

# Journal of Materials Chemistry C

Materials for optical, magnetic and electronic devices

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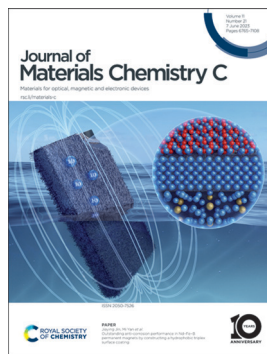
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ISSN 2050-7526 CODEN JMCCCX 11(21) 6765–7108 (2023)



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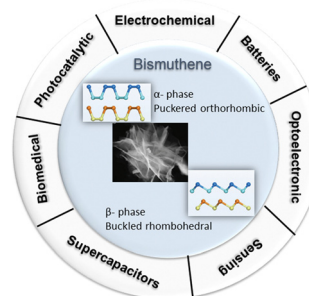
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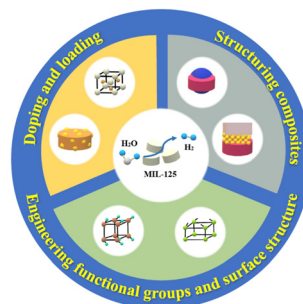
Shwetharani R.,\* Itika Kainthla, Sumanth Dongre S., Laveena D'Souza and R. Geetha Balakrishna\*



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Yijun He, Tianping Lv,\* Bin Xiao, Bo Liu, Tong Zhou, Jin Zhang, Yumin Zhang, Genlin Zhang\* and Qingju Liu\*



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Journal of Materials Chemistry C (electronic: ISSN 2050-7534)

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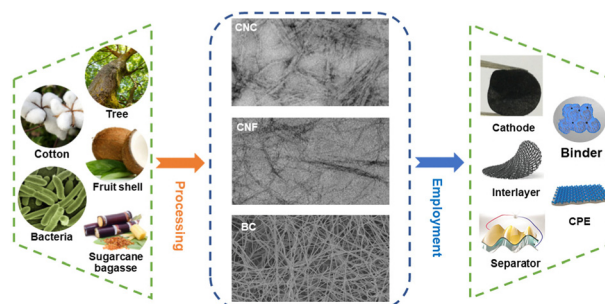


## REVIEWS

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**Inexhaustible natural celluloses in advanced Li-S batteries: a review**

Ming Chen, Dongxue Liu, Liucheng Meng, Ying Zhao, Jiaqi Xu, Sha Yin, Yige Wang and Yang Huang\*

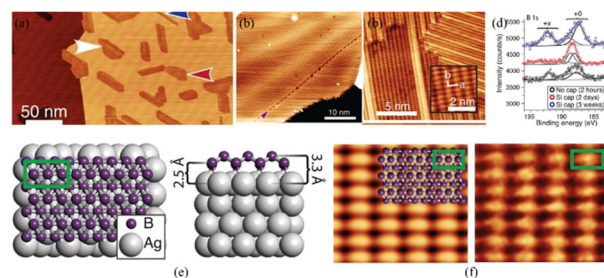


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**Borophenes: monolayer, bilayer and heterostructures**

Rui Yang and Mengtao Sun\*

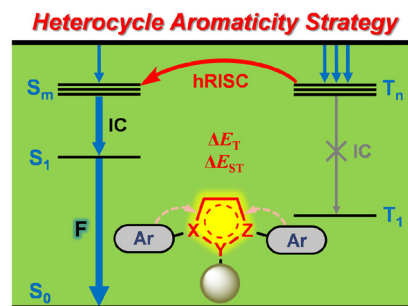


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**Exploiting heterocycle aromaticity to fabricate new hot exciton materials**

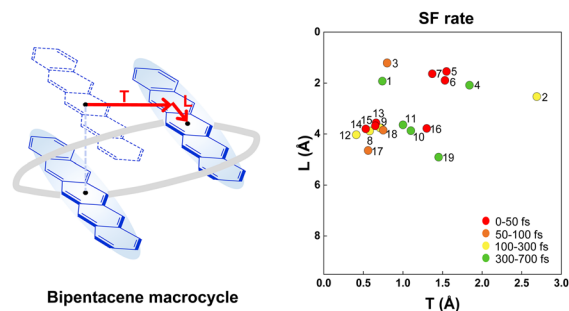
Shaoting Guo, Long Wang,\* Qianqian Deng, Guoliang Wang, Xiangbin Tian, Xiyu Wang, Zuyuan Liu, Mengfan Zhang, Senhao Wang, Yanqin Miao,\* Jun Zhu\* and Hua Wang\*



