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个人简介:

孙建科, 教授, 博士生导师, 北京理工大学“特立青年学者”。2012年博士毕业于中科院福建物质结构研究所, 毕业后留所工作一年, 随后分别在日本产业技术综合研究所、德国马普学会胶体与界面研究所、韩国基础科学研究院软物质与活性物质研究中心以及瑞典斯德哥尔摩大学从事科学研究工作。近年来, 以第一及通讯作者在 *Nature*、*Nat. Commun.*、*J. Am. Chem. Soc.*、*Angew. Chem. Int. Ed.*、*Chem. Soc. Rev.*、*Energy Environ. Sci.* 等国际著名期刊杂志发表 SCI 论文 30 余篇, 其中 4 篇入选 ESI Top 1% 高被引论文。论文总引用 2000 余次。

研究方向:

1. 电荷修饰多孔材料及其纳米复合材料的设计合成与功能化, 探索其在催化、环境检测以及能源存储与转化领域的应用。
2. 聚离子液体及其纳米复合材料的合成与应用。

获奖情况:

2019	Journal of Materials Chemistry A Emerging Young Investigator
2018	北理工特立青年学者
2017	Journal of the American Chemical Society Young Investigator
2015	德国洪堡学者
2013	日本JSPS研究员
2012	宝钢优秀研究生特等奖
2012	卢嘉锡优秀研究生奖
2012	中科院优秀毕业生

承担项目:

北京理工大学“高层次人才科研启动计划”项目

课题组招聘:

课题组每年招聘博士生、硕士生数名; 欢迎优秀博士毕业生加入课题组从事博士后研究。

论文发表:

1. **Jian-Ke Sun**, Yaroslav I Sobolev (Co-first author), Weiyi Zhang, Qiang Zhuang and Bartosz Grzybowski*, Enhancing crystal growth using polyelectrolyte solutions and shear flow, *Nature*, 2020, 579, 73-79.
2. Su-Yun Zhang, Qiang Zhuang (Co-first author), Miao Zhang, Hong Wang, Zhiming Gao, **Jian-Ke Sun***, and Jiayin Yuan*, Poly(ionic liquid) composites, *Chem. Soc. Rev.*, 2020, DOI: 10.1039/C8CS00938D.
3. Hui-Chun Lee, Tobias Heil, **Jian-Ke Sun*** and Bernhard V. K. J. Schmidt*, Dispersed Nano-MOFs via a Stimuli-Responsive Biohybrid System with Enhanced Photocatalytic Performance, *Mater. Horiz.*, 2019, 6, 802-809.
4. Su-Yun Zhang, Zdravko Kochovski, Hui-Chun Lee, Yan Lu, Jie Zhang, **Jian-Ke Sun*** and Jiayin Yuan*, Ionic Organic Cage-encapsulating Phase-transferable Metal Clusters, *Chem. Sci.*, 2019, 10, 1450-1456.
5. **Jian-Ke Sun**, Xiao-Dong Yang, Guo-Yu Yang and Jie Zhang*, Bipyridinium derivative-based coordination polymers: from synthesis to materials applications, *Coord. Chem. Rev.*, 2019, 378, 533-560.
6. **Jian-Ke Sun**, Weiyi Zhang (Co-first author), Ryan Guterman, Hui-Juan Lin and Jiayin Yuan*, Porous polycarbene-bearing membrane actuator for ultrasensitive weak-acid detection and real-time chemical reaction monitoring, *Nat. Commun.*, 2018, 9, 1717. **Selected by Nature Research Chemistry Community as " Behind the Paper post"**
7. **Jian-Ke Sun**, Zdravko Kochovski, Wei-Yi Zhang, Holm Kirmse, Yan Lu, Markus Antonietti, and Jiayin Yuan*, General Synthetic Route toward Highly Dispersed Metal Clusters Enabled by Poly(ionic liquid)s, *J. Am. Chem. Soc.*, 2017, 139, 8971-8976. **Selected by JACS Young Investigators Virtual Issue 2017.**
8. Cheng Chen, **Jian-Ke Sun (Co-first author)**, Ya-Jun Zhang, Xiao-Dong Yang, Jie Zhang*, Flexible Viologen-based Porous Framework Showing X-ray Induced Photochromism with Single-Crystal-to-Single-Crystal Transformation, *Angew. Chem. Int. Ed.*, 2017, 56, 14458-14462.
9. **Jian-Ke Sun**, Hui-Juan Lin, Wei-Yi Zhang, Min-Rui Gao, Markus Antonietti and Jiayin

