

# Journal of Materials Chemistry C

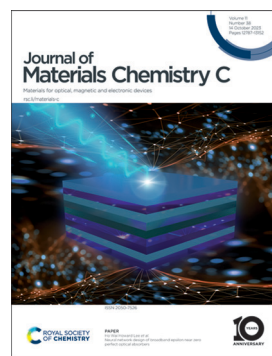
Materials for optical, magnetic and electronic devices

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## IN THIS ISSUE

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*et al.*, pp. 12906–12914.

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## PROFILE

12799

Contributors to the Emerging Investigators 2023  
issue



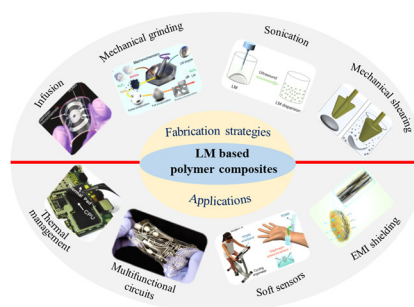
Journal of  
Materials Chemistry C  
2023 Emerging Investigators

## REVIEWS

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A review on thermal and electrical behaviours of  
liquid metal-based polymer composites

Li-Chuan Jia, Yun-Fei Yue, Jian-Feng Zeng,  
Zhi-Xing Wang, Run-Pan Nie,\* Ling Xu,  
Ding-Xiang Yan\* and Zhong-Ming Li



# Journal of Materials Chemistry C

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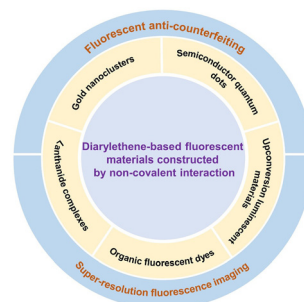


## REVIEWS

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### Photochromic diarylethene induced fluorescence switching materials constructed by non-covalent interactions

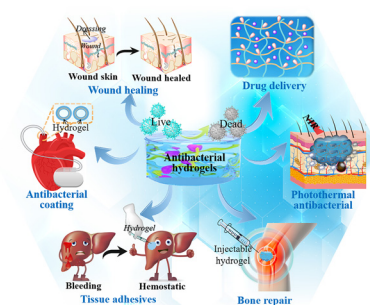
Qing-Feng Li, Longlong Zhang, Mengdan Shen, Jin-Tao Wang,\* Lin Jin\* and Zhenling Wang\*



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### Recent progress of antibacterial hydrogel materials for biomedical applications

Qian Wang, Xing Feng, Hong Xu, Guo Guo, Ying Li\* and Qilong Zhang\*

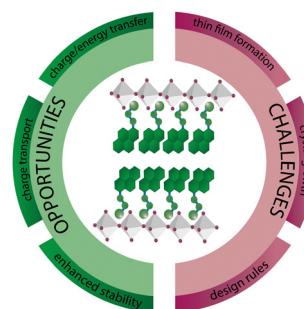


## PERSPECTIVE

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### 2D and quasi-2D hybrid perovskites containing organic cations with an extended conjugated system: opportunities and challenges

Wouter T. M. Van Gompel,\* Laurence Lutsen and Dirk Vanderzande

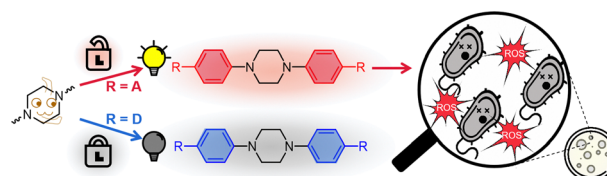


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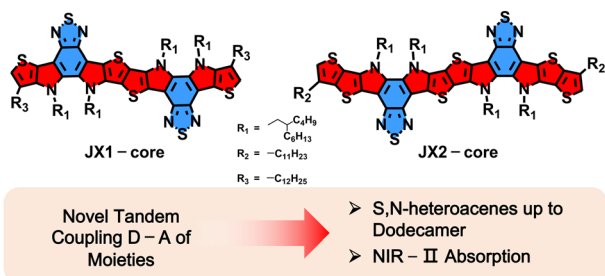
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### Piperazine: a promising building block for aggregation-induced emission materials

