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### Cover

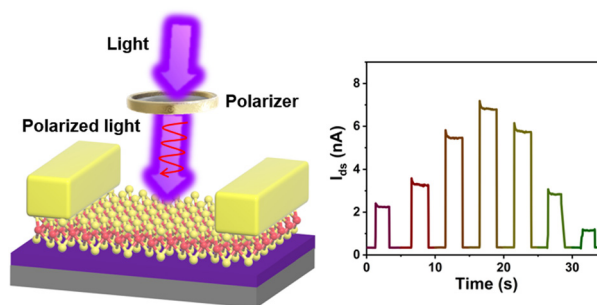
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## REVIEW

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### Development and challenges of polarization-sensitive photodetectors based on 2D materials

Liang Yu, Huafeng Dong, Wei Zhang, Zhaoqiang Zheng,\*  
Ying Liang\* and Jiandong Yao\*

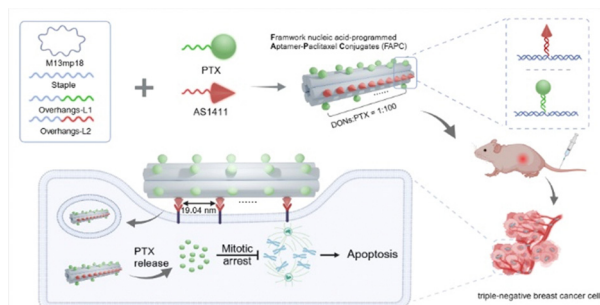


## COMMUNICATIONS

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### Framework nucleic acid-programmed aptamer-paclitaxel conjugates as targeted therapeutics for triple-negative breast cancer

Lin Li, Pengyao Wei, Tong Kong, Bo Yuan, Pan Fu,  
Yong Li, Yuhui Wang,\* Jianping Zheng\* and  
Kaizhe Wang\*



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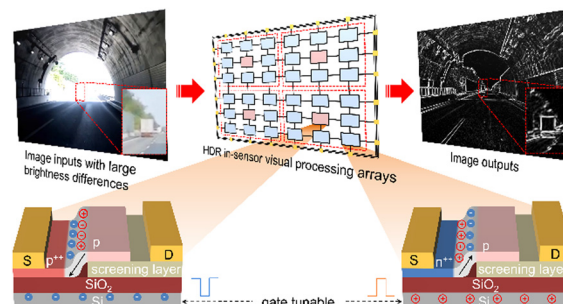
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### An ultra-fast WSe<sub>2</sub> homojunction photodiode with a large linear dynamic range towards in-sensor image processing

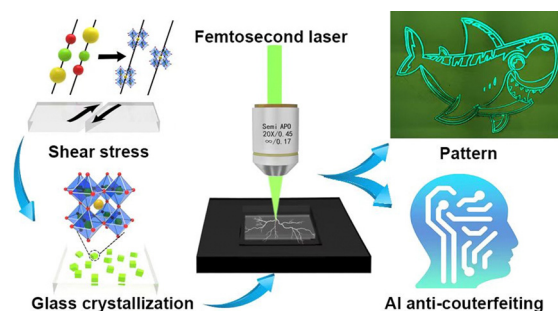
Shaofeng Wen, Shuren Zhou, Yimin Gong, Rui Zhang, Xinyu Jia, Linggang Kong, Haodong Fan, Yi Yin, Changyong Lan,\* Chun Li\* and Yong Liu



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### Destruction for growth: a novel laser direct writing perovskite strategy with intelligent anti-counterfeiting applications

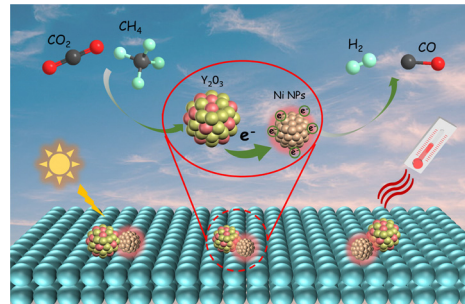
Shoufang Liu, Xiangyu Xu, Jie Zhou, Yuxuan Jiang, Xue Liu, Yan Kuai, Benli Yu and Siqi Li\*



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### Enhanced photothermal methane dry reforming through electronic interactions between nickel and yttrium

