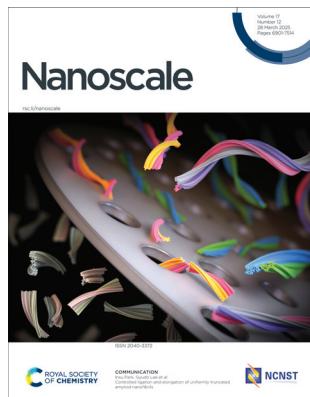


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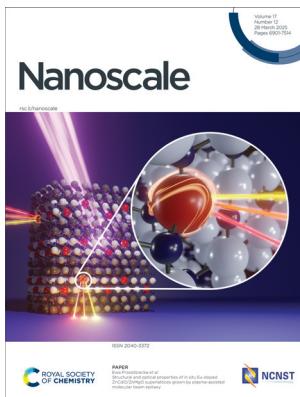
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### Cover

See Insu Park, Gyudo Lee et al., pp. 6993–7001.

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### Inside cover

See Ewa Przeździecka et al., pp. 7055–7065.

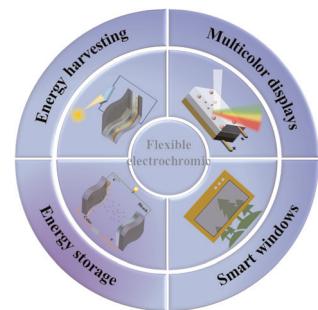
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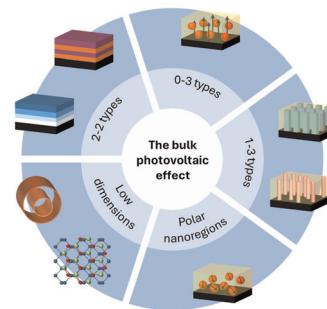
Jiamin Yu, Shanjie Wang, Lin Gao, Guoqi Qiao, Meng-Fang Lin, Cong Wei, Jingwei Chen\* and Shaohui Li\*



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### Nanostructure engineering for ferroelectric photovoltaics

Wenzhong Ji, Teng Lu\* and Yun Liu\*



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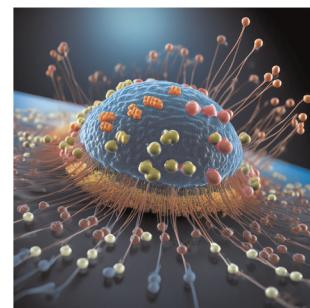
Fundamental questions  
Elemental answers

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**Understanding the interplay between pH and charges for theranostic nanomaterials**

Valerie Ow, Qianyu Lin, Joey Hui Min Wong, Belynn Sim, Yee Lin Tan, Yihao Leow, Rubayn Goh\* and Xian Jun Loh\*

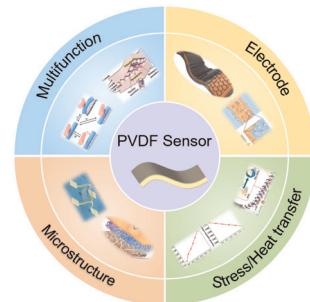


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**External strategies for enhanced sensing performance of self-powered polyvinylidene fluoride-based sensors**

Fang Wang,\* Zixuan Song, Xinchen Cai, Kai Guo, Xiaoyu Pan,\* Chuanlai Ren and Bo Li\*

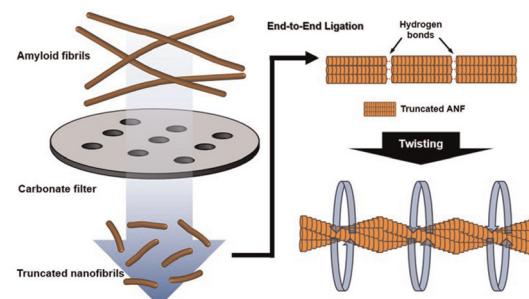


## COMMUNICATIONS

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**Controlled ligation and elongation of uniformly truncated amyloid nanofibrils**

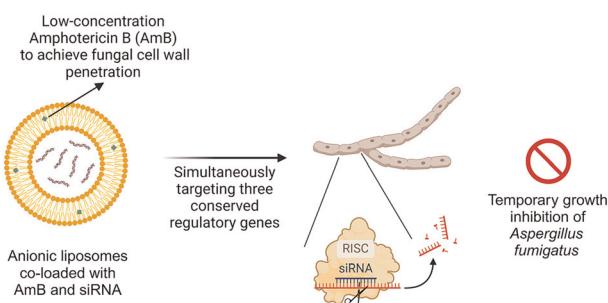
Seokbeom Roh, Da Yeon Cheong, Sangwoo Lee, Jongsang Son, Insu Park\* and Gyudo Lee\*



