



核专业校友  
孙晓东教授当选  
美国核学会Fellow

## 师资队伍

### 副教授

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师资概况
教师名录
教授
副教授
讲师
专职科研
工程试验人员
外聘专家
博士后



祖建华

副研究员

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#### 教育背景

1999/09 - 2002/06, 中国科学院上海应用物理研究所, 无机化学, 博士

1996/07 - 1999/06, 中国科学院上海应用物理研究所, 无机化学, 硕士

1992/09 - 1996/07, 山东师范大学, 化学化工与材料科学学院, 学士

#### 工作经历

2002-2005, 上海大学环境与化学工程学院, 助理研究员

2006-2011, 上海大学环境与化学工程学院, 副研究员

2006-2007, 韩国原子能研究院, 博士后

2011.9-至今, 上海交大核科学与工程学院, 副研究员

2016- 上海交通大学核科学与工程学院, 博导

#### 研究方向

先进核燃料循环技术；离子交换、螯合等吸附材料的制备，环境放射性

#### 科研项目

1. 2017年7月-2020年12月,国家自然科学基金,《基于Am/Cm分离的芳胺基多孔树脂制备及其模型化合物的动力学解机理研究》,项目负责人
2. 2013年1月-2015年12月,国家自然科学基金,《双功能基阴离子交换吸附—还原解吸法从高放废液中分离锝的研究》,项目负责人
3. 2014年1月-2016年12月,国家自然科学基金,《BTP/SiO<sub>2</sub>-P萃取色层-电沉积(EC-ED)联用新方法从高放废液中分离回收<sup>90</sup>Y》,项目负责人
4. 2004年1月-2006年12月,国家自然科学基金,《双功能阳离子交换膜的辐射接枝制备及其评价》,项目负责人
5. 2013年6月-2015年6月,上海市科委,《高性能吸附剂以及污染处理技术体系》,项目负责人
6. 2010年10月-2013年9月,上海市科委基础研究重点,《燃料电池质子交换膜材料的辐射制备及其降解机理探索》,项目负责人
7. 2005年10月-2008年10月,上海市教委青年基金,《有毒有机废水的电子束辐照处理》,项目负责人

