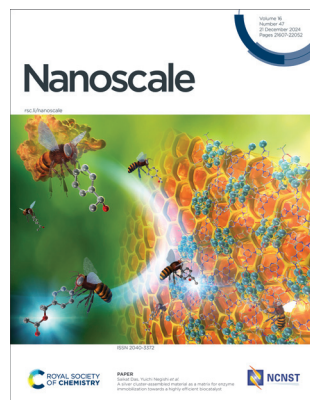


## IN THIS ISSUE

ISSN 2040-3372 CODEN NANOHL 16(47) 21607–22052 (2024)



### Cover

See Saikat Das,  
Yuichi Negishi *et al.*,  
pp. 21767–21775.

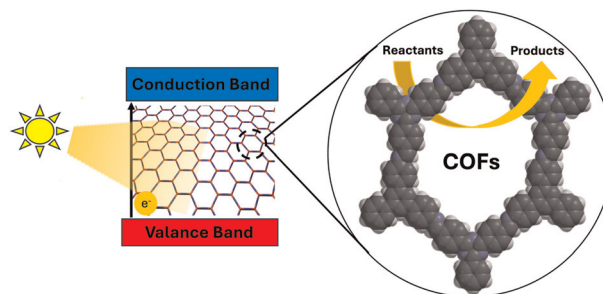
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Yuichi Negishi  
from *Nanoscale*,  
2024, **16**, 21767.

## REVIEWS

21619

### Photocatalytic applications of covalent organic frameworks: synthesis, characterization, and utility

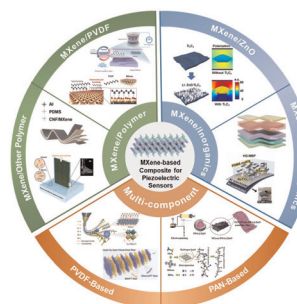
Jared G. Doremus, Bertha Lotsi, Aadarsh Sharma and  
Psaras L. McGrier\*



21673

### Recent advances in MXene-based composites for piezoelectric sensors

Long Jin, Yong Ao, Tianpei Xu, Yulin Zou and  
Weiqing Yang\*



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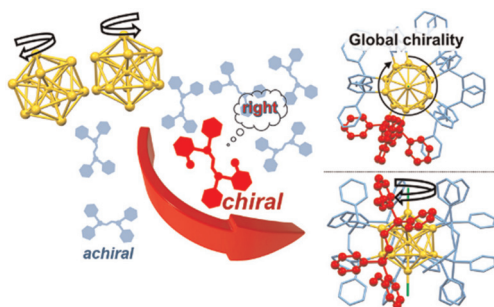
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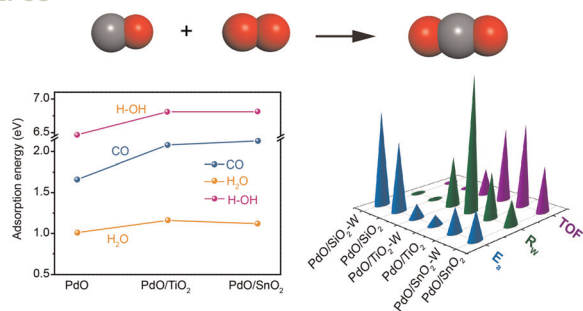
21776



### "Sergeants-and-soldiers" principle in the synthesis of intrinsically chiral Au<sub>13</sub> clusters

Katsuya Mutoh, Sonomi Kawakita, Teppei Yahagi and Takuya Nakashima\*

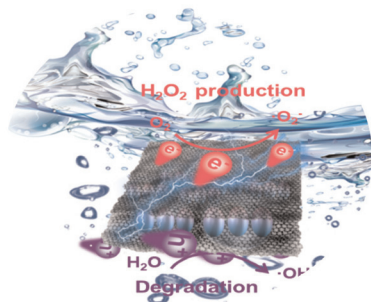
21783



### Impact of catalyst support on water-assisted CO oxidation over PdO/MO<sub>2</sub> (M = Sn, Ti, and Si) catalysts: experimental and theoretical investigation

