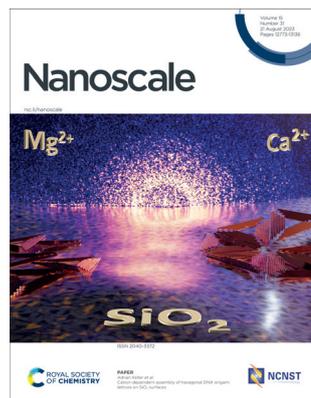


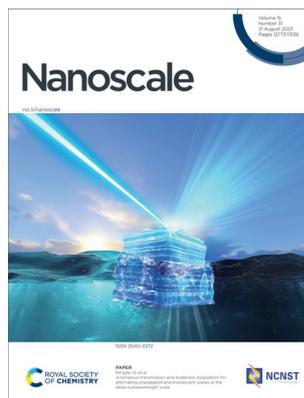
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ISSN 2040-3372 CODEN NANOHL 15(31) 12773–13136 (2023)



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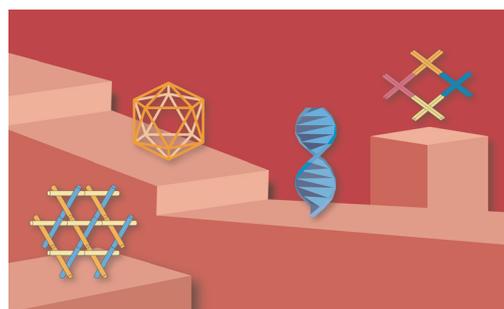
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## EDITORIAL

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### Introduction to emerging concepts in nucleic acids: structures, functions and applications

Dhiraj Bhatia,\* Prabal Kumar Maiti,\* Xiaogang Liu\* and Arun Richard Chandrasekaran\*

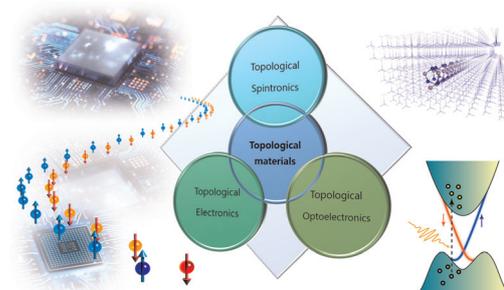


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### Topological quantum devices: a review

Kyung-Hwan Jin, Wei Jiang, Gurjyot Sethi and Feng Liu\*



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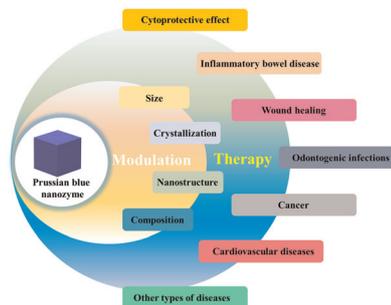


## REVIEWS

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**Prussian blue nanozymes: progress, challenges, and opportunities**

Hongliang He, Mengmeng Long, Yifan Duan and Ning Gu\*

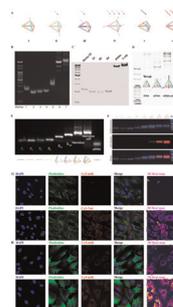


## MINIREVIEWS

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**Functional micro-RNA drugs acting as a fate manipulator in the regulation of osteoblastic death**

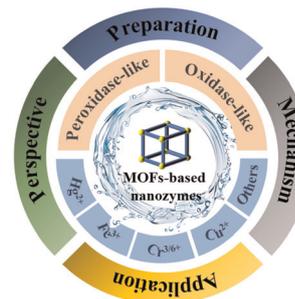
Zhengwen Cai, Fengshuo Liu, Yong Li, Long Bai, Maogeng Feng, Songhang Li, Wenjuan Ma and Sirong Shi\*



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**Advances in the application of metal–organic framework nanozymes in colorimetric sensing of heavy metal ions**

