



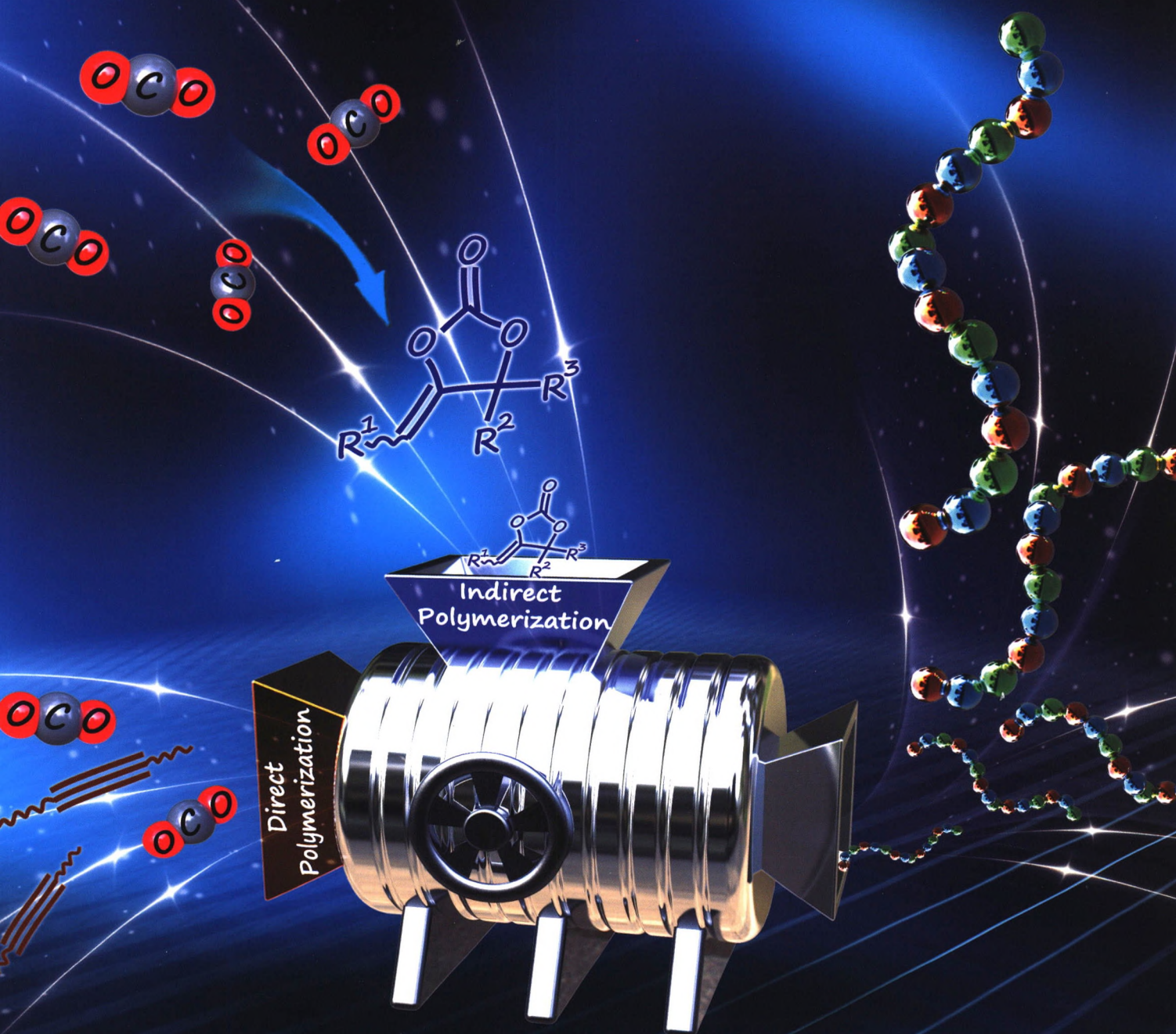
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# 化学学报