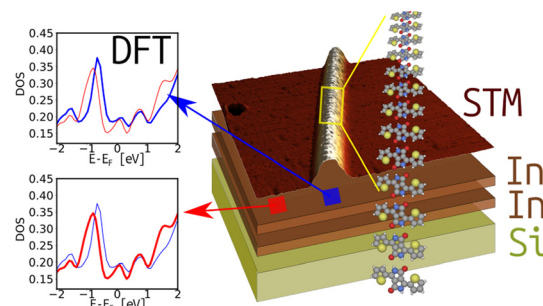
Xueying Zhang, Zeshu Zhang,\* Qishun Wang, Jianheng Xu, Xinyu Han, Jiakun Wang, Jia Liu, Cheng Rao, Xiangguang Yang, Yibo Zhang\* and Lu Wang\*



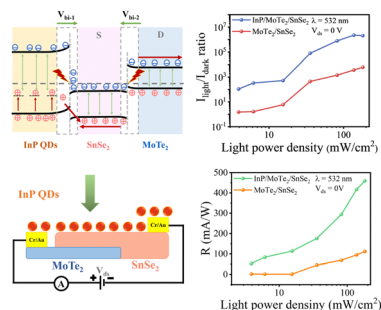
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### One-dimensional molecular nanostructures interacting with two-dimensional metals

Pavel Kocán,\* Barbara Pieczyrak, Soshiro Umachi, Martin Cigánek, Pavel Sobotík, Ivan Ošťádal, Leszek Jurczyszyn, Jozef Krajčovič and Kazuyuki Sakamoto



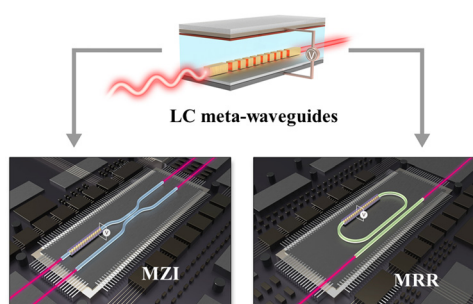
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### Engineering energy bands in 0D–2D hybrid photodetectors: Cu-doped InP quantum dots on a type-III SnSe<sub>2</sub>/MoTe<sub>2</sub> heterojunction

Jiabin Li, Dongxue Wang, Xiya Chen, Yao Zhou, Huanteng Luo, Tu Zhao, Sheng Hu, Zhaoqiang Zheng, Wei Gao\* and Xiao Liu\*

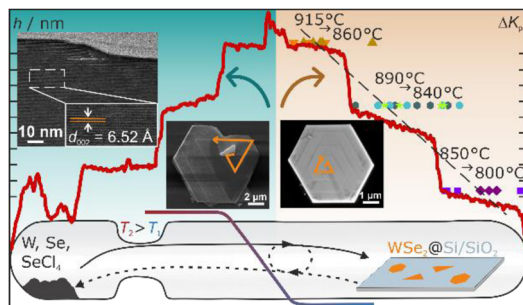
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### An ultra-compact integrated phase shifter via electrically tunable meta-waveguides

Chengkun Dong, Xiaowen Gu, Yiyun He, Ziwei Zhou, Jiayi Wang, Zhihai Wu, Wenqi Wang, Tangsheng Chen, Jun Wu, Tong Qiu and Jun Xia\*

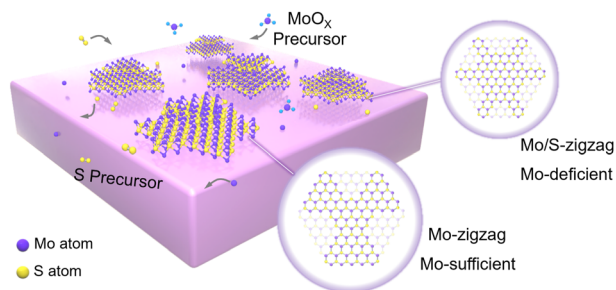
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### Creating chirality in WSe<sub>2</sub> through screw dislocations by chemical vapor transport

Philip Putze,\* Tobias Ritschel, Paul Chekhonin, Jochen Geck, Daniel Wolf, Alexey A. Popov, Bernd Büchner, Peer Schmidt and Silke Hampel\*

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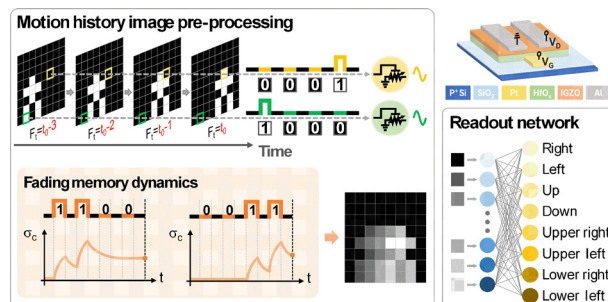
Weijie Ma, Qing Zhang, Jie Zhu, Yang Guo, Yajing Sun, Lin Li and Dechao Geng\*