Tuokai Peng and Hui-Qing Peng\*



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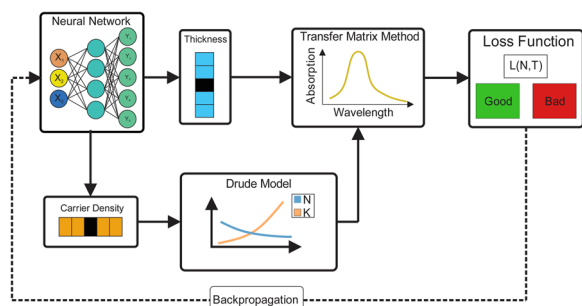


### A narrow-bandgap non-fullerene acceptor constructed with an S,N-heteroacene up to a dodecamer in size

Jiaxin Guo, Xinyuan Jia, Xiangjian Cao, Tengfei He, Huazhe Liang, Wendi Shi, Zheng Xu, Ruohan Wang, Yaxiao Guo,\* Zhaoyang Yao,\* Xiangjian Wan, Guankui Long, Chenxi Li and Yongsheng Chen\*

PAPERS

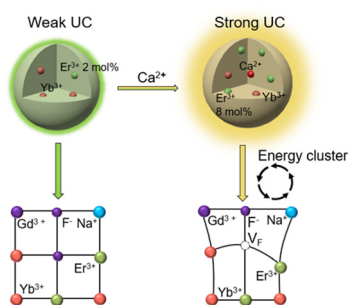
12906



### Neural network design of broadband epsilon near zero perfect optical absorbers

David Dang, Aleksei Anopchenko, Sudip Gurung, Zoey Liu, Xuguo Zhou and Ho Wai Howard Lee\*

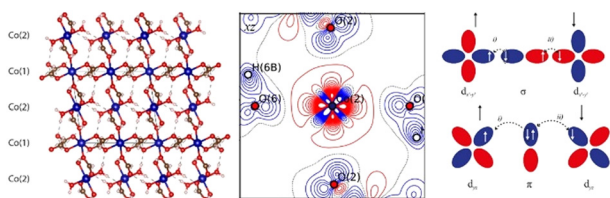
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### Enhancing upconversion *via* constructing local energy clusters in lanthanide-doped fluoride nanoparticles

Haolin Yang, Anshuo Zhang, Hai Guo,\* Denghao Li, Shiqing Xu\* and Lei Lei\*

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### Elucidating the superexchange mechanisms in magnetic coordination polymer $[\text{Co}(\text{HCOO})_2(\text{H}_2\text{O})_2]_\infty$ through chemical bonding analysis

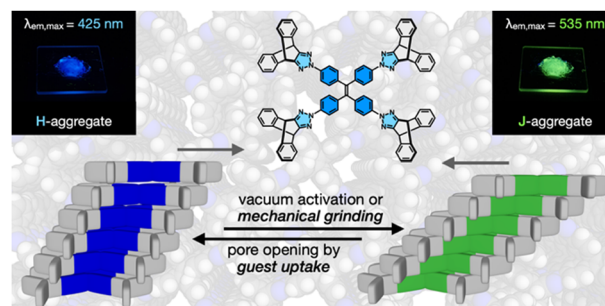
Thomas Bjørn Egede Grønbech, Lennard Krause, Davide Ceresoli\* and Bo Brummerstedt Iversen\*



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### A hydrogen-bonded organic framework of rigidly branched fluorophore: guest-adaptive cavity and phase-dependent light emission

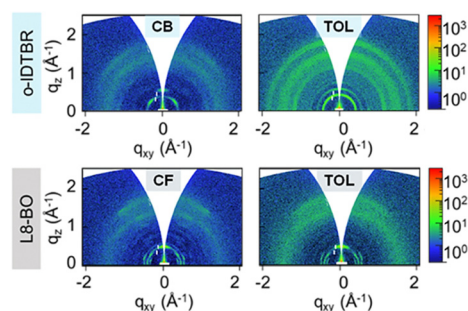
Hongsik Kim, Hyejin Yoo, Jin Yeong Kim and Dongwhan Lee\*



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### Boosting electron transport in non-fullerene acceptors using non-chlorinated solvents