Kun Liu,\* Luliang Liao and Guangfu Liao\*

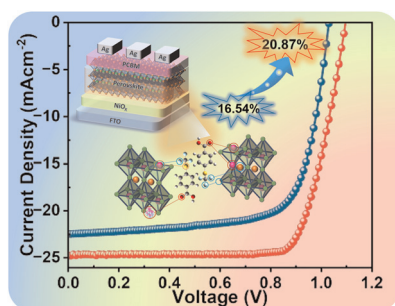
21794



### Enhancing the efficiency of PVDF-based piezoelectric catalysis through water-induced polarization and a micro-nano-composite strategy

Haitao Li,\* Yingying Zhang, Han Dai, Veronica Pereir, Junfeng Zhao\* and Hiang Kwee Lee\*

21804



### Minimizing defect states through multidentate coordination and morphology regulation for enhancing the performance of inverted perovskite solar cells

Himangshu Baishya, Mayur Jagdishbhai Patel, Ramkrishna Das Adhikari, Deepak Yadav and Parameswar Krishnan Iyer\*

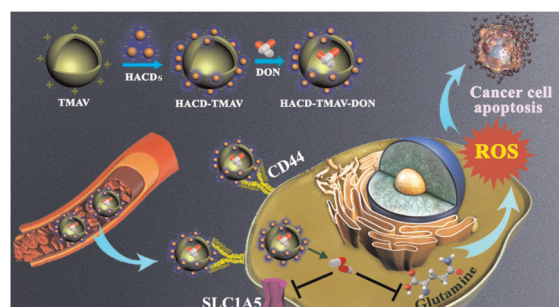


## PAPERS

21817

### DON encapsulated carbon dot–vesicle conjugate in therapeutic intervention of lung adenocarcinoma by dual targeting of CD44 and SLC1A5

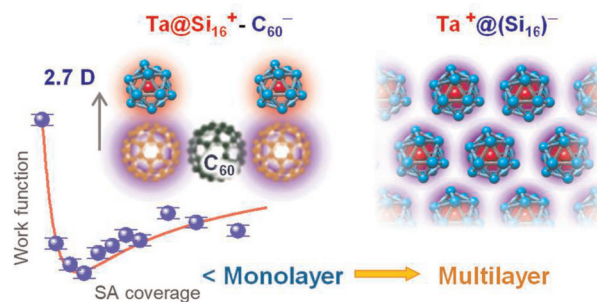
Afreen Zaman, Aparajita Ghosh, Anup Kumar Ghosh and Prasanta Kumar Das\*



21837

### Photoemission spectroscopy and microscopy for Ta@Si<sub>16</sub> superatoms and their assembled layers

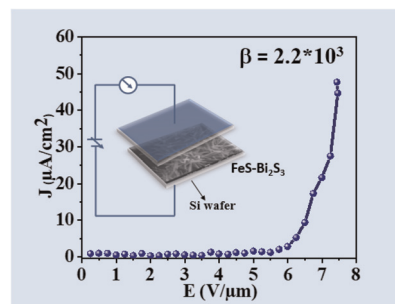
Masahiro Shibuta, Tsutomu Ohta, Toshiaki Kamoshida, Kana Yamagiwa, Hironori Tsunoyama, Tomoya Inoue, Tsugunosuke Masubuchi and Atsushi Nakajima\*



21847

### Design of a new process for the stabilization of FeS–Bi<sub>2</sub>S<sub>3</sub> hybrid nanostructure and its application as a field emitter

