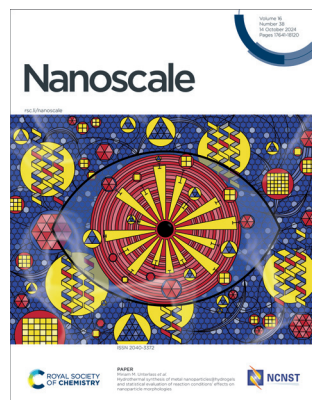


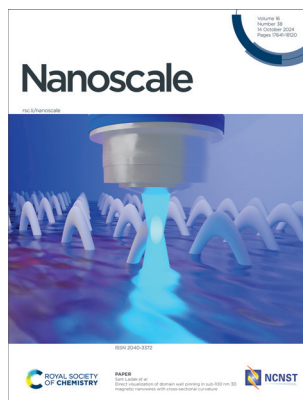
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ISSN 2040-3372 CODEN NANOHL 16(38) 17641–18120 (2024)



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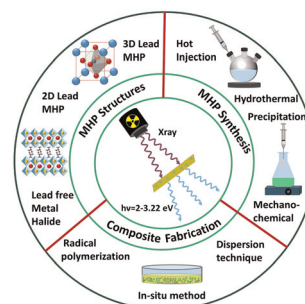
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## REVIEWS

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### Metal halide perovskite polymer composites for indirect X-ray detection

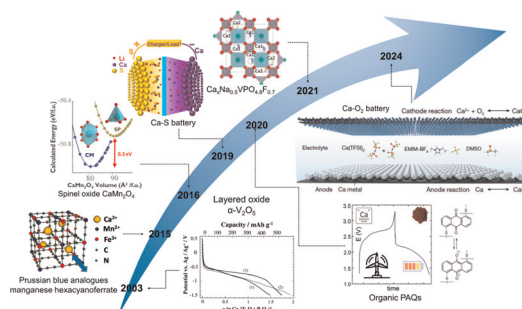
Shruti Jayaprakash Saiji, Yiteng Tang, Shin-Tson Wu, Luis Stand, Yauhen Tratsiak and Yajie Dong\*



17683

### Cathode materials for non-aqueous calcium rechargeable batteries

Yingkai Hua, Yiyuan Ma, Qi Qi and Zheng-Long Xu\*



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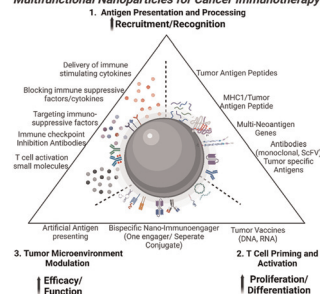
## REVIEWS

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## Immunomodulatory nanoparticles activate cytotoxic T cells for enhancement of the effect of cancer immunotherapy

Kory Wells, Tongrui Liu, Lei Zhu and Lily Yang\*

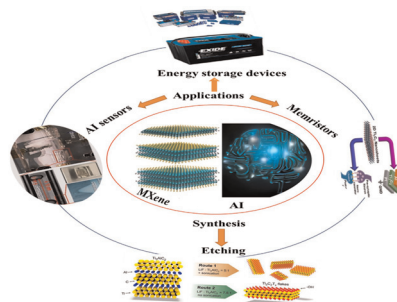
### Multifunctional Nanoparticles for Cancer Immunotherapy



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## Recent developments of artificial intelligence in MXene-based devices: from synthesis to applications

Talib Hussain, Imamdin Chandio, Akbar Ali, Ali Hyder, Ayaz Ali Memon,\* Jun Yang\* and Khalid Hussain Thebo\*

