

# Journal of Materials Chemistry C

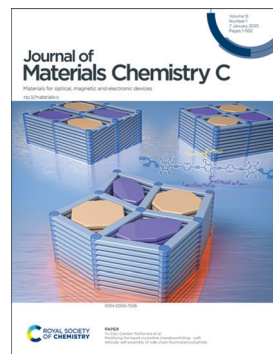
Materials for optical, magnetic and electronic devices

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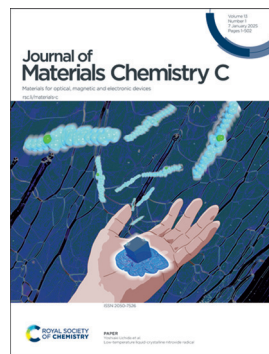
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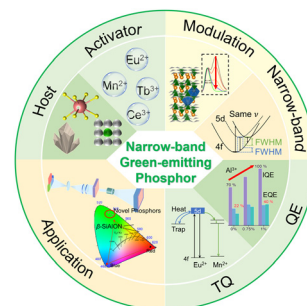
See Yoshiaki Uchida *et al.*, pp. 54–60. Image reproduced by permission of Yoshiaki Uchida from *J. Mater. Chem. C*, 2025, 13, 54.

## REVIEW

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### High-performance, narrow-band green-emitting phosphors for white LEDs: recent advances and perspectives

Yujia Wan, Dongjie Liu, Wei Yang, Yingsheng Wang, Min Zhang, Hongzhou Lian,\* Peipei Dang,\* Guogang Li\* and Jun Lin\*

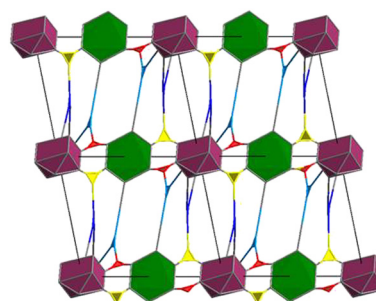


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### Accessing mixed cluster rare-earth MOFs with reduced connectivity *via* linker expansion and desymmetrization: co-assembly of 6-c and 10-c hexanuclear clusters in RE-stc-MOF-1

Edward Loukopoulos, Constantinos Tsangarakis, Konstantinos G. Froudas, Maria Vassaki, Giasemi K. Angeli and Pantelis N. Trikalitis\*



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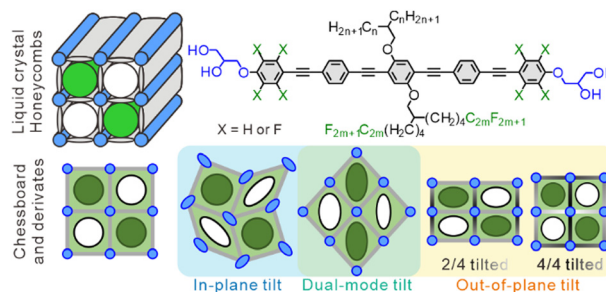
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## Modifying the liquid crystalline chessboard tiling – soft reticular self-assembly of side-chain fluorinated polyphiles

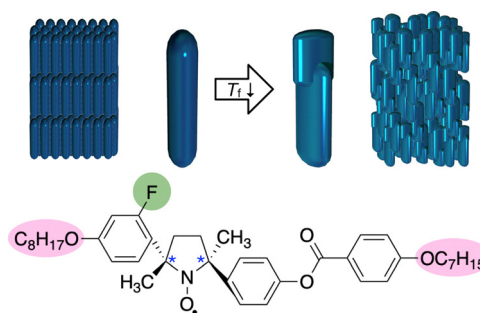
Christian Anders, Virginia-Marie Fischer, Tianyi Tan, Mohamed Alaasar, Rebecca Waldecker, Yubin Ke, Yu Cao,\* Feng Liu and Carsten Tschierske\*



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## Low-temperature liquid-crystalline nitroxide radical

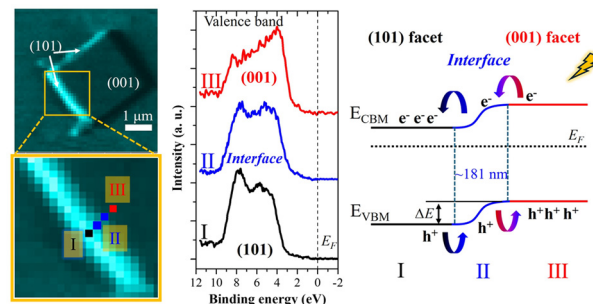
Yoshiaki Uchida,\* Takuya Akita, Takuo Ohkochi, Xiao-Qian Ma, Daichi Kiyohara, Sho Nakagami, Taira Yamazaki and Norikazu Nishiyama