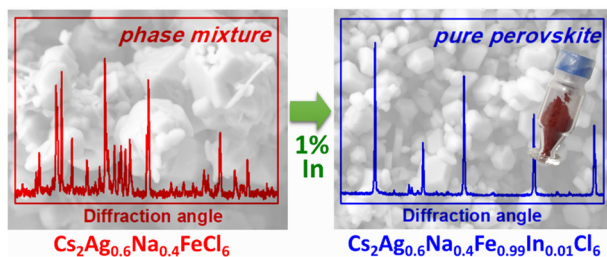
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**Optimizing through-space interaction for singlet fission by using macrocyclic structures**

Zhangxia Wang, Xuexiao Yang, Haibo Ma\* and Xiaoyu Xie\*



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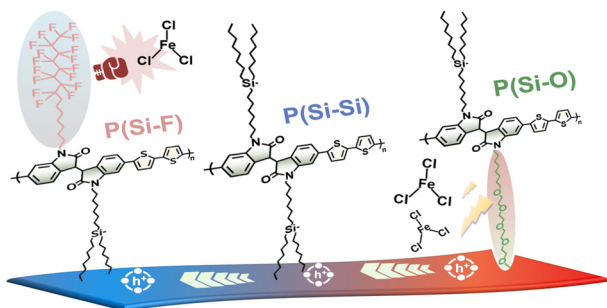


### In(III)-dictated formation of double $\text{Cs}_2\text{Ag}_x\text{Na}_{1-x}\text{Fe}_y\text{In}_{1-y}\text{Cl}_6$ perovskites

Oleksandr Stroyuk,\* Oleksandra Raievska, Anastasia Barabash, Jens Hauch and Christoph J. Brabec

PAPERS

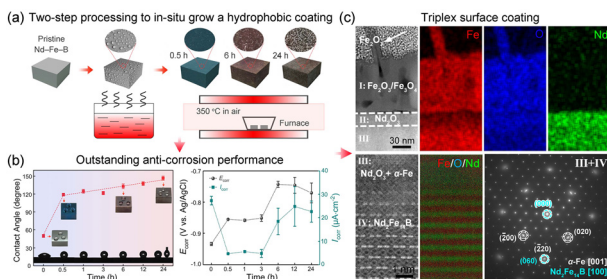
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### Optimizing the doping efficiency and thermoelectric properties of isoindigo-based conjugated polymers using side chain engineering

Chia-Hao Tsai, Yan-Cheng Lin,\* Wei-Ni Wu, Shih-Hung Tung, Wen-Chang Chen and Cheng-Liang Liu\*

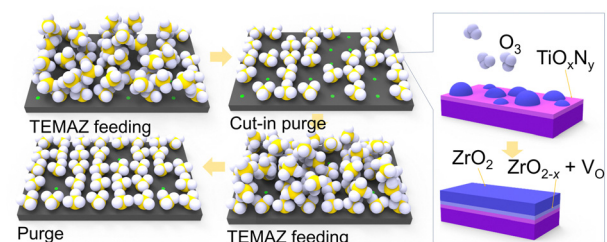
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### Outstanding anti-corrosion performance in Nd–Fe–B permanent magnets by constructing a hydrophobic triplex surface coating

Wang Chen, Jiaying Jin,\* Junyao Yu, Liang Zhou, Baixing Peng, Song Fu, Xiaolian Liu, Guohua Bai and Mi Yan\*

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### Enhancing chemisorption efficiency and thin-film characteristics *via* a discrete feeding method in high- $k$ dielectric atomic layer deposition for preventing interfacial layer formation

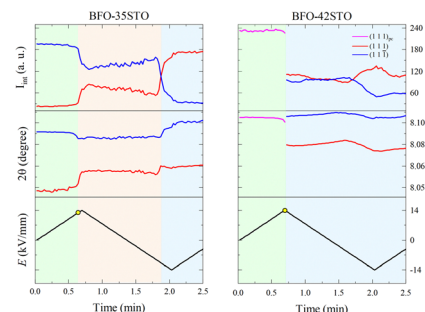
Ae Jin Lee, Seungwoo Lee, Dong Hee Han, Youngjin Kim and Woojin Jeon\*



