

# Journal of Materials Chemistry C

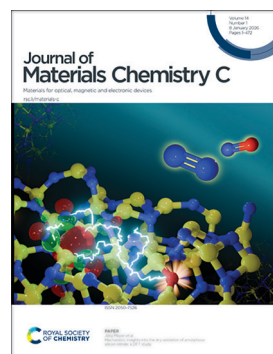
Materials for optical, magnetic and electronic devices

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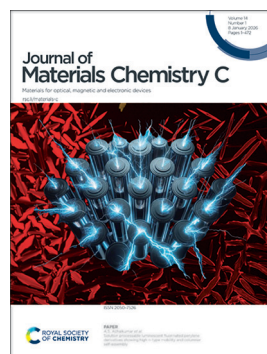
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### Cover

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### Inside cover

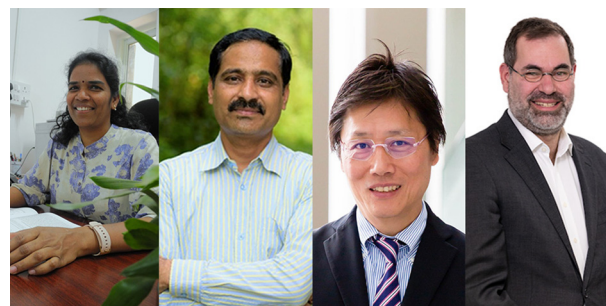
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## EDITORIAL

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### Perspectives on OLED Technology

Chihaya Adachi,\* Subrata Ghosh,\* P. Rajamalli\* and Eli Zysman-Colman\*

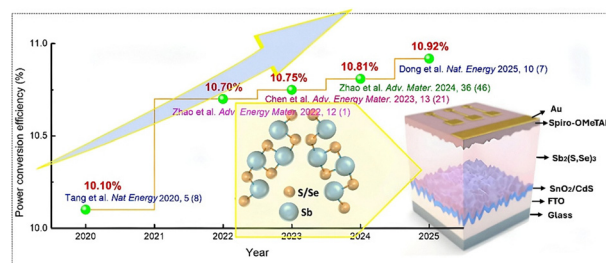


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### Scientific advancements in antimony selenosulfide solar cells

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## REVIEWS

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### Aggregation-induced emission-active thermally activated delayed fluorescent materials for solution-processed organic light-emitting diodes: a review

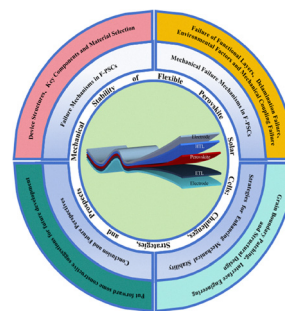
Tagare Jairam\* and Wan Pyo Hong\*



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### Mechanical stability of flexible perovskite solar cells: challenges, strategies, and prospects

Hang Zhao, Zhongyan Wang, Jia Xu, Pengchen Zou, Junguo Li,\* Xiaoling Wang, Shiguang Lu, Xing Huang, Yahan Wu, Zhenzhen Li\* and Jianxi Yao\*

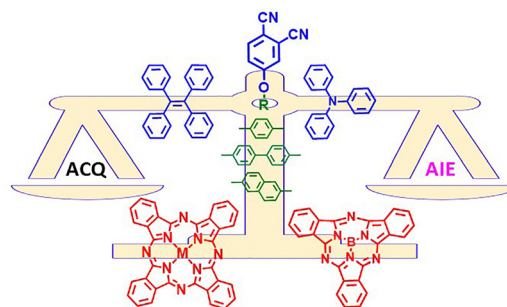


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### Enlightening the future: AIEgen-integrated phthalocyanines and subphthalocyanines for next-generation functional materials

Govardhana Babu Bodedla,\* Shengyi Ke, Yibing Cao, Lijie Zhang and Wai-Yeung Wong\*