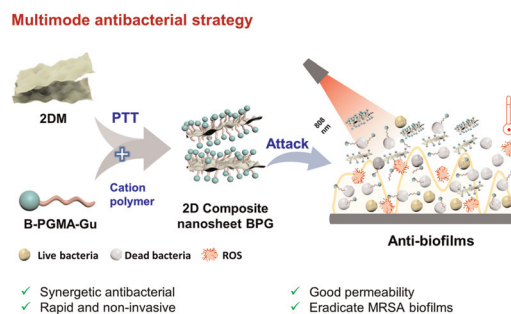
Arushi Arora, Anima Mahajan, Nausad Khan, Santanu Ghosh and Menaka Jha\*



21856

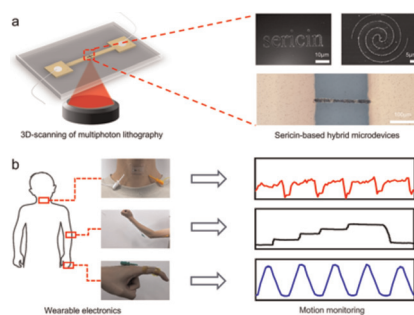
### Synergetic antibacterial nanosheet based on Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> photothermal therapy and cationic polymer to eradicate drug-resistant bacterial biofilms

Chuming Pang, Yingxin Tan, Jiahao Ling and Liangzhi Hong\*



## PAPERS

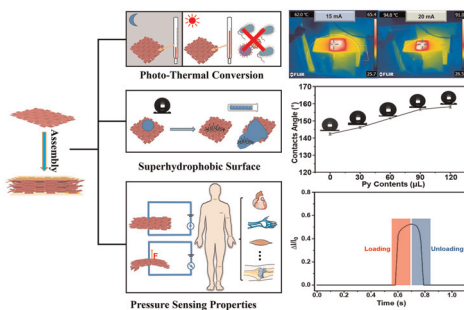
21869



### Femtosecond laser direct writing *Bombyx mori* sericin-based nanocomposites into intrinsically soft wearable micro-/nano-electronics

Qi Liang, Qian Xu, Gongwen Yang, Yanting Xu, Hanxuan Huang, Zhishan Hou, Zhengzhong Shao, Ming Wang and Yun-Lu Sun\*

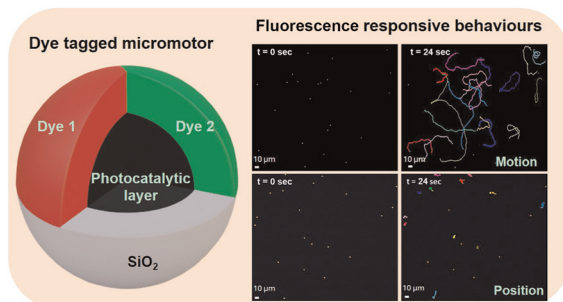
21881



### Flexible wearable piezoresistive physical sensors with photothermal conversion and self-cleaning functions for human motion monitoring