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### Electric-field-induced non-ergodic relaxor to ferroelectric transition in $\text{BiFeO}_3-x\text{SrTiO}_3$ ceramics

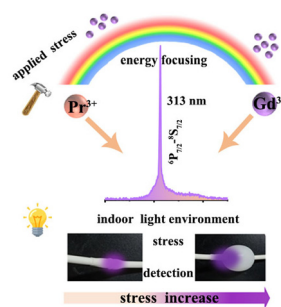
Leonardo Oliveira, Jeppe Ormstrup, Marta Majkut, Maja Makarovic, Tadej Rojac, Julian Walker and Hugh Simons\*



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### Energy focusing reinforced narrowband ultraviolet-B mechanoluminescence for bright-field stress visualization

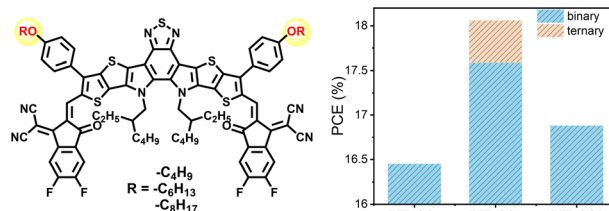
Xiuxia Yang, Dongxun Chen, Yanjie Liang, Su Zhou, Ju Xu, Lin Liu, Hang Lin, Yan Xiong, Yao Cheng\* and Yuansheng Wang\*



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### Side-chain modification of non-fullerene acceptors for organic solar cells with efficiency over 18%

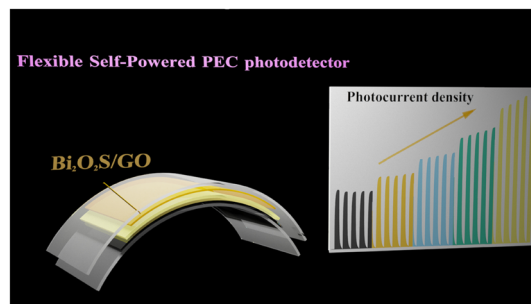
Zhixiang Li, Changzun Jiang, Xin Chen, Guangkun Song, Xiangjian Wan, Bin Kan,\* Tainan Duan, Ekaterina A. Knyazeva, Oleg A. Rakin and Yongsheng Chen\*



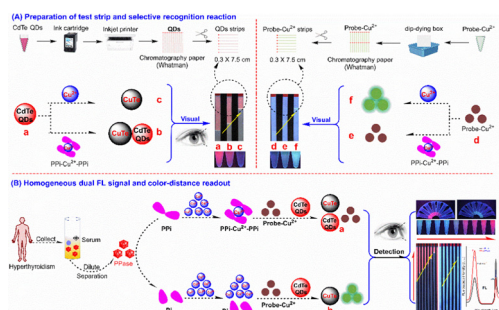
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### Flexible self-powered photoelectrochemical-type photodetectors based on $\text{Bi}_2\text{O}_3/\text{GO}$ composites

Xinzhe Yan, Baolong Shi, Huyue Cao, Zhengshan Tian, Chaoqing Dai,\* Wei Liu,\* Qin Yang\* and Yueyue Wang\*



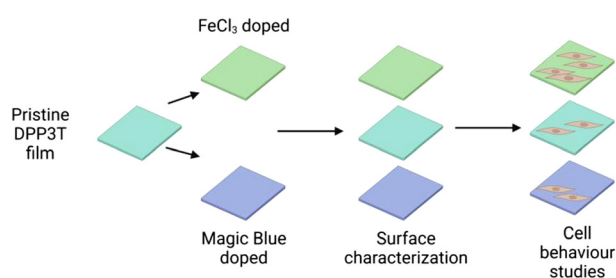
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### Visual analysis of pyrophosphatase assisted by red and green two-color distance-reading test strips for the diagnosis of hyperthyroidism

Tian Shi, Wu Peng, Li Yan, Maoyuan Zhao, Zixuan Zhan,\* Binwu Ying\* and Piaopiao Chen\*

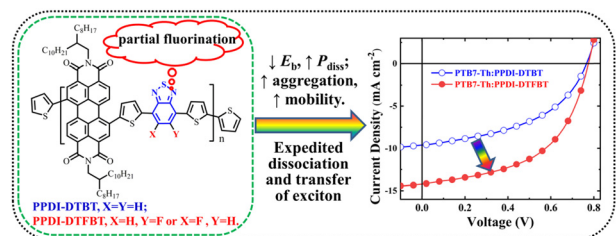
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### Improving the biological interfacing capability of diketopyrrolopyrrole polymers via p-type doping