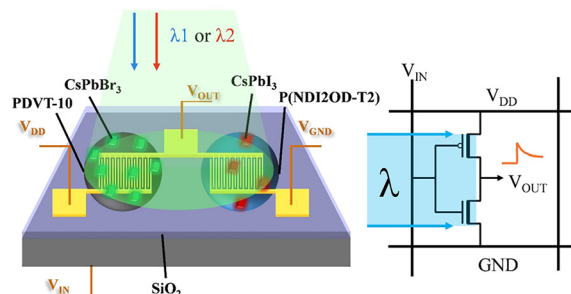


## COMMUNICATION

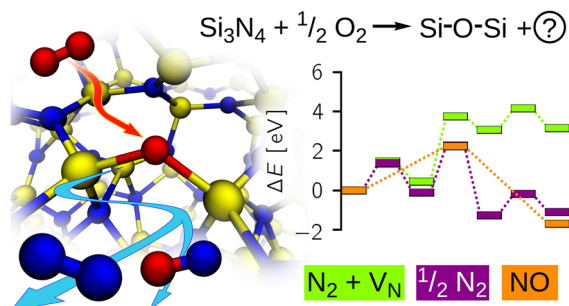
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### Wavelength-sensitive CMOS-like optoelectronic inverter circuits based on solution-processable perovskite nanocrystals/organic semiconductor blends

Junlong Zou, Xiao Han, Sufyan Aslam, Lin He, Zhiming Wang,\* Thumu Udayabhaskararao\* and Tim Leydecker\*



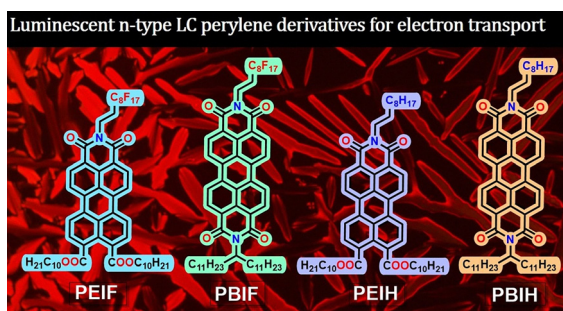
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### Mechanistic insights into the dry oxidation of amorphous silicon nitride: a DFT study

Lukas Hückmann, Robert Sylvia, Floris Blankenvoorde, Jonathon Cottom and Jörg Meyer\*

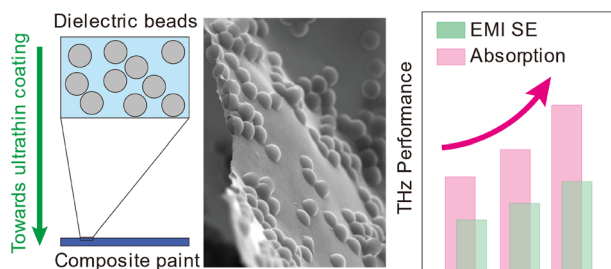
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### Solution processable luminescent fluorinated perylene derivatives showing high n-type mobility and columnar self-assembly

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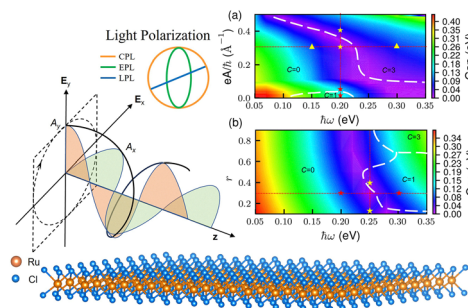
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### Dielectric microbead-decorated conductive polymer composites towards ultrathin high-performance terahertz absorbing coatings

Xiao Sun, Wenqian Li, Chaoyang Kuang,\* Tianlong Wen, Qiye Wen\* and Shangzhi Chen\*

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### Floquet engineering of topological phase transitions in intrinsic ferromagnetic semiconductor *via* circularly and elliptically polarized light