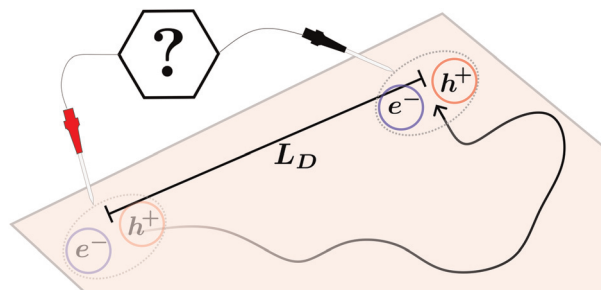


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## Exciton diffusion in organic semiconductors: precision and pitfalls

Drew B. Riley, Paul Meredith and Ardalan Armin

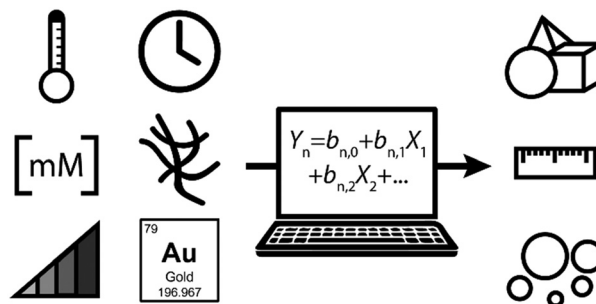


## PAPERS

17778

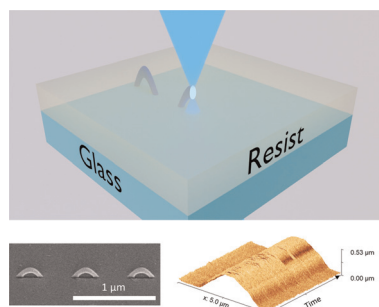
## Hydrothermal synthesis of metal nanoparticles@hydrogels and statistical evaluation of reaction conditions' effects on nanoparticle morphologies

Olivier Gazil, D. Alonso Cerrón-Infantes, Nick Virgilio and Miriam M. Unterlass\*



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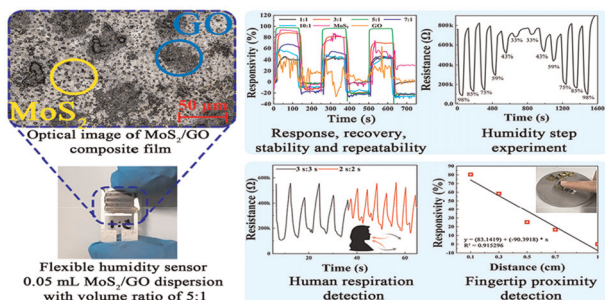
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### Direct visualization of domain wall pinning in sub-100 nm 3D magnetic nanowires with cross-sectional curvature

Joseph Askey, Matthew Oliver Hunt, Lukas Payne, Arjen van den Berg, Ioannis Pitsios, Alaa Hejazi, Wolfgang Langbein and Sam Ladak\*

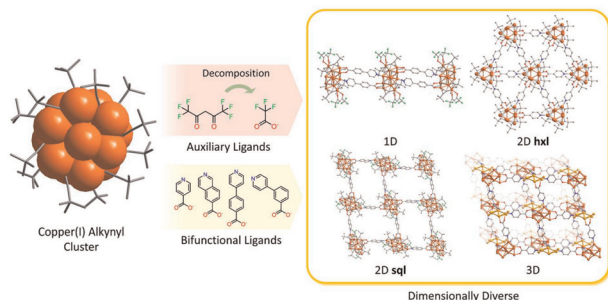
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### A fast response and highly sensitive flexible humidity sensor based on a nanocomposite film of MoS<sub>2</sub> and graphene oxide