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## Motion image feature extraction through voltage modulated memory dynamics in an IGZO thin-film transistor

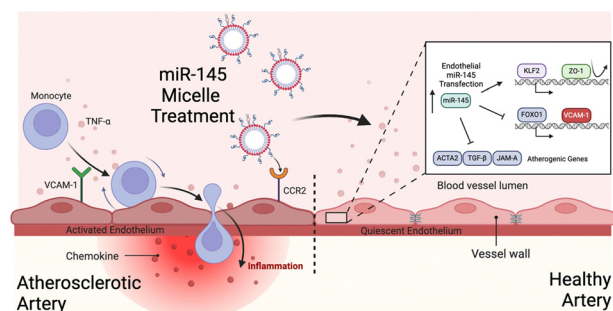
Yu-Chieh Chen, Jyu-Teng Lin, Kuan-Ting Chen, Chun-Tao Chen and Jen-Sue Chen\*



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## Endothelial-targeting miR-145 micelles restore barrier function and exhibit atheroprotective effects

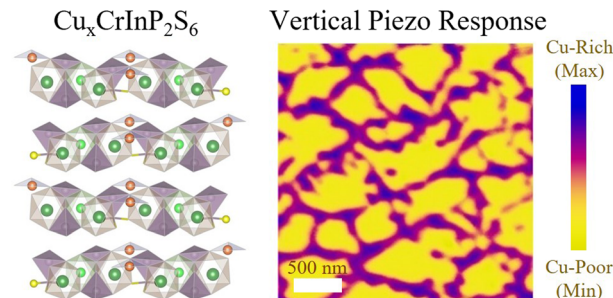
Anisa Ashraf, Yi Huang, Auveen Choroomi, Kyla Johnson, Jocelynn Torres and Eun Ji Chung\*



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## Enhanced piezoresponse in van der Waals 2D CuCrInP<sub>2</sub>S<sub>6</sub> through nanoscale phase segregation

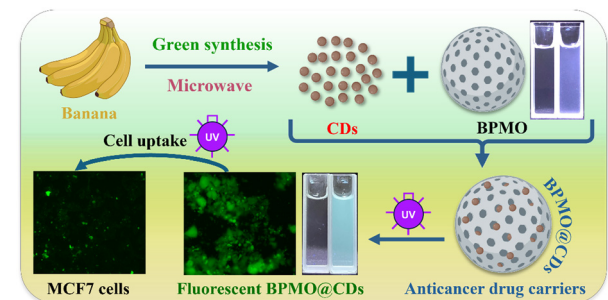
Sharidya Rahman,\* Sanika S. Padelkar, Lan Nguyen, Naufan Nurrosyid, Md Hemayet Uddin, Oleksandr Chernyavskiy, Junlin Yan, Chang Cao, Alexandr N. Simonov, Aftab Alam and Jacek J. Jasieniak\*



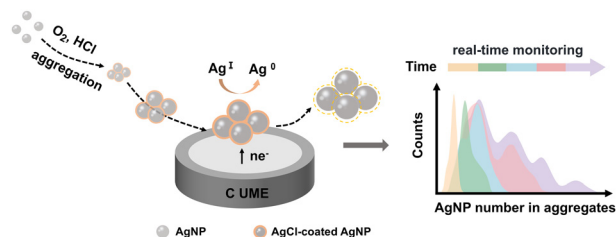
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## Biogenic fluorescent carbon dot-decorated mesoporous organosilica nanoparticles for enhanced bioimaging and chemotherapy

Ky-Vien Le, Hanh-Vy Tran Nguyen, Phu-Quan Pham, Ngoc Hong Nguyen, Tan Le Hoang Doan, Linh Ho Thuy Nguyen, Bach Thang Phan, Lan Thi My Nguyen,\* Sungkyun Park, Ngoc Kim Pham,\* Philip Anggo Krisbiantoro, Kevin C.-W. Wu\* and Ngoc Xuan Dat Mai\*



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### Real-time, non-destructive monitoring of the aggregation behavior of silver nanoparticles using nano-impact electrochemistry

Hairong Hu, Yu-An Li, Meijuan Liu, Wei Xu and Yi-Ge Zhou\*