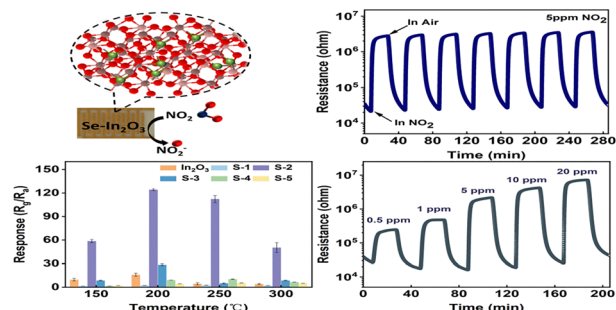
Wenpeng Wang, Xinge Zhang, Yuping Tian, Haoyue Bai, Shaozhi Li, Wei-Jiang Gong and Xiangru Kong\*



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### High-sensitivity NO<sub>2</sub> detection using Se-doped In<sub>2</sub>O<sub>3</sub> thin films synthesized via RF magnetron sputtering

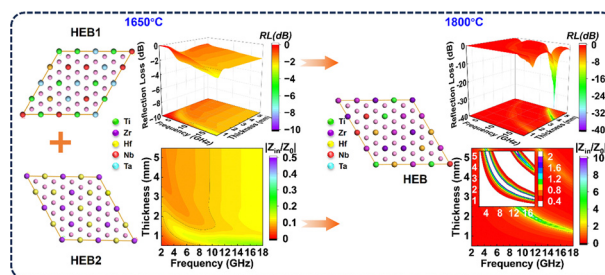
Lijuan Xie, Ziyao Wang, Jiabei Li, Shuo Li, Xiaohong Li,\*  
Xi Yang\* and Guoqiang Li\*



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### Effects of temperature-induced lattice distortion and phase evolution on electromagnetic wave absorption in high-entropy powders

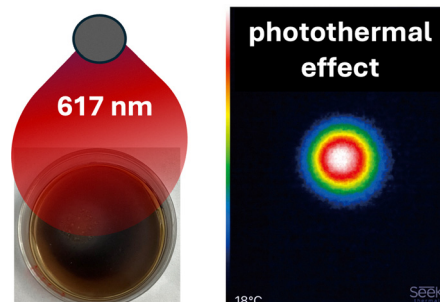
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Haibin Ma, Weichao Bao, Wei Ji, Weimin Wang and  
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### On the photothermal behaviour of naphthalene diimide aggregates in water

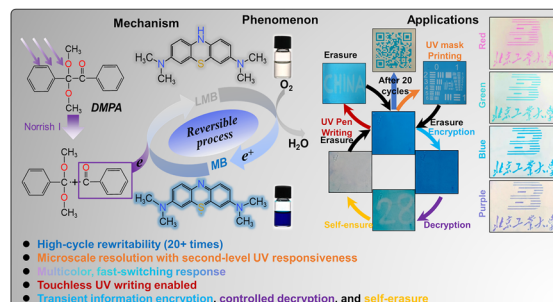
Ziyao Xu, James Douth, Najet Mahmoudi,  
Stephen Sproules and Emily R. Draper\*



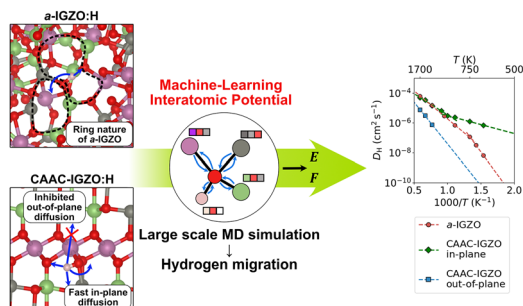
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### Light-induced color changing of redox dyes assisted by a photoinitiator for information encryption on hydrogel paper

Penglei Li, Lisha Zhang, Jing Wang, Zhenle Qin,  
Yiwei Zhang, Yulan Fu, Xiaohui Fang, Jinxin Guo\* and  
Xinping Zhang\*



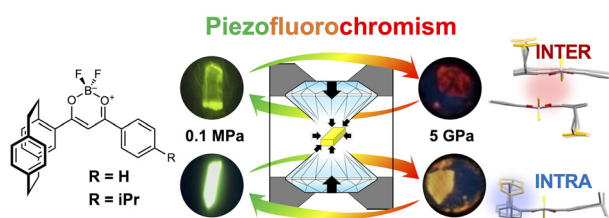
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### Atomistic insights into hydrogen migration in IGZO from machine-learning interatomic potential: linking atomic diffusion to device performance

