

# Journal of Materials Chemistry C

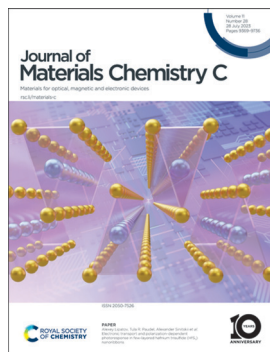
Materials for optical, magnetic and electronic devices

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## IN THIS ISSUE

ISSN 2050-7526 CODEN JMCCCX 11(28) 9369–9736 (2023)



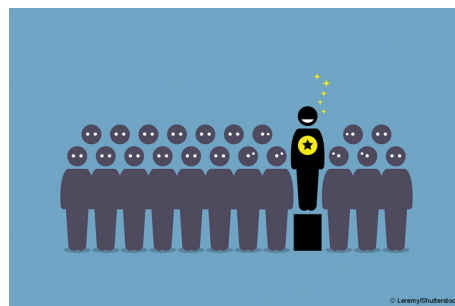
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## EDITORIAL

9381

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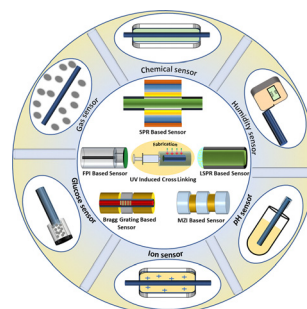


## REVIEW

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### Hydrogel-integrated optical fiber sensors and their applications: a comprehensive review

Md. Sazid Bin Sadeque, Hussain Kawsar Chowdhury,  
Muzaffar Rafique, Mehmet Atif Durmuş,  
Md. Kawsar Ahmed, Md. Mehdi Hasan, Aykut Erbaş,  
İbrahim Sarpkaya, Fatih Inci and Mustafa Ordu\*



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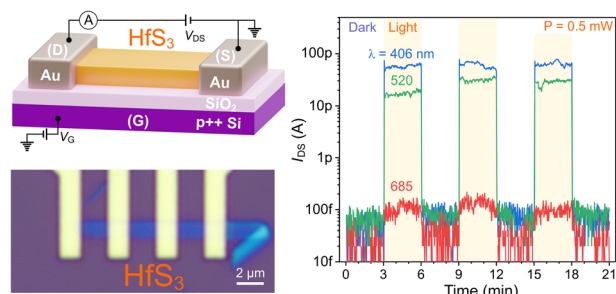
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## Electronic transport and polarization-dependent photoresponse in few-layered hafnium trisulfide (HfS<sub>3</sub>) nanoribbons

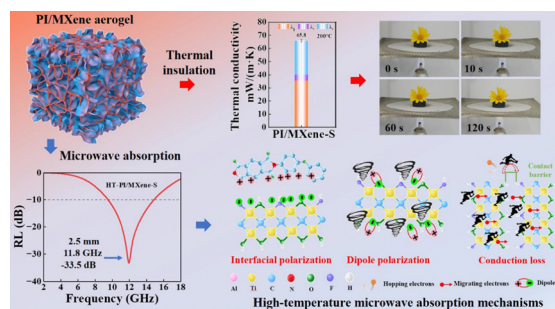
Alexey Lipatov,\* Jehad Abourahma, Gauthami Viswan, Khimananda Acharya, Tula R. Paudel,\* Michael J. Loes, Saman Bagheri, Alpha T. N'Diaye, Esha Mishra, Thilini Kumari Ekanayaka, Mohammad Zaz, Jack Rodenburg, Archit Dhingra, Robert Streubel, Peter A. Dowben and Alexander Sinitskii\*