### 代表性论文专著

1. Jianhua Zu\*, Fangdong Tang, Linfeng He, Lingxiao Fu. Facile synthesis and properties of cation exchange membranes containing bifunctional groups prepared by pre-irradiation graft copolymerization. *RSC Advances.* 2018, 8: 25966 - 25973.
2. Puyin Wang, Jianhua Zu\*, Afshin Khayambashi, Ruiqin Liu, Yuezhou Wei. Gamma radiolysis of porous anion exchange resin based on 4-vinylpyridine. *Journal of Radioanalytical and Nuclear Chemistry.* 2017, 311:1619-1625.
3. Puyin Wang, Afshin Khayambashi, Jianhua Zu\*, Yuezhou Wei, Fangdong Tang, Linfeng He. Study the radiolysis of vinylpyridine-based porous resins in <sup>99</sup>Tc adsorption. *Journal of Radioanalytical and Nuclear Chemistry.* 2017, 311:306.
4. Ruiqin Liu, Qing Zou, Jianhua Zu, \*, Yuezhou Wei, Youqian Ding, Yaping Zhao. Feasibility studies on the selective removal of fission palladium(II) by isoHex-BTP/SiO<sub>2</sub>-P adsorbent from HLLW, *Journal of Nuclear Science and Technology.*, 2017, 54(10): 899-907.
5. Puyin Wang, Jianhua Zu\*, Yuezhou Wei, Fangdong Tang, Linfeng He. Adsorption performance of porous 4-vinylpyridine anion exchanger for rhenium (VII) as analogue to <sup>99</sup>Tc. *Nucl. Sci.Tech.,* 2017, 28(3):1-7.
6. Jianhua Zu\*, Ruiqin Liu, Jianqiu Zhang, Fangdong Tang, Linfeng He. Adsorption of Re and <sup>99</sup>Tc by means of radiation-induced weak basic anion exchange resin. *Journal of Radioanalytical and Nuclear Chemistry,* 2016, 310 (1) : 229-237.
7. Jianhua Zu\*, Maosong Ye, Puyin Wang, Fangdong Tang, Linfeng He. Design of a strong-base anion exchanger and its elution behavior of rhenium (VII). *RSC Advances.* 2016, 6 (23) : 18868-18873.
8. Jianhua Zu\*, Ruiqin Liu, Yuezhou Wei, Puyin Wang, Haiying Fu, Fangdong Tang, Linfeng He. Pulse radiolysis investigation of •H radicals initiated degradation reaction of sulfonated aromatics as model compounds for proton exchange membrane. *Res. Chem. Intermediate.,* 2016, 42(4): 2883-2898.
9. Jianhua Zu, Yuezhou Wei, Maosong Ye, Fangdong Tang, Linfeng He, Ruiqin Liu\*. Preparation of a new anion exchange resin by irradiation grafting technique and its adsorptive removal of rhenium (VII) as analogue to <sup>99</sup>Tc. *Nucl. Sci. Tech.* 2015, 26(1): 75.
10. Jianhua Zu\*, Puyin Wang, Fangdong Tang, Linfeng He, Ruiqin Liu. Modification of lithium ion battery separator by beam radiation induced grafting of glycidyl methacrylate onto porous PP film. *Int. J. Electrochem. Sci.,* 2015, 10(9): 692-698.
11. Jianqiu Zhang, Tao Tian, Jinyang Chen\*, Jianhua Zu, Yangjun Wang. Recycling of waste printed circuit boards into resin. *RSC Advances.* 2015, 5: 2080-2087.
12. Jianqiu Zhang, Songhang Liu, Jinyang Chen\*, Jianhua Zu, Yangjun Wang. Preparation of anion exchange resin from waste printed circuit boards. *RSC Advances.* 2015, 5: 116680-116687.
13. 王晓龙,俎建华,韦锐周\*. AR-01树脂对铼的吸附和解吸行为. *核化学与放射化学.* 2014, 36: 205-209.
14. Jianqiu Zhang, Songhang Liu, Jianhua Zu\*, Chao Song, Chengbing Yu, Research on preparation of activated termosetting epoxy circuit board, *Applied Mechanics and Materials,* 2014, 692: 396-400.
15. Jianhua Zu\*, Fuxia Shi, Ruiqin Liu, Maosong Ye. Amination of glycidyl methacrylate-grafted polystyrene particles and its adsorption capacity for Nd<sup>3+</sup> and Cd<sup>2+</sup>. *Iran. Poly. J.* 2013, 22: 259-265.
16. Xiangbiao Yin, Yuezhou Wei\*, Jianhua Zu. Adsorption behavior of Zr (IV) and Hf (IV) on a silica-based macroporous adsorbent. *Nucl. Sci. Tech.* 2013, 24: 040203.
17. 史福霞,俎建华\*,殷祥标.强碱性阴离子交换纤维的辐射接枝法制备及对铼(VII)的吸附. *高分子材料科学与工程.* 2013, 29: 11-15.
18. Jianhua Zu\*, Fuxia Shi, Ruiqin Liu, Maosong Ye. Amination of glycidyl methacrylate-grafted polystyrene particles and its adsorption capacity for Nd<sup>3+</sup> and Cd<sup>2+</sup>. *Iran. Poly. J.* 2013, 22: 259-265.