Hyunsung Cho, Minseok Moon, Jaehoon Kim, Eunkyung Koh, Hyeon-Deuk Kim, Rokyeon Kim, Gyehyun Park, Seungwu Han and Youngho Kang\*

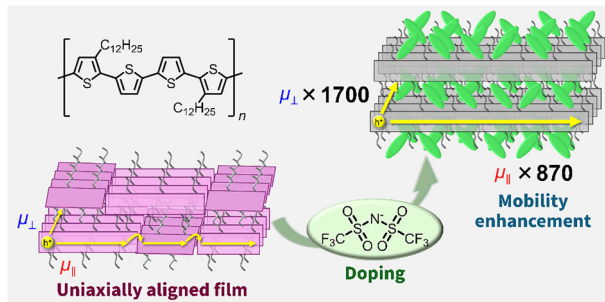
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### The role of a [2.2]paracyclophane moiety in piezofluorochromism of crystalline organoboron complexes

Shun Irii, Takuya Ogaki,\* Shun Yamamoto, Hana Miyashita, Kazutaka Nobori, Hiroki Iida, Yoshiki Ozawa, Masaaki Abe,\* Hiroyasu Sato, Yasunori Matsui and Hiroshi Ikeda\*

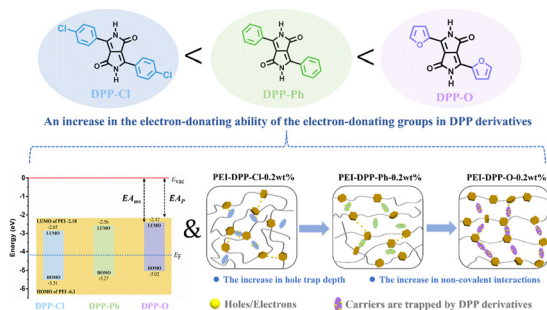
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### Quantifying anisotropic mobility enhancement in uniaxially aligned polythiophene films via ion-exchange doping

Takaho Yokoyama and Keisuke Tajima\*

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### Enhancing high-temperature energy density of dielectric composites by tailoring molecular semiconductors

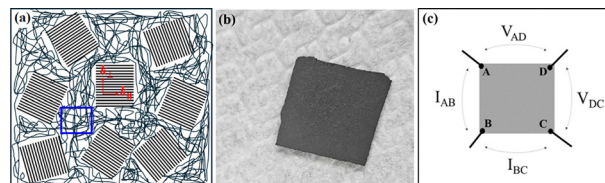
Xiwen Yang, Dang Wu, Xiaona Li, Yuting Wan, Hang Luo,\* Zhongna Yan\* and Dou Zhang



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### Incorporation of Al<sup>3+</sup> into turbostratic graphite: an efficient route toward improved thermal and electrical conductivity

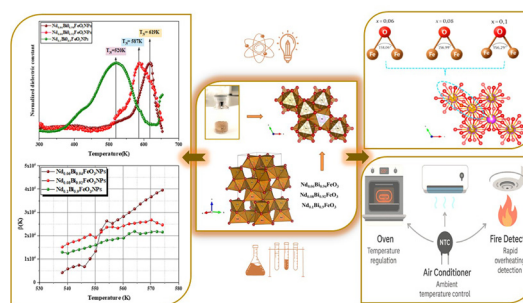
Hsin-Jung Tsai, Kai-Le Lin, Ping-Chun Chen, Han-Chen Chang and Wen-Kuang Hsu\*



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### Neodymium-engineered relaxor bismuth ferrite nanoparticles: structural tuning and dielectric enhancement for efficient sensor applications