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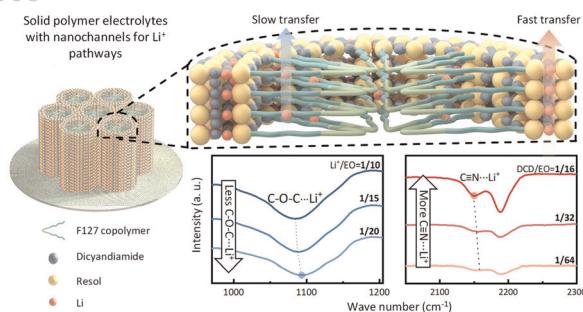
**Enhanced antifungal activity of siRNA-loaded anionic liposomes against the human pathogenic fungus *Aspergillus fumigatus***

Yidong Yu, Theresa Vogel, Sina Hirsch, Jürgen Groll, Krystyna Albrecht\* and Andreas Beilhack\*



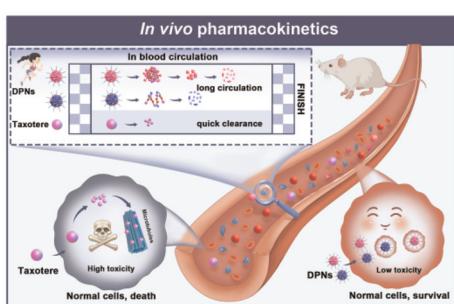
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**One-pot synthesis of long-range aligned nanochannels for Li-ion transfer pathways**

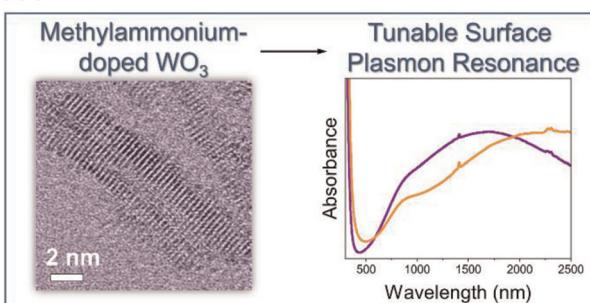
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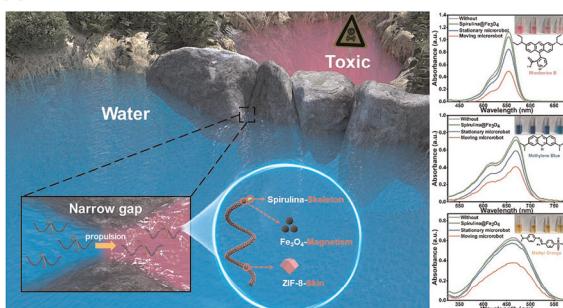
Wenjing Wang, Shuo Wang, Shengyao Xu, Rong Chai, Jun Yuan, Hao Zhang, Yaqi Li, Xiaohui Pu, Xin Li, Jin Sun, Zhonggui He\* and Bingjun Sun\*

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Owen Kendall, Lesly V. Melendez, Merve Nur Guven Bicer, Michael Wilms, Joel van Embden, Daniel E. Gómez, Arrigo Calzolari, Deborah Prezzi\* and Enrico Della Gaspera\*

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Yongcheng Li, Dajian Li, Yuhong Zheng, Sirui Lu, Yuepeng Cai\* and Renfeng Dong\*

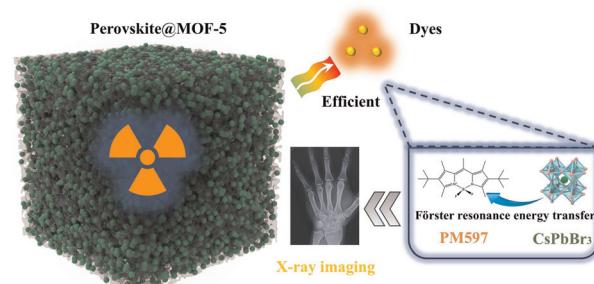


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**One stone, two birds: robust and self-absorption free flexible perovskite scintillators by metal–organic framework encapsulation**

Jie Zhou, Zhouyuanhang Wang, Zhongren Shi, Xilin Zhang, Lan Yang, Yuxuan Jiang, Yan Kuai, Zhijia Hu\* and Siqi Li\*

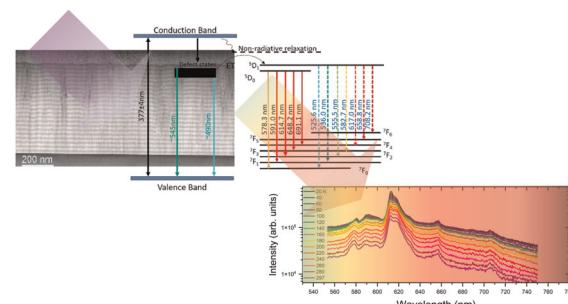


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**Structural and optical properties of *in situ* Eu-doped ZnCdO/ZnMgO superlattices grown by plasma-assisted molecular beam epitaxy**

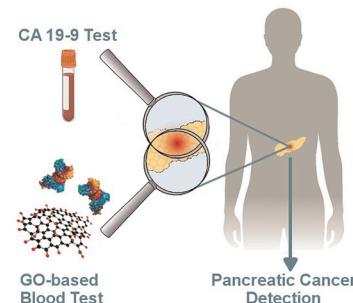
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**Nanoparticle-protein corona enhances accuracy of CA-19.9-based pancreatic cancer classification**