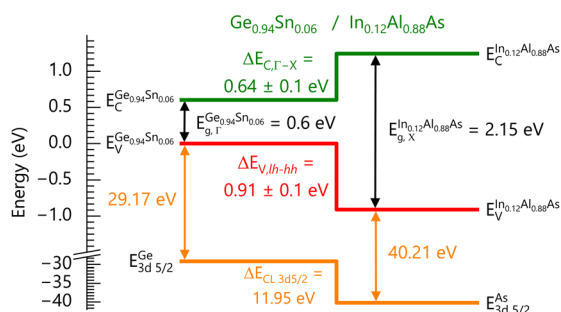
9438

## Microstructure controllable polyimide/MXene composite aerogels for high-temperature thermal insulation and microwave absorption

Wenting Zhang, Enjie Ding, Wenxi Zhang, Jiaqiang Li, Chuyang Luo and Liying Zhang\*



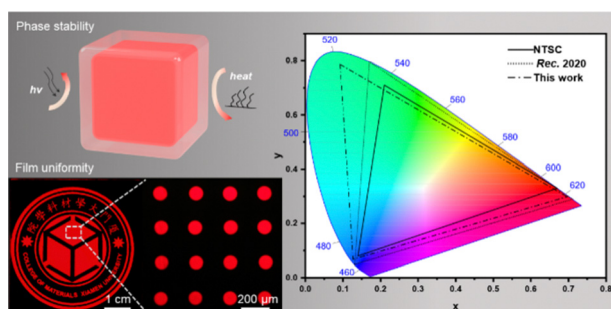
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### Lattice matched GeSn/InAlAs heterostructure: role of Sn in energy band alignment, atomic layer diffusion and photoluminescence

Sengunthar Karthikeyan, Rutwik Joshi, Jing Zhao, Robert J. Bodnar, Brenden A. Magill, Yannick Pleimling, Giti A. Khodaparast and Mantu K. Hudait\*

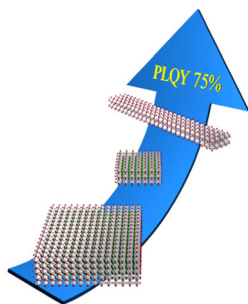
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### Pure red CsPbBr<sub>0.96</sub>I<sub>2.04</sub>/SiO<sub>2</sub> core/shell nanocrystals with simultaneous high efficiency and stability for Mini-LEDs

Yixin Cai, Yang Yang, Haorui Dong, Tongtong Xuan,\* Xueyuan Tang\* and Rong-Jun Xie\*

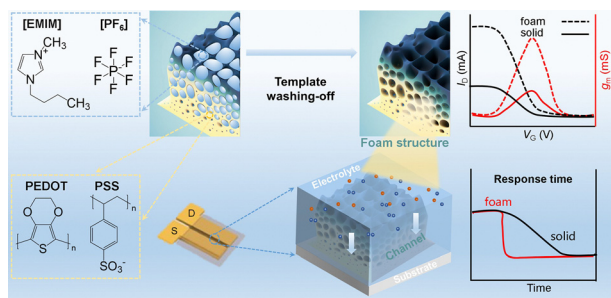
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### Shape- and excitation-dependent charge-carrier dynamics in colloidal MAPbI perovskites as nanostripes, nanosheets and nanoplatelets

Eugen Klein, Chris Rehagen, Rostyslav Lesyuk and Christian Klinker\*

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### A high-performance organic electrochemical transistor based on foam-structured channels prepared using a template washing-off method

Shunhao He, Shanglin Xiang, Junjie Wang, Kaili Wang, Liuyingzi Yu, Yaxin Song, Chengcheng Zhu, Zhongyan Gong, Yulong Zhang, Kun Gao, Xing Kang, Tingwei Wang,\* Hai-Dong Yu\* and Gang Lu\*

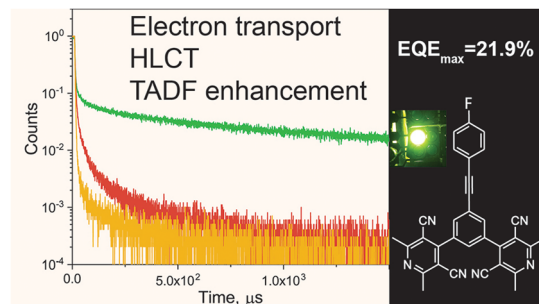


## PAPERS

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### 3,5-Dicyanopyridine motifs for electron-transporting semiconductors: from design and synthesis to efficient organic light-emitting diodes