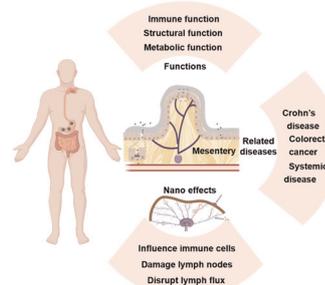
Li Zhang, Xiaoya Bi, Xiaohong Liu, Yi He, Libo Li\* and Tianyan You\*



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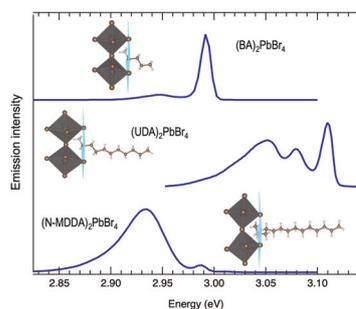
**The implication of mesenteric functions and the biological effects of nanomaterials on the mesentery**

Guanyu Liu, Lin Bao, Chunying Chen, Jianfu Xu\* and Xuejing Cui\*



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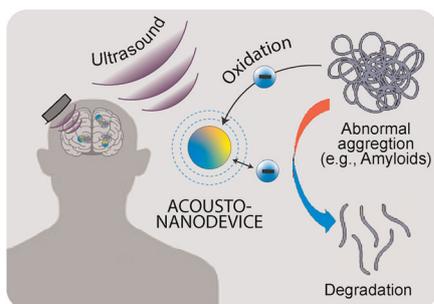
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### Impact of the organic cation on the band-edge emission of two-dimensional lead–bromide perovskites

Seda Kutkan, Balaji Dhanabalan, Miao-Ling Lin, Ping-Heng Tan, Alexander Schleusener, Milena P. Arciniegas and Roman Krahné\*

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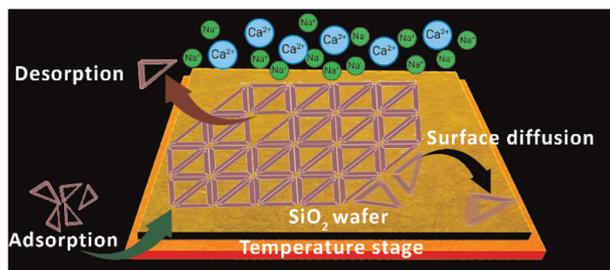


### Protein redox by a piezoelectric acousto-nanodevice

Sophia Selvarajan, Hyunji Shim, Eunjeong Byun, Albert Kim\* and Seung Hyun Song\*

## PAPERS

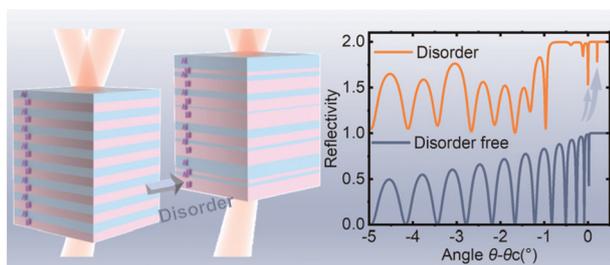
12894



### Cation-dependent assembly of hexagonal DNA origami lattices on SiO<sub>2</sub> surfaces

Bhanu Kiran Pothineni, Guido Grundmeier and Adrian Keller\*

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### Anomalous transmission and Anderson localization for alternating propagated and evanescent waves at the deep-subwavelength scale

Changlin Sun, Haiyi Liu, Pengfei Qi,\* Liguozhu, Lanjun Guo, Lie Lin and Weiwei Liu

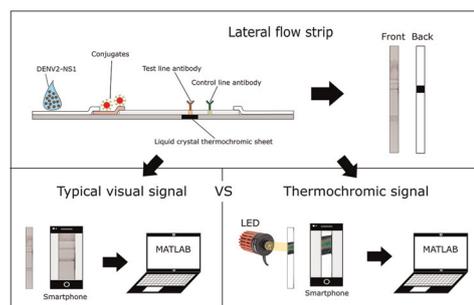


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### Development of a thermochromic lateral flow assay to improve sensitivity for dengue virus serotype 2 NS1 detection

