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其他任职：工会组织委员、青年委员

曾获荣誉：

2015~2017连续三年  
教学评价排名学院前  
10%

第九届校级青年教师讲课比赛优秀奖

2017年度院级优秀共产党员

2015-2016年度校级优秀共产党员

2017年度工会工作积极分子

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### 个人简介

舒杼 (Shu Zhu)，男，1985年出生，博士，副教授，硕士生导师，博士生副导师。任职于中国地质大学（武汉）材料与化学学院材料系。共发表国际SCI论文40余篇，其中第

一作者或通讯作者20余篇，授权发明专利10项，合著专著1本。

### 【研究兴趣】

多孔纳米材料、二维材料、纳米复合材料的设计合成。

水污染治理（吸附、光催化降解、综合利用）。

光解水制氢、光催化还原CO<sub>2</sub>。

### 【受教育经历】

2009/12–2010/11，海梅一世大学，西班牙陶瓷技术研究所，导师Eliseo Monfort Gimeno教授，联合培养博士

2006/09–2011/06，中国地质大学（武汉），环境学院环境科学与工程系，导师王焰新教授，博士

2002/09–2006/06，华中科技大学，环境学院环境工程系，导师陆晓华教授，学士

### 【工作经历】

2013/12–至今，中国地质大学（武汉），材料与化学学院材料系，副教授

2013/07–2013/11，中国地质大学（武汉），材料与化学学院材料系，讲师

2011/07–2013/06，中国科学院上海硅酸盐研究所，高性能陶瓷和超微结构国家重点实验室（介孔与低维纳米材料组），合作导师施剑林研究员，博士后

### 【科研项目】

中央高校基本科研业务费青年教师提升计划“摇篮计划”项目“纳米g-C<sub>3</sub>N<sub>4</sub>及其掺杂/复合结构的直接合成及光催化应用”，2018.1-2020.12，项目负责人；

浙江省自然科学基金一般项目“非金属掺杂g-C<sub>3</sub>N<sub>4</sub>纳米片在粘土矿物层间的可控合成及其可见光催化性能研究”（LQY18D020001），2018.1-2020.12，项目负责人；

校级教研项目“复合材料原理课程教学内容及方法的改革与实践”（2017A10），2017.7-2019.6，项目负责人；

国家自然科学基金青年科学基金项目“基于蒙脱石层间域的石墨相氮化碳纳米片的限域合成及机

理”(41502030), 2016.1-2018.12, 项目负责人;

生物地质与环境地质国家重点实验室开放课题“水滑石的结构组分调控及其对地下水中硼吸附过程的影响”(GBL21504), 2015.07-2016.12, 项目负责人;

中央高校基本科研业务费专项资金杰出人才培养基金项目“高比表面的高岭土基介孔氧化硅的无模板法制备与机理”(CUG160615), 2013.1-2016.12, 项目负责人;

中央高校新青年教师科研启动基金项目“高岭石原位制备介孔材料及其成孔机制研究”(CUGL140811), 2014.1-2015.12, 项目负责人;

国土资源部项目“煤矸石提铝后氧化硅的综合利用技术及产业化”(2012034098), 2012.1-2014.12, 子课题负责人;

国家自然科学基金青年科学基金项目“LDHs调控水泥混凝土水化硬化过程及抗氯离子-硫酸盐侵蚀的机理研究”(51502272), 2016.1-2018.12, 参与;

国家自然科学基金青年科学基金项目“有机/无机杂化纳米药物输运系统的设计、制备及其在药物共输运中的应用探索”(51302293), 2014.1-2016.12, 参与;

湖北省环境保护厅环保科研项目“湖北省磷化工行业磷石膏的无害化处置及资源化研究”(2013HB10), 2014.1-2014.12, 参与;

国家973重大科技基础研究发展计划“半封闭空间机动车排放污染物治理的关键技术”之课题2“NO<sub>x</sub>的常温吸附/催化氧化/碱吸收过程与纳米材料的设计合成与性能”(2013CB933200), 2013.1-2017.8, 参与;

上海市科委基础研究重点项目“NO<sub>x</sub>室温催化氧化及其在城市隧道污染物治理中的应用研究”(11JC1413400), 2012.1-2014.12, 参与;

国家自然科学基金面上项目“基于介孔空心球的新型CO<sub>2</sub>吸附剂的设计制备与性能研究”(21177137), 2012.1-2015.12, 参与。

### 【SCI论文】

Yigen Tan, **Zhu Shu\***, Jun Zhou\*, Tiantian Li, Wenbin Wang, Zhengliang Zhao. One-step synthesis of nanostructured g-C<sub>3</sub>N<sub>4</sub>/TiO<sub>2</sub> composite for highly enhanced visible-light photocatalytic H<sub>2</sub> evolution. *Applied Catalysis B: Environmental*, 2018, 230: 260-268.