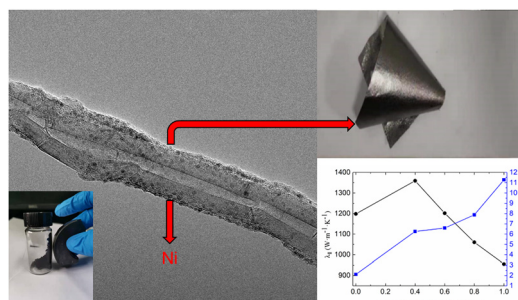
Karolis Leitonas, Brigita Vigante, Dmytro Volyniuk, Audrius Bucinskas, Rasa Keruckiene, Pavels Dimitrijevs, Tien-Lung Chiu, Juozas Vidas Grazulevicius\* and Pavel Arsenyan\*



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### Flexible graphite films with high cross-plane thermal conductivity prepared by graphitization of polyimide catalyzed by Ni-coated-CNTs

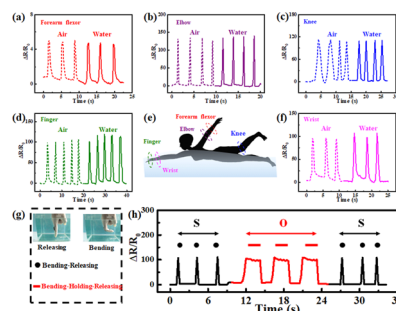
Shuaizhen Li, Zhibo Zheng, Siwei Liu,\* Zhenguo Chi, Yi Zhang\* and Jiarui Xu



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### Micro-/nanofiber-coupled superhydrophobic and conductive textile for underwater wearable strain sensors with full-scale human motion detection ability

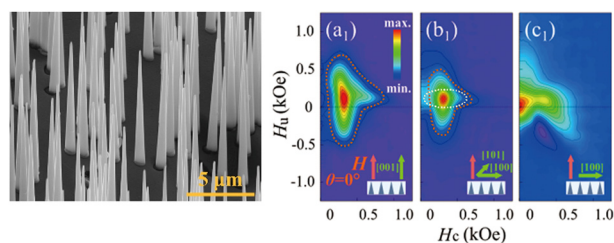
Junchi Ma, Yongquan Qing,\* Haoyang Song, Yuxuan Yao, Xinyu Xu, Cai Long, Niu Liu, Hengjun Li and Changsheng Liu



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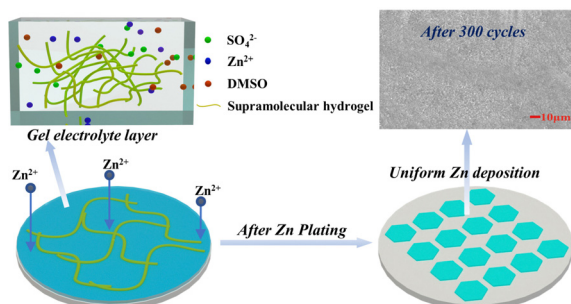
### A perfect conical nanoshape meets large magnetocrystalline anisotropy: unusual magnetic configurations

Jianzhuang Jiang, Wentao Wang, Xiaochan Fu, Xinyan Wang, Yuhui Hu, Kaizhou He, Xiangqian Wang\* and Xia Ni\*



