

所属学院 材料科学与工程学院

学科领域 材料科学与工程, 高分子化学与物理,
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个人简介

- (1) 2007 年 1 月至今, 华东理工大学材料科学与工程学院, 特聘教授, 博士生导师。
- (2) 2002 年 1 月至 2006 年 7 月, Department of Chemistry, The University of North Carolina at Chapel Hill (美国北卡大学教堂山分校化学系), 博士后。
- (3) 2001 年 7 月至 2002 年 1 月, 南开大学化学学院元素有机化学研究所, 助理研究员。
- (4) 1996 年 9 月至 2001 年 7 月, 南开大学化学学院化学系, 博士研究生, 师从王积涛教授。
- (5) 1992 年 9 月至 1996 年 7 月, 南开大学化学学院化学系, 本科生。

研究方向

- (1) 新型高分子合成反应的开发与应用
- (2) 功能性纳米碳材料的合成和应用
- (3) 新型高分子复合材料的性能表征平台的设计与组建
- (4) 新型烯二炔抗生素设计合成及反应机理研究

研究成果及主要发表文章

- 1.Deng, Sheng; Zhi, Jian; Zhang, Xianmei; Wu, Qingqing; Ding, Yun; Hu, Aiguo*. "Size-Controlled Synthesis of Conjugated Polymer Nanoparticles in Confined Nanoreactors". Angew. Chem. Int. Ed.2014, 53(51), 14144-14148.
- 2.Chen, Yingying; Zhu, Qin; Cui, Xinghui; Tang, Weijun; Yang, Heng; Yuan, Yuan; Hu, Aiguo*. "Preparation of Highly Efficient MRI Contrast Agents through Complexation of Cationic GdIII-Containing Metallosurfactant with Biocompatible Polyelectrolytes". Chem. Eur. J.2014, 20, 12477-12482.
- 3.Zhi, Jian; Wang, Youfu; Deng, Sheng; Hu, Aiguo*. "Study on the Relation between Pore Size and Supercapacitance in Mesoporous Carbon Electrodes with Silica-Supported Carbon Nanomembranes". RSC Adv.2014,4, 40296-40300.
- 4.Wang, Youfu; Hu, Aiguo*. "Carbon quantum dots: synthesis, properties and applications". J. Mater. Chem.C2014, 2, 6921-6939.
- 5.Wang, Youfu; Xiong, Rulin; Dong, Luhua; Hu, Aiguo*. "Synthesis of carbon nanomembranes through cross-linking of phenyl self-assembled monolayers for electrode materials in supercapacitors". J. Mater. Chem.A2014, 2, 5212-5217.
- 6.Sun, Shiyuan; Zhu, Chuanchuan; Song, Depeng; Li, Fei; Hu, Aiguo*. "Preparation of Conjugated Polyphenylenes from Maleimide-Based Enedynes through Thermal-Triggered Bergman Cyclization Polymerization". Polym. Chem.2014, 5, 1241-1247.
- 7.Tan, Qinggang; Zhang, Chi; Wang, Ning; Zhu, Xiujuan; Sun, Qiang; Jacobsen, Mikkel F.; Gothelf, Kurt V.; Besenbacher, Flemming; Hu, Aiguo*; Xu, Wei*. "Tailoring on-surface supramolecular architectures based on adenine directed self-assembly". Chem. Commun.2014, 50, 356-358.
- 8.Wang, Youfu; Dong, Luhua; Xiong, Rulin; Hu, Aiguo*. "Practical Access to Bandgap-Like N-Doped Carbon Dots with Dual Emission Unzipped from PAN@PMMA Core-Shell Nanoparticles". J. Mater. Chem.C2013, 1, 7731-7735.
- 9.Chen, Yingying; Yang, Heng; Tang, Weijun; Cui, Xinhui; Wang, Wei; Chen, Xiangyu; Yuan, Yuan*; Hu, Aiguo*. "Attaching Double Chain Cationic Gd(III)-Containing Surfactants on Nanosized Colloids for Highly Efficient MRI Contrast Agents". J. Mater. Chem.B2013, 1, 5443-5449.
- 10.Sheng, Kai; Kong, Huihui; Li, Zhiwen; Zhang, Chi; Sun, Qiang; Tan, Qinggang; Pan, Yunxiang; Hu, Aiguo*; Xu, Wei*. "Atomic-Scale Probing the Priority of Oxidation Sites of an Organic Molecule Adsorbed at the Cu-O/Cu(110) Interface". ChemCatChem2013, 5, 2662-2666.
- 11.Sun, Qiang; Zhang, Chi; Li, Zhiwen; Kong, Huihui; Tan, Qinggang; Hu, Aiguo*; Xu, Wei*. "On-Surface Formation of One-Dimensional Polyphenylene through Bergman Cyclization". J. Am. Chem. Soc.2013, 135, 8448-8451.
- 12.Zhu, Benchuan; Sun, Shiyuan; Wang, Youfu; Deng, Sheng; Qian, Guannan; Wang, Meng; Hu, Aiguo*. "Preparation of Carbon Nanodots from Single Chain Polymeric Nanoparticles and Theoretical Investigation of the Photoluminescence Mechanism". J. Mater. Chem.C2013, 1, 580-586. (ESI highly cited paper) (most accessed article 2013, <http://rsc.li/1c6boBj>)
- 13.Zhi, Jian; Deng, Sheng; Zhang, Yuxuan; Wang, Youfu; Hu, Aiguo*. "Embedding Co3O4 Nanoparticles in SBA-15 Supported Carbon Nanomembrane for Advanced Supercapacitor Materials". J. Mater. Chem.A2013, 1, 3171-3176.
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- 18.Zhi, Jian; Xiao, Yuli; Hu, Aiguo*. "Synthesis of Thiol-Containing Amino Acids through Alkylation of Glycinate Ketamine".Synth. Commun.2012, 42, 914-920.
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- 22.Ma, Jianguo; Deng, Sheng; Cheng, Xin; Wei, Wei; Hu, Aiguo*. "Covalent Surface Functionalization of Multiwalled Carbon Nanotubes through Bergman Cyclization of Enediyne-Containing Dendrimers". J. Polym. Sci.: Polym. Chem. 2011, 49, 3951-3959.
- 23.Li, Zhiwen; Song, Depeng; Zhi, Jian; Hu, Aiguo*. "Synthesis of Ultrathin Ordered Porous Carbon through Bergman Cyclization of Enediyne Self-Assembled Monolayers on Silica Nanoparticles". J. Phys. Chem. C, 2011, 115(32), 15829-15833.
- 24.Gong, Pei; Chen, Zhengyan; Chen, Yingying; Wang, Wei; Wang, Xiaosong*; Hu, Aiguo*. "High-Relaxivity MRI Contrast Agents Prepared from Miniemulsion Polymerization Using Gadolinium(III)-Based Metallosurfactants". Chem. Commun.2011, 47(14), 4240-4242.
- 25.Zhu, Benchuan; Ma, Jianguo; Li, Zhiwen; Hou, Jing; Cheng, Xin; Qian, Guannan; Liu, Pai; Hu, Aiguo*. "Formation of Polymeric Nanoparticles via Bergman Cyclization Mediated Intramolecular Chain Collapse". J. Mater. Chem.2011, 21(8), 2679-2683.
- 26.Ma, Jianguo; Ma, Xiaowei; Deng, Sheng; Li, Fei; Hu, Aiguo*. "Synthesis of Dendronized Polymers through Bergman Cyclization of Enediyne-Containing Frechet Type Dendrimers". J. Polym. Sci.: Polym. Chem. 2011, 49, 1368-1375.
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