Yuan*, A tale of two membranes: from poly(ionic liquid) to metal-organic framework hybrid nanoporous membranes via pseudomorphic replacement, *Mater. Horiz.*, 2017, 4, 681-687.
Highlighted by: <http://www.x-mol.com/news/7173>.

10. **Jian-Ke Sun**, Markus Antonietti, and Jiayin Yuan*, Nanoporous ionic organic networks: from synthesis to materials applications, *Chem. Soc. Rev.*, 2016, 45, 6657-6657.
11. **Jian-Ke Sun**, Wen-Wen Zhan, Tomoki Akita, and Qiang Xu*, Toward Homogenization of Heterogeneous Metal Nanoparticle Catalysts with Enhanced Catalytic Performance: Soluble Porous Organic Cage as a Stabilizer and Homogenizer, *J. Am. Chem. Soc.*, 2015, 137, 7063-7066. **Highlighted by Chemical & Engineering News and JACS Spotlights.**
12. **Jian-Ke Sun** and Qiang Xu*, Functional materials derived from open framework templates/precursors: synthesis and applications, *Energy Environ. Sci.*, 2014, 7, 2071-2100.
13. **Jian-Ke Sun**, Wei Li, Cheng Chen, Cai-Xia Ren, Dan-Mei Pan and Jie Zhang*, Photoinduced bending of large single crystal of 1,2-bis(4-pyridyl)-ethylene-based pyridinium salt powered by [2 + 2] cycloaddition, *Angew. Chem. Int. Ed.*, 2013, 52, 6653-6657.
14. Xinchun Yang, **Jian-Ke Sun**, Mitsunori Kitta, Huan Pang and Qiang Xu*, Encapsulating highly catalytically-active metal nanoclusters inside porous organic cages, *Nature Catal.*, 2018, 1, 214-220.
15. **Jian-Ke Sun**, Cheng Chen, Li-Xuan Cai, Cai-Xia Ren, Bin Tan and Jie Zhang*, Mechanical grinding of a single-crystal metal-organic framework triggered emission with tunable violet-to-orange luminescence, *Chem. Commun.*, 2014, 50, 15956-15959.
16. **Jian-Ke Sun**, and Qiang Xu*, From metal-organic framework to carbon: toward controlled hierarchical pore structures via a double-template approach, *Chem. Commun.*, 2014, 50, 13502-13505.
17. **Jian-Ke Sun**, Min Ji*, Cheng Chen, Wu-Gen Wang, Peng Wang, Rui-Ping Chen and Jie Zhang*, A charge-polarized porous metal-organic framework for gas chromatographic separation of alcohols from water, *Chem. Commun.*, 2013, 49, 1624-1626.
18. **Jian-Ke Sun**, Li-Xuan Cai, Yong-Juan Chen, Zhao-Hui Li and Jie Zhang*, Reversible luminescence switch in a photochromic Metal-Organic Framework. *Chem. Commun.*, 2011, 47, 6870-6872.
19. **Jian-Ke Sun**, Bin Tan, Li-Xuan Cai, Rui-Ping Chen, Jian Zhang and Jie Zhang*, Polycatenation driven self-assembly of nanoporous frameworks based on 1D ribbon of rings:

regular structural evolution, interpenetration transformation and photochemical modification, *Chem. Eur. J.*, 2014, 20, 2488-2498 (Cover paper). Highlighted by *ChemistryViews*. [http://www.chemistryviews.org/details/ezone/5799181/Soft Porous Frameworks.html](http://www.chemistryviews.org/details/ezone/5799181/Soft_Porous_Frameworks.html) and *Angewandte Spotlights (Angew. Chem. Int. Ed., 2014, 53, 2272–2275)*, *Nanowerk*. http://www.nanowerk.com/nanotechnology-news/newsid=34414.php?utm_content=buffer35bd9&utm_medium=social&utm_source=plus.google.com&utm_campaign=buffer.

20. **Jian-Ke Sun**, Qing-Xia Yao, Yu-Yang Tian, Lei Wu, Guang-Shan Zhu, Rui-Ping Chen and Jie Zhang*, Borromean-entanglement-driven Assembly of Porous Molecular Architectures with Anions Modified Pore Space. *Chem. Eur. J.*, 2012, 18, 1924-1931 (Frontispiece Paper).
21. **Jian-Ke Sun**, Xu-Hui Jin, Li-Xuan Cai and Jie Zhang*, Supramolecular isomer-dependent photochromism and emission color tuning of bipyridinium salts, *J. Mater. Chem.*, 2011, 21, 17667-17672.
22. **Jian-Ke Sun**, Peng Wang, Qing-Xia Yao, Yong-Juan Chen, Zhao-Hui Li, Yong-Fan Zhang, Li-Ming Wu and Jie Zhang*, Solvent- and anion-controlled photochromism of viologen-based metal-organic hybrid materials. *J. Mater. Chem.*, 2012, 22, 12212-12219.
23. **Jian-Ke Sun**, Ya-Jun Zhang (Co-first author), Gui-Peng Yu, Jie Zhang*, Markus Antonietti, and Jiayin Yuan*, Three Birds, One Stone – Photo-/Piezo-/Chemochromism in One Conjugated Nanoporous Ionic Organic Network. *J. Mater. Chem. C*, 2018, 6, 9065-9070. Selected as 2018 Journal of Materials Chemistry C HOT Papers&Cover Paper&Journal of Materials Chemistry C top 5% most-read during April-June 2018.
24. **Jian-Ke Sun**, and Qiang Xu*, Metal Nanoparticles Immobilized on Carbon Nanodots as Highly Active Catalysts for Hydrogen Generation from Hydrazine in Aqueous Solution, *ChemCatChem*, 2015, 7, 526-531.
25. **Jian-Ke Sun**, Xu-Hui Jin, Chao Chen and Jie Zhang*, Thermally Triggered Reversible Transformation between Parallel Staggered Stacking and Plywood-Like Stacking of 1D Coordination Polymer Chains. *Inorg. Chem.*, 2010, 49, 7046-7051.
26. **Jian-Ke Sun**, Peng Wang, Cheng Chen, Xue-Jun Zhou, Li-Ming Wu, Yong-Fan Zhang and Jie Zhang*, Charge-distribution-related regioisomerism of photoresponsive metal-organic polymeric chains. *Dalton Trans.*, 2012, 41, 13441-13446.
27. **Jian-Ke Sun**, and Jie Zhang*, Functional metal-bipyridinium frameworks: self-assembly and

applications, *Dalton Trans.*, 2015, 44, 19041-19055.

28. **Jian-Ke Sun**, Wei Li, Li-Xuan Cai and Jie Zhang*, Structural diversity of the mixed-ligand system Mn-cpdba-2,2'-bpy controlled by temperature. *CrystEngComm*, 2011, 13, 1550-1556.
29. **Jian-Ke Sun**, Qing-Xia Yao, Zhan-Feng Ju and Jie Zhang*, 2D self-catenated coordination polymer constructed by triple- and double-helical chains. *CrystEngComm*, 2010, 12, 1709-1711.