## PAPERS

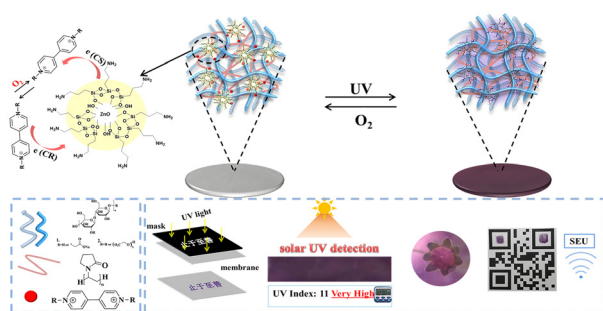
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### Study of a novel supramolecular hydrogel electrolyte for aqueous zinc ion batteries

Ying Yang, Changmiao Huang, Hui Li, Zixuan Teng, Heng Zhang, Xi Wei, Hong Zhang, Lili Wu, Chaocan Zhang and Wanyu Chen\*

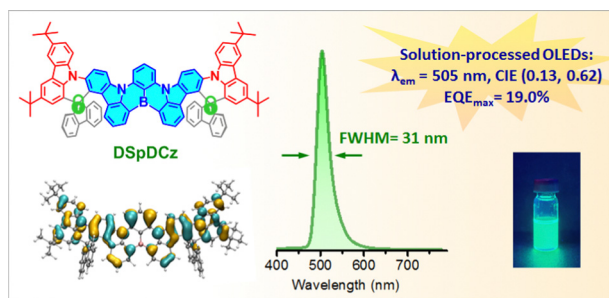
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### A novel ZnO/viologen photochromic composite film with a rapid UV response for rewritable paper, solar UV detection, smart windows and anti-counterfeiting

Na Chen, Wan-Xiong Yong, Tuo-Dong Xiong and Guo-Dong Fu\*

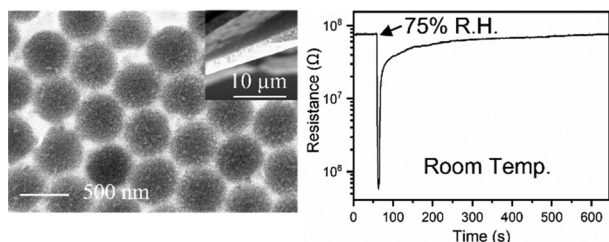
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### Spirofluorene-locked carbazole based multiple resonance thermally activated delayed fluorescence emitters for efficient solution-processed narrowband green OLEDs

Baoyun Du, Kaiyuan Zhang, Penglong Wang, Xingdong Wang, Shumeng Wang, Shiyang Shao\* and Lixiang Wang\*

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### Ordered porous RGO/SnO<sub>2</sub> thin films for ultrasensitive humidity detection

Zhou Li, David W. Gardner, Yong Xia, Sikai Zhao, Aifei Pan, Nishit Goel, Stephen Bart, Chen Liu, Jianxin Yi, Carlo Carraro and Roya Maboudian\*

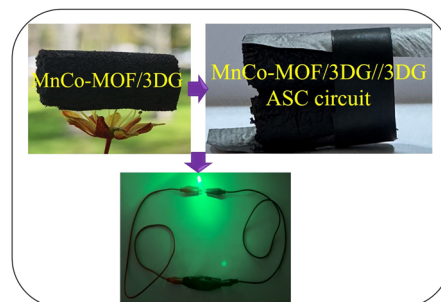


## PAPERS

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### Design and synthesis of a MnCo-MOF modified flexible 3D graphene sponge electrode for an asymmetric supercapacitor with high power and energy density

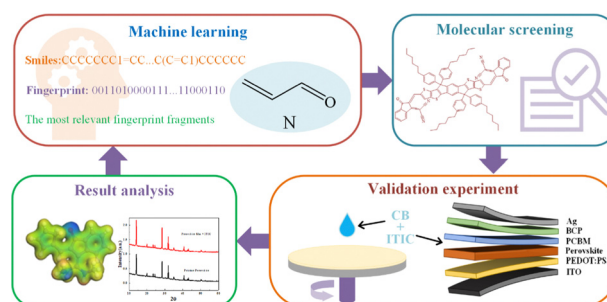
Elif Erçarıkçı, Ezgi Topçu and Kader Dağcı Kıranşan\*