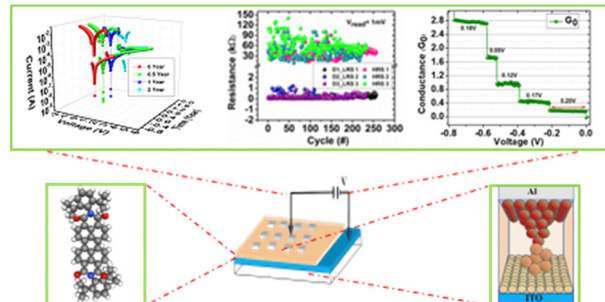
Mohamad Insan Nugraha,\* Ryanda Enggar Anugrah Ardhi, Dipti Naphade, Weimin Zhang, Youyou Yuan, Martin Heeney and Thomas D. Anthopoulos\*



12949

### Two-stage filamentary mechanism in high-performance organic resistive switches

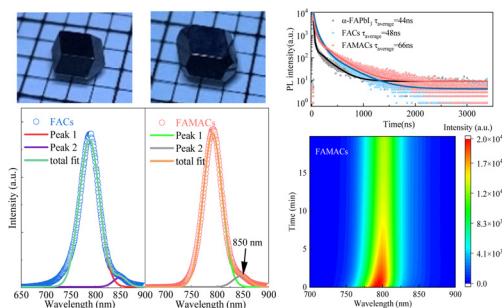
Arti Bisht, Nitish Saini, Komal Bhardwaj, Rachana Kumar and Ajeet Kumar\*



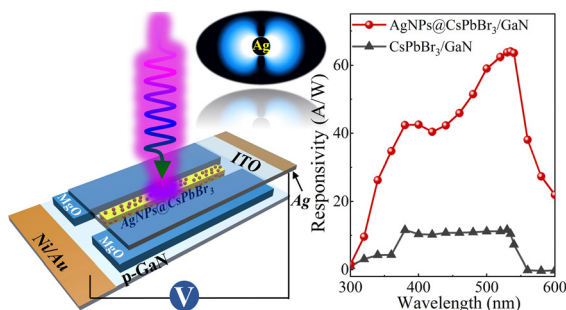
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Kaiyu Wang, Feitong Chen, Qing Yao, Jie Zhang, Huiling Zhu, Weiwei Zhang, Xiaoyuan Zhan, Shenglai Wang\* and Jianxu Ding\*



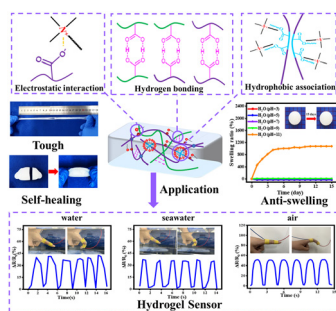
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### Plasmon-enhanced photoresponse and stability of a CsPbBr<sub>3</sub> microwire/GaN heterojunction photodetector with surface-modified Ag nanoparticles

Chengxin Lin, Peng Wan, Bingwang Yang, Daning Shi, Caixia Kan\* and Mingming Jiang\*

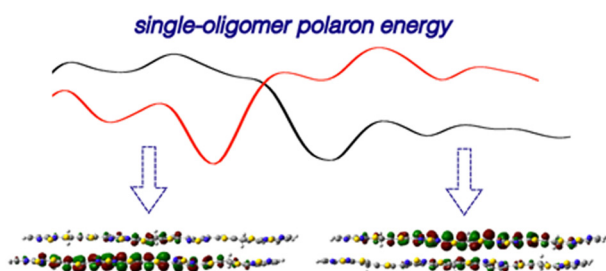
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### Anti-swelling hydrogels based on surfactant-polymer interactions for underwater sensing with excellent mechanical properties

Yue Cai, Kaizhen Wan, Qihui Chen, Maochun Hong, Zhao-Xi Zhou\* and Heqing Fu\*

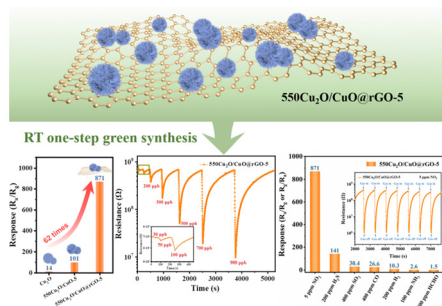
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### Dynamics-induced charge transfer in semiconducting conjugated polymers