## ACTA CHIMICA SINICA

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中国化学会  
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主办

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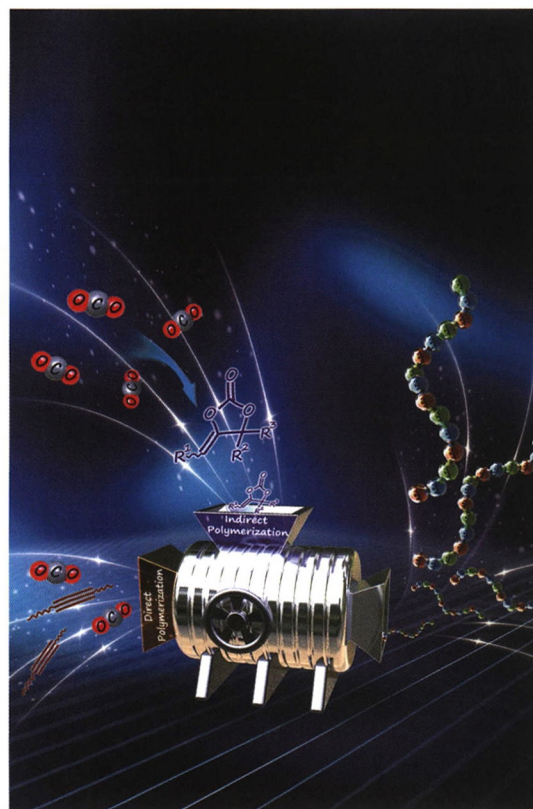
### 研究论文

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| 自交联聚乙烯亚胺-聚砜高温质子交换膜研究 .....                    | 赵伟辰, 徐鑫, 白慧娟, 张劲*, 卢善富*, 相艳, 化学学报, 2020, 78(1), 69-75                  |
| 快速合成 Bi@ZIF-8 复合纳米材料用于近红外二区光热治疗以及可控药物释放 ..... | 王英美, 朱道明, 杨阳, 张珂, 张修珂, 吕明珊, 胡力, 丁帅杰, 王亮*, 化学学报, 2020, 78(1), 76-81     |
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\* 通信联系人.

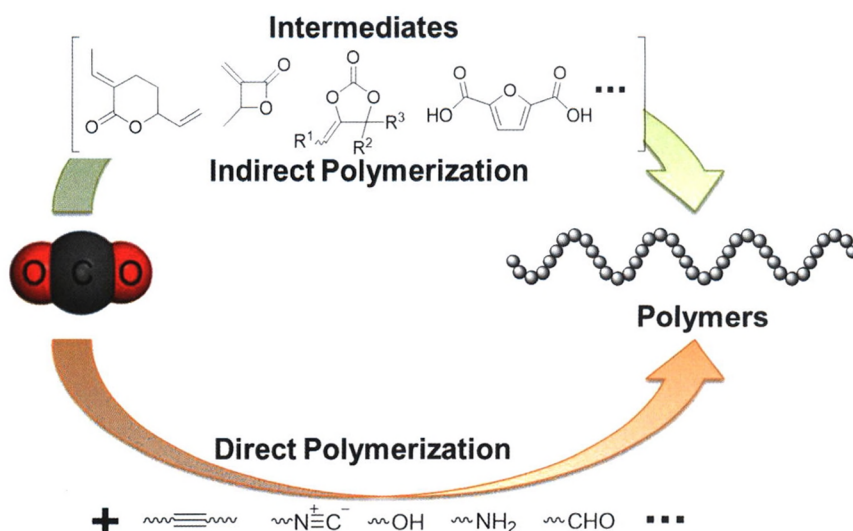


**On the cover:** Using the green monomer of CO<sub>2</sub> to prepare polymeric materials has attracted more attention. This review summarizes the advances in converting CO<sub>2</sub> into polymeric materials during the past few years, and discusses the perspective in this area. [Tang, Ben Zhong *et al.* on page 9-22.]