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### Machine learning-assisted screening of effective passivation materials for P–I–N type perovskite solar cells

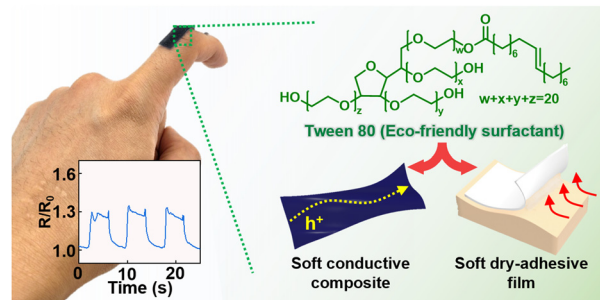
Di Huang, Chaorong Guo, Zhennan Li, Haixin Zhou, Xiaojie Zhao, Zhimin Feng, Rui Zhang, Menglong Liu, Jiaojiao Liang,\* Ling Zhao\* and Juan Meng\*



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### A skin-friendly soft strain sensor with direct skin adhesion enabled by using a non-toxic surfactant

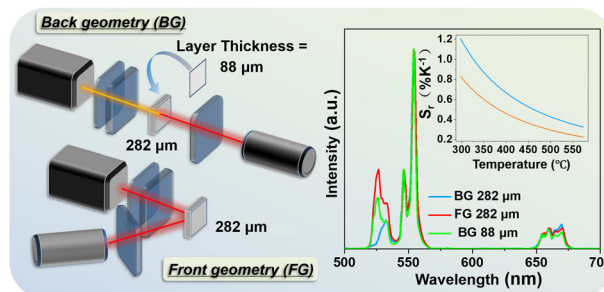
Haechan Park, Myeonghyeon Na, Donghyung Shin, Daeun Kim, Euna Kim, Sehyun Kim, Donghyun Lee and Kyoseung Sim\*



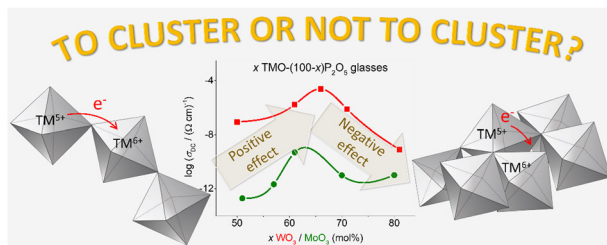
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### Influence of excitation and detection geometry on optical temperature readouts – reabsorption effects in luminescence thermometry

Natalia Stopikowska,\* Przemysław Woźny, Markus Suta, Teng Zheng,\* Stefan Lis and Marcin Runowski\*



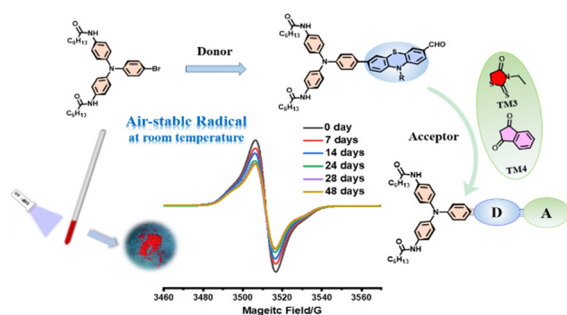
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### Glass structure as a driver of polaronic conductivity in phosphate glasses containing $\text{MoO}_3$ and $\text{WO}_3$

Sanja Renka, Radha D. Banhatti, Grégory Tricot, Petr Kalenda, Luka Pavić, Petr Mošner, Ladislav Koudelka and Ana Šantić\*