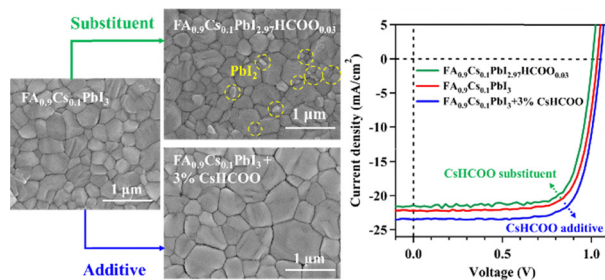
Ilhem Chiba,\* Ibtissem Fraj, Fredj Hassen,\* Moneim Zannen, Cecile Autret-Lambert, Mouldi Zouaoui, Thomas Fourgassie, Brahim Dkhil, Pierre-Eymeric Janolin and Omar Ibder



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### Impact of pseudohalide-based cesium formate salt as an additive or substituent on perovskite solar cell performance

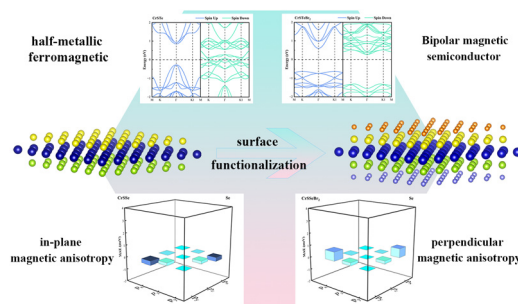
Raja Rajendran, Pei-Yu Wang, Ming-Hsien Li,\* Chen-Fu Lin, Farhan Yousuf, Cheng-Hung Hou, Jing-Jong Shyue and Peter Chen\*



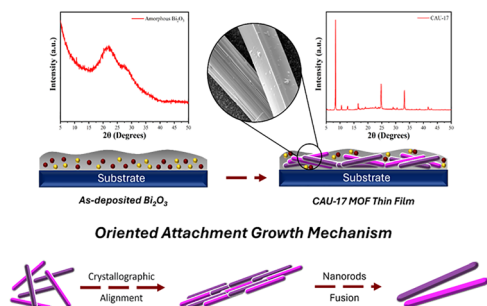
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### Halogen functionalization-induced modulation of ferromagnetism and electronic phases in CrXY monolayers

Xiaolong He, Dongni Wu, Yangfang Liao and Jing Xie\*



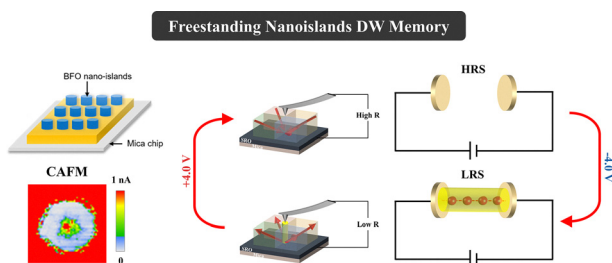
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### A controlled growth strategy for CAU-17 MOF thin films *via* two-step synthesis

Muhammad Zain Azeem, Khaled Hassanein,\*  
Badriah Sultan, Abduljabar Alsayoud, Syed B. Qadri and  
Qasem A. Drmosh\*

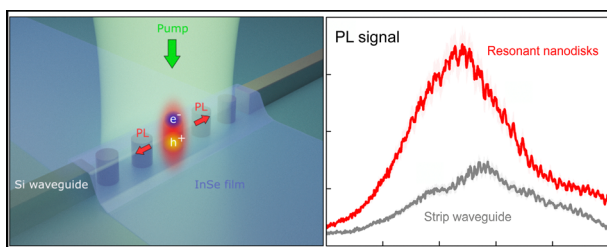
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### Construction of ferroelectric topological domains in freestanding epitaxial BiFeO<sub>3</sub> nanostructures

Jun Jin, Houlin Zhou, Yuyin Yang, Jiaqi Zhang,  
Xingchen Zhang, Shuoshuo Ma, Jianbiao Xian,  
Yihang Guo, Ji-Yan Dai\* and Guo Tian\*