Xuelin Wang<sup>1</sup>, Zhengliang Zhao<sup>1</sup>, **Zhu Shu\***, Ying Chen\*, Jun Zhou, Tiantian Li, Wenbin Wang, Yigen Tan, Na Sun. One-pot synthesis of metakaolin/g-C<sub>3</sub>N<sub>4</sub> composite for improved visible-light photocatalytic H<sub>2</sub> evolution. *Applied Clay Science*, 2018, 166: 80-87.

Zhengliang Zhao, Xuelin Wang, **Zhu Shu\***, Jun Zhou\*, Tiantian Li, Wenbin Wang, Yigen Tan. Facile preparation of hollow-nanosphere based mesoporous g-C<sub>3</sub>N<sub>4</sub> for highly enhanced visible-light-driven photocatalytic hydrogen evolution. *Applied Surface Science*, 2018, 455: 591-598.

**Zhu Shu**, Cong Xie, Jun Zhou\*, Tiantian Li, Ying Chen, Wenbin Wang, Yigen Tan, Zhengliang Zhao. Nanoporous g-C<sub>3</sub>N<sub>4</sub> nanosheets: Facile synthesis and excellent visible-light photocatalytic H<sub>2</sub> evolution performance. *Journal of Alloys and Compounds*, 2018, 747: 140-148.

Wenbin Wang, **Zhu Shu\***, Jun Zhou\*, Tiantian Li, Ping Duan, Zhengliang Zhao, Yigen Tan, Cong Xie, Shuai Cui. Halloysite-derived mesoporous g-C<sub>3</sub>N<sub>4</sub> nanotubes for improved visible-light photocatalytic hydrogen evolution. *Applied Clay Science*, 2018, 158: 143-149.

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synthesis of mesoporous X-Mn (X = Co, Ni, Zn) bimetal oxides and catalytic application in room-temperature removal of low-concentration NO. *Journal of Materials Chemistry A*, 2013, 1 (35): 10218-10227.

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**Z. Shu**\*, J. Garcia-Ten, E. Monfort, J.L. Amoros, J. Zhou, Y.X. Wang. Cleaner production of porcelain tile powders. Fired compact properties. *Ceramics International*, 2012, 38: 1479-1487.

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Yu Chen, Pengfei Xu, Meiyong Wu, Qingshuo Meng, Hangrong Chen, **Zhu Shu**, Jin Wang, Lingxia Zhang, Yaping Li, Jianlin Shi\*. Colloidal RBC-Shaped, Hydrophilic, and Hollow Mesoporous Carbon Nanocapsules for Highly Efficient Biomedical Engineering. *Advanced Materials*, 2014, 26(25): 4294-4301.

Lisong Chen, Xiangzhi Cui, Yongxia Wang, Min Wang, Ruihao Qiu, **Zhu Shu**, Lingxia Zhang, Zile Hua, Fangming Cui, Chenyang Wei, Jianlin Shi\*. One-step synthesis of sulfur doped graphene foam for oxygen reduction reactions. *Dalton Transactions*, 2014, 43(9): 3420-3423.

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macro/mesoporous carbon monoliths with strong hydrophobicity. *Carbon*, 2014, 66: 547-559.

Yanyan Du, Weimin Huang, Zile Hua, Yongxia Wang, Xiangzhi Cui, Meiyang Wu, **Zhu Shu**, Lingxia Zhang, Jin Wang, Hangrong Chen, Jianlin Shi\*. A facile ultrasonic process for the preparation of Co<sub>3</sub>O<sub>4</sub> nanoflowers for room-temperature removal of low-concentration NO<sub>x</sub>. *Catalysis Communications*, 2014, 57: 73-77.

Xiangqian Fan, Lingxia Zhang, Guobin Zhang, **Zhu Shu**, Jianlin Shi\*. Chitosan derived nitrogen-doped microporous carbons for high performance CO<sub>2</sub> capture. *Carbon*, 2013, 61: 423-430.

Yu Chen, Pengfei Xu, Hangrong Chen, Yongsheng Li, Wenbo Bu, **Zhu Shu**, Yaping Li, Jiamin Zhang, Lingxia Zhang, Limin Pan, Xiangzhi Cui, Zile Hua, Jin Wang, Linlin Zhang, Jianlin Shi\*. Colloidal HPMO nanoparticles: silica-etching chemistry tailoring, topological transformation, and nano-biomedical applications. *Advanced Materials*, 2013, 25 (22), 3100-3105.

Yongxia Wang, Xiangzhi Cui, Yongsheng Li, **Zhu Shu**, Hangrong Chen, Jianlin Shi\*. A simple co-nanocasting method to synthesize high surface area mesoporous LaCoO<sub>3</sub> oxides for CO and NO oxidations. *Microporous and Mesoporous Materials*, 2013, 176: 8-15.