### Review

#### New Polymerizations Based on Green Monomer of Carbon Dioxide

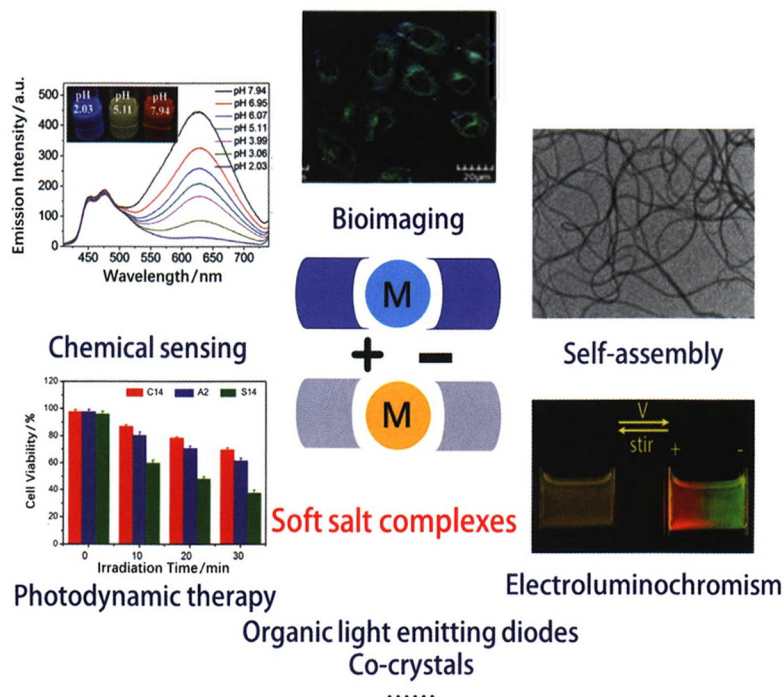


Song, Bo; Qin, Anjun\*; Tang, Ben Zhong\*

*Acta Chim. Sinica* **2020**, 78(1), 9-22

The recent progress in the polymerizations based on the green monomer of carbon dioxide is summarized in this review, and the perspective in this area is discussed.

## Phosphorescent Soft Salt Complexes for Optoelectronic Applications



Ma, Yun; Chen, Kexin; Guo, Zeling; Liu, Shujuan; Zhao, Qiang\*; Wong, Wai-Yeung\*

*Acta Chim. Sinica* **2020**, 78(1), 23-33

Recently, phosphorescent soft salt complexes have gained an increasing attention and this review aims to summarize the synthesis and photophysical properties of those complexes, and recent advances of them in different optoelectronic applications, including organic light emitting diodes, bioimaging, photodynamic therapy, electrochromic luminescence devices, etc.

## Cyclic Lanthanide-based Molecular Clusters: Assembly and Single Molecule Magnet Behavior



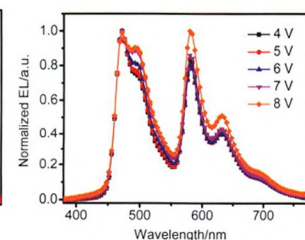
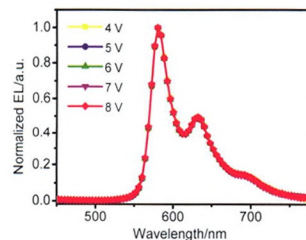
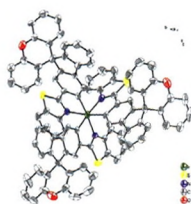
Tian, Haiquan; Zheng, Li-Min\*

*Acta Chim. Sinica* **2020**, 78(1), 34-55

The recent progress of cyclic lanthanide-based clusters with the main focus on the synthetic routes, crystal structures and magnetic properties are summarized in this review.

