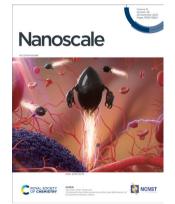
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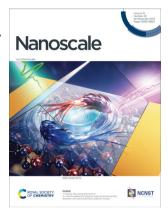
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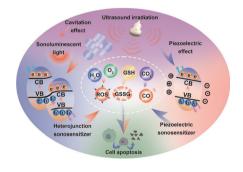
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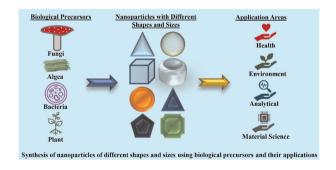
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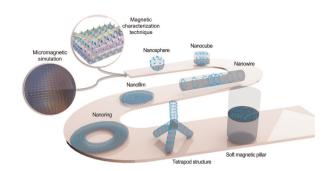


# **MINIREVIEW**

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Magnetic characterization techniques and micromagnetic simulations of magnetic nanostructures: from zero to three dimensions

Xin Li, Zhaolian Wang, Zhongyun Lei, Wei Ding, Xiao Shi, Jujian Yan and Jiangang Ku\*

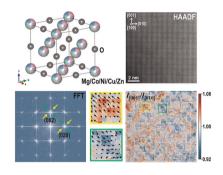


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### 19469

# Sub-Angstrom-scale structural variations in high-entropy oxides

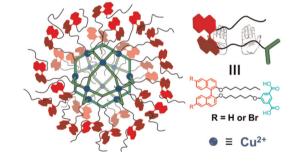
Hanbin Gao, Ning Guo, Yue Gong, Lu Bai, Dongwei Wang and Qiang Zheng\*



### 19475

# Chiral metal-organic cages decorated with binaphthalene moieties

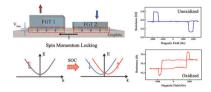
Cheng Huang, Jiajia Li, Xinyuan Zhu and Youfu Wang\*



### 19480

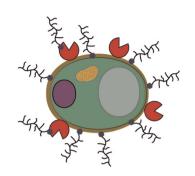
# Tunable asymmetric magnetoresistance in an Fe<sub>3</sub>GeTe<sub>2</sub>/graphite/Fe<sub>3</sub>GeTe<sub>2</sub> lateral spin valve

Xiangyu Zeng, Ge Ye, Fazhi Yang, Qikai Ye, Liang Zhang, Boyang Ma, Yulu Liu, Mengwei Xie, Yan Liu,\* Xiaozhi Wang,\* Yue Hao and Genquan Han



# COMMUNICATIONS

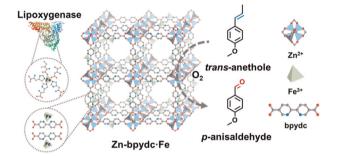
### 19486



# Self-decorating cells *via* surface-initiated enzymatic controlled radical polymerization

Andrea Belluati,\* Dominic Happel, Malte Erbe, Nicole Kirchner, Anna Szelwicka, Adrian Bloch, Valeria Berner, Andreas Christmann, Brigitte Hertel, Raheleh Pardehkhorram, Amin Reyhani, Harald Kolmar and Nico Bruns\*

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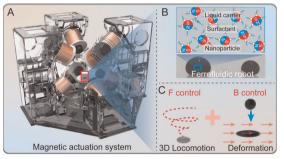


# Iron-incorporated metal—organic frameworks for oxidative cleavage of *trans*-anethole to *p*-anisaldehyde

Jun Xiong, Xin Yuan, Min-Hua Zong, Xiaoling Wu\* and Wen-Yong Lou\*

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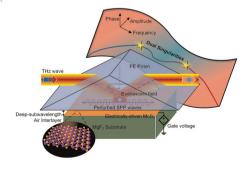
# 19499



# Combined three dimensional locomotion and deformation of functional ferrofluidic robots

Xinjian Fan, Yunfei Zhang, Zhengnan Wu, Hui Xie, Lining Sun, Tao Chen\* and Zhan Yang\*

### 19514



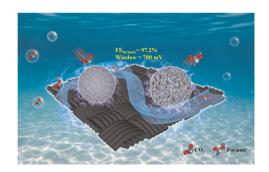
# An ultra-broadband frequency-agile terahertz perfect absorber with perturbed MoS<sub>2</sub> plasmon modes

Yujie Zhong, Yi Huang,\* Shuncong Zhong,\* Tingting Shi, Fuwei Sun, Tingling Lin, Qiuming Zeng, Ligang Yao and Xuefeng Chen