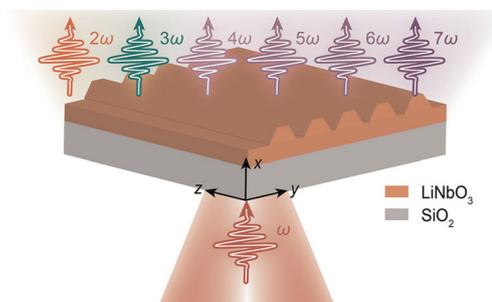
Thithawat Trakoolwilaiwan, Yasuhiro Takeuchi, Terence S. Leung, Matej Sebek, Liudmyla Storozhuk, Linh Nguyen, Le Duc Tung and Nguyen Thi Kim Thanh\*



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### Efficient second- and higher-order harmonic generation from LiNbO<sub>3</sub> metasurfaces

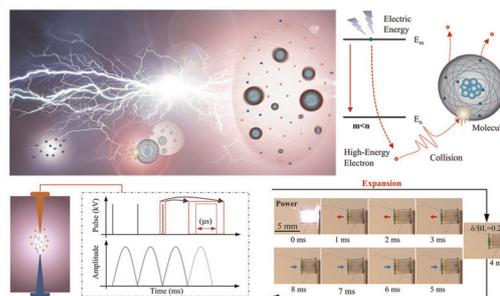
Yun Zhao, Zhaoxi Chen, Cheng Wang,\* Yuanmu Yang\* and Hong-Bo Sun\*



12933

### A novel electric stimulus-responsive micro-actuator for powerful biomimetic motions

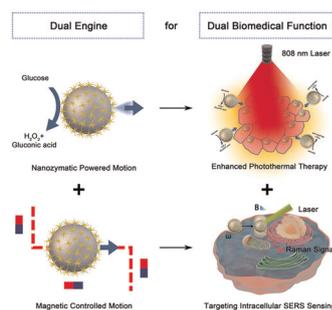
Ruide Yun,\* Jingyu Che, Zhiwei Liu, Xiaojun Yan and Mingjing Qi\*



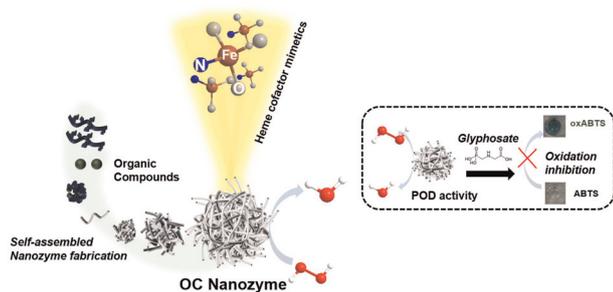
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### Nanozymatic magnetic nanomotors for enhancing photothermal therapy and targeting intracellular SERS sensing

Shimi Liu, Dandan Xu,\* Junling Chen, Na Peng, Tao Ma and Feng Liang\*



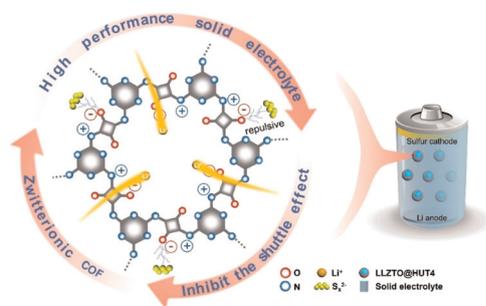
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### Organic compound-based nanozymes for agricultural herbicide detection