Fabian Bauch, Chuan-Ding Dong\* and Stefan Schumacher

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### One-step green synthesis of Cu<sub>2</sub>O/CuO@rGO composites for ppt level detection of NO<sub>2</sub> at room temperature

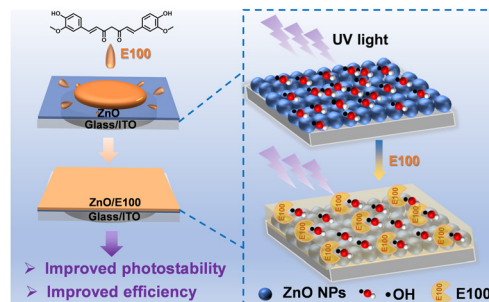
Jinjuan Li, Jing Hu,\* Nan Li, Miao Cheng, Tao Wei, Qianqian Liu, Ruirui Wang, Wanfei Li, Yun Ling, Yafei Zhang and Bo Liu\*



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### Simultaneous improvement in efficiency and photostability of organic solar cells by modifying the ZnO electron-transport layer with curcumin

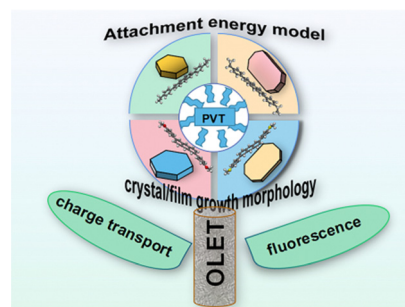
Yue Liu, Hang Yang, Yue Wu, Hongyu Fan, Xiaoxiao Li, Kewei Hu, Chaohua Cui\* and Yongfang Li



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### The effect of heteroatoms at end groups of anthracene derivatives on the photoelectric properties and crystal/film morphology: a theoretical perspective

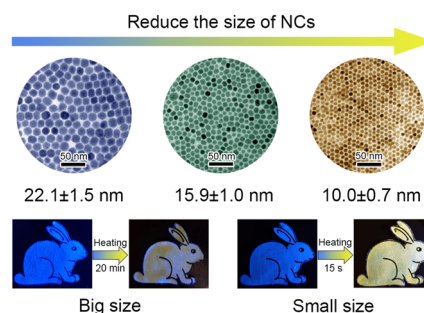
Gui-Ya Qin, Xiao-Qi Sun, Pan-Pan Lin, Xue Wei, Jing-Fu Guo, Wei-Bo Cui, Jian-Xun Fan, Hui Li, Lu-Yi Zou and Ai-min Ren\*



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### Phase transition and rapid temperature response of lead-free perovskite Cs–Cu–I nanocrystals enabled by their size

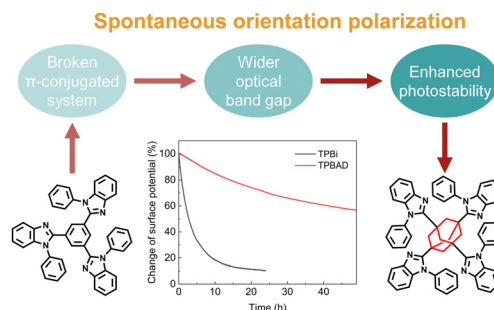
Jie Chen, Yu Li, Zhe Yin,\* Shuaibing Wang, Ouyang Lin, Wentao Niu, Feng Teng\* and Aiwei Tang\*



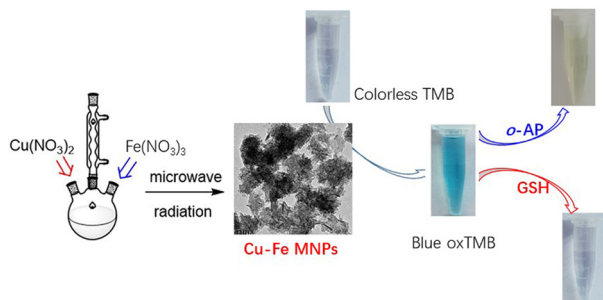
13039

### Stable spontaneous orientation polarization by widening the optical band gap with 1,3,5,7-tetrakis(1-phenyl-1H-benzo[d]imidazol-2-yl)-adamantane

Wei-Chih Wang, Kyohei Nakano, Yuya Tanaka, Keisuke Kurihara, Hisao Ishii, Kiyohiro Adachi, Daisuke Hashizume, Chain-Shu Hsu\* and Keisuke Tajima\*