Xingzhong Chen, Qianqian Tian, Zheng Xiong, Min Wu and Xiao Gong\*

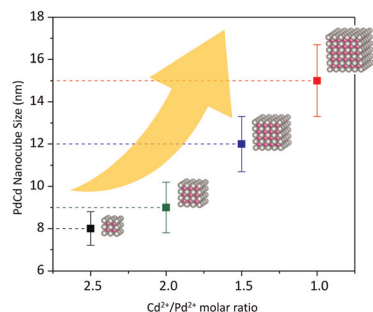
21893



### Engineering light-driven micromotors with fluorescent dye coatings for easy detection and tracking

Srikanta Debata, Suvendu Kumar Panda and Dhruv Pratap Singh\*

21902



### Exploring size-dependent optical property alterations in fine-tuning intermetallic PdCd nanocube sizes

Jia-Lin Li, Ting-Yu Tien, Hung-Chun Liao and Hsin-Lun Wu\*

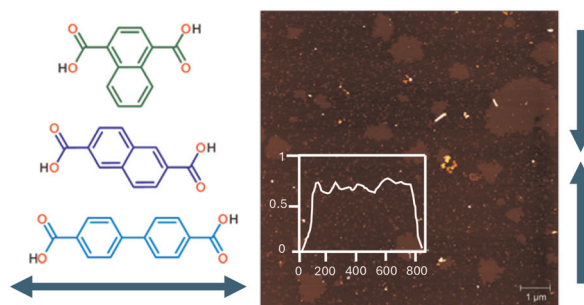


## PAPERS

21908

### Liquid exfoliation of a series of expanded layered Cu(II)-paddlewheel metal–organic frameworks to form nanosheets

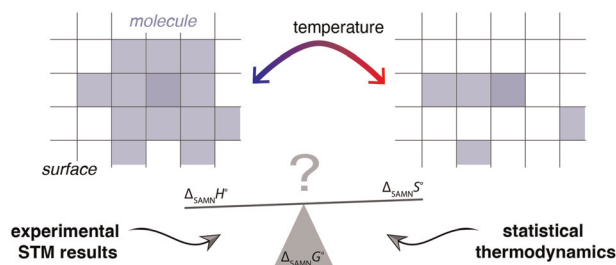
Joshua Nicks, Thomas M. Roseveare, Michael S. Harris, David J. Ashworth, George Danczuk, Lee Brammer and Jonathan A. Foster\*



21916

### Investigation of the temperature effect on the formation of a two-dimensional self-assembled network at the liquid/solid interface

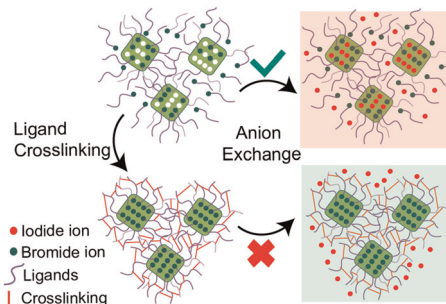
Tamara Rinkovec, Eveline Croket, Hai Cao, Jeremy N. Harvey\* and Steven De Feyter\*



21928

### Retarding anion exchanges in lead halide perovskite nanocrystals by ligand immobilization

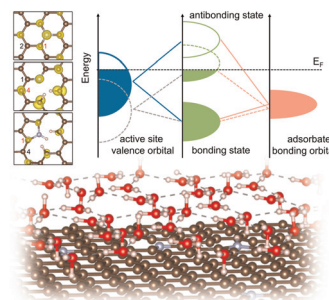
Gauri Sharma, Radha Rathod and Pralay K. Santra\*



21937

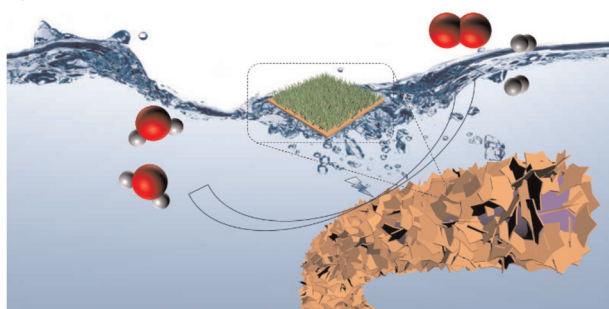
### Oxygen electrode catalysis in N-doped graphene: the role of nitrogen coordination and solvation effects