### Article

## Conjugated Regulation of Phosphorescent Iridium (III) Complex Constructed from Spiro Ligand and Its Electroluminescent Performances



Ren, Bao-Yi; Yi, Jian-Cheng; Zhong, Dao-Kun; Zhao, Yu-Zhi; Guo, Run-Da\*; Sheng, Yong-Gang; Sun, Ya-Guang\*; Xie, Ling-Hai; Huang, Wei

*Acta Chim. Sinica* **2020**, 78(1), 56-62

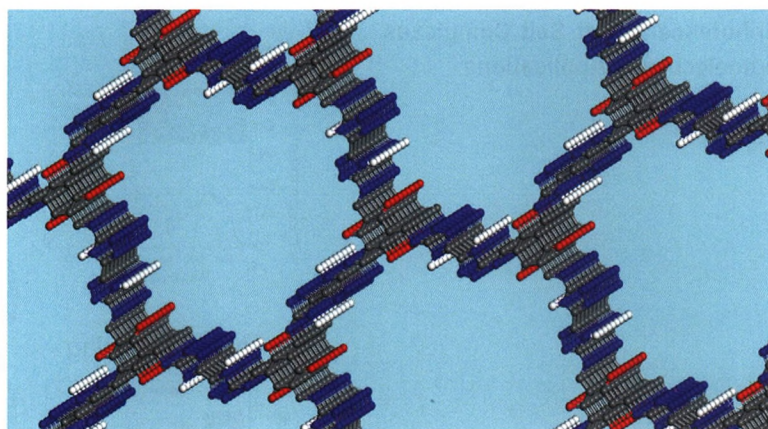
A new iridium(III) complex containing spiro ligand is designed and synthesized, and the results of device performances indicate that the complex is a potential phosphor for efficient orange and white organic light-emitting diodes, possessing the advantages of low-cost, suitable doping in high concentration, and stabilized color coordinates.



# Synthesis of a Two-dimensional Covalent Organic Framework with the Ability of Conducting Proton along Skeleton

Wang, Zhitao; Li, Hui; Yan, Shichen; Fang, Qianrong\*

*Acta Chim. Sinica* **2020**, 78(1), 63-68

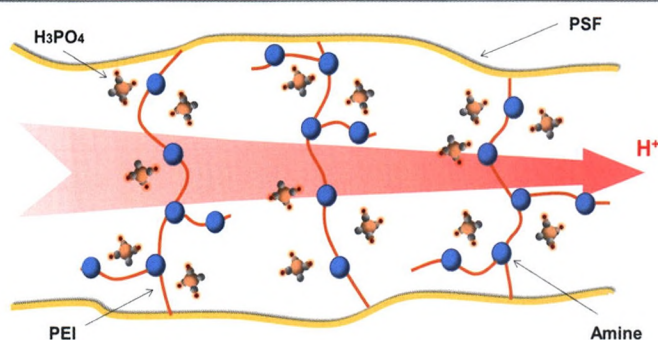


A novel two-dimensional covalent organic framework (COF) named TFP-BTDA-COF was synthesized by condensation of 5,5'-diamino-3,3'-bis(1*H*-1,2,4-triazole) (BTDA) containing triazole fragments in the structure and 2,4,6-triformylphloroglucinol (TFP) through Schiff-base reaction. The N—H bond of the triazole in the construction unit of BTDA is periodically and regularly arranged on each layer of the COF to form an ordered array because of the  $\pi$ - $\pi$  accumulation of the 2D-COF. Under certain humidity conditions, the protons can be transmitted along the array in the one-dimensional pore channel by the intermediary of water molecules. Therefore, the TFP-BTDA-COF has the ability to conduct proton through the skeleton.