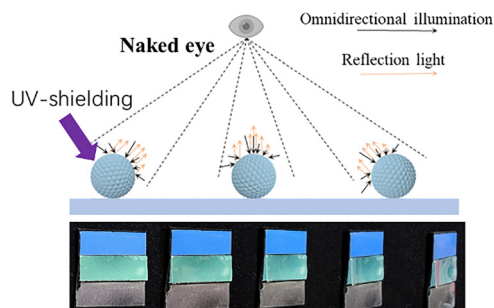
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### Mie-resonant silicon waveguide for efficient coupling with excitonic emitters in InSe

Maxim Rakhlin, Timofey V. Antipov,  
Alexandra D. Gartman, Dmitry N. Gulkin, Lyubov Kotova,  
Aidar Galimov, Bogdan Borodin, Ilya Elisseyev,  
Alexander S. Shorokhov and Andrey A. Fedyanin\*

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### Omnidirectional brightness and UV-shielding bifunctional pigments *via* CeO<sub>2</sub> photonic crystal microbeads

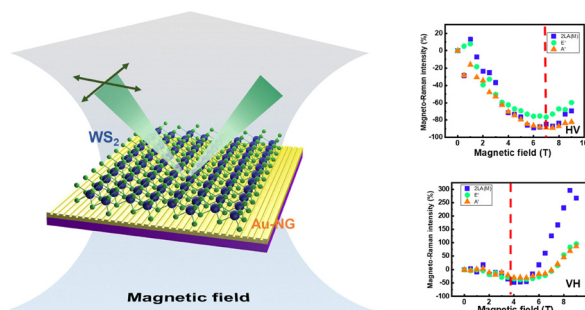
Zhengyang Gao, Shi Li, Yong Qi, Xianfei Cao,  
Wenbin Niu, Suli Wu and Shufen Zhang\*



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### Magneto-optical Raman effect of WS<sub>2</sub> tuned by a plasmonic gold nanograting

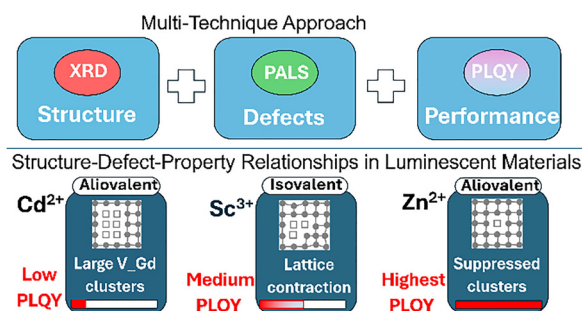
Yang Yang,\* Yang Guo, Ruochen Zhang, Hao Chang, Cai Luo, Junjie Li\* and Changzhi Gu\*



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### Probing structural and optical modulations in metal-ion co-doped gadolinium vanadate: a combined spectroscopic and diffraction study

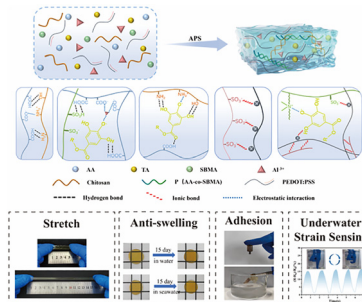
Ahmed G. Attallah,\* Arzu Cosgun Ergene, Eric Hirschmann, Maik Butterling, Dmitry Busko, Aditya Chauhan, Bryce S. Richards and Andrey Turshatov\*



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### A multifunctional anti-swelling hydrogel with high stretchability and adhesion for wearable flexible sensors

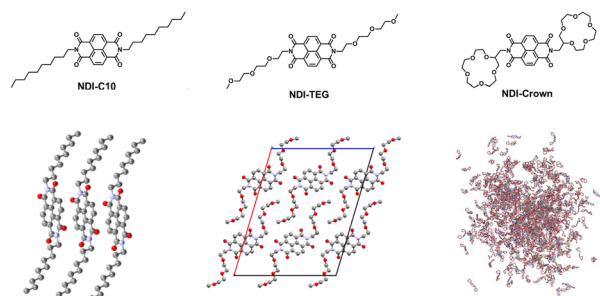
Qingyu Han, Manzhou Li, Chi Liu, Ying Qu, Surui Li and Shuang Guan\*