Junxian Liu, Yun Wang,\* Yuantong Gu\* and Liangzhi Kou\*



## PAPERS

21947

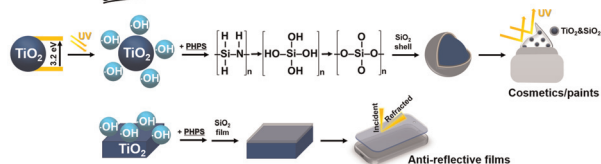


### Interfacial coupling of NiSe in heterostructures promotes electrocatalytic hydrolysis of MoS<sub>2</sub>

Feng Jiao, Jun Tang, Jinzhao Huang,\* Zehui Liu and Jing Xiao\*

21960

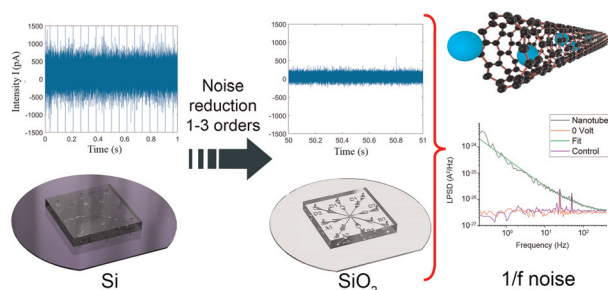
#### Self-catalysed passivation of TiO<sub>2</sub> via perhydropolysilazane



### Controlling TiO<sub>2</sub> photocatalytic behaviour via perhydropolysilazane-derived SiO<sub>2</sub> ultrathin shell

Darya Burak, Jae Hyun Han, Joon Soo Han, In Soo Kim, Md Abdur Rahman, Joel K. W. Yang and So-Hye Cho\*

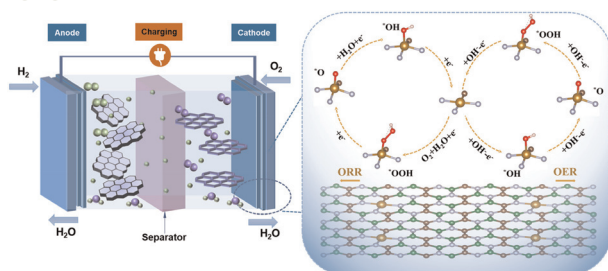
21970



### Ultra-low noise measurements of ionic transport within individual single-walled carbon nanotubes

Laure Bsawmaï, Clément Delacou, Valerii Kotok, Sébastien Méance, Koutayba Saada, M. Amine Kribeche, Saïd Tahir, Christophe Roblin, Antonin Louiset, Hanako Okuno, Manoel Manghi, John Palmeri, François Henn, Adrien Noury and Vincent Jourdain\*

21979



### Insights into the electrochemical catalytic mechanism of atomically dispersed metal on h-BCN monolayer

Na Zhou, Yanning Wang,\* Jiao Wang, Panchao Zhao and Hang Zhang

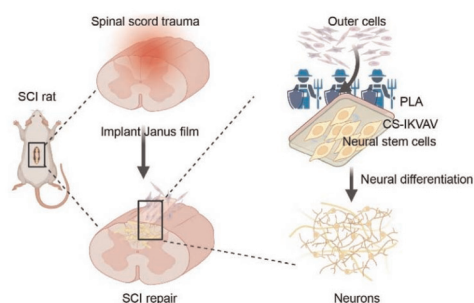


## PAPERS

21991

### Polylactic acid/chitosan-IKVAV Janus film serving as a dual functional platform for spinal cord injury repair

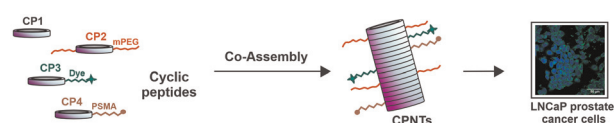
Liyang Yu, Haoyong Jin, He Xia, Xiaoxiong Wang, Liang Wang, Dezheng Li, Jiangli Zhao, Yuanhua Sang, Jichuan Qiu, Ning Lu,\* Hong Liu\* and Ning Yang\*