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## Facet-dependent photocatalytic performance and electronic structure of single-crystalline anatase TiO<sub>2</sub> particles revealed by X-ray photoelectron spectromicroscopy

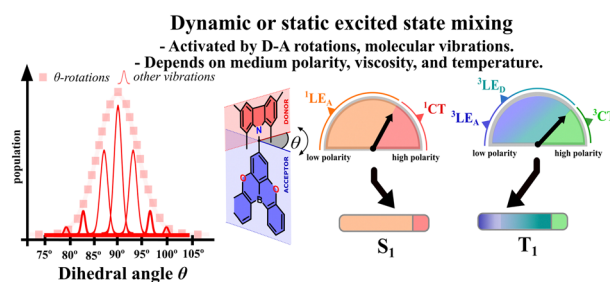
Wenxiong Zhang,\* Mustafa Al Samarai, Haochong Zhao, Daobin Liu, Hisao Kiuchi, Ralph Ugalino, Sen Li, Fangyi Yao, Qi Feng and Yoshihisa Harada\*



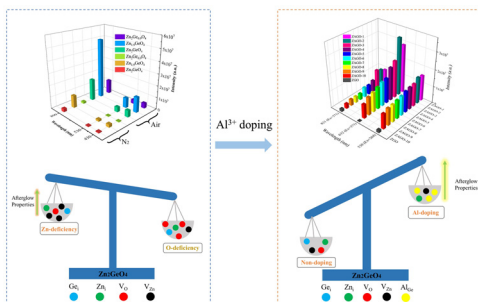
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## Experimental evidence of the excited-state mixing in the blue emitter for organic light-emitting diodes

Vladyslav Ievtukhov, Michał Mońka, Olga Ciupak, Irena Bylińska, Piotr Bojarski, Karol Krzysiński and Illia E. Serdiuk\*



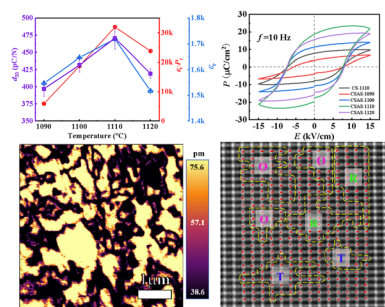
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### Ternary afterglow and dynamic anti-counterfeiting applications of self-activated zinc germanate

Tianyu Hu, Jie Yu, Qiqi Zeng, Cong Zhang, Yuanjie Teng, Kang Shao and Zaifa Pan\*

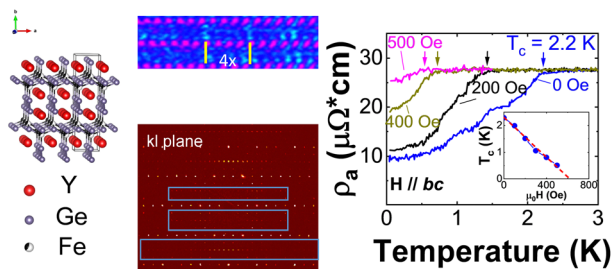
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### Enhanced electrical properties of lead-free sodium potassium niobate piezoelectric ceramics prepared via cold sintering assisted sintering

Yao Huang, Xinyue Song, Renbing Sun, Hai Jiang, Peng Du and Laihui Luo\*

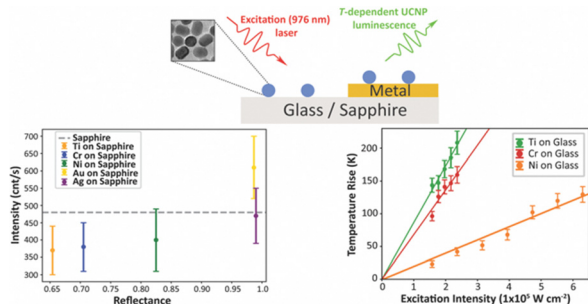
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### Emergence of heavy-fermion behavior and distorted square nets in partially vacancy-ordered $Y_4Fe_xGe_8$ ( $1.0 \leq x \leq 1.5$ )

Hengdi Zhao, Xiuquan Zhou, Mohammad Usman, Ramakanta Chapai, Lei Yu, Jianguo Wen, Hyowon Park, Alexios P. Douvalis, Patricia E. Meza, Yu-Sheng Chen, Ulrich Welp, Stephan Rosenkranz, Duck Young Chung and Mercouri G. Kanatzidis\*

