



Q K 1 8 3 1 8 2 7

ISSN 1003-3726

CN 11-2051/O6

# 高分子通报

POLYMER BULLETIN

2018 6

《高分子通报》编辑委员会

中国化学会  
中国科学院化学研究所

# 高分子通报

## (GAOFENZI TONGBAO)

2018年6月第6期

### 目 次

#### 专论

- 基于氧化偶联聚合制备的共轭多孔聚咔唑及相关性能研究进展 ..... 陈 琦 张荣荣 韩宝航(1)  
编织超交联微孔聚合物的研究进展 ..... 杨 娟 金尚彬 谭必恩(9)  
多孔聚离子液体的合成与应用 ..... 任勇源 郭江娜 孙 哲 胡 寅 严 锋(21)  
基于氮,磷配体多孔有机聚合物材料的设计合成及其催化应用 .....  
..... 李存耀 严 丽 汪文龙 王玉清 姜 森 丁云杰(32)

#### 研究简报

- 粉末状聚苯乙烯气凝胶的结构调控及其液相吸附性能初探 .....  
..... 蔡力锋 许 静 许鸿基 徐 飞 梁业如 郑冰娜 符若文 吴丁财(51)  
含硫共轭微孔聚合物的制备及光催化水分解性能研究 ..... 王 千 高慧敏 任世杰(58)  
超临界二氧化碳活化提升多孔有机聚合物的比表面积和气体吸附性能的研究 ..... 贾子彦 袁大强(66)

#### 综述

- 三嗪基共价微孔有机聚合物的研究进展 ..... 徐 琛 付 县 喻桂朋 潘春跃(72)  
多孔聚电解质功能材料研究进展 ..... 唐清泉 赵 强(85)  
固态发光多孔有机聚合物的研究进展 ..... 李玉森 李满荣 张思梦 陈 龙(96)  
从反应条件看有机反应在 POPs 合成中的应用 .....  
..... 黄继涛 陈樑吉 李子银 林铨杰 杨义锶 项发晖 张章静 项生昌(114)  
多孔有机聚合物在生物医学方面的应用 ..... 陈无忌 郭 佳(129)  
磁性金属有机框架复合材料的构筑及应用 ..... 姜 雪 张秋禹(143)  
多孔有机聚合物非均相光催化研究进展 ..... 支永峰 马 思 刘晓明(160)  
有机多孔材料后修饰官能化方式研究进展 ..... 穆振杰 丁雪松 陈志彦 韩宝航(172)  
含二氮杂萘酮结构微孔聚合物的研究进展 ..... 刘 程 袁宽瑜 王锦艳 蹇锡高(182)  
氢键有机骨架材料的研究进展 ..... 李阳雪 于海洋 杨茜元 林鑫辰 贺逸凡 李卓然(190)  
基于有机多孔聚合物的荧光探针 ..... 姚 婵 刘艳丽 刘铭晗 王文君 许彦红(198)  
共轭微孔聚合物光催化分解水制氢研究进展 ..... 毛 娜 许云峰 蒋加兴(215)  
多孔高分子材料对二氧化碳的捕获与转化 ..... 李怡萌 张 玲 马 雷 邓伟侨(231)  
聚合物有机框架的药物输送应用 ..... 张丹维 王 辉 黎占亭(243)  
六齿硅节点、阴离子有机框架化合物的合成 ..... 徐智策 张博颖 乔山林(251)