Gengwu Ge, Ningfeng Ke, Hongliang Ma, Jie Ding,\* Wendong Zhang\* and Xuge Fan\*

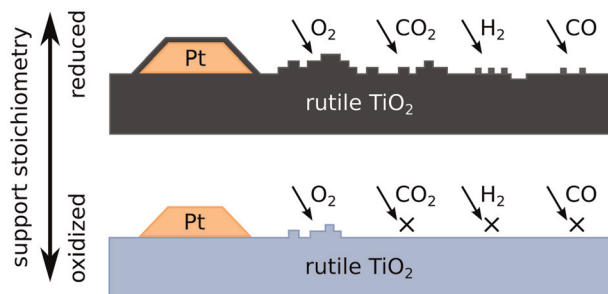
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### Structural diversity of copper(I) alkynyl cluster-based coordination polymers utilizing bifunctional pyridine carboxylic acid ligands

Zheng Liu, Jun-Jie Fang, Zhi-Yi Wang, Yun-Peng Xie\* and Xing Lu\*

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### The influence of bulk stoichiometry on near-ambient pressure reactivity of bare and Pt-loaded rutile TiO<sub>2</sub>(110)

Florian Kraushofer, Matthias Krinninger, Sebastian Kaiser, Johanna Reich, Agnieszka Jarosz, Matthias Fuchsl, Gaurav Anand, Friedrich Esch and Barbara A. J. Lechner\*

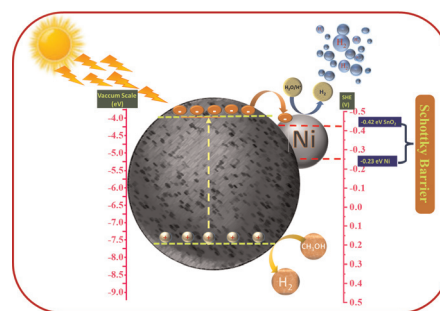


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**Nanostructured electroless Ni deposited SnO<sub>2</sub> for solar hydrogen production**

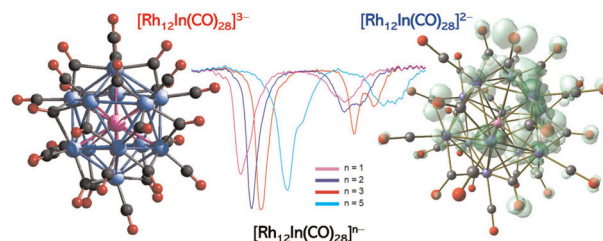
Priyanka N. Birla, Sudhir Arbut, Ratna Chauhan, Manish Shinde, Sunit Rane, Suresh Gosavi and Bharat Kale\*



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**Atomically precise rhodium–indium carbonyl nanoclusters: synthesis, characterization, crystal structure and electron-sponge features**

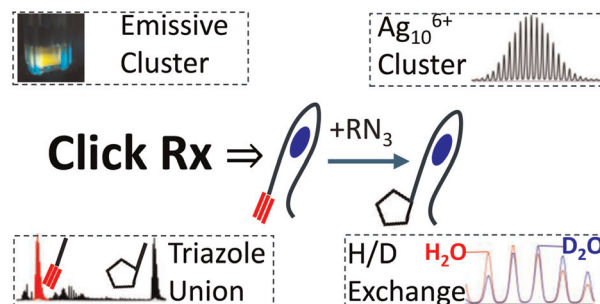
Guido Bussoli, Alberto Boccalini, Marco Bortoluzzi, Cristiana Cesari, Maria Carmela Iapalucci, Tiziana Funaioli, Giorgia Scorzoni, Stefano Zacchini, Silvia Ruggieri\* and Cristina Femoni\*



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**Click catalysis and DNA conjugation using a nanoscale DNA/silver cluster pair**