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### Metal surface effects on single upconverting nanoparticle luminescence and thermometry signals

Ziyang Ye, Laura Signor, Molly Cohan and Andrea D. Pickel\*

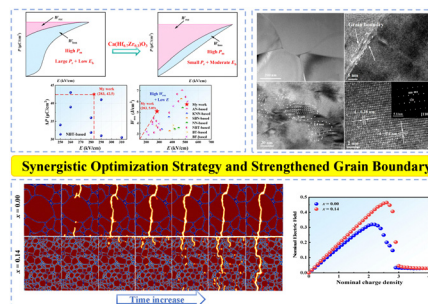




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### Achieved excellent energy storage performance under moderate electric field in BaTiO<sub>3</sub>-modified Bi<sub>0.5</sub>Na<sub>0.5</sub>TiO<sub>3</sub>-based lead-free ceramics via multiple synergistic design

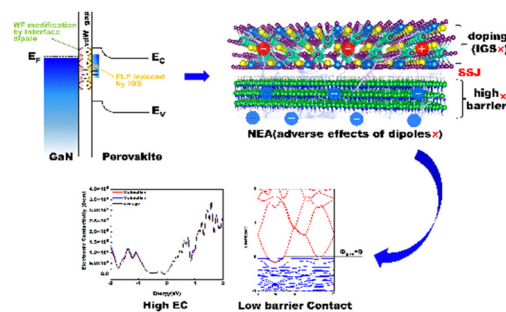
Xiangluo Miao, Run Jing, Zhenhui Zhang, Xiangbin Zhang, Shibang Zhang, Pengfei Li, Changan Wang,\* Chung Ming Leung, Xingsen Gao and Min Zeng\*



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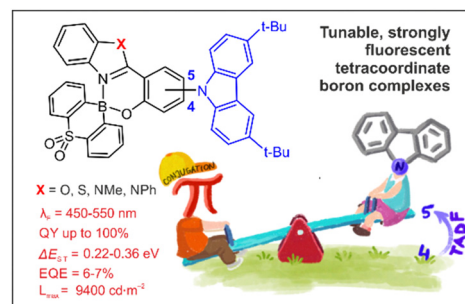
Pengjie Fu, Baolin Wang, Mengni Liu, Guixian Ge, Juan Hou\* and Xiaodong Yang\*



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### Strongly fluorescent spiro-type tetracoordinate complexes of dibenzo[*b,e*][1,4]thiaborinine dioxide with functionalized 2-(benzo[*d*]heterazol-2-yl)phenolate ligands displaying TADF

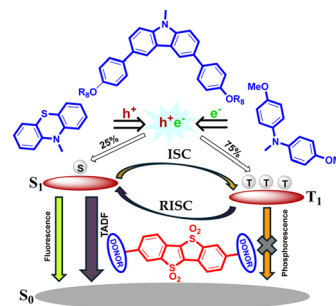
Mateusz Urban, Karolina Wrochna, Paulina H. Marek-Urban, Dawid R. Natkowski, Krzysztof Woźniak, Piotr Pander,\* Andrew P. Monkman, Krzysztof Durka\* and Sergiusz Luliński\*



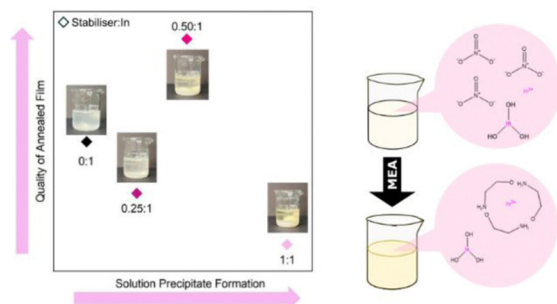
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### New [1]benzothieno[3,2-*b*]benzothiophene-tetraoxide-based TADF emitters with a D-A-D structure for OLED applications

Maria Montrone, Antonio Maggiore,\* Anna Moliterni, Piotr Pander, Marco Pugliese, Agostina Lina Capodilupo, Salvatore Gambino, Carmela Tania Prontera, Vitantonio Valenzano, Fabrizio Mariano, Gianluca Accorsi, Teresa Sibillano, Cinzia Giannini, Giuseppe Gigli, Antonio Cardone\* and Vincenzo Maiorano