22001

### Tailored peptide nanomaterials for receptor targeted prostate cancer imaging

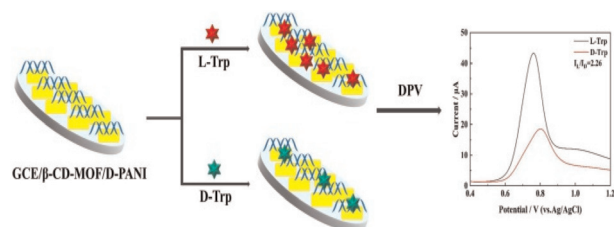
Fátima Santillán, Carlie L. Charron, Betty C. Galarreta and Leonard G. Luyt\*



22011

### Electrochemical chiral recognition of tryptophan enantiomers by using chiral polyaniline and $\beta$ -CD-MOF

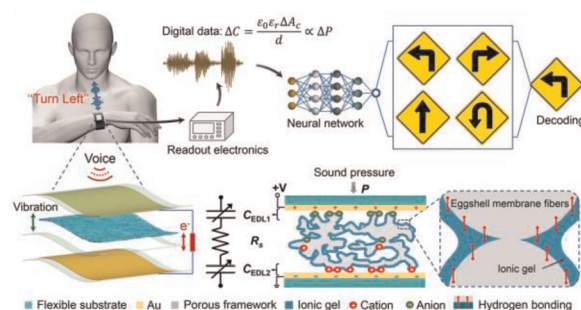
Jiamin Liang, Yuxin Song, Huan Xing, Liang Ma, Fengxia Wang, Mingfang Zhang, Hongli Zhang,\* Gang Zou\* and Guang Yang\*



22021

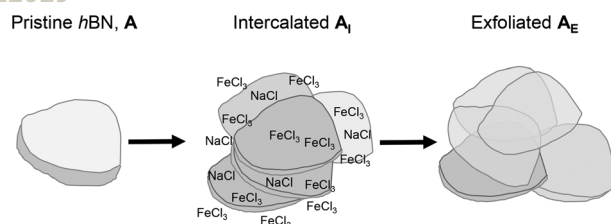
### Highly stable and ultra-fast vibration-responsive flexible iontronic sensors for accurate acoustic signal recognition

Yan Wang,\* Weiqiang Liao, Xikai Yang, Kexin Wang, Shengpeng Yuan, Dan Liu, Cheng Liu, Shiman Yang and Li Wang\*



## PAPERS

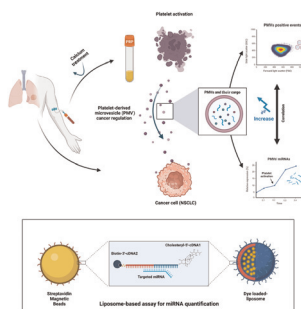
22029



### High yield exfoliation of sub-micron hexagonal boron nitride using a solvent free method

Diana Santiago, Maricela Lizcano, Sean P. McDarby, Ching-ched Hung and Baochau N. Nguyen\*

22037



### A liposome-based assay for cancer biomarker detection: exploring the correlation between platelet-derived microvesicles and NSCLC-associated miRNAs

Mohamed Aimene Benariba, Kanza Hannachi, Sha Zhu,\* Yuting Zhang, Xiaoli Wang and Nandi Zhou\*

## CORRECTIONS

22047

### Correction: A multifunctional black phosphorus nanosheet-based immunomagnetic bio-interface for heterogeneous circulating tumor cell capture and simultaneous self-identification in gastric cancer patients

Yifan Zuo, Yi Xia, Wenwen Lu, Yue Li, Yang Xiao, Shuai Gao, Zhiyi Zhou, Hao Xu, Xingqing Feng, Chenglin Li\* and Yanyan Yu\*

22048

### Correction: Cytomembrane-mimicking nanocarriers with a scaffold consisting of a CD44-targeted endogenous component for effective asparaginase supramolecule delivery

Yongjia Huang, Jing Gu, Zijun Yan, Xueyuan Hu, Dan He, Yonghong Zhang, Yao Li, Cailing Zhong, Jie Yang, Da Shi, Ruben Abagyan, Qunyou Tan\* and Jingqing Zhang\*