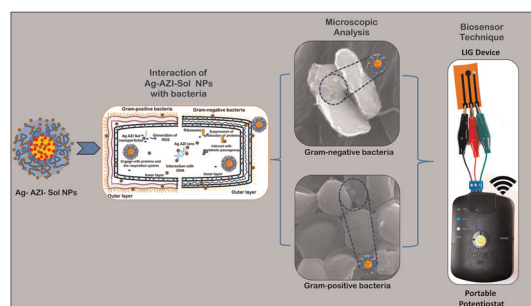
Caleb J. Setzler and Jeffrey T. Petty\*



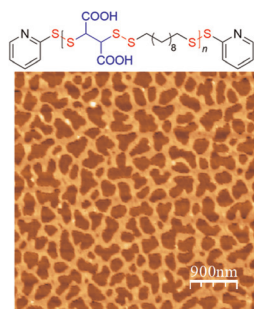
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**Enhanced antibacterial efficacy: rapid analysis of silver-decorated azithromycin-infused Soluplus® nanoparticles against *E. coli* and *S. epidermidis* biofilms**

Murali Mohan Jaligam, Chisato Takahashi,\* Benjamin Heidt and Amy Q. Shen\*



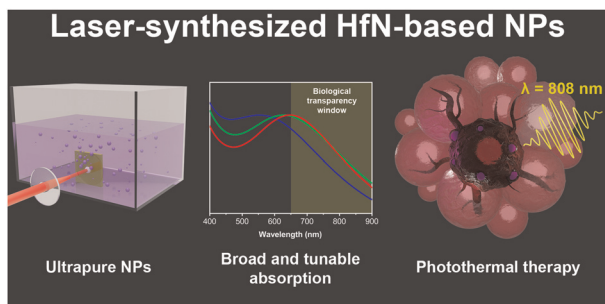
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### Alternating vs. random amphiphilic polydisulfides: aggregation, enzyme activity inhibition and redox-responsive guest release

Sukanya Bera and Suhrit Ghosh\*

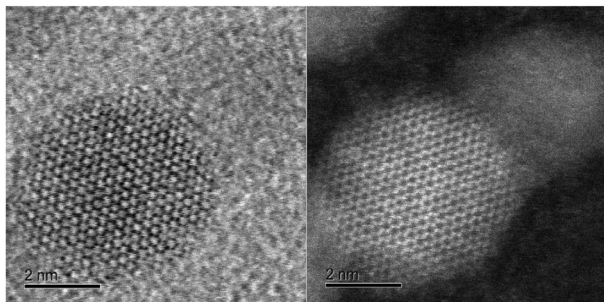
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### Laser-synthesized plasmonic HfN-based nanoparticles as a novel multifunctional agent for photothermal therapy

A. I. Pastukhov, M. S. Savinov, I. V. Zelepukin, J. S. Babkova, G. V. Tikhonowski, A. A. Popov, S. M. Klimentov, A. Devi, A. Patra, I. N. Zavestovskaya, S. M. Deyev and A. V. Kabashin\*

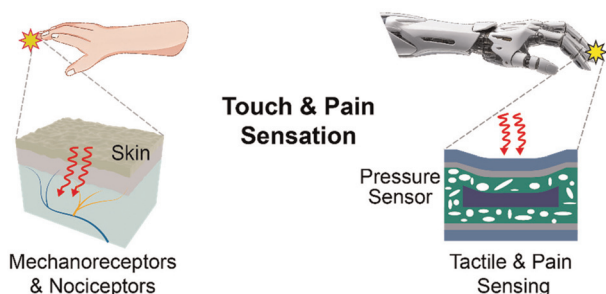
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### High-load Mg<sub>2</sub>Ni nanoparticle-carbon nanofiber composites for hydrogen storage

Eduardo David Ruiz-Santacruz, José de Jesús Vega-Soria, Aura Karina Cruz-Jiménez, Uriel Caudillo-Flores, Nidia Libia Torres-García and Karina Suárez-Alcántara\*

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### A flexible capacitive pressure sensor with a hybrid porous PDMS/SA hydrogel structure for touch/pain detection