Dong Hoon Lee and Mohammed Kamruzzaman\*

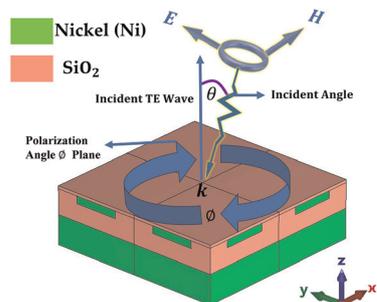
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### Squaraine-linked zwitterionic COF modified LLZTO nanoparticles for high performance polymer composite electrolytes in Li-S batteries

Shuo Wang, Mengke Li, Gaojie Yan, Zhipeng Yang, Yuchao Guo, Xi Sun, Yue Wang, Yi Feng,\* Huili Ding\* and Xiaojie Zhang\*

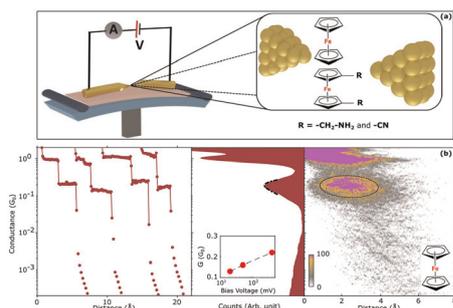
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### Broadband near unity absorption meta-structure for solar thermophotovoltaic systems and optical window applications

Md Mohiuddin Soliman, Mohammad Tariqul Islam,\* Touhidul Alam, Norbahiah Misran, Sharul Kamal Abdul Rahim, Ahmed Alzamil, Muhammad E. H. Chowdhury, Ahmed S. Alshammari, Haitham Alsaif and Mohamed S. Soliman

12995



### Resonant transport in a highly conducting single molecular junction via metal-metal covalent bond

Biswajit Pabi, Štěpán Marek, Adwitiya Pal, Puja Kumari, Soumya Jyoti Ray, Arunabha Thakur, Richard Korytár and Atindra Nath Pal\*

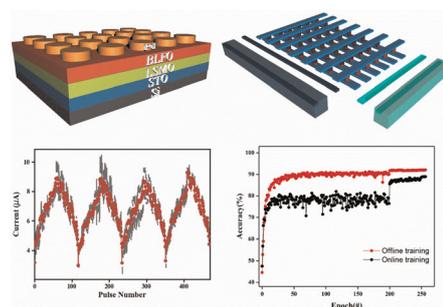


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### Silicon based $\text{Bi}_{0.9}\text{La}_{0.1}\text{FeO}_3$ ferroelectric tunnel junction memristor for convolutional neural network application

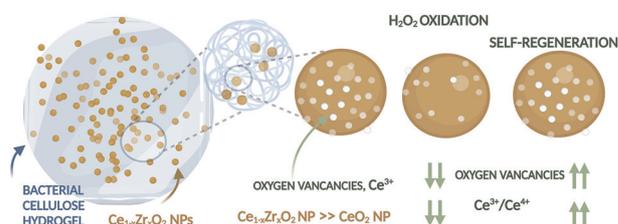
Gongjie Liu, Wei Wang, Zhenqiang Guo, Xiaotong Jia, Zhen Zhao, Zhenyu Zhou, Jiangzhen Niu, Guojun Duan and Xiaobing Yan\*



13018

### $\text{Ce}_{1-x}\text{Zr}_x\text{O}_2$ nanoparticles in bacterial cellulose, bio-based composites with self-regenerating antioxidant capabilities

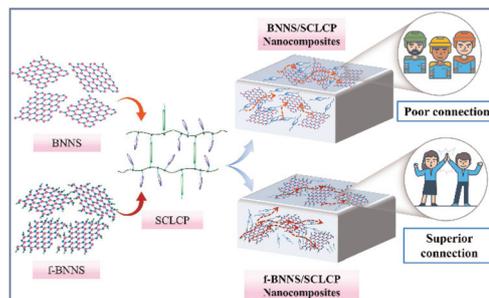
Johanna van Gent\* and Anna Roig\*



13025

### Improved thermal conductivity and excellent electrical insulation properties of polysiloxane nanocomposite-incorporated functional boron nitride sheets *via in situ* polymerization