2018年6月出版 责任编辑 陈晓闽 戴晓红

# POLYMER BULLETIN

No. 6 June 2018

## CONTENTS

Conjugated Porous Polycarbazoles via Oxidative Coupling Polymerization from Preparation to Properties .....	CHEN Qi, ZHANG Rong-rong, HAN Bao-hang( 1 )
Research Progress in Knitting Hypercrosslinked Microporous Polymers ... YANG Juan, JIN Shang-bin, TAN Bi-en( 9 )	
Synthesis and Application of Porous Poly(ionic liquid)s .....	REN Yong-yuan, GUO Jiang-na, SUN Zhe, HU Yin, YAN Feng(21)
Design and Synthesis of N, P-Ligands Based POPs (Porous Organic Polymers) and Their Applications in Heterogeneous Catalysis .....	LI Cun-yao, YAN Li, WANG Wen-long, WANG Yu-qing, JIANG Miao, DING Yun-jie(32)
Structural Control of Powdery Polystyrene Aerogel and Preliminary Investigation of Its Liquid-Phase Adsorption Properties CAI Li-feng, XU Jing, XU Hong-ji, XU Fei, LIANG Ye-ru, ZHENG Bing-na, FU Ruo-wen, WU Ding-cai(51)	
Sulphur-Containing Conjugated Microporous Polymers for Photocatalytic Water-splitting Hydrogen Evolution .....	WANG Qian, GAO Hui-min, REN Shi-jie(58)
Enhanced Surface Area and Gas Uptake in Porous Polymer Networks Activated by Supercritical Carbon Dioxide Exchange .....	JIA Zi-yan, YUAN Da-qiang(66)
Research Progress on Trazine-based Microporous Organic Polymers .....	XU Chen, FU Xian, YU Gui-peng, PAN Chun-yue(72)
Progress in Porous Polyelectrolytes Functional Materials .....	TANG Qing-quan, ZHAO Qiang(85)
Research Progress in Solid-state Luminescence Porous Organic Polymers .....	
..... LI Yu-sen, LI Man-rong, ZHANG Si-meng, CHEN Long(96)	
Applications of Organic Reactions in the Synthesis of POPs from the View of Reaction Conditions ..... HUANG Ji-tao, CHEN Liang-ji, LI Zi-yin, LIN Quan-jie, YANG Yi-si, XIANG Fa-hui, ZHANG Zhang-jing, XIANG Sheng-chang(114)	
Biomedical Applications of Porous Organic Polymers ..... CHEN Wu-ji, GUO Jia(129)	
Fabrication and Application of Magnetic Metal-Organic Frameworks Composites ... JIANG Xue, ZHANG Qiu-yu (143)	
Progress of Porous Organic Polymers in Heterogeneous Photocatalysis ... ZHI Yong-feng, MA Si, LIU Xiao-ming(160)	
Recent Advances on Post-functionalization of Porous Organic Polymers .....	
..... MU Zhen-jie, DING Xue-song, CHEN Zhi-yan, HAN Bao-hang(172)	
The Research Process of Phthalazinone-based Microporous Organic Polymers .....	
..... LIU Cheng, YUAN Kuan-yu, WANG Jin-yan, JIAN Xi-gao(182)	
Recent Advances in Hydrogen-bonded Organic Frameworks .....	
..... LI Yang-xue, YU Hai-yang, YANG Xi-yuan, LIN Xin-chen, HE Yi-fan, LI Zhuo-ran(190)	
Application of Porous Organic Polymers in Fluorescent Probe .....	
..... AO Chan, LIU Yan-li, LIU Ming-han, WANG Wen-jun, XU Yan-hong(198)	
Recent Advances of Conjugated Microporous Polymer Photocatalysts for Hydrogen Evolution .....	
..... MAO Na, XU Yun-feng, JIANG Jia-xing(215)	
The Capture and Conversion of Porous Polymer Materials for CO <sub>2</sub> .....	
..... LI Yi-meng, ZHANG Ling, MA Lei, DENG Wei-qiao(231)	
Porous Organic Frameworks for Drug Delivery .....	ZHANG Dan-wei, WANG Hui, LI Zhan-ting(243)
Anionic Silicate Organic Frameworks Constructed from Hexacoordinate Silicon Centres .....	
..... XU Zhi-ce, ZHANG Bo-ying, QIAO Shan-lin(251)	

## 高分子通报

(月刊)

2018年6月 第6期 (总第230期)

主 管 中国科学技术协会

排 版 同方知网(北京)技术有限公司

主 办 中国化学会

印刷装订 北京诚信嘉华印刷厂

中国科学院化学研究所

订 购 处 全国各地邮政局

主 编 李永舫

总发行处 北京报刊发行局

编辑出版 《高分子通报》编辑部

《高分子通报》编辑部电子信箱:gfzbt@iccas.ac.cn

《高分子通报》编辑部地址

《高分子通报》编辑部电话:010-62588926

北京 2709 信箱 邮政编码 100190

广告经营许可证号:京海工商广字第 8290 号(1-1)