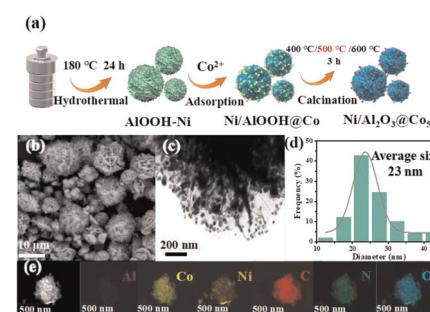
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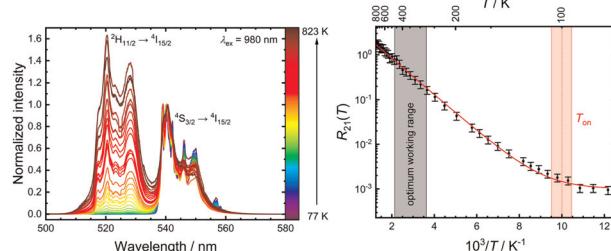
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Shuang Jiang, Hongyao Zhao, Zichen Ma, Hongyang Zhu, Danhong Shang, Linzhi Zhai, Yanyun Wang,\* Yiyian Song\* and Fu Yang\*



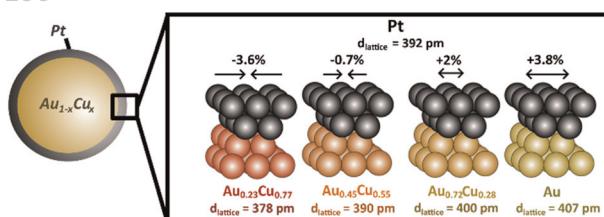
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**What makes  $\beta\text{-NaYF}_4:\text{Er}^{3+},\text{Yb}^{3+}$  such a successful luminescent thermometer?**

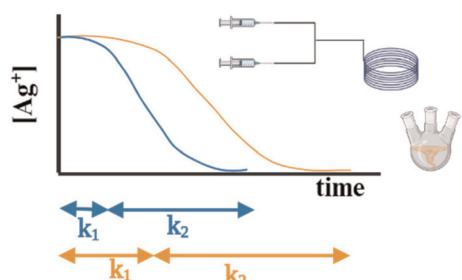
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**Synthetic control over lattice strain in trimetallic AuCu-core Pt-shell nanoparticles**

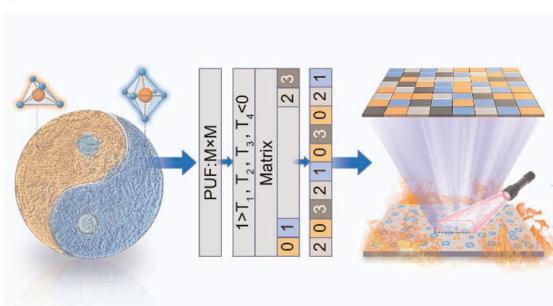
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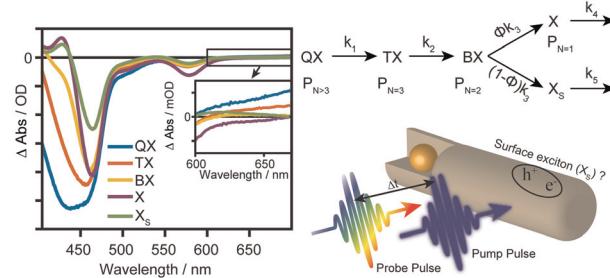


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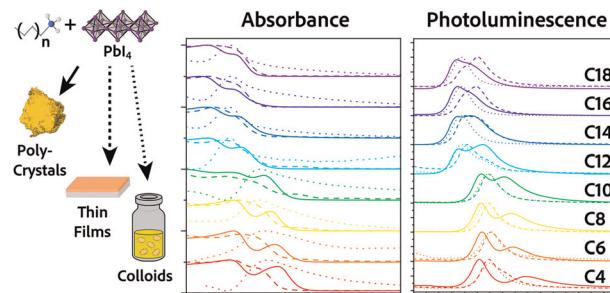
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**Studying the effect of dimensions and spacer ligands on the optical properties of 2D lead iodide perovskites**