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Active-site stabilized Bi metal—organic framework-based catalyst for highly active and selective electroreduction of CO<sub>2</sub> to formate over a wide potential window

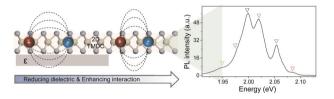
Leliang Cao, Jie Huang, Xueying Wu, Ben Ma, Qingqing Xu, Yuanhong Zhong,\* Ying Wu,\* Ming Sun and Lin Yu\*



### 19533

# Enhanced interactions of excitonic complexes in free-standing WS<sub>2</sub>

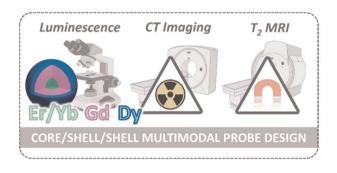
Xuegian Sun, Zhuoyuan Lu and Yuerui Lu\*



### 19546

Core-multi-shell design: unlocking multimodal capabilities in lanthanide-based nanoparticles as upconverting, T<sub>2</sub>-weighted MRI and CT probes

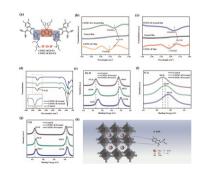
Nan Liu, Christian Homann, Samuel Morfin, Meghana S. Kesanakurti, Nicholas D. Calvert, Adam J. Shuhendler, Tom Al and Eva Hemmer\*



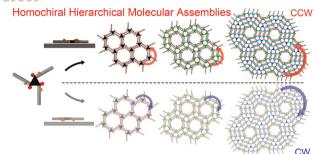
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# Stable and efficient perovskite solar cells *via* hydrogen bonding and coordination

Tianrui Li, Tao Zhu,\* Xiyao Zhang, Haorui Tang, Kai Zhang, Xing Zhu, Shaoyuan Li, Wenhui Ma and Jie Yu\*

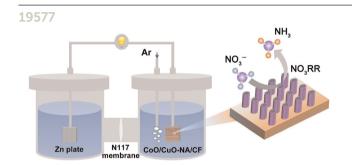


### 19569



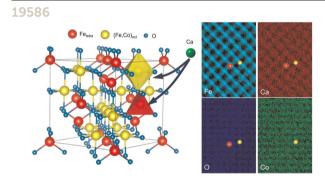
Homochiral hierarchical molecular assemblies through dynamic combination of conformational states of a single chiral building block at the liquid/solid interface

Matsuhiro Maeda, Kazuya Sato, Steven De Feyter and Kazukuni Tahara\*



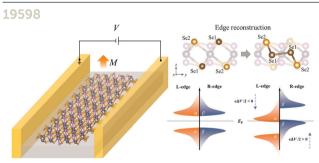
# Electrocatalytic nitrate-to-ammonia conversion on CoO/CuO nanoarrays using Zn-nitrate batteries

Shanshan Chen, Gaocan Qi,\* Ruilian Yin, Qian Liu, Ligang Feng, Xincai Feng, Guangzhi Hu, Jun Luo, Xijun Liu\* and Wenxian Liu\*



Atomic-scale observation of calcium occupation in spinel cobalt ferrite towards the regulation of intrinsic magnetic properties

Guohua Bai, Weijia Zhong, Zhenhua Zhang,\* Sateesh Bandaru, Xiuyuan Fan, Xiaolian Liu and Xuefeng Zhang\*



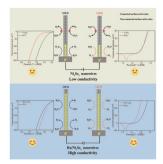
Electrically induced net magnetization in FePSe<sub>3</sub> nanoribbons: the role of edge reconstructions

Wenqi Zhang, Weifeng Xie, Bin Shao\* and Xu Zuo\*

### 19604

# Exceptional green hydrogen production performance of a ruthenium-modulated nickel selenide

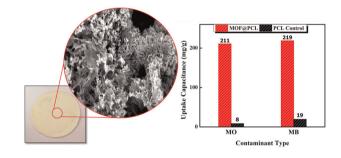
Rong Li, Lanli Chen, Huaming Zhang,\* Muhammad Humayun, Junhong Duan, Xuefei Xu, Yanjun Fu, Mohamed Bououdina and Chundong Wang\*



### 19617

# Durable and recyclable MOF@polycaprolactone mixed-matrix membranes with hierarchical porosity for wastewater treatment

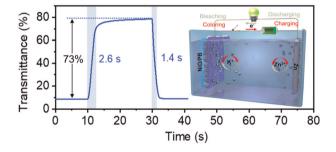
Amal Hani, Rana R. Haikal,\* Worood A. El-Mehalmey, Youssef Safwat and Mohamed H. Alkordi



