

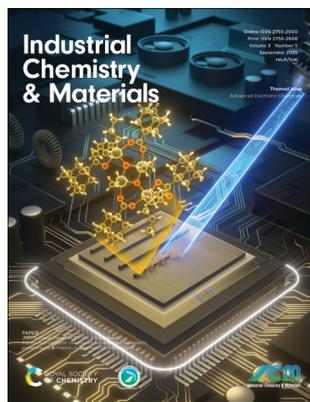
Industrial Chemistry & Materials

An international journal of significant innovative research and major technological breakthroughs in all aspects of industrial chemistry and materials
rsc.li/icm

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 2755-2500 CODEN ICMNCZ 3(5) 501-644 (2025)



Cover

See Jialong Zhang, Pengzhong Chen, Xiaojun Peng *et al.*, pp. 543-552.
Image reproduced by permission of Pengzhong Chen from *Ind. Chem. Mater.*, 2025, 3, 543.

EDITORIAL

507

Introduction to advanced electronic chemicals

Ruixia Liu,* Rong Sun* and Guoqiang Yang*

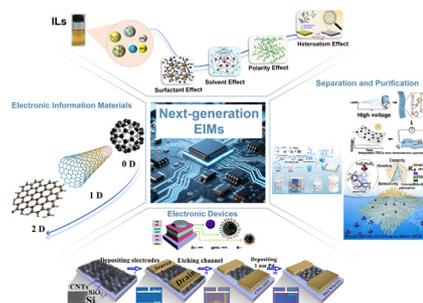


REVIEW

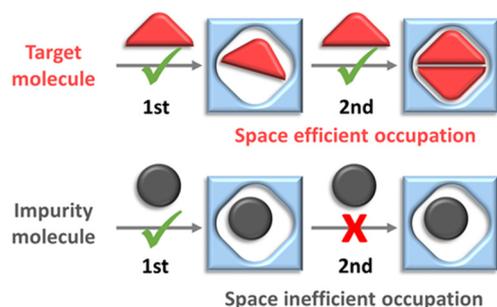
509

Ionic liquids: a pitocin for next-generation electronic information materials?

Mengyue Li, Bin He, Yangyang Jiang, Ruirui Wang, Cunliang Gan, Fengqi Ji, Yao Li and Ruixia Liu*



535



Efficient stacking of iso-butene in sulfonate functional metal-organic frameworks for efficient iso-butene/iso-butane separation

Zhensong Qiu, Jiyu Cui, Dengzhuo Zhou, Zhenglu Yang, Xiaofei Lu, Xian Suo, Anyun Zhang, Xili Cui, Lifeng Yang* and Huabin Xing*

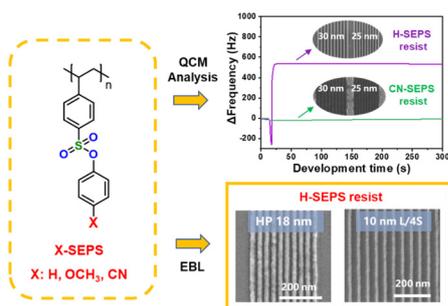
543



Hybrid alkyl-ligand tin-oxo clusters for enhanced lithographic patterning performance via intramolecular interactions

Hao Chen, Wenzheng Li, Yingdong Zhao, Xinyan Huang, Jialong Zhang,* Peijun Ji, Jun Zhao, Pengzhong Chen* and Xiaojun Peng*

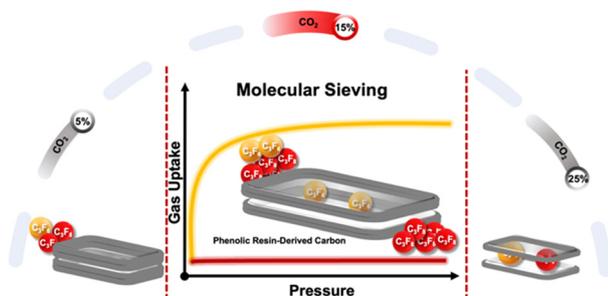
553



Lithographic performances of aryl sulfonate ester-modified polystyrenes as nonchemically amplified resists

Rongrong Peng, Peng Lian, Jinping Chen,* Tianjun Yu, Yi Zeng, Shuangqing Wang, Xudong Guo, Rui Hu, Jun Zhao, Yanqing Wu, Guoqiang Yang* and Yi Li*

567



Fine-tuned ultramicroporous carbon materials via CO₂ activation for molecular sieving of fluorinated propylene and propane