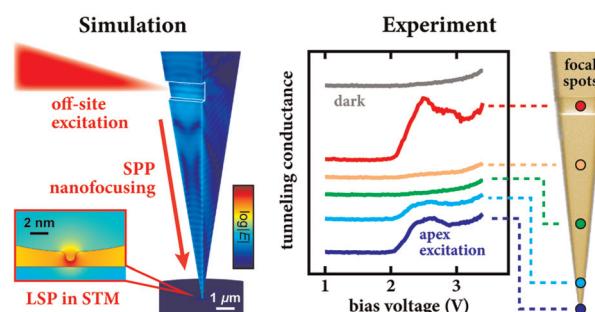
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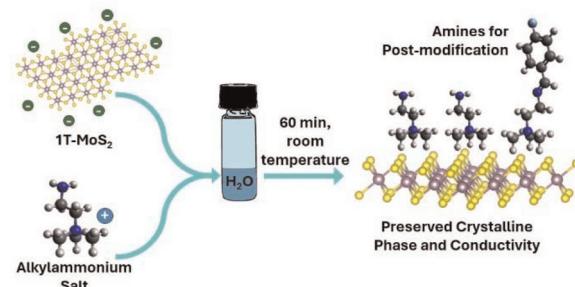
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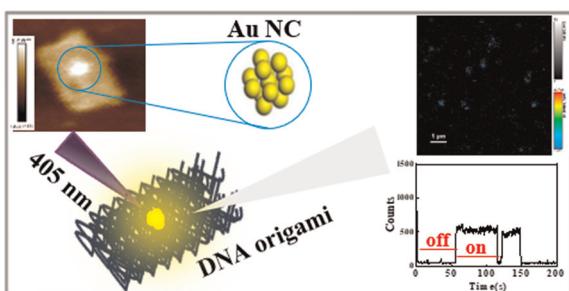
**Supramolecular electrostatic functionalization of 1T-MoS<sub>2</sub> based on alkylammonium salts**

Giuseppe Misia, Michele Cesco, Maurizio Prato\* and Alessandro Silvestri\*



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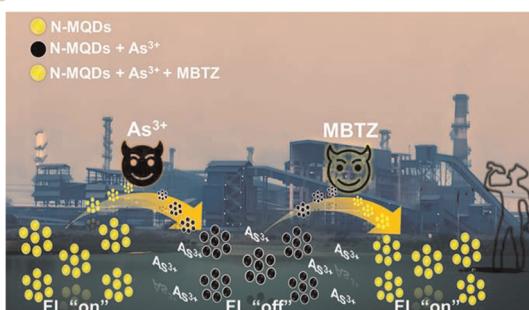
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**DNA origami-templated individual gold nanoclusters: probing their photophysical dynamics using single-molecule fluorescence spectroscopy**

Shikha Rai, Vishaldeep Kaur, Charanleen Kaur, Mridu Sharma and Tapasi Sen\*

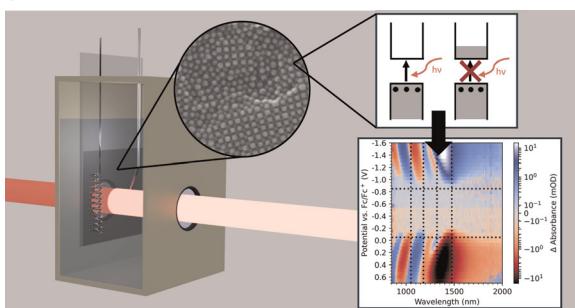
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**Bright yellow fluorescent N-doped  $\text{Ti}_3\text{C}_2$  MXene quantum dots as an "on/off/on" nanoprobe for selective  $\text{As}^{3+}$  ion detection**

Santanu Bera and Susanta Kumar Bhunia\*

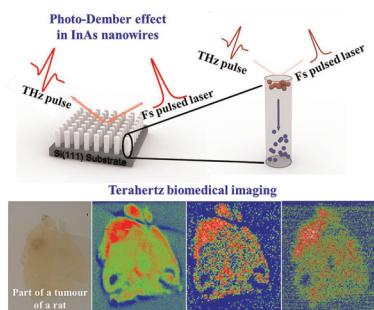
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**Spectroelectrochemistry with hydrogen-doped indium oxide electrodes monitors electron and hole injection into  $\text{PbS}$  quantum dots**

Sophia Westendorf, Shangjing Li, Patrick Michel, Bin Hu\* and Marcus Scheele\*

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**Terahertz biomedical imaging using a terahertz emitter based on InAs nanowires**

Dong Woo Park, Young Bin Ji, Ilgyu Choi, Jeongwoo Hwang, Jae Cheol Shin, Jin Chul Cho, Eui Su Lee, Seung Jae Oh,\* Siyun Noh, Jaehyeok Shin and Jin Soo Kim\*