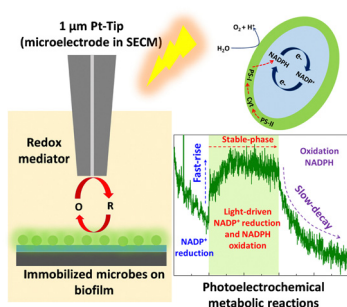
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### The influence of stabiliser concentration on the formation of $\text{In}_2\text{O}_3$ thin films

Aysha A. Riaz, Curran Kalha, Maria Basso, Máté Füredi and Anna Regoutz\*

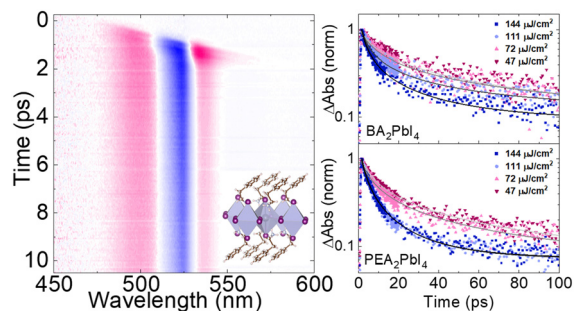
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### Single microbe photoelectrochemical device using scanning electrochemical microscopy

Arun Kumar Samuel, Shweta Shinde, Alagammai Palaniappan, Prerna Bhalla and Aravind Kumar Chandiran\*

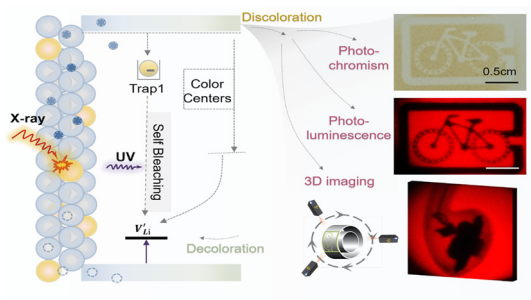
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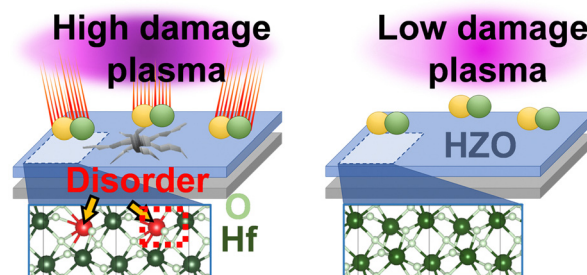
Yueteng Zhang, Xue Bai, Heping Zhao, Jianbei Qiu, Zhiguo Song, Jiayan Liao\* and Zhengwen Yang\*



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### Damage mitigation as a strategy to achieve high ferroelectricity and reliability in hafnia for random-access-memory

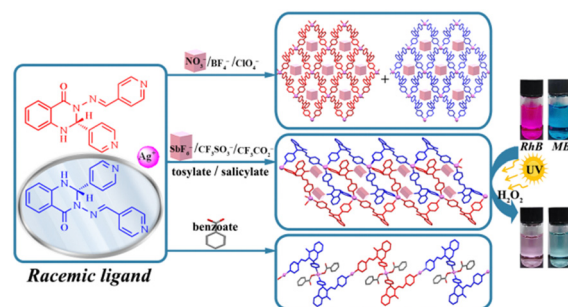
Junghyeon Hwang, Hunbeom Shin, Chaeheon Kim, Jinho Ahn\* and Sanghun Jeon\*



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### Anion-induced chiral assembly: construction of Ag(I) coordination polymers for photocatalytic degradation of organic dyes

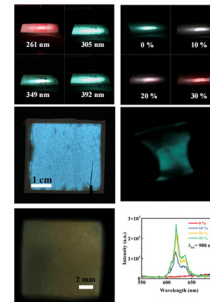
Chao Huang,\* Jin-Xia Liang and Bi-Xue Zhu\*



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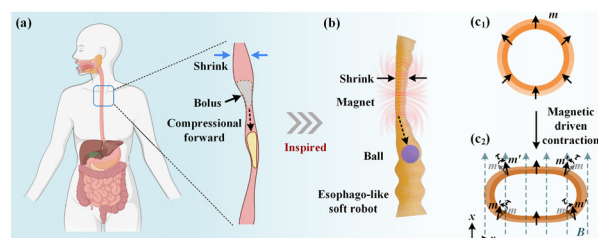
Lidong Wang, Xueting Fu, Peng Du, Hai Jiang and Laihui Luo\*