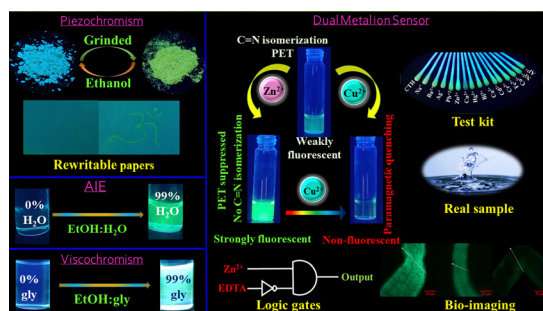
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### Peroxidase-like Cu–Fe bimetal oxide mesoporous nanospheres identified for the efficient recognition of toxic *o*-aminophenol and bioactive glutathione

Xuemei Zhou, Lingmin Kong, Junkai Hao, Jing Feng, Shuo Sun, Chuanzhen Zhou, Yanmin Liu, Zhengquan Yan,\* Xiao Zhu and Lei Hu\*

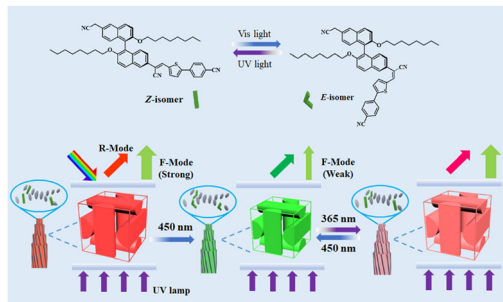
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### A multifunctional coumarin-based probe for distinguishable detection of Cu<sup>2+</sup> and Zn<sup>2+</sup>: its piezochromic, viscochromic and AIE behavior with real sample analysis and bio-imaging applications

Aayoosh Singh, Pranjalee Yadav, Saumya Singh, Pradeep Kumar, S. Srikrishna and Vinod P. Singh\*

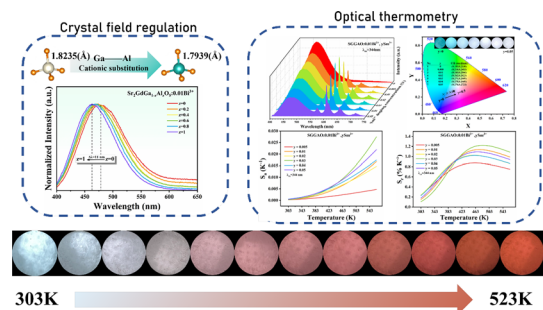
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### Simultaneous optical tuning of reflection and fluorescence in a self-organized simple 3D cubic structure by $\alpha$ -cyanodiarylethene-based chiral fluorescence photoswitches

Jingjing Wang, Yanrong He, Shan Li, Qingyan Fan and Jinbao Guo\*

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### Multicolor tunable Bi<sup>3+</sup>, Sm<sup>3+</sup> co-doped Sr<sub>2</sub>GdGaO<sub>5</sub> phosphor and its application in optical thermometry

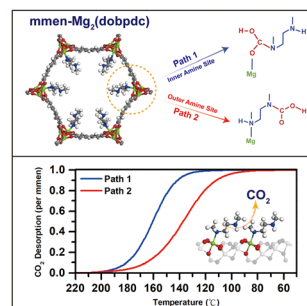
Kangrui Qiang, Yingqiang Yu, Yulong Ye, Liang Liang, Qinan Mao, Yang Ding, Yiwen Zhu, Meijiao Liu and Jiasong Zhong\*



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### Insights into the capture mechanism of CO<sub>2</sub> by diamine-appended Mg<sub>2</sub>(dobpdc): a combined DFT and microkinetic modeling study

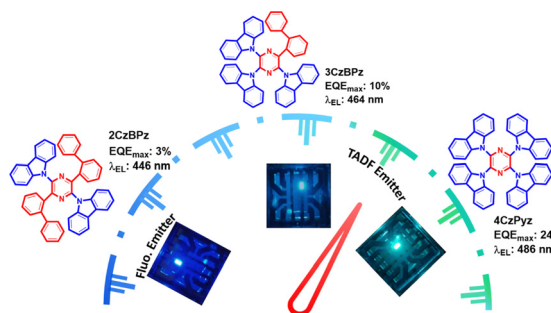
Kuan-Yu Lin, Zhong-Ming Xie, Lu-Sheng Hong and Jyh-Chiang Jiang\*