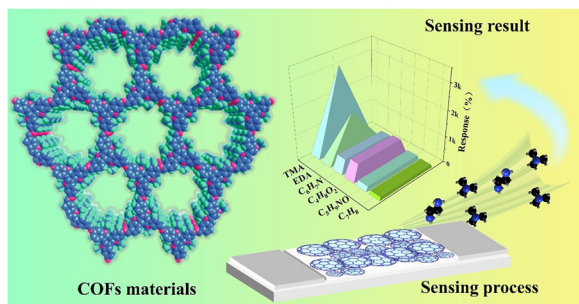
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### Disclosing the molecular structure and dynamics of naphthalene diimide based organic semiconductors in the solid state

Marco Severi,\* Simiao Yu, Isaac Abrahams, Christian B. Nielsen\* and Daniele Fazzi\*



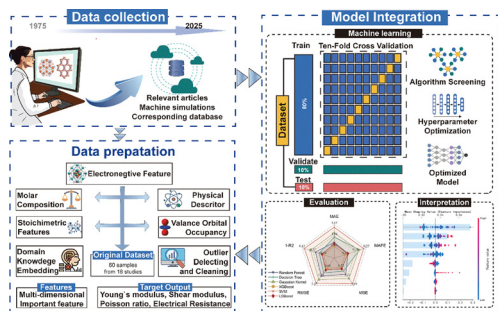
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### Room-temperature ultra-sensitive trimethylamine and ethylenediamine assays for fish freshness detection based on an imine-covalent organic framework

Weiyu Zhang, Qihua Sun, Ping Hu, Ning Tian and Zhaofeng Wu\*

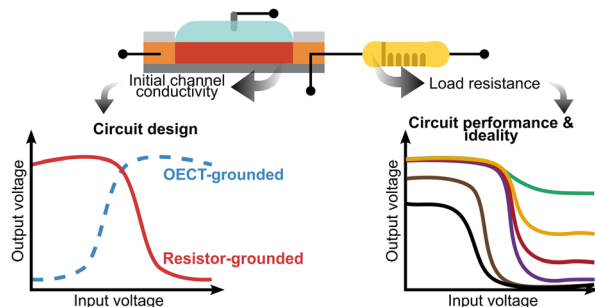
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### Prediction of the elastic properties and electrical resistance of halide glass based on interpretable machine learning

Jiayang Zhou and Xiangfu Wang\*

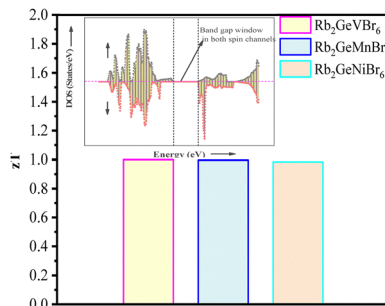
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### An unbalanced load resistor for ideal logic levels and maximum gain in organic electrochemical transistor-based unipolar inverters

Marcos Luginieski,\* Bruno Bassi Millan Torres, Bianca de Andrade Feitosa, Gerwin Dijk, Alberto Salleo and Gregório Couto Faria\*

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### Spin exchange, electronic correlation, and thermoelectric transport in $\text{Rb}_2\text{GeMBr}_6$ ( $M = \text{V}, \text{Mn}, \text{Ni}$ ) halide double perovskites from first principles calculations

Mudasir Younis Sofi,\* Mohd. Shahid Khan and M. Ajmal Khan\*



## CORRECTIONS

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**Correction: Fluorination in core-only calamitic liquid crystals: how many and where should they go?**

Jacob G. Rothera, Reem Bazzi, Lara K. Watanabe, Jeremy M. Rawson, A. Mohan Raj, William G. Skene and S. Holger Eichhorn\*

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**Correction: Work function modulated water-soluble anode interlayer with copper-ion doping for precise signal detection in organic photodiodes**

Min Soo Kim, Woongsik Jang, Jin Hee Lee, Jung Hwa Seo\* and Dong Hwan Wang\*