Ryan P. Trueman, Peter Gilhooly Finn, Megan M. Westwood, Avishek Dey, Robert Palgrave, Alethea Tabor, James B. Phillips and Bob C. Schroeder\*

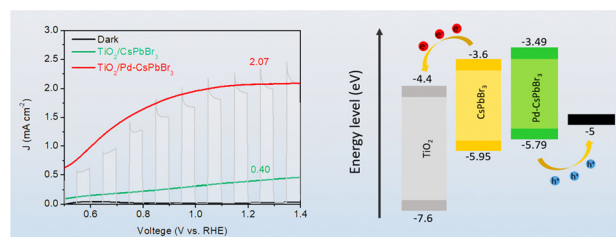
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### Unraveling the origin of improved photovoltaic performance in acceptor-acceptor-structured perylene-diimide-based polymeric acceptors through partially fluorinating benzo[c][1,2,5]thiadiazole

Junfeng Tong,\* Wuyan Liu, Yubo Huang, Zheyu Li, Yan Wang, Suiyan Bai, Zezhou Liang, Lihe Yan,\* Jianfeng Li and Yangjun Xia\*

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### Enhanced charge transport from Pd-doping in CsPbBr<sub>3</sub> quantum dots for efficient photoelectrocatalytic water splitting

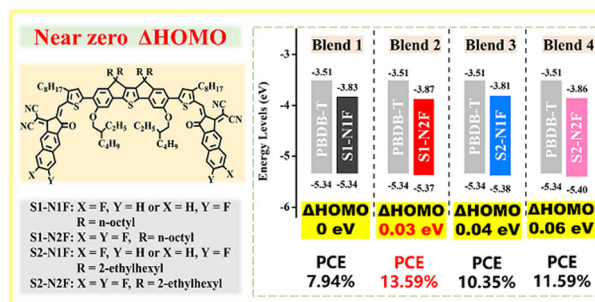
Wenxiao Gong, Yulan Li,\* Yang Yang, Heng Guo\* and Xiaobin Niu\*



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### Near 0 eV HOMO offset enable high-performance nonfullerene organic solar cells with large open circuit voltage and fill factor

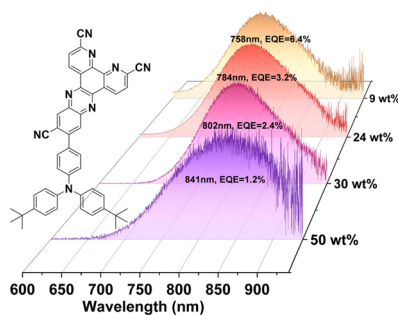
Liwen Wang, Cai'e Zhang, Zhiyi Su, Yikai Wang, Wenli Su, Xuyan Man, Zaifei Ma, Wenkai Zhang,\* Cuihong Li,\* Chuluo Yang and Zhishan Bo\*



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### Highly efficient near-infrared thermally activated delayed fluorescence organic light-emitting diodes with emission beyond 800 nm

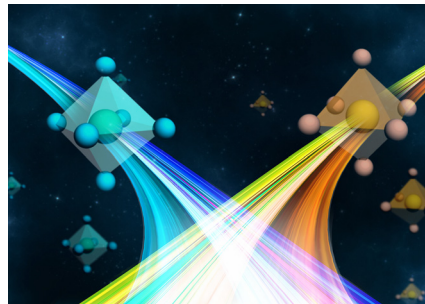
Jing-Xing Liang, Yukun Tang, Xiaofei Wang, Kai Zhang, Yu-wei Shih, Chia-Hsun Chen, Tien-Lung Chiu, Pei Jin Li, Jiun-Haw Lee, Chuan-Kui Wang,\* Chung-Chih Wu\* and Jian Fan\*



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### Cyan-rich sunlight-like spectra from Mn<sup>2+</sup>-doped CsCd(Cl<sub>1-y</sub>Br<sub>y</sub>)<sub>3</sub> perovskites with dual tunable emissions and high stability