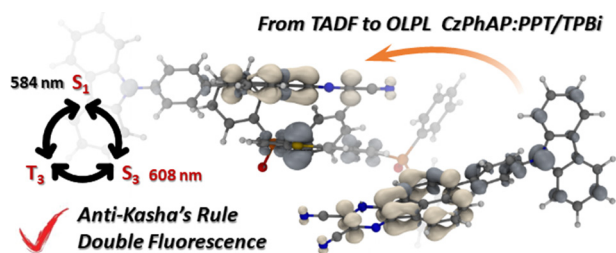
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### An esophagus-inspired magnetic-driven soft robot for directional transport of objects

Shanfei Zhang, Qi Wang, Zhuofan Li, Yizhuo Xu and Bin Su\*



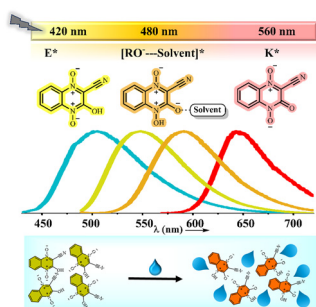
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### Marcus inverted region in organic long-persistent luminescence host-guest systems designed from thermally activated delayed fluorescence molecules: a mechanistic study

Yajie Meng, Xi Chen, Yingqi Li, Yunlong Shang, Yulin Guo, Yong Wu,\* Haiyan Wei\* and Jiawei Xu\*

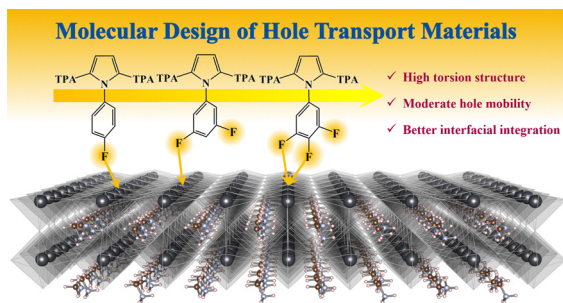
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### Revisiting the excited state proton transfer dynamics in *N*-oxide-based fluorophores: a keto-enol/enolate interplay to detect trace water in organic solvents

Savita, Adarash Kumar Shukla and Anupam Bhattacharya\*

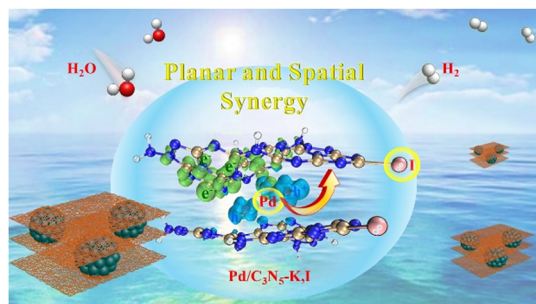
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### Theoretical study on the optoelectronic properties of fluorinated phenylpyrrole-based hole transport materials for perovskite solar cells

Wenhui You, Jie Yang\* and Quansong Li\*

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### Fabrication of a high-efficiency hydrogen generation $Pd/C_3N_5-K,I$ photocatalyst through synergistic effects of planar and spatial carrier separation

Yanan Gao, Jingjing Wang, Jingxuan Yang, Yajie Wang, Wenjuan Tian\* and Bin Liu\*

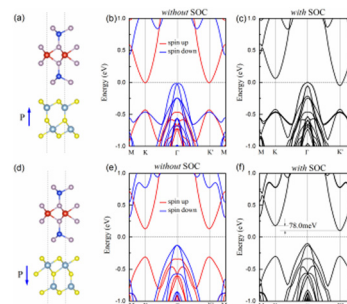




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### Nonvolatile electrical control of the electronic and valleytronic properties by ferroelectricity in the $\text{VSi}_2\text{P}_4/\text{Al}_2\text{S}_3$ van der Waals heterostructure

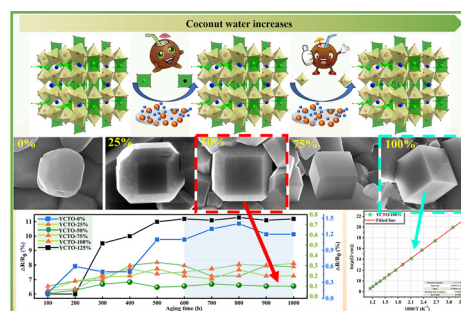
Shoubao Zhang, Na Jiao, Hongyan Lu, Mengmeng Zheng, Ping Zhang and Meiyang Ni\*