# Self-crosslinked Polyethyleneimine-polysulfone Membrane for High Temperature Proton Exchange Membrane

Zhao, Weichen; Xu, Xin; Bai, Huijuan; Zhang, Jin\*; Lu, Shanfu\*; Xiang, Yan

*Acta Chim. Sinica* **2020**, 78(1), 69-75

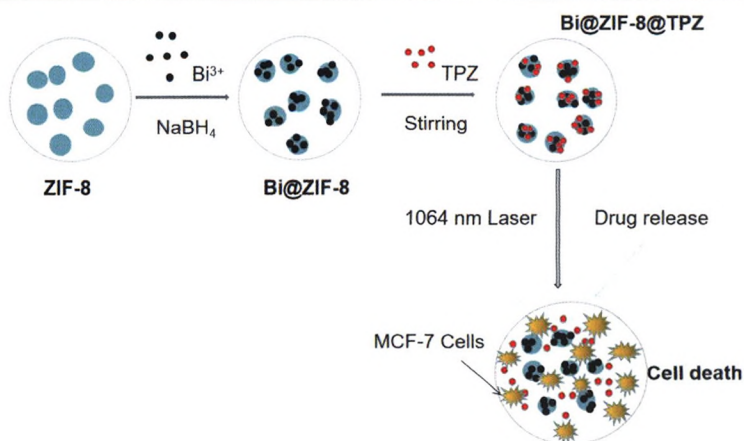


In this study, a novel self-crosslinked polyethyleneimine-polysulfone (PEI-PSF) high temperature proton exchange membrane with high mechanical properties was prepared, in which PEI acts as a crosslinking agent and provides phosphoric acid (PA) adsorption sites. Different from previous studies, as the degree of cross-linking increases, the acid adsorption of the membrane increases, resulting in high proton conductivity and cell performance.

# Rapid Synthesis of Bi@ZIF-8 Composite Nanomaterials for the Second Near-infrared Window Photothermal Therapy and Controlled Drug Release

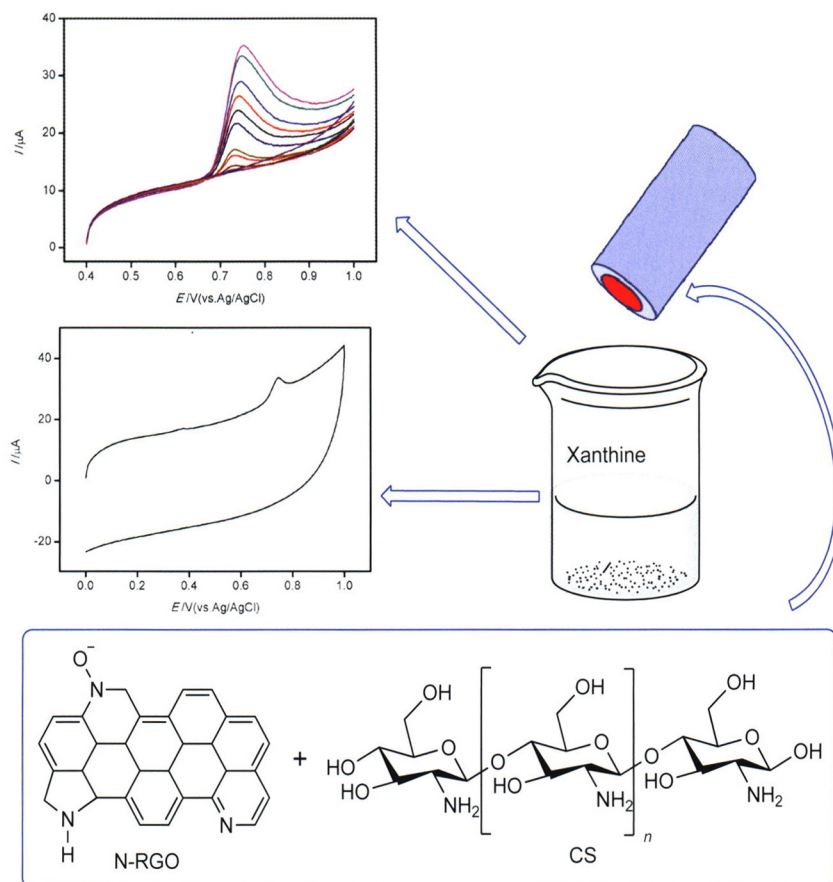
Wang, Yingmei; Zhu, Daoming; Yang, Yang; Zhang, Ke; Zhang, Xiuke; Lv, Mingshan; Hu, Li; Ding, Shuaijie; Wang, Liang\*

*Acta Chim. Sinica* **2020**, 78(1), 76-81



The nanomaterial Bi@ZIF-8 which Bi nanoparticles embedded in ZIF-8, was efficiently loaded with the anticancer drug tirapazamine (TPZ) to form a composite nanomaterial Bi@ZIF-8@TPZ. Under acidic and near-infrared two-zone (NIR-II) lighting conditions, controllable release of the drug can be achieved, and good therapeutic effects are approached.