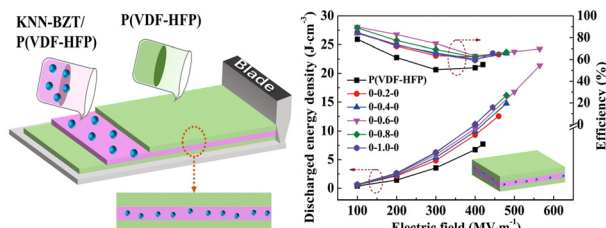
Tianzhuo Wen, Guoxian Gu,\* Bofei Wang, Wenjun Zhang\* and Ruihu Wang



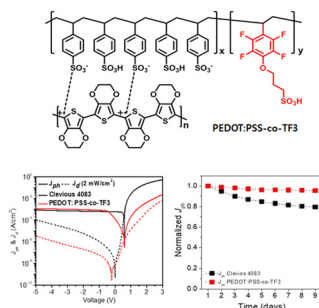
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### Improved energy storage performance of sandwich-structured P(VDF-HFP)-based nanocomposites by the addition of inorganic nanoparticles

Yan Guo, Di Zhou,\* Da Li, Weichen Zhao, Yifei Wang, Lixia Pang, Zhongqi Shi, Tao Zhou, Shikuan Sun, Charanjeet Singh, Sergei Trukhanov, Antonio Sergio Bezerra Sombra and Guohua Chen



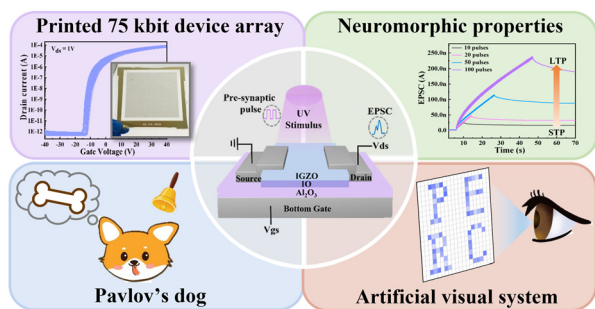
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### Synthesis and characterization of PEDOT:PSS-co-TF for enhancing detection performances of organic photodetectors

Long Shen, Gyeong Uk Seo, Hyeong Ju Eun, Prabhakaran Prem, Sang Eun Yoon, Jong H. Kim\* and Tae-Dong Kim\*

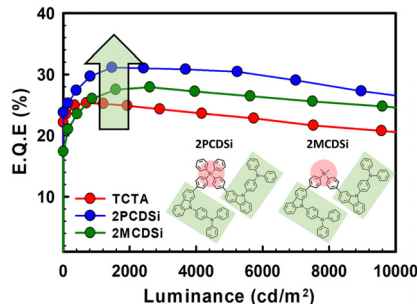
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### 75 kbit printed indium oxide (IO)/indium gallium zinc oxide (IGZO) heterojunction photoelectric synaptic transistor arrays for an artificial visual memory system

Shuangshuang Shao, Suyun Wang, Min Li, Tanghao Xie, Yuxiao Fang, Penghui Guo, Zhaofeng Chen and Jianwen Zhao\*

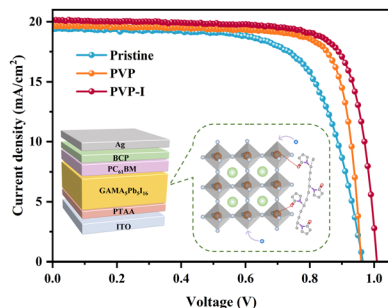
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### A design strategy of exciton blocking materials using simulations and the analysis of device properties

Young Hun Jung, Ramanaskanda Braveenth, Seung Hyun Lee, Su Bin Oh, Hyuna Lee, Hye In Yang, Jun Hyeog Oh, Hye Rin Kim, Bo-Mi Kim\* and Jang Hyuk Kwon\*

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### The synergistic passivation effect of functionally doped povidone-iodine on quasi-2D perovskite solar cells

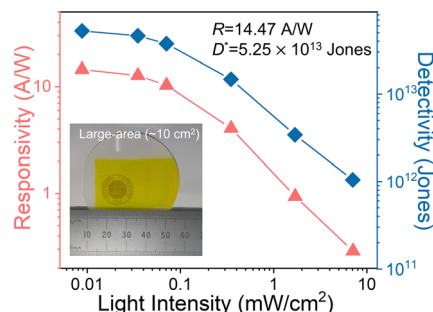
Sai Ji, Yansheng Sun, Xiaonan Huo, Weifeng Liu, Weiwei Sun, Kexiang Wang, Ran Yin, Tingting You\* and Penggang Yin\*