Haizhou Huang, Xu Ran, Shu Wan,\* Yi Wang and Hengchang Bi\*

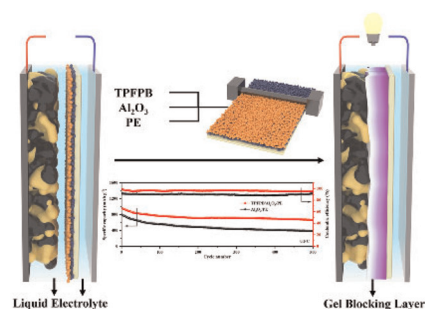


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### A gel polymer electrolyte functionalized separator for high-performance lithium–sulfur batteries

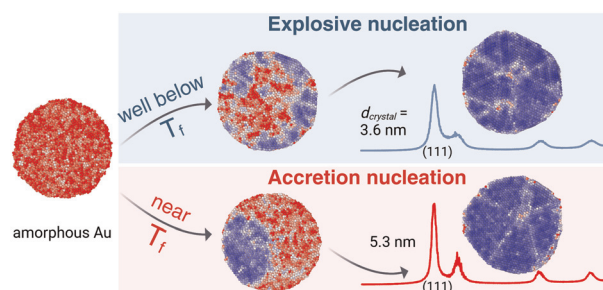
Zhan Fang, Jian Tan, Longli Ma, Pengshu Yi, Wenyi Lu, Yuyu Xu, Mingxin Ye\* and Jianfeng Shen\*



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### The onset of aerosol Au nanoparticle crystallization: accretion & explosive nucleation

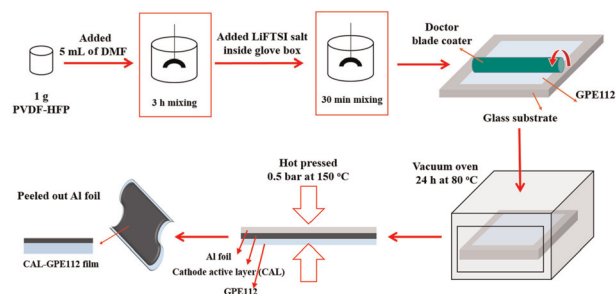
Yi Wang and Eirini Goudeli\*



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### A buffering PVDF-HFP-based gel polymer electrolyte for stable and flexible lithium batteries

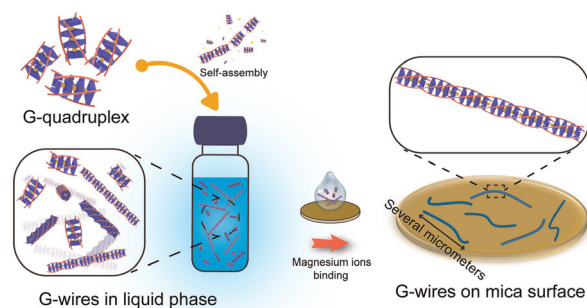
Ahmad Shokrieh, Ruichao Lu, Binbin Zhang, Bharat Prasad Sharma and Zhixiang Wei\*



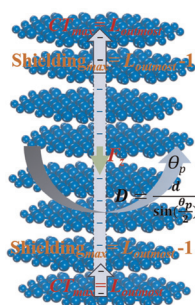
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### Self-assembly of DNA G-quadruplex nanowires: a study of the mechanism towards micrometer length

Yiqi Fan, Jiachen Li,\* Min Jiang, Jing Zhao, Lei He, Yong Wang and Fangwei Shao\*



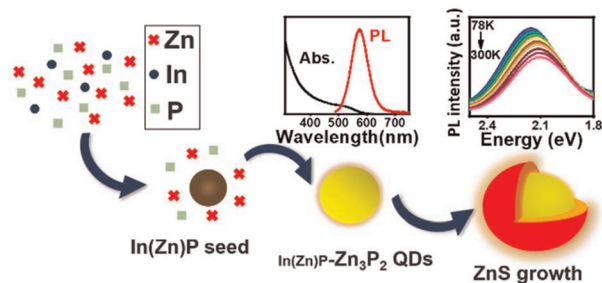
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### A controllable interlayer shielding effect in twisted multilayer graphene quantum dots