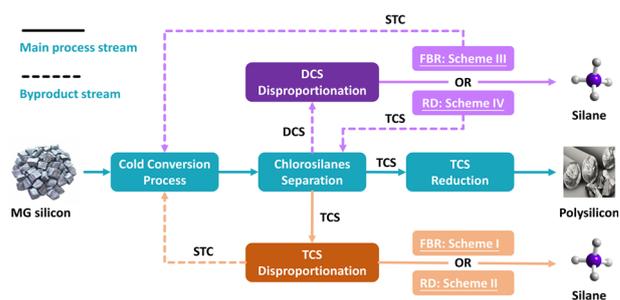
Yiwen Fu, Liangzheng Sheng, Wei Xia, Guangtong Hai,* Jialei Yan, Lihang Chen,* Qiwei Yang, Zhiguo Zhang, Qilong Ren and Zongbi Bao*



578

Silane production from the dichlorosilane by-product of the Siemens process: a comparative study with the trichlorosilane route

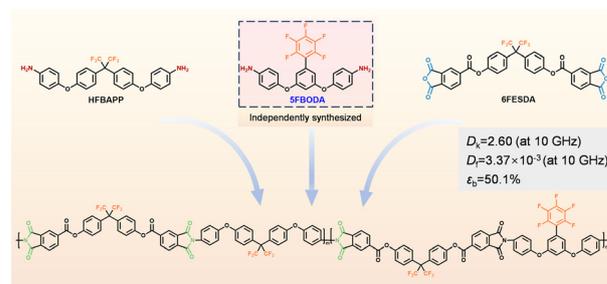
Zi-Yi Chi, Peng-Bo Bai, Wen-De Xiao, Ming-Dong Zhou* and Xue-Gang Li*



587

Synthesis and properties of a novel perfluorinated polyimide with high toughness, low dielectric constant and low dissipation factor

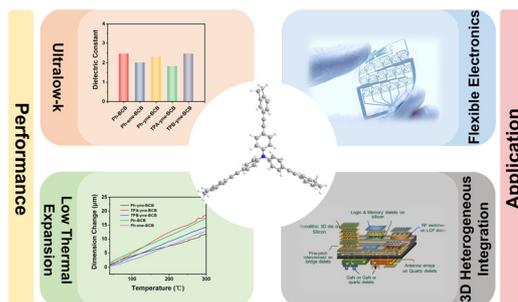
Hangqian Wang, Yao Zhang, Xialei Lv,* Jinhui Li,* Kuangyu Wang, Guoping Zhang and Rong Sun



596

Molecular topology-driven benzocyclobutene-based ultralow dielectrics with copper-matched low thermal expansion

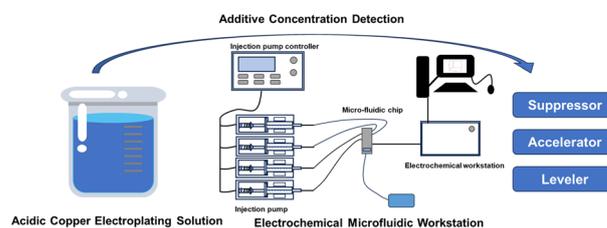
Menglu Li, Linfeng Fan, Quan Sun, Meng Xie, Jin Guo and Wenxin Fu*



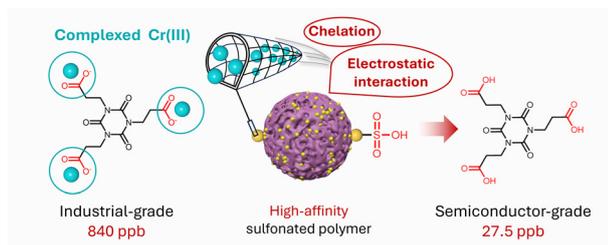
607

On-line detection of additive concentrations in acidic copper plating solution for metal interconnection by an electrochemical microfluidic workstation

Yi Zhao, Ju-Xing Zeng, Jia-Qiang Yang, Tao Song, Ren Hu, Jian-Jia Su, Bo Zhang,* Fang-Zu Yang,* Dongping Zhan* and Lianhuan Han*



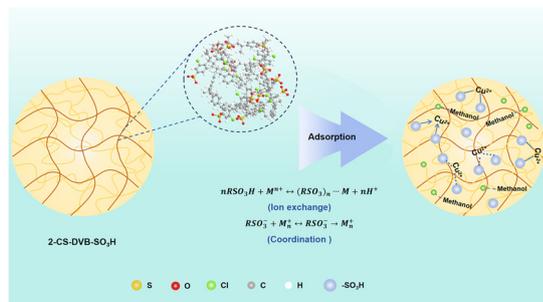
618



Engineering sulfonated polymers for the removal of ultra-trace complexed Cr(III) in tris(2-carboxyethyl) isocyanurate photoresist resin monomers

Huiyao Huang, Shiquan Zhong, Yawen Chen, Wangquan Gong, Changshen Ye, Ting Qiu* and Jie Chen*

631



Synergistic strengthening of ion-exchange resins by post-crosslinking and selective sulfonation for PGMEA purification

Nian Zhang, Fan Liu, Dan Li, Chunyan Shi, Aizi Cai, Shizhe Xu, Yaocheng Dai, Yan Wang* and Haifeng Dong*