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### Blade-coating of a highly crystallized lead-free silver-bismuth halide double perovskite thin film with improved stability for high-performance photodetection

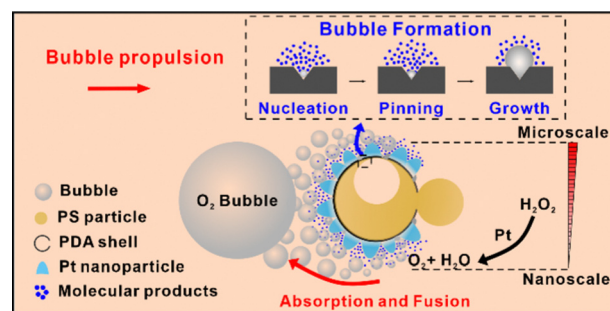
Feier Fang, Wenlong He,\* Zexiang Liu, Ke Jiang, Ye Wang, Fuming Chen, Henan Li\* and Yumeng Shi\*



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### Bubble-propelled micro-/nanomotors of variable sizes by regulating the surface microstructure of partially coated Pt shells

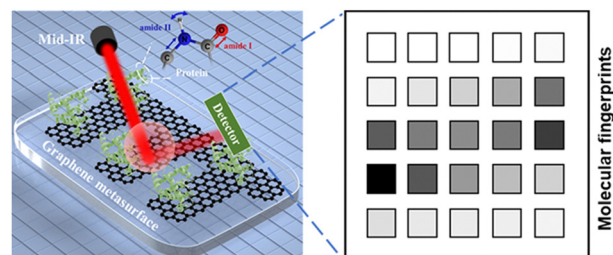
Jiaxin Li, Xiangxiang Zhai, Zili Yang, Ziyue Pei, Ming Luo\* and Jianguo Guan\*



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### Graphene plasmonics for ultrasensitive imaging-based molecular fingerprint detection

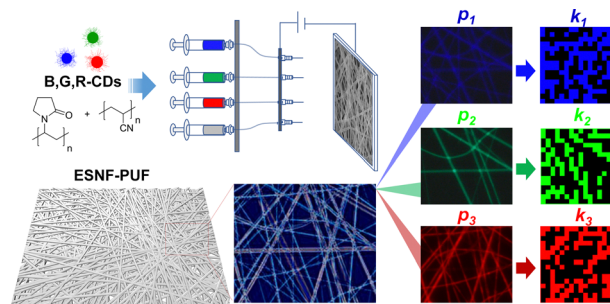
Chengdong Tao, Chuanbao Liu,\* Yongliang Li, Lijie Qiao, Ji Zhou and Yang Bai\*



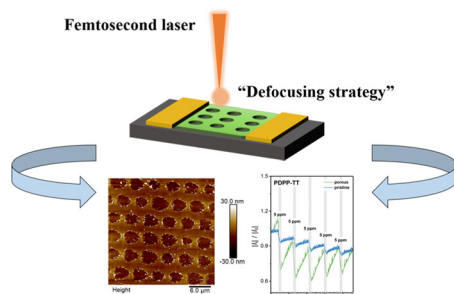
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### A multicolor carbon dot doped nanofibrous membrane for unclonable anti-counterfeiting and data encryption

Shunfei Qiang, Ke Yuan, Yanyan Cheng, Guoqiang Long, Wenkai Zhang,\* Xiaofeng Lin, Xiuli Chai,\* Xiaomin Fang and Tao Ding



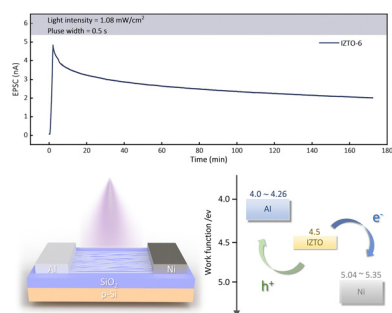
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## Direct laser patterning of organic semiconductors for high performance OFET-based gas sensors

Li Chen, Yuzhou Hu, Huaxi Huang, Chao Liu, Di Wu\* and Jianlong Xia\*

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## Long-memory retention and self-powered ultraviolet artificial synapses realized by multi-cation metal oxide semiconductors

Lingyan Zheng, Ruifu Zhou, Shuwen Xin, Haofei Cong, Yuanbin Qin, Peilong Xu, Xuhai Liu\* and Fengyun Wang\*