### 19629

# Transparent metal oxide interlayer enabling durable and fast-switching zinc anode-based electrochromic devices

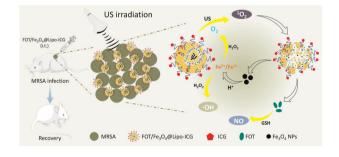
Bing Xu, Jingwei Chen,\* Ping Li, Yujia Ouyang, Yu Ma, Huanlei Wang\* and Haizeng Li\*



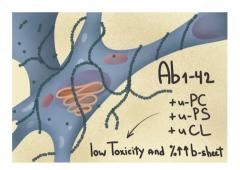
### 19638

An ultrasound-controllable ROS-responsive nanoplatform for O<sub>2</sub> and NO generation to enhance sonodynamic therapy against multidrug-resistant bacterial infections

Jingyi Zhang, Lin Zhang, Yuhan Zhang, Rong Ju and Guoqing Wei\*



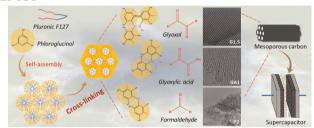
### 19650



# Nano-infrared analysis of amyloid $\beta_{1-42}$ fibrils formed in the presence of lipids with unsaturated fatty acids

Kiryl Zhaliazka and Dmitry Kurouski\*

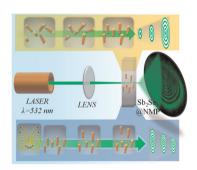
### 19658



Advancing mesoporous carbon synthesis for supercapacitors: a systematic investigation of cross-linking agent effects on pore structure and functionality

Yaoguang Song, Xiaolei Zhang,\* Peter A. A. Klusener and Peter Nockemann\*

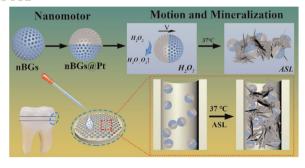
### 19671



Strong non-linear optical response of Sb<sub>2</sub>Se<sub>3</sub> nanorods in a liquid suspension based on spatial self-phase modulation and their all-optical photonic device applications

Nabanita Sen, Nabamita Chakraborty, Biswajit Das and Kalyan Kumar Chattopadhyay\*

### 19681



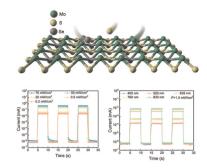
# Self-propelled bioglass janus nanomotors for dentin hypersensitivity treatment

Wei Wu, Hang Chi, Qianyang Zhang, Ce Zheng, Narisu Hu,\* Yingjie Wu\* and Jiaxin Liu\*

### 19691

An ultrafast and self-powered  $MoS_xSe_{2-x}/Si$  photodetector with high light-trapping structures and a  $SiO_x$  interface layer

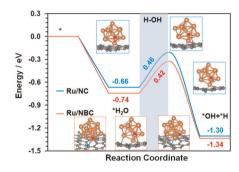
Zhen Yue, Honglie Shen,\* Chen Wang, Yajun Xu, Jinjie Zheng, Yufang Li, Jingzhe Zhang, Jianian Chen, Hang Bai, Hechao Li, Jiuchuan Zeng and Long Wang



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Ru nanoclusters anchored on boron- and nitrogen-doped carbon for a highly efficient hydrogen evolution reaction in alkaline seawater

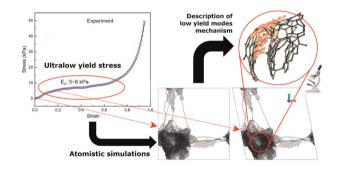
Binbin Jiang, Zhen Wang, Hui Zhao, Xie Wang, Xiaoxia Mao, Aijian Huang,\* Xuehua Zhou, Kui Yin,\* Kefa Sheng and Junwei Wang\*



### 19709

Atomistic mechanisms underlying plastic flow at ultralow yield stress in ductile carbon aerogels

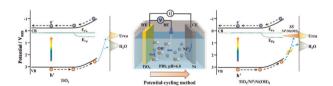
Giorgio Conter, Kailu Xiao, Xianqian Wu, William A. Goddard, III\* and Alessandro Fortunelli\*



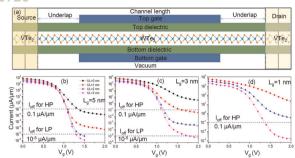
### 19717

Tailoring the density of states of Ni(OH)<sub>2</sub> with Ni<sup>0</sup> towards solar urea wastewater splitting

Li Zou, Wenyan Tao, Jing Huang, Shuxiang Wang, Yijia Zhang, Keqiang Han, Yi Hu, Haoyan Gao, Pingping Yang and Jiale Xie\*