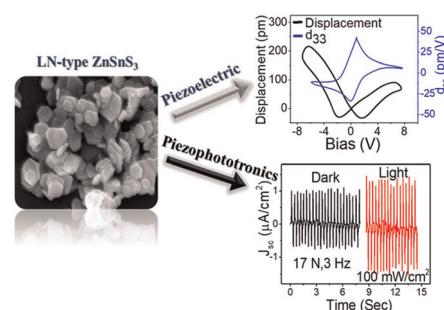


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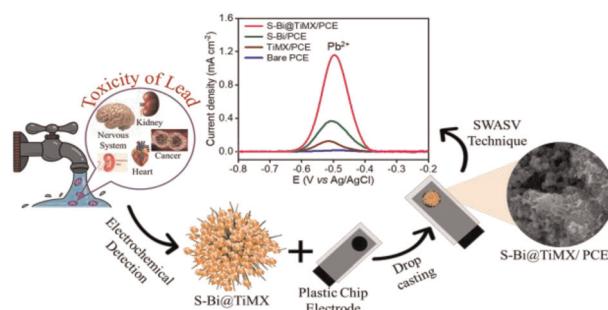
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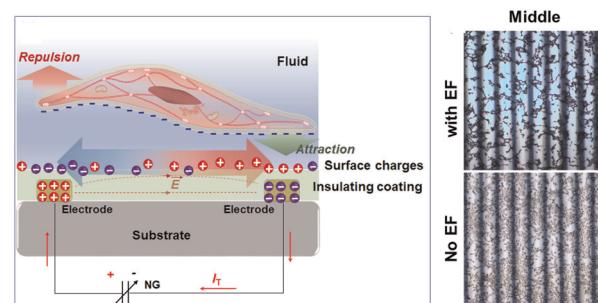
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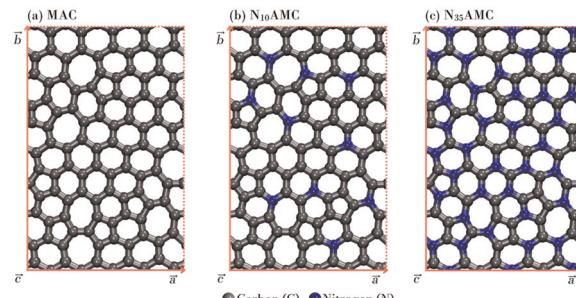
Zulmari Silva Pedraza, Fengdan Pan, Pengfei Chen, Steven Melendez Rosario, Grace Wu, Derui Wang, Jooyong Kim, Qianfan Yang, Bo Liu\* and Xudong Wang\*



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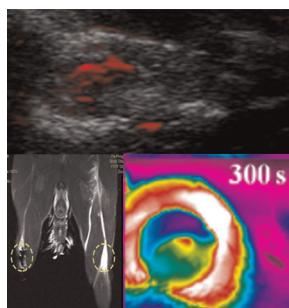
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Emanuel J. A. dos Santos, Marcelo L. Pereira, Junior,\* Raphael M. Tromer, Douglas S. Galvão and Luiz A. Ribeiro, Junior



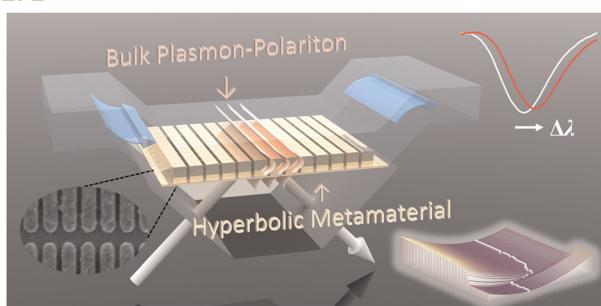
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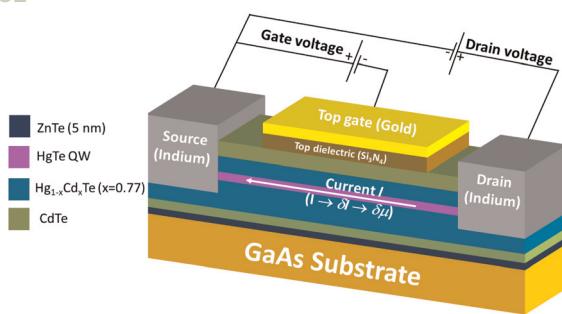
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**Composite metamaterial of hyperbolic nanoridges and gold nanoparticles for biosensing**

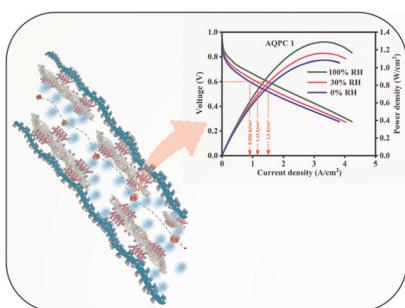
Xinzhaoyue, Tao Wang,\* Yaohua Cai, Huimin Wang, Enze Lv, Xuyang Yuan, Jinwei Zeng, Wenyu Zhao\* and Jian Wang\*

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**Radical initiated polymerization of p-styrenesulfonate on graphitic carbon nitride for interconnected water networks in short-side-chain PFSA membranes for low-humidity hydrogen fuel cells**

Maniprakundil Neeshma, Punnappadam Rajan Suraj, Baskaran Mohan Dass and Santoshkumar D. Bhat\*

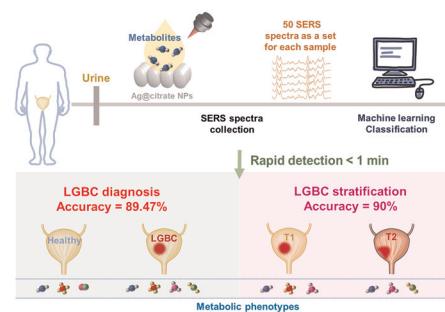


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**Non-invasive and rapid diagnosis of low-grade bladder cancer via SERSomes of urine**