19. Xiangbiao Yin, Yuezhou Wei\*, Jianhua Zu. Adsorption behavior of Zr (IV) and Hf (IV) on a silica-based macrop adsorbent. Nucl. Sci. Tech. 2013, 24: 040203.
20. Jianhua Zu\*, Min Xia, Fuxia Shi, Ruiqin Liu. Cation-exchange membranes prepared by pre-irradiation grafting and sodium styrene sulfonate onto ETFE membranes. Advanced Materials Research. 2012, 399:1111-1114.
21. Jianhua Zu\*, Young Chang Nho, Joon Pyo Jeun, Ruiqin Liu, Li Liu, Feng Yan, Min Xia. Preparation of Chelat Radiation Induced Grafting of Itaconic Acid and Acrylonitrile onto Polypropylene Nonwoven Fabrics and Amination of Graft Copolymer. Journal of Applied Polymer Science. 2011, 119(6): 3483-3489.
22. Joon-Pyo Jeun, Jianhua Zu, Phil-Hyun Kang, Young-Chang Nho\*. Electron-Beam-Radiation-Induced Grafting onto Polypropylene Fibers: Influence of the Synthesis Conditions. Journal of Applied Polymer Science. 2010, 115:
23. Jianhua Zu\*, Shiqiang He, Young Chang Nho, Jeun Joon Pyo, Feng Yan. Preparation of Adsorbent for Palladium Amination of Acrylonitrile Grafted Polypropylene Nonwoven Fabrics. Journal of Applied Polymer Science. 2010, 115: 1421.
24. Jianhua Zu\*, Jianqiu Zhang, Guisheng Sun, Ruimin Zhou, Zhaomin Liu. The preparation of cation exchange resin containing bi-functional groups by radiation induced grafting of acrylic acid and sodium styrene sulfonate. Influence of synthesis Conditions. Journal of Radioanalytical and Nuclear Chemistry. 2009, 279: 185-192.
25. Jianhua Zu\*, Feng Yan, Wen yunluo, Young Chang Nho. Modified polypropylene fabrics adsorbent for effective adsorption, Proceedings of 2009 international Conference on Advanced Fibers and Polymer Materials Oct. 21-24, 2009, 637..
26. Jianhua Zu\*, shiqiang He, Feng Yan. Radiation synthesis of amino-functionalized adsorbent and their application in heavy metal ions' recovery. Radiation Physics and Chemistry. 2009, 78: 328-332.
27. Jianhua Zu\*, Zhiqiang Hu, Ruiqin Liu, Jianqiu Zhang, Jianzhong Gu, Long Tong, Xinwen Liu. Role of additives in radiation-induced grafting copolymerization of acrylic acid and sodium styrene sulfonate to high-density polyethylene. Journal of Applied Polymer Science. 2007, 103: 2622-2626.
28. Jianhua Zu\*, Zhiqiang hu, Weitao Wang, Jianqiu Zhang, Eddy Segura Pino, Jianzhong Gu, Long Tong. The effect of additives on radiation-induced grafting of AA and SSS onto HDPE. Journal of Radioanalytical and Nuclear Chemistry. 2007, 270: 27-30.
29. Jianhua Zu\*, Guisheng Sun, Long Tong, Xinwen Liu. Modification of HDPE membranes by radiation induced grafting of acrylic acid and sodium styrene sulfonate. 8th International Topical Meeting on Nuclear Applications and Accelerators, ACCAPP'07. 2007, 313-318.
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31. Jianhua Zu\*, Chunhui Yu, Minghong Wu, Zheng Jiao. Radiation-induced grafting of acrylic acid and sodium styrene sulfonate onto HDPE membranes: II. Study on thermal and chemical properties. J. Appli. Poly. Sci. 2006, 99: 3406-3410.

## 教学工作

《核化学及核技术应用》，本科生，32学时，2学分

《放射化学和水化学》，本科生，32学时，2学分

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1. 双功能基阳离子交换膜的制备方法, 发明专利, ZL200410017965.8, 已授权, 第一发明人
2. 湿度传感器湿敏元件感湿膜的制备方法, 发明专利, ZL2005 10112089.1, 已授权, 第一发明人
3. 辐射接枝法制备聚乙烯离子螯合膜的方法, 发明专利, ZL2006 10118171.X, 已授权, 第一发明人
4. 辐射接枝法制备聚丙烯离子螯合膜的方法, 发明专利, ZL200910046520.5, 已授权, 第一发明人
5. 燃料电池用质子交换膜的制备方法, 中国发明专利, ZL201110195250.1, 已授权, 第一发明人
6. 利用聚丙烯薄膜辐射接枝改性制锂电池隔膜的方法, 中国发明专利, 200910199534.0, 已授权, 第一发明人

## 学术兼职

上海市核学会材料分会秘书长

## 荣誉奖励

2006年，上海大学优秀青年教师  
2010年，上海技术发明三等奖

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