Xian Wang\* and Yunpeng Lu\*

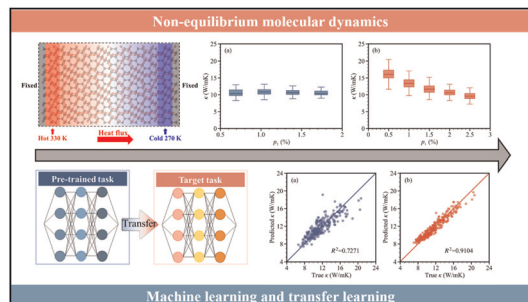
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### Heterostructure seed-mediated synthesis of zinc phosphide quantum dots for bright band-edge emission

Ju ho Kim, Hyekyeong Kwon, Myoungho Jeong and Jiwon Bang\*

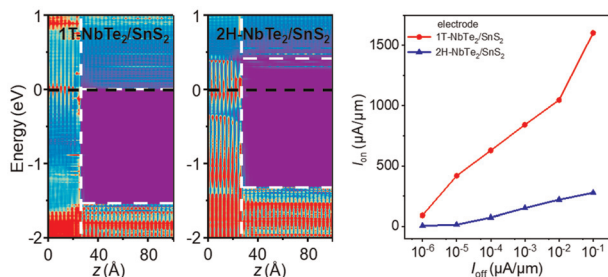
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### Thermal transport properties of defective graphene/graphyne van der Waals heterostructures elucidated *via* molecular dynamics and machine learning

Jian Li and Jin Zhang\*

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### Monolayer SnS<sub>2</sub> Schottky barrier field effect transistors: effects of electrodes

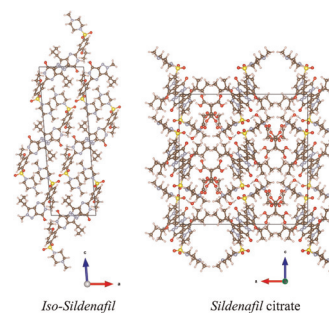
Hong Li,\* Yunfeng Zhang, Fengbin Liu and Jing Lu\*



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## Harnessing machine learning for efficient large-scale interatomic potential for sildenafil and pharmaceuticals containing H, C, N, O, and S

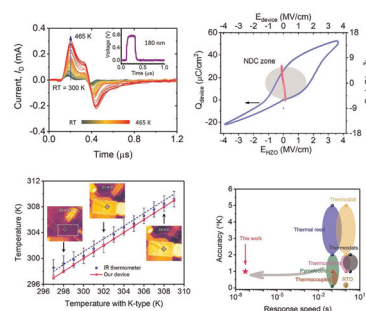
E. Nikidis, N. Kyriakopoulos, R. Tohid, K. Kachrimanis and J. Kioseoglou\*



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## Ultrahigh-speed absolute temperature sensing using ferroelectric HfO<sub>2</sub> enabled by transient negative differential capacitance

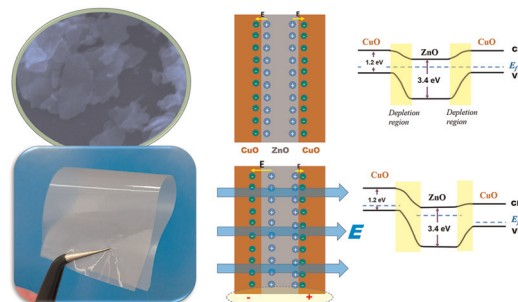
Mohit Kumar,\* Hayoung Park and Hyungtak Seo\*



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## Heterostructured n-ZnO@p-CuO nanosheets filled in a polymer matrix for enhanced electrostatic energy storage performance

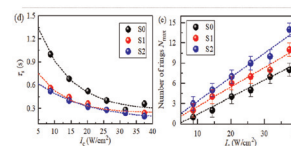
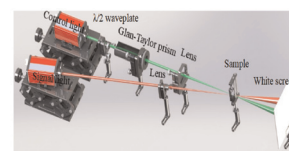
Weixuan Zhang, Yuqing Hu, Xin Zhang, Yingda Zhang and Jinzhang Liu\*