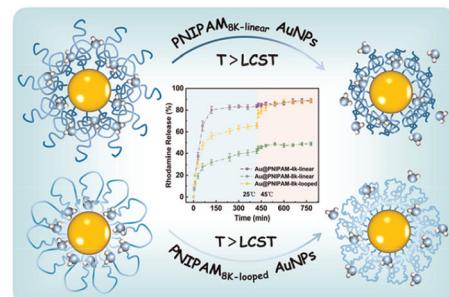
Yao Lu, Jiayi Wang, Xinyuan Bi, Hongyang Qian, Jiahua Pan\* and Jian Ye\*



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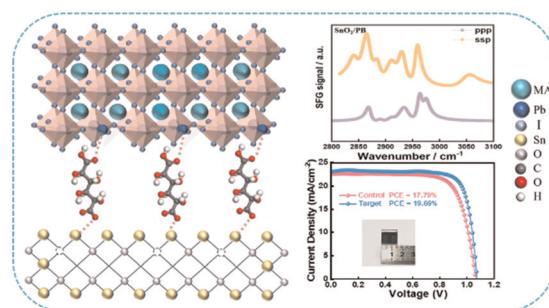
Chi Li, Jin Jing, Yanxiong Pan,\* Xiangling Ji and Wei Jiang\*



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**Interface-oriented bridges toward efficient carbon-based perovskite solar cells**

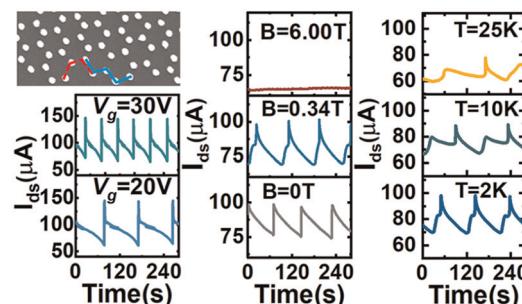
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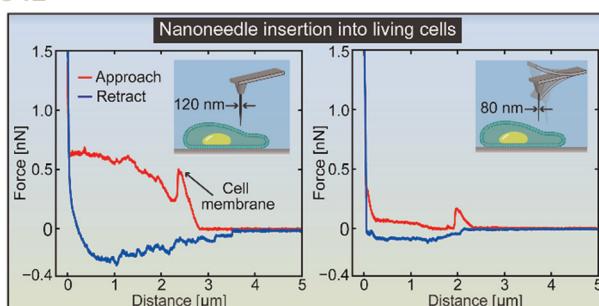
**Constant voltage driving current oscillation in artificial graphene ribbons with deterministic chiral edges**

Yan Zhan, Qiang Huang, Jingpu Yang, Wei Luo, Zuimin Jiang and Zhenyang Zhong\*



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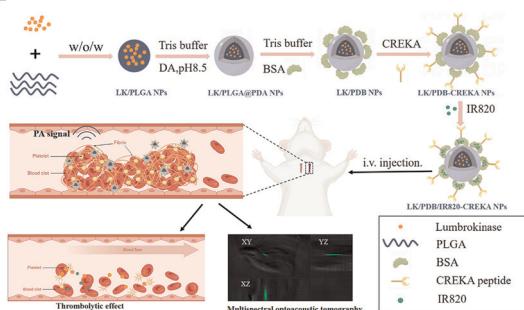
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### Significant reduction of cell invasiveness in nanoneedle insertion into a living cell with an electron-beam-deposited probe: impacts of probe geometry, speed and vibration

Mohammad Shahidul Alam, Marcos Penedo,\* Takehiko Ichikawa, Mohammad Mubarak Hosain, Kyosuke Matsumoto, Keisuke Miyazawa and Takeshi Fukuma\*

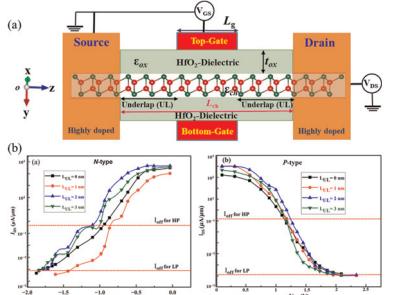
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### Construction of fibrin-targeted nanoparticles for imaging diagnosis and treatment of arterial thrombosis

Yaxue Liu, Yu Li, Junlong Chen, Pei Xie and Zongning Yin\*

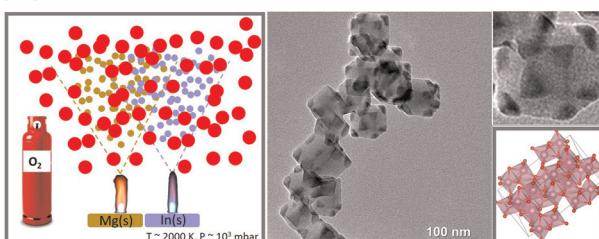
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### Quantum transport simulations of monolayer $\beta$ -Agl: a prospective nanochannel material in sub-1 nm gate-length MOSFETs