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### Crystal facet tailoring: a promising pathway toward high-performance $\text{Y}_{2/3}\text{Cu}_3\text{Ti}_4\text{O}_{12}$ thermosensitive ceramics

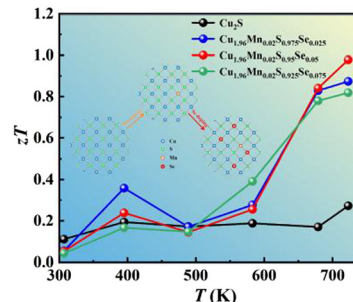
Yaxin Wei, Wenyuan Li, Jia Chen, Jianan Xu, Kai Li, Hanao Deng, Ke Zhao, Yahong Xie, Aimin Chang and Bo Zhang\*



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### Mn-doping method boosts Se doping concentration in $\text{Cu}_2\text{S}$ towards high thermoelectric performance

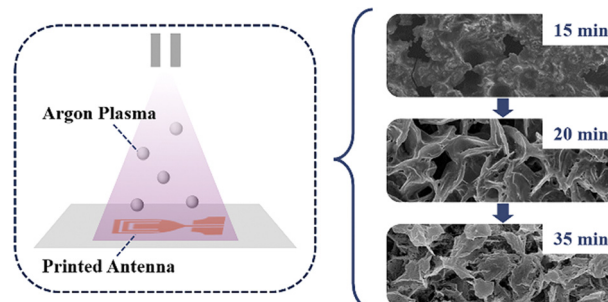
Chen Gong, Zhiwei Zeng, Xiaoling Sun, Chengran Luo and Hongyi Chen\*



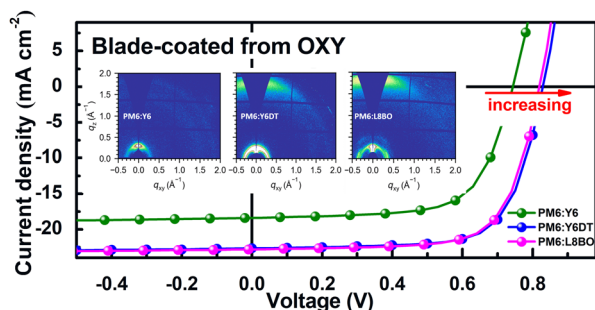
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### Plasma-activated copper-alkanolamine precursor paste for printed flexible antenna: formulation, mechanism, and performance evaluation

Wendong Yang,\* Zihao Guo, Michael Hengge and Emil J. W. List-Kratochvil\*



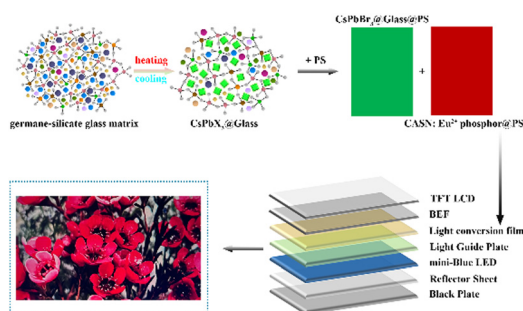
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### Improving voltage and quantum efficiency in blade-coated ITO-free organic solar cells processed with a non-halogenated solvent

Cuifen Zhang, Zheng Li, Yi Lin, Zhibo Wang, Huawei Hu, Ming Wang,\* Zheng Tang\* and Zaifei Ma\*

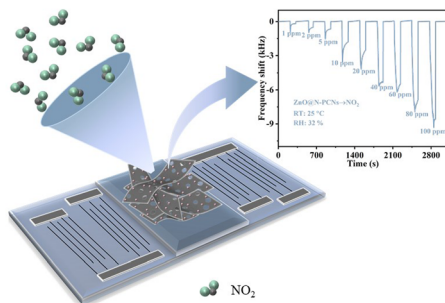
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### High stability modified $\text{CsPb}(\text{ClBr})_3$ @glass@PS for wide color gamut mini-LED backlight displays

Enrou Mei, Jiapeng Yang, Yanling Lin, Zhaoping Chen,\* Xiaojuan Liang\* and Weidong Xiang\*

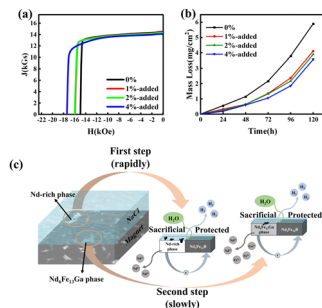
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### Enhancing the $\text{NO}_2$ detection ability of surface acoustic wave sensors with ZnO-decorated N-doped porous carbon nanosheets