# Electrochemical Detection of Xanthine and Study for the Inhibition of Uric Acid Based on Chitosan/Nitrogen Doped Reduced Graphene Oxide Modified Electrode



Song, Guangjie; Wu, Tiaodi; Liu, Fuxin;  
Zhang, Binyan; Liu, Xiuhui\*

*Acta Chim. Sinica* **2020**, 78(1), 82-88

A sensitive sensor for xanthine detection is constructed based on chitosan/nitrogen doped reduced graphene oxide (CS/N-RGO). The inhibition for the formation of uric acid by febuxostat and allopurinol was researched by the electrochemical method.

**Author Guide** ..... *Acta Chim. Sinica* **2020**, 78(1), 89-94



## “《化学学报》2018 年度最有影响力论文奖”揭晓

为推动促进国内外化学期刊发展、加强化学工作者交流，根据《化学学报》编委会决议，设立“《化学学报》XX 年度最有影响力论文奖”。该奖对获奖人的国籍、居住地、单位、年龄等没有任何限制，由《化学学报》编委会根据文章年度 SCI 引用情况评出（参考影响因子计算规则，兼顾当年发表当年引用情况，按第 n-2 年至第 n 年发表的文章在第 n 年引用情况排序），奖励通信作者荣誉证书、文章第一作者荣誉证书和奖金 1000 元。奖励 10 篇左右。已获奖的论文次年不再重复奖励。

### “《化学学报》2018 年度最有影响力论文奖”获奖列表：

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基于萘并二酰亚胺的胺基功能化聚合物的三组分一锅法合成及其在聚合物太阳能电池中的应用  
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化学学报 2017 Vol. 75 (8): 744-769

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余晓叶, 周帆, 陈加荣, 肖文精  
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于月娜, 徐明华

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手性磷-烯配体在不对称催化领域的研究进展  
化学学报 2017 Vol. 75 (7): 655-670

汤湫湫, 霍小红, 孟庆华, 张万斌  
DOI: 10.6023/A16020078

钨催化的烯丙位 C—H 键官能团化：新催化体系的发展  
化学学报 2016 Vol. 74 (3): 219-233

#### 10 次：

钟建基, 孟庆元, 陈彬, 佟振合, 吴骊珠  
DOI: 10.6023/A16090491  
可见光催化的交叉偶联放氢反应  
化学学报 2017 Vol. 75 (1): 34-40

竹芯, 朱凯, 孙邦锦, 樊健, 周祎, 宋波  
DOI: 10.6023/A17020074  
综合研究 DPE 添加剂对含 5,6-二氟-苯并[1,2,5]噻二唑给-受体共聚物的光伏性能影响  
化学学报 2017 Vol. 75 (5): 464-472

#### 9 次：

王少静, 李长伟, 李锦, 陈邦, 郭媛  
DOI: 10.6023/A17010029  
新型香豆素类氟离子荧光探针的合成及细胞成像研究  
化学学报 2017 Vol. 75 (4): 383-390

黄佳琦, 孙滢智, 王云飞, 张强  
DOI: 10.6023/A16080454  
锂硫电池先进功能隔膜的研究进展  
化学学报 2017 Vol. 75 (2): 173-188

王其, 程明, 曹逸涵, 强璐莉, 王乐勇  
DOI: 10.6023/A15090585  
基于双间苯-32-冠-10 穴醚超分子组装体的设计与构筑  
化学学报 2016 Vol. 74 (1): 9-16