Xiaole Zheng, Yingjie Zhan, Jun Shi, Mangeng Lu and Kun Wu\*

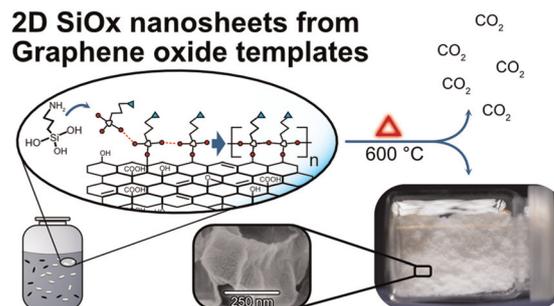


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### Large-scale synthesis of 2D-silica ( $\text{SiO}_x$ ) nanosheets using graphene oxide (GO) as a template material

Björn K. Birdsong, Billy W. Hoogendoorn, Fritjof Nilsson, Richard L. Andersson, Antonio J. Capezza, Mikael S. Hedenqvist, Stefano Farris, Antonio Guerrero and Richard T. Olsson\*

### 2D $\text{SiO}_x$ nanosheets from Graphene oxide templates



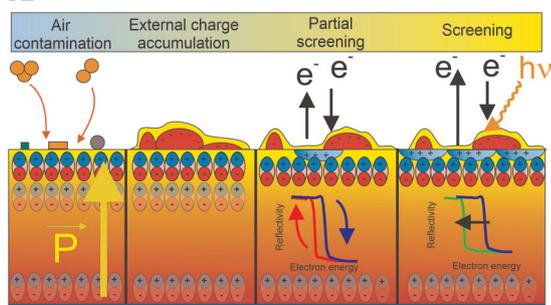
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### Multifunctional metal selenide-based materials synthesized via a one-pot solvothermal approach for electrochemical energy storage and conversion applications

Bhimanaboina Ramulu, Shaik Junied Arbaz, Manchi Nagaraju and Jae Su Yu\*

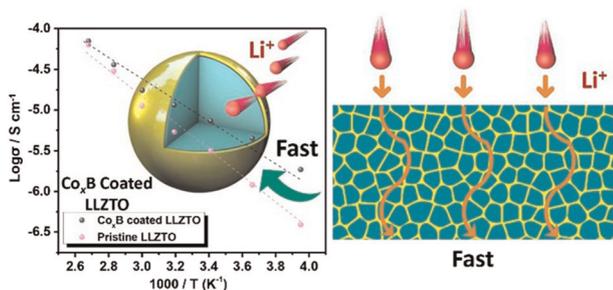
13062



### Surface charge dynamics on air-exposed ferroelectric $\text{Pb}(\text{Zr},\text{Ti})\text{O}_3(001)$ thin films

Laura E. Abramiuc,\* Liviu C. Tănase, Mauricio J. Prieto, Lucas de Souza Caldas, Aarti Tiwari, Nicoleta G. Apostol, Marius A. Huşanu, Cristina F. Chirilă, Lucian Trupină, Thomas Schmidt, Lucian Pintilie and Cristian M. Teodorescu

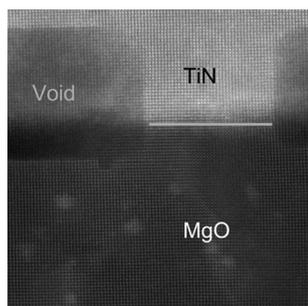
13076



### Reactive boride as a multifunctional interface stabilizer for garnet-type solid electrolyte in all-solid-state lithium batteries

Mingzhe Chen,\* Jing Zhang, Jiliang Zhang, Binkai Yu, Limin Zhou, Yao Xiao, Xu Gao, Jin Xiao,\* Chunsheng Li,\* Yan Sun,\* Huakun Liu, Shixue Dou and Shulei Chou\*