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Jacek Goniakowski,\* Cédric Baumier, Franck Fortuna and Slavica Stankic\*

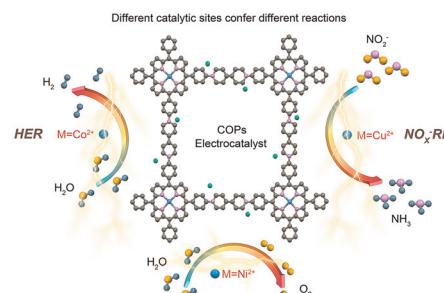


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**Construction of hydrophilic-and-cationic metallocporphyrin-based polymers for electrocatalytic small molecule activation**

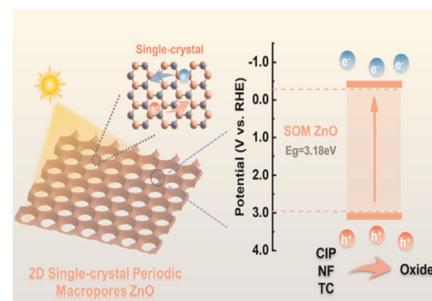
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**Two-dimensional single-crystal periodic macroporous ZnO sheets for extraordinary photocatalytic performance for antibiotics**

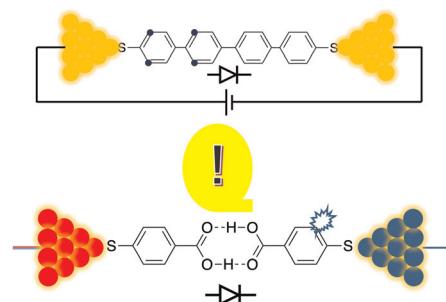
Ling Zhou, Yongjun Fu, Manxing Mo, Yihan Tong, Ping Niu, Junchao Wei, Rongbin Zhang, Ruihong Deng\* and Xuewen Wang\*



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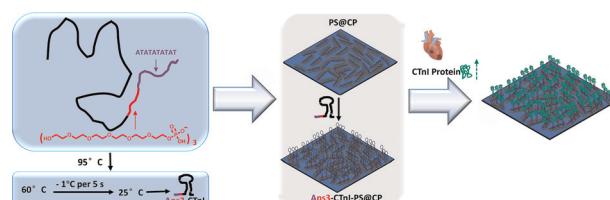
Hisao Nakamura\* and Naoyuki Karasawa



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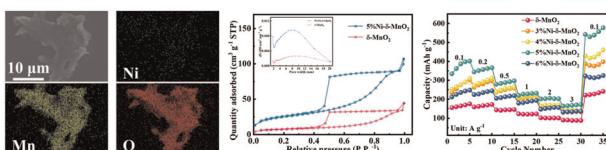
**Novel paper sensor with modified aptamer for accurate detection of clinical cardiac troponin I**

Qing Xie, Danfeng Wu, Qinran Chen, Haiyan Liang,\* Leyu Wang\* and Xiaozhong Qiu\*



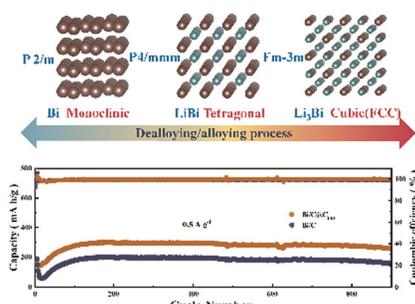
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7423

**Nickel-doped  $\delta$ -MnO<sub>2</sub> abundant in oxygen vacancies as a cathode material for aqueous Zn-ion batteries with superior performance**

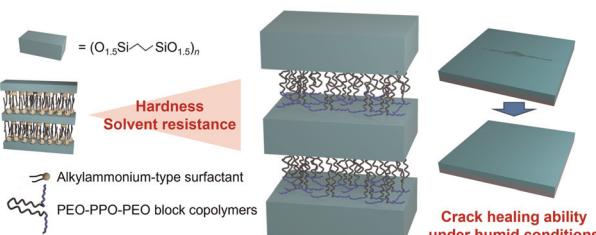
Shaolin Yang,\* Fangfang Li, Panpan Fu, Cheng Zhen, Jiandong Wu, Hui Lu, Chunping Hou and Zhilin Sheng

7434

**Microstructure modulation improving the stability performance of a Bi anode for lithium-ion batteries**

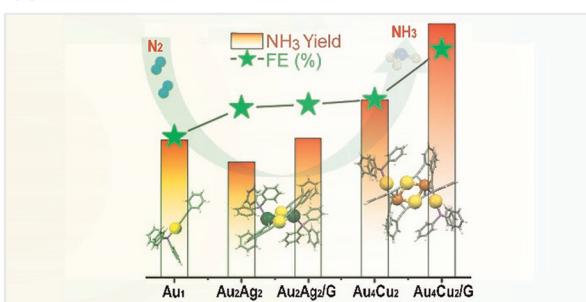
Yi-wen Chen, Cheng-Lu Yang, Jun Guo,\* Bu-Ming Chen,\* Hui Huang and Rui-dong Xu