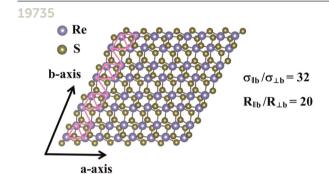


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# The device performance limit of in-plane monolayer VTe<sub>2</sub>/WTe<sub>2</sub> heterojunction-based field-effect transistors

Xingyi Tan, Qiang Li, Dahua Ren and Hua-Hua Fu\*



# Electrical and optoelectronic anisotropy and surface electron accumulation in ReS<sub>2</sub> nanostructures

Hemanth Kumar Bangolla, Muhammad Yusuf Fakhri, Ching-Hsuan Lin, Cheng-Maw Cheng, Yi-Hung Lu, Tsu-Yi Fu, Pushpa Selvarasu, Rajesh Kumar Ulaganathan, Raman Sankar and Ruei-San Chen\*

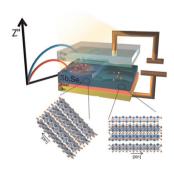
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# Quantified instant conjugation of peptides on a nanogold surface for tunable ice recrystallization inhibition

Shixuan Yang, Zhongxiang Ding, Leiming Chu, Mengke Su and Honglin Liu\*

19757



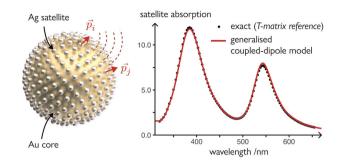
# Impedance spectroscopy of $Sb_2Se_3$ photovoltaics consisting of $(Sb_4Se_6)_n$ nanoribbons under light illumination

Jaemin Park, Thomas P. Shalvey, Thomas Moehl, Kyoohee Woo, Jonathan D. Major, S. David Tilley and Wooseok Yang\*

### 19767

# Generalised coupled-dipole model for core-satellite nanostructures

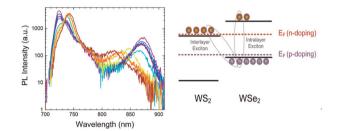
Stefania Glukhova, Eric C. Le Ru and Baptiste Auguié\*



### 19777

Probing the interlayer excitation dynamics in WS<sub>2</sub>/WSe<sub>2</sub> heterostructures with broadly tunable pump and probe energies

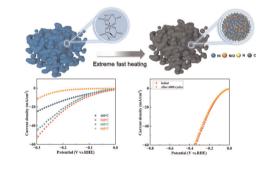
Anran Wang, Wendian Yao, Zidi Yang, Dingqi Zheng, Songlin Li, Yi Shi, Dehui Li and Fengqiu Wang\*



### 19784

Ni/NiO@NC as a highly efficient and durable HER electrocatalyst derived from nickel(II) complexes: importance of polydentate amino-acid ligands

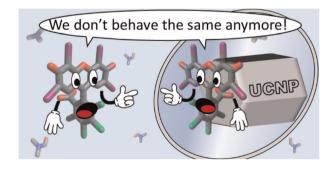
Xu Yang, Mengxue Liu, Fang Cui,\* Qinghai Ma and Tieyu Cui\*



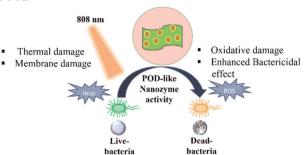
### 19792

Synergistic or antagonistic effect of lanthanides on Rose Bengal photophysics in upconversion nanohybrids?

Juan Ferrera-González, María González-Béjar\* and Julia Pérez-Prieto\*



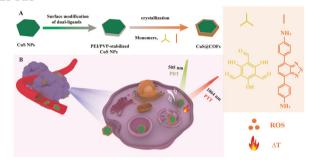
# 19801



# 2D-MoS<sub>2</sub>-supported copper peroxide nanodots with enhanced nanozyme activity: application in antibacterial activity

Archana Kumari, Jagabandhu Sahoo and Mrinmoy De\*

### 19815



Dual-wavelength responsive CuS@COF nanosheets for high-performance photothermal/ photodynamic combination treatments

Qian An, Shengze Su, Wei Hu, Yanying Wang, Tao Liang,\* Xianghong Li\* and Chunya Li\*

### **CORRECTIONS**

### 19820

# Correction: Pursuing colloidal diamonds

Łukasz Baran,\* Dariusz Tarasewicz, Daniel M. Kamiński and Wojciech Rżysko

### 19821

Correction: MXenes vs. clays: emerging and traditional 2D layered nanoarchitectonics

Eduardo Ruiz-Hitzky\* and Cristina Ruiz-Garcia