13086



### Chemical potential gradient induced formation of Kirkendall voids at the epitaxial TiN/MgO interface

Xiaoman Zhang, W. J. Meng\* and Andrew C. Meng\*

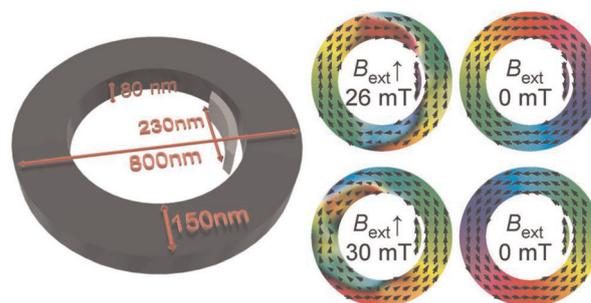


## PAPERS

13094

### Control of vortex chirality in a symmetric ferromagnetic ring using a ferromagnetic nanoelement

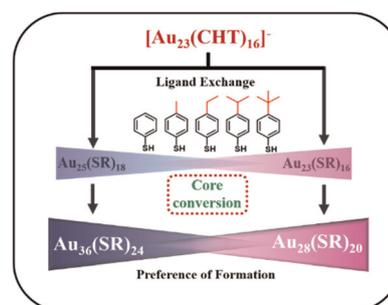
Uladzislau Makartsou,\* Mathieu Moalic, Mateusz Zelent, Michal Mruczkiewicz and Maciej Krawczyk\*



13102

### Control over product formation and thermodynamic stability of thiolate-protected gold nanoclusters through tuning of surface protecting ligands

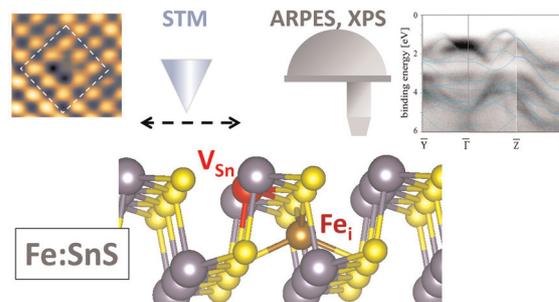
Manju P. Maman, Eyyakkandy Nida Nahan, Greeshma Suresh, Arunendu Das, Akhil S. Nair, Biswarup Pathak and Sukhendu Mandal\*



13110

### Defect pairing in Fe-doped SnS van der Waals crystals: a photoemission and scanning tunneling microscopy study

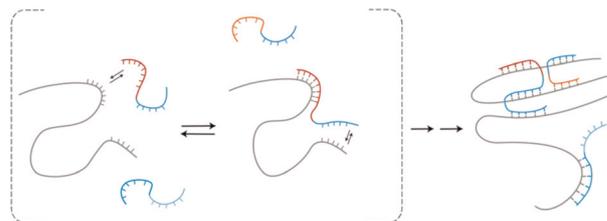
Damla Yesilpinar, Martin Vondráček, Patrik Čermák, Harry Mönig, Jaromír Kopeček, Ondřej Caha, Karel Carva, Čestmír Drašar and Jan Honolka\*



13120

### Sequence-dependent folding of monolayered DNA origami domains

Sabrina Gambietz, Lena J. Stenke and Barbara Saccà\*



## CORRECTION

13133

**Correction: A graphene/h-BN MEMS varactor for sub-THz and THz applications**

Piotr A. Drózdź,\* Maciej Haras,\* Aleksandra Przewłoka,\* Aleksandra Krajewska, Maciej Filipiak, Mateusz Słowikowski, Bartłomiej Stonio, Karolina Czerniak-Łosiewicz, Zygmunt Mierczyk, Thomas Skotnicki and Dmitri Lioubtchenko