7445

**Tuning structures and properties of self-healing silsesquioxane films using block copolymers**

Yoshiaki Miyamoto, Takamichi Matsuno and Atsushi Shimojima\*

7453

**Electrocatalytic nitrogen reduction to ammonia by graphene-supported Au<sub>4</sub>Cu<sub>2</sub> and Au<sub>2</sub>Ag<sub>2</sub> nanoclusters**

Aamir Shehzad, Qiuhan Yi, Chaonan Cui and Zhixun Luo\*

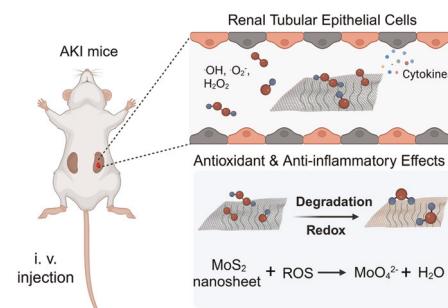


## PAPERS

7460

**Engineered molybdenum disulfide nanosheets as scavengers against oxidative stress inhibit ferroptosis to alleviate acute kidney injury**

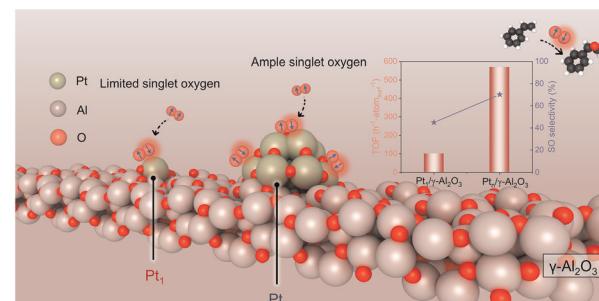
Xuwu Zhang, Zhipeng Xu, Yongzheng Zhang, Dan Wei, Shuping Zhang, Jianning Wang\* and Jiayu Ren\*



7474

**Proper aggregation of Pt is beneficial for the epoxidation of styrene by O<sub>2</sub> over Pt<sub>x</sub>/γ-Al<sub>2</sub>O<sub>3</sub> catalysts**

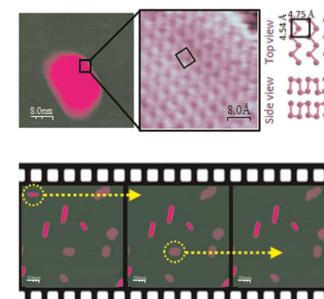
Fengfeng Li, Chenyang Shen, Yu He, Haoyu Lu, Rongtian Gu, Jun Yao, Zhewei Zhang, Feifei Mei, Taotao Zhao, Xiangke Guo, Nianhua Xue and Weiping Ding\*



7482

**Growing and nanomanipulating heterostructures of α-bismuthene in a nearly isolated state**

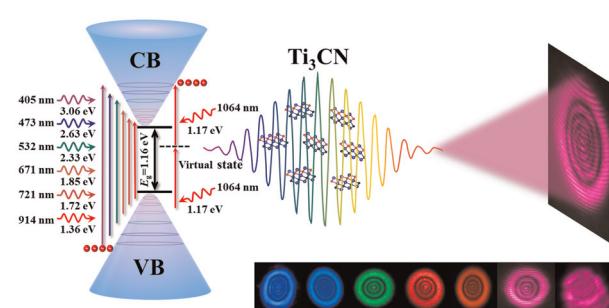
Antonio J. Martínez-Galera\* and José M. Gómez-Rodríguez



7488

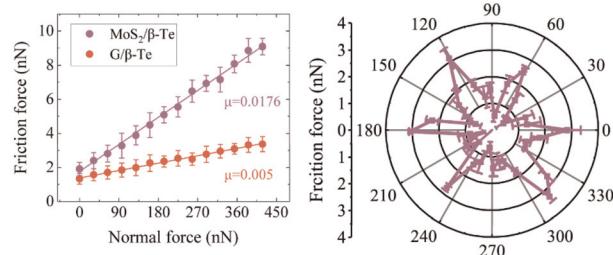
**Efficient spatial self-phase modulation in the near-infrared and visible regimes of transition metal carbonitride Ti<sub>3</sub>CN**

Jiawei Cao, Xiaodan Xu, Yixuan Huang, Tengdong Zhang, Ying Liu, Haotian Yang, Jimin Zhao,\* Jun Li\* and Yanling Wu\*



## PAPERS

7497

**Interfacial polarization-induced tribological behavior in MoS<sub>2</sub>/β-Te and G/β-Te heterostructures**

Guoliang Ru, Weihong Qi,\* Kaiyuan Xue, Mengzhao Wang and Xuqing Liu

## CORRECTION

7511

**Correction: Simulation of the resistance switching performance and synaptic behavior of TiO<sub>2</sub>-based RRAM devices with CoFe<sub>2</sub>O<sub>4</sub> insertion layers**

Fei Yang,\* Bo Hu, Zijian He, Bingkun Liu, Shilong Lou, Duogui Li and Wentao Wang