18046

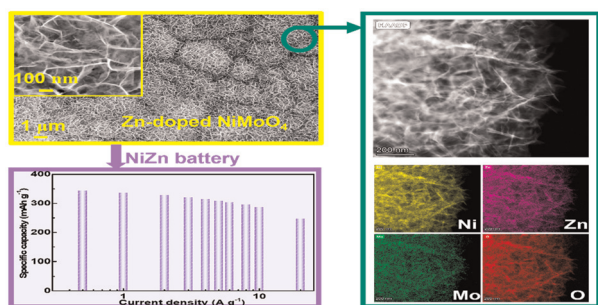
## All-optical switching based on spatial self-phase modulation of Ag/violet phosphorus heterojunctions

Yang Gao, Cheng Ling, Danyi Weng, Guanghao Rui, Jun He, Qiannan Cui, Chunxiang Xu and Bing Gu\*



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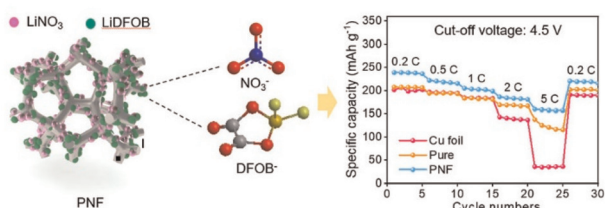
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### Zn-doped NiMoO<sub>4</sub> enhances the performance of electrode materials in aqueous rechargeable NiZn batteries

Xingyan Zhang\* and Dag Noréus

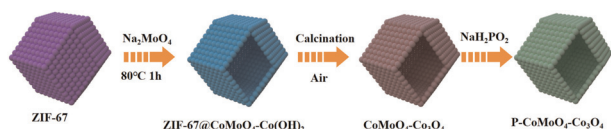
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### An artificial layer enables *in situ* generation of a homogeneous inorganic/organic composite solid electrolyte interphase for stable lithium metal batteries

Huajun Tian, Jianxun Zhang, Bijiao He, Yang Liu, Weiyi Li, Fang Zhang, Zile Wang, Xuwei Lu, Yan Xin and Shuwei Wang\*

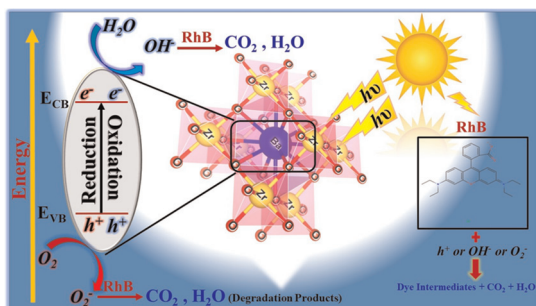
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### Self-templated fabrication of P-doped CoMoO<sub>4</sub>-Co<sub>3</sub>O<sub>4</sub> hollow nanocages for the efficient oxygen evolution reaction

Wenzhi Jia, Qian Lu, Tian Tian, Guoxiang Pan, Rui Tan, Bin He\* and Jiang Liu\*

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### Tailoring the structural and electro-optical properties of a visible-light emitting BaZrO<sub>3</sub> photocatalyst: integrating DFT and comprehensive experimental analysis

Shubha Dubey,\* Vipin Kumar,\* Kumud Dubey, Chinmay Sahu, Anchit Modi, U. K. Gautam, R. K. Sharma, Fozia Z. Haque, Gitanjali Pagare and N. K. Gaur



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## CuCo<sub>2</sub>S<sub>4</sub> nanoparticles synthesized via a thermal decomposition approach: evaluation of their potential as peroxidase mimics

Nainy Khera and Pethaiyan Jeevanandam\*