Xue Li, Yuan Feng, Haifeng Lv, Junjie Shi, Yuanjun Guo,\* Sean Li\* and Xiaotao Zu\*

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### Concurrent improvements in coercivity and corrosion resistance for $\text{Nd}_6\text{Fe}_{13}\text{Ga}$ -reconstructed Nd-Fe-B sintered magnets

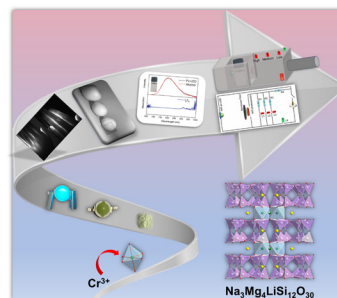
Rui Shen, Shuainan Xu, Congyi Wang, Enxiang Yang, Xiaolian Liu,\* Song Fu, Weiyang Jin, Yu Pan, Lizhong Zhao, Pengfei Guan and Xuefeng Zhang\*



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### A novel broadband near-infrared phosphor $\text{Na}_3\text{Mg}_4\text{LiSi}_{12}\text{O}_{30}:\text{Cr}^{3+}$ : moderate synthesis and application

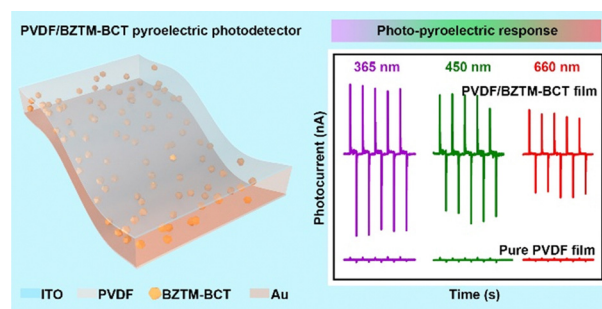
Zhenwei Jia, Xiaohui Zhao, Jingyi Gao, Tongqing Sun,\*  
Li Wu,\* Yongfa Kong and Jingjun Xu



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### Boosting the light-driven pyroelectric response of poly(vinylidene difluoride) by constructing Mn-doped BZT-BCT/PVDF composites

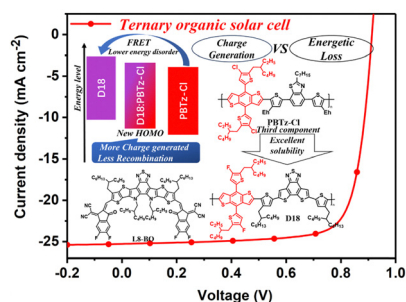
Lu Wang, Feilong Yan, Jifeng Pan, Xiang He, Chen Chen,  
Muzaffar Ahmad Boda and Zhiguo Yi\*



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### Molecular interaction regulation by adding a third component with high miscibility suppresses the energetic disorder and reduces energy loss for efficient ternary solar cells

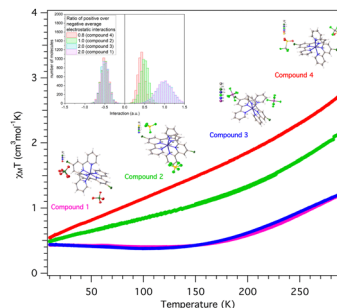
Ruiying Lin, Shichu Peng, Zhenyu Luo, Jiabin Wu,  
Yaocheng Jin, Yanping Huo, Liangang Xiao\* and  
Yonggang Min\*



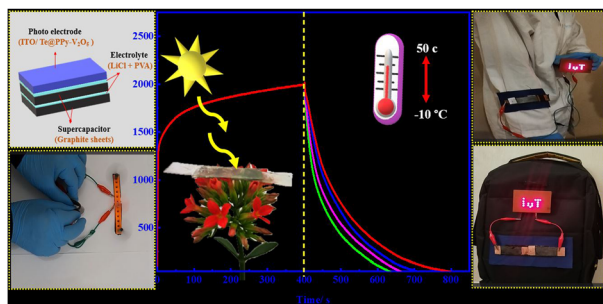
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### Variation in the zero-point energy difference via electrostatic interactions in Co(II)-Cltpy-based spin-crossover molecular materials

Mousumi Dutta, Ajana Dutta, Prabir Ghosh,\*  
Shubhankar Maiti, Laurentiu Stoleriu,  
Cristian Enachescu and Pradip Chakraborty\*