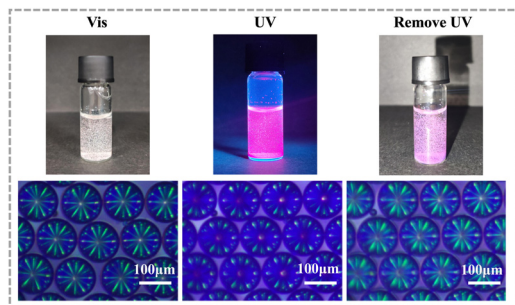
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### A feasible strategy to obtain air-stable triphenylamine radicals in the solid state by introducing conjugated donor-acceptor modules

Xugang Rong, Jueshan Liu, Jianglin Wu, Chuan Li, Kexin Wang, Zhiyun Lu,\* Yingzhe Liu, Mingjie Gu and Yan Huang\*

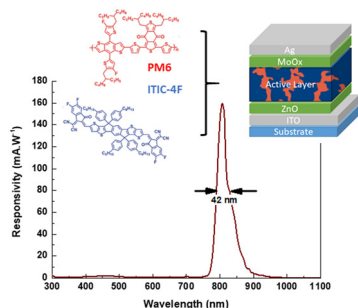
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### A three-state label programmed using a three-color microsphere of structural, fluorescent and dye colors

Chaofeng Qu, Xiaolan Li, Na Zhao, Sijie Zhou, Jiaming Wang, Lishuang Yao\* and Yongjun Liu\*

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### Towards efficient NFA-based selective near-infrared organic photodetectors: impact of thermal annealing of polymer blends

Q. Eynaud, Y. A. Avalos Quiroz, T. Koganezawa, R. Sato, N. Yoshimoto, O. Margeat, C. M. Ruiz, J. Ackermann and C. Vidolot-Ackermann\*

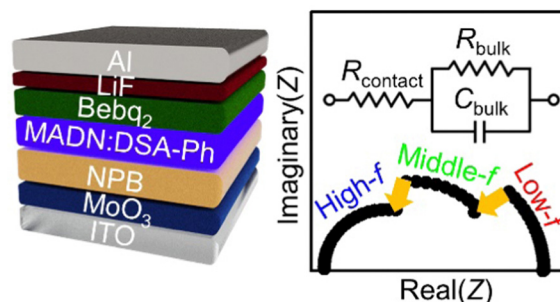


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# Frequency-triggered circuit transition in organic light-emitting diodes probed by impedance spectroscopy

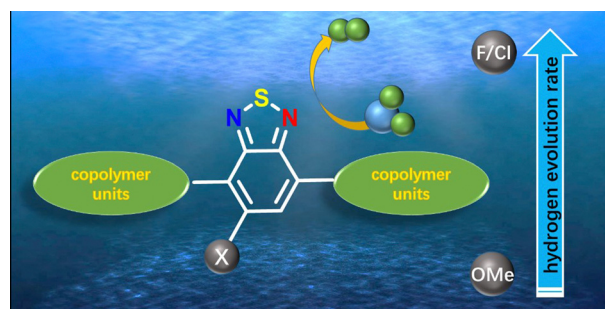
Joon Hyung Park, Ye Ji Shin, Ioannis Kymissis, Yongmin Jeon\* and Chang-Hyun Kim\*



9678

# Improving the photocatalytic performance of conjugated polyelectrolytes via substituent optimization

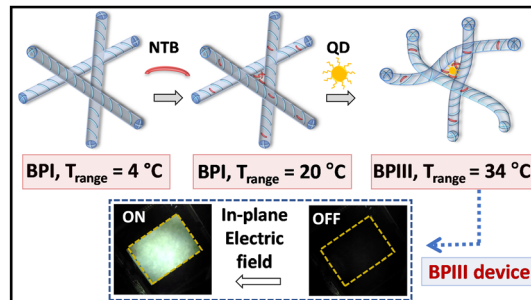
Li Tian,\* Haowei Lin, Mengya Shang, Xi Zhang, XueFei Zhou, Shanhong Xu, Cheng-Xing Cui\* and Airong Wang\*