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### Tuning the emission and exciton utilization mechanisms of pyrazine-based multi-carbazole emitters and their use in organic light-emitting diodes

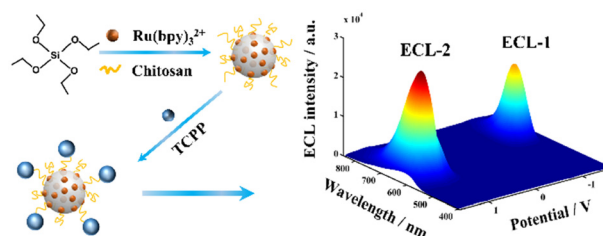
Dongyang Chen, Le Zhang, Tomas Matulaitis, David B. Cordes, Alexandra M. Z. Slawin, Xiao-Hong Zhang, Ifor D. W. Samuel\* and Eli Zysman-Colman\*



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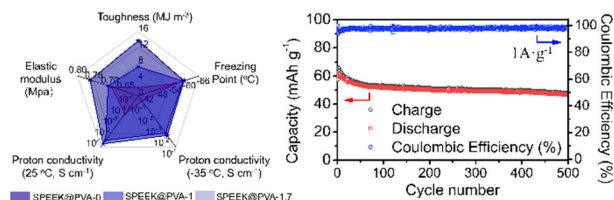
Mingquan Guo, Jiangnan Shu,\* Dexin Du, Yisha Wang and Hua Cui\*



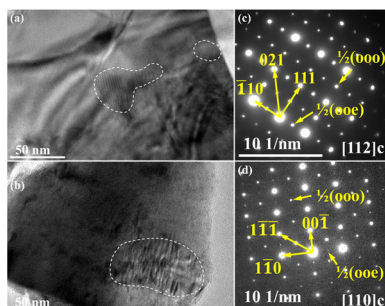
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### A freezing-tolerant superior proton conductive hydrogel comprised of sulfonated poly(ether-ether-ketone) and poly(vinyl-alcohol) as a quasi-solid-state electrolyte in a proton battery

Hao Dong, Lin-Lin Wang, Zhi-Rong Feng, Jie Song, Qiao Qiao,\* Yu-Ping Wu and Xiao-Ming Ren\*



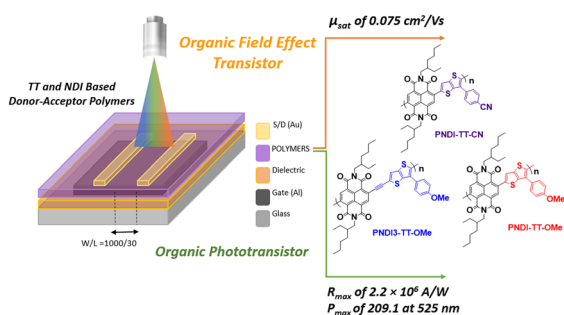
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### Energy storage performance of $\text{NaNbO}_3$ lead-free dielectric ceramics by doping $\text{Sr}(\text{Mg}_{1/3}\text{Sb}_{2/3})\text{O}_3$

Qinpeng Dong, Peng Nong, Yue Pan, Dafu Zeng, Mingzhao Xu, Huanfu Zhou, Xu Li\* and Xiuli Chen\*

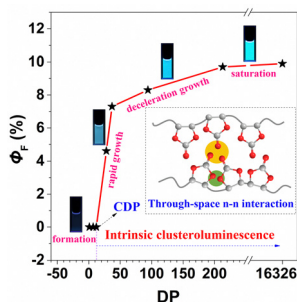
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### Synthesis and characterization of naphthalenediimide-thienothiophene-conjugated polymers for OFET and OPT applications

Dilara Gunturkun, Recep Isci, Sheida Faraji, Berkay Sütay, Leszek A. Majewski and Turan Ozturk\*

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### Polymerization-induced clusteroluminescence of poly(cyclic carbonate)s

Bin Liu,\* Genghong Huang, Hu-liang Lu, Kang Chen, Zishan Yan, Ya-Ling Wang, Bo Chu, Fu-de Ren, Yongzhen Yang and Xing-Hong Zhang\*