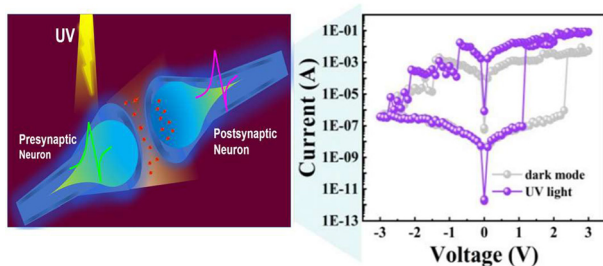
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### Lightweight flexible self-powered photo-supercapacitors with good stability through photoelectrochemical deposition of tellurium on PPy-V<sub>2</sub>O<sub>5</sub> films as a new visible light active dual photoelectrode

Mohamad Mohsen Momeni,\*  
Hossein Mohammadzadeh Aydisheh,  
Byeong-Kyu Lee\* and Ali Naderi

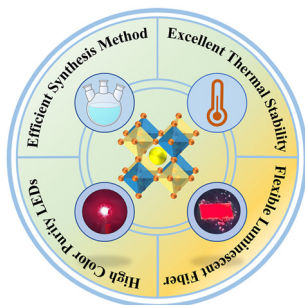
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### Optoelectronic stimuli-driven switchable memristors with multilevel resistance states for neuromorphic vision sensors

Pravinraj Selvaraj, Meng-Lin Chen, Sreeshyam Adat and Yu-Wu Wang\*

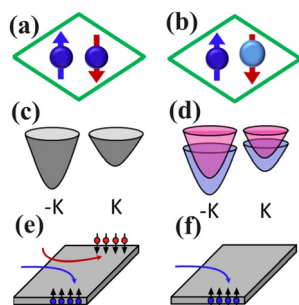
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### High stability of robust anti-thermal-quenching lead-free double perovskite crystals for optoelectronic devices and high-performance fibers

Xiaoman Zhang, Yehua Zheng, Kun Nie,\*  
Xiaodong Zhang, Xiuqiang Duan, Ziyao Hu, Ming Yang,  
Lefu Mei, Luoxin Wang, Hua Wang, Mingquan Li and Xiaoxue Ma\*

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### The isovalent alloying assisted anomalous valley Hall effect in a hexagonal antiferromagnetic monolayer

Liguo Zhang, San-Dong Guo,\* Xiao-Shu Guo and Gangqiang Zhu

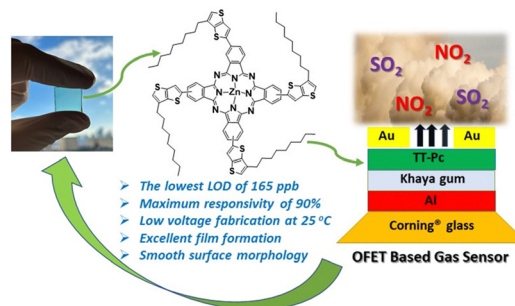




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### Highly sensitive OFET based room temperature operated gas sensors using a thieno[3,2-*b*]thiophene extended phthalocyanine semiconductor

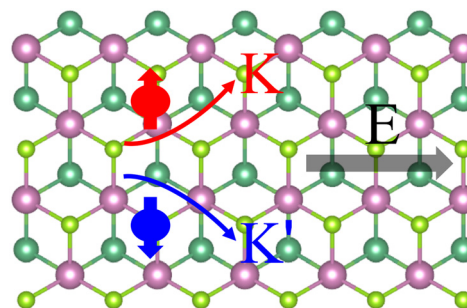
Recep Isci,\* Ozgur Yavuz, Sheida Faraji, Dilara Gunturkun, Mehmet Eroglu, Leszek A. Majewski, Ismail Yilmaz\* and Turan Ozturk\*



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### Strain and *U* driven phase transitions in monolayer intrinsic ferrovalley Nbln<sub>2</sub>As<sub>2</sub>Se<sub>2</sub>

Jiajun Zhu, Heyun Zhao and Wanbiao Hu\*



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### Study on the time-resolved detection performance of $\beta$ -Ga<sub>2</sub>O<sub>3</sub>-based SBUV photodetectors: surface chemical analysis and the impacts of non-V<sub>O</sub> factors

Zeming Li, Rensheng Shen, Wancheng Li, Teng Jiao, Yuchun Chang,\* Hongwei Liang,\* Xiaochuan Xia and Baolin Zhang\*