9686

# Topological defects stabilized by a soft twist-bend dimer and quantum dots lead to a wide thermal range and ultra-fast electro-optic response in a liquid crystalline amorphous blue phase

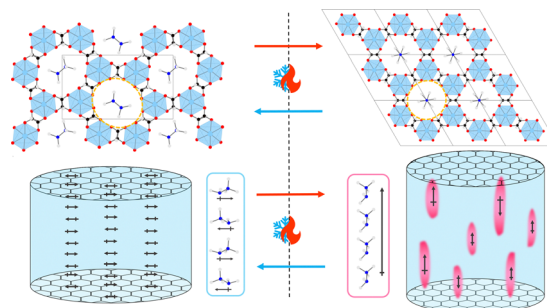
Nurjahan Khatun, Vimala Sridurai, Katalin F. Csorba and Geetha G. Nair\*



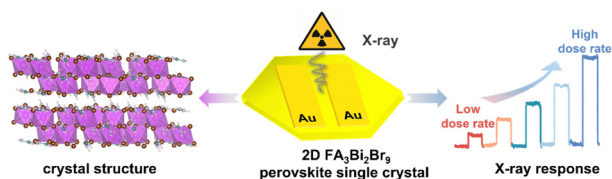
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# A new avenue to relaxor-like ferroelectric behaviour found by probing the structure and dynamics of $[\text{NH}_3\text{NH}_2]\text{Mg}(\text{HCO}_2)_3$

Thomas J. Hitchings, Helen M. Wickins, George U. L. Peat, Paul Hodgkinson, Anant Kumar Srivastava, Teng Lu, Yun Liu, Ross O. Piltz, Franz Demmel, Anthony E. Phillips and Paul J. Saines\*



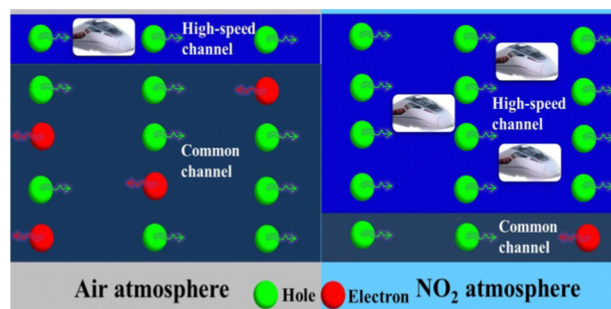
9707



### A centimeter-scaled lead-free two-dimensional perovskite FA<sub>3</sub>Bi<sub>2</sub>Br<sub>9</sub> single crystal for X-ray detection

Xiuting Luo, Lei Gao, Kezheng Tao, Qiang Li and Qingfeng Yan\*

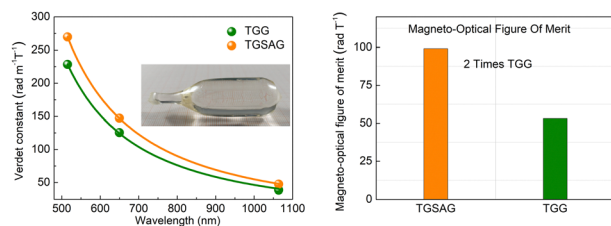
9715



### Ternary alloyed MoS<sub>2-x</sub>Se<sub>x</sub> nanocomposites with a carrier mobility-dominated gas sensing mode: a superior room temperature gas sensing material for NO<sub>2</sub> sensors

Mingli Yin,\* Kexin Wang, Liaochuan Zhang, Chunxiao Gao, Juan Ren and Lingmin Yu

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### Reporting a novel visible near-infrared {Tb<sub>3</sub>}[Ga<sub>0.1</sub>Sc<sub>1.9</sub>](Al<sub>3</sub>)O<sub>12</sub> single crystal for Faraday isolators

Yuankai Hao, Xianhui Xin, Xianxian Yang, Zhen Zhang, Xiuwei Fu,\* Zhitai Jia\* and Xutang Tao

