18345-18352.
- Chongyang Yang, Jiali Shen, Chunyan Wang, Haojie Fei, Hua Bao, Gengchao Wang*. All-solid-state asymmetric supercapacitor based on reduced graphene oxide/carbon nanotube and carbon fiber paper/polypyrrole electrodes. Journal of Materials Chemistry A, 2014, 2, 1458-1464
- Minqiang Sun, Gengchao Wang*, Xingwei Li, Chunzhong Li. Irradiation preparation of reduced graphene oxide/carbon nanotube composites. Journal of Power Sources, 2014, 245, 436-444
- Qianqiu Tang, Minqiang Sun, Shuangmin Yu, Gengchao Wang*. Preparation and supercapacitance performance of manganese oxide nanosheets/graphene/carbon nanotubes ternary composite film. Electrochimica Acta, 2014, 125, 488-496
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