网 址 www.gfzbt.com

国内邮发代号:80-294

ISSN 1003-3726  
CN 11-2051/O6

定价:30元

国内外公开发行

# POLYMER BULLETIN

No. 6 June 2018

## CONTENTS

Conjugated Porous Polycarbazoles via Oxidative Coupling Polymerization from Preparation to Properties .....	CHEN Qi, ZHANG Rong-rong, HAN Bao-hang( 1 )
Research Progress in Knitting Hypercrosslinked Microporous Polymers ... YANG Juan, JIN Shang-bin, TAN Bi-en( 9 )	
Synthesis and Application of Porous Poly(ionic liquid)s .....	REN Yong-yuan, GUO Jiang-na, SUN Zhe, HU Yin, YAN Feng(21)
Design and Synthesis of N, P-Ligands Based POPs (Porous Organic Polymers) and Their Applications in Heterogeneous Catalysis .....	LI Cun-yao, YAN Li, WANG Wen-long, WANG Yu-qing, JIANG Miao, DING Yun-jie(32)
Structural Control of Powdery Polystyrene Aerogel and Preliminary Investigation of Its Liquid-Phase Adsorption Properties CAI Li-feng, XU Jing, XU Hong-ji, XU Fei, LIANG Ye-ru, ZHENG Bing-na, FU Ruo-wen, WU Ding-cai(51)	
Sulphur-Containing Conjugated Microporous Polymers for Photocatalytic Water-splitting Hydrogen Evolution .....	WANG Qian, GAO Hui-min, REN Shi-jie(58)
Enhanced Surface Area and Gas Uptake in Porous Polymer Networks Activated by Supercritical Carbon Dioxide Exchange .....	JIA Zi-yan, YUAN Da-qiang(66)
Research Progress on Trazine-based Microporous Organic Polymers .....	XU Chen, FU Xian, YU Gui-peng, PAN Chun-yue(72)
Progress in Porous Polyelectrolytes Functional Materials .....	TANG Qing-quan, ZHAO Qiang(85)
Research Progress in Solid-state Luminescence Porous Organic Polymers .....	
..... LI Yu-sen, LI Man-rong, ZHANG Si-meng, CHEN Long(96)	
Applications of Organic Reactions in the Synthesis of POPs from the View of Reaction Conditions ..... HUANG Ji-tao, CHEN Liang-ji, LI Zi-yin, LIN Quan-jie, YANG Yi-si, XIANG Fa-hui, ZHANG Zhang-jing, XIANG Sheng-chang(114)	
Biomedical Applications of Porous Organic Polymers ..... CHEN Wu-ji, GUO Jia(129)	
Fabrication and Application of Magnetic Metal-Organic Frameworks Composites ... JIANG Xue, ZHANG Qiu-yu (143)	
Progress of Porous Organic Polymers in Heterogeneous Photocatalysis ... ZHI Yong-feng, MA Si, LIU Xiao-ming(160)	
Recent Advances on Post-functionalization of Porous Organic Polymers .....	
..... MU Zhen-jie, DING Xue-song, CHEN Zhi-yan, HAN Bao-hang(172)	
The Research Process of Phthalazinone-based Microporous Organic Polymers .....	
..... LIU Cheng, YUAN Kuan-yu, WANG Jin-yan, JIAN Xi-gao(182)	
Recent Advances in Hydrogen-bonded Organic Frameworks .....	
..... LI Yang-xue, YU Hai-yang, YANG Xi-yuan, LIN Xin-chen, HE Yi-fan, LI Zhuo-ran(190)	
Application of Porous Organic Polymers in Fluorescent Probe .....	
..... AO Chan, LIU Yan-li, LIU Ming-han, WANG Wen-jun, XU Yan-hong(198)	
Recent Advances of Conjugated Microporous Polymer Photocatalysts for Hydrogen Evolution .....	
..... MAO Na, XU Yun-feng, JIANG Jia-xing(215)	
The Capture and Conversion of Porous Polymer Materials for CO <sub>2</sub> .....	
..... LI Yi-meng, ZHANG Ling, MA Lei, DENG Wei-qiao(231)	
Porous Organic Frameworks for Drug Delivery .....	ZHANG Dan-wei, WANG Hui, LI Zhan-ting(243)
Anionic Silicate Organic Frameworks Constructed from Hexacoordinate Silicon Centres .....	
..... XU Zhi-ce, ZHANG Bo-ying, QIAO Shan-lin(251)	

## 高分子通报

(月刊)

2018年6月 第6期 (总第230期)

主 管 中国科学技术协会

排 版 同方知网(北京)技术有限公司

主 办 中国化学会

印刷装订 北京诚信嘉华印刷厂

中国科学院化学研究所

订 购 处 全国各地邮政局

主 编 李永舫

总发行处 北京报刊发行局

编辑出版 《高分子通报》编辑部

《高分子通报》编辑部电子信箱:gfzbt@iccas.ac.cn

《高分子通报》编辑部地址

《高分子通报》编辑部电话:010-62588926

北京 2709 信箱 邮政编码 100190

广告经营许可证号:京海工商广字第 8290 号(1-1)

网 址 www.gfzbt.com

国内邮发代号:80-294

ISSN 1003-3726  
CN 11-2051/O6

定价:30元

国内外公开发行