Guobin Zhang, Hangrong Chen, Yun Gong, **Zhu Shu**, Dannong He, Yan Zhu, Xiaoxia Zhou, Xiangqian Fan, Haojie Zhang, Jianlin Shi\*. One-pot synthesis of mesoporous CuO<sub>x</sub>/CeO<sub>2</sub> Co-loaded ZrO<sub>2</sub>-TiO<sub>2</sub> nanocomposites via surfactant-free solvothermal method for catalytic removal of soot under NO/O<sub>2</sub>. *Catalysis Communications*, 2013, 35: 105-109.

Xiangzhi Cui, Zile Hua, Chenyang Wei, **Zhu Shu**, Liangxia Zhang, Hangrong Chen, Jianlin Shi\*. An in situ carbonization-replication method to synthesize mesostructured WO<sub>3</sub>/C composite as nonprecious-metal anode catalyst in PEMFC. *Chemistry - An Asian Journal*, 2013, 2: 429-436.

Guiju Tao, Zile Hua, Zhe Gao, Yan Zhu, Yan Zhu, Yu Chen, **Zhu Shu**, Lingxia Zhang and Jianlin Shi\*.

KF-Loaded Mesoporous Mg-Fe Bi-Metal Oxides: High Performance Transesterification Catalysts for Biodiesel Production. *Chemical Communications*, 2013, 49: 8006-8008.

Yongxia Wang, Xiangzhi Cui, Yongsheng Li, Lisong Chen, **Zhu Shu**, Hangrong Chen, Jianlin Shi\*. High surface area mesoporous  $\text{LaFe}_x\text{Co}_{1-x}\text{O}_3$  oxides: synthesis and electrocatalytic property for oxygen reduction. *Dalton Transactions*, 2014, 42(26): 9448-9452.

Xiaoxia Zhou, Hangrong Chen, Yan Zhu, Yudian Song, Yu Chen, Yongxia Wang, Yun Gong, Guobin Zhang, **Zhu Shu**, Xiangzhi Cui, Jinjin Zhao, Jianlin Shi\*. Dual-Mesoporous ZSM-5 Zeolite with Highly b-Axis-Oriented Large Mesopore Channels for the Production of Benzoin Ethyl Ether. *Chemistry - A European Journal*, 2013, 19 (30): 10017-10023.

Jun Zhou\*, Tiantian Li, Qiuyu Zhang, Yanxin Wang, **Zhu Shu**. Direct-utilization of sewage sludge to prepare split tiles. *Ceramics International*, 2013, 39 (8), 9179-9186.

#### 【授权发明专利】

**舒杼**, 李天天, 周俊. 利用高岭土通过无模板法制备介孔氧化硅材料的方法, 201610032397.1, 中国发明专利

**舒杼**, 李天天, 周俊. 利用高岭土通过不煅烧无模板法制备介孔氧化硅材料的方法, 201610033520.1, 中国发明专利

**舒杼**, 周俊, 李天天, 于冬雪, 陈云, 王焰新, 袁曦明. 高岭土基介孔氧化硅材料的制备方法, 201510027769.7, 中国发明专利

李天天, **舒杼**, 周俊. 一种长石的资源化综合利用工艺, 201610032396.7, 中国发明专利

李天天, **舒杼**, 周俊. 一种硅铝沸石制备介孔氧化硅并回收铝的工艺, 201610033505.7, 中国发明专利

周俊, **舒杼**, 李天天. 一种粉煤灰资源化综合利用工艺, 201610031407.X, 中国发明专利

周俊, 于冬雪, **舒杼**, 王焰新. 高强度高掺量磷石膏免烧砖的生产工艺, 2014102527071, 中国发明专利

周俊, 李天天, 于冬雪, **舒杼**, 王焰新. 一种免烧建筑陶瓷的生产工艺, 2014105061567, 中国发明专利

周俊, 王焰新, **舒杼**. 一种半干法制备建筑陶瓷用坯料的工艺, 200710053371.6, 中国发明专利

周俊, 王焰新, **舒杼**. 利用高温磷渣液制备建筑装饰用磷渣铸石的生产工艺, 200710053370.1, 中国发明专利

#### 【专著】

周俊, **舒杼**, 王焰新. 建筑陶瓷清洁生产. 北京: 科学出版社. 2011

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## 教育经历

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海梅一世大学 材料科学与工程 博士生联合培养 西班牙陶瓷技术研究所

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## 工作经历

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## 研究方向

[1] 多孔纳米材料、二维材料、纳米复合材料的设计合  
成。

水污染治理（吸附、光催化降解、综合利用）。

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