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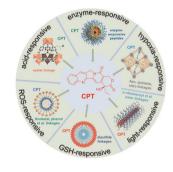
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#### **MINIREVIEWS**

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# Bridging the gap: harnessing liquid nanomachine know-how for tackling harmful airborne particulates

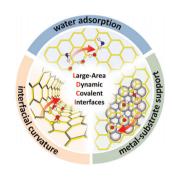
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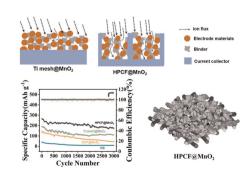
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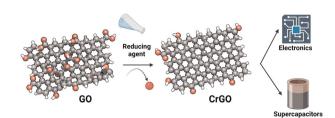
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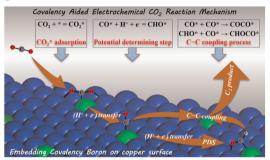
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# A comparative investigation of the chemical reduction of graphene oxide for electrical engineering applications

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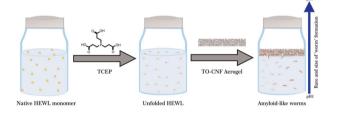


A covalency-aided electrochemical mechanism for CO<sub>2</sub> reduction: the synergistic effect of copper and boron dual active sites drives the formation of a high-efficiency ethanol product

Shiyan Wang, \* Longlu Wang, Xianjun Zhu, Yanling Zhuang, Xianghong Niu and Qiang Zhao\*

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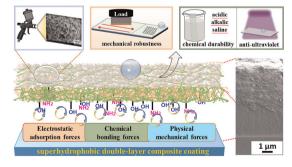
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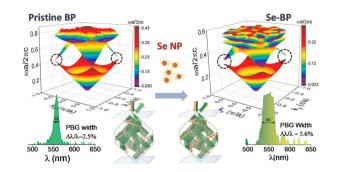
# Robust superhydrophobic silicone/epoxy functional coating with excellent chemical stability and self-cleaning ability

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Towards complete photonic band gap in a high refractive index nanoparticle-doped blue phase liquid crystal

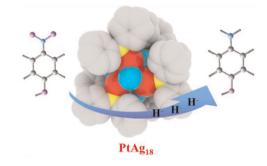
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PtAg<sub>18</sub> superatoms costabilized by phosphines and halides: synthesis, structure, and catalysis

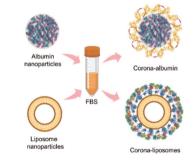
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Differential cellular responses to FDA-approved nanomedicines: an exploration of albumin-based nanocarriers and liposomes in protein corona formation

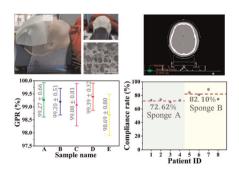
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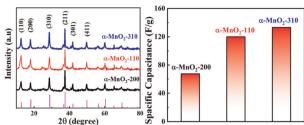
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Investigation of sponge medium for efficient concurrent tumor treating fields and radiotherapy for glioblastomas

Jiajun Zheng, Huanfeng Zhu, Wenjie Guo, Chenchen Gao, Jiahao Guo, Li Sun, Geng Xu, Zhi Wang, Baoying Dai,\* Ning Gu\* and Xia He\*



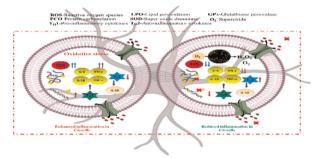
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# Engineering the crystal facets of $\alpha\textsc{-MnO}_2$ nanorods for electrochemical energy storage: experiments and theory

Yifan Wang, Zhengwei Lu, Peipei Wen, Yinyan Gong, Can Li, Lengyuan Niu\* and Shiqing Xu

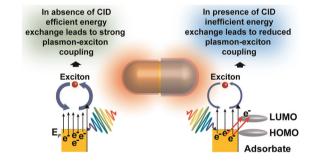
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Coal waste-derived synthesis of yellow oxidized graphene quantum dots with highly specific superoxide dismutase activity: characterization, kinetics, and biological studies

Tushar Das, Subrata Das,\* Prakash Kumar, Betty C.A. and Debabrata Mandal\*

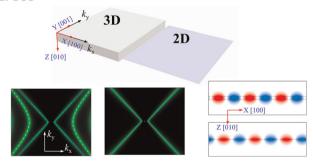
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# Tuning nanoscale plasmon—exciton coupling *via* chemical interface damping

Jyotirban Dey, Alisha Virdi and Manabendra Chandra\*

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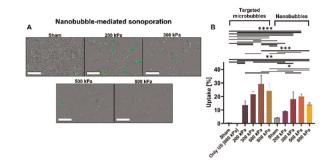
# Comparative analysis of two models for phonon polaritons in van der Waals materials: 2D and 3D

Shuo Chen, Xiaohu Wu\* and Ceji Fu\*

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# Nanobubble-mediated cancer cell sonoporation using low-frequency ultrasound

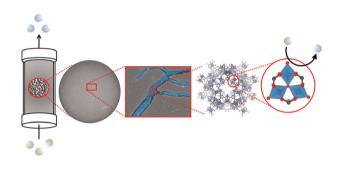
Mike Bismuth, Michal Eck and Tali Ilovitsh\*



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# MOF-based heterogeneous catalysis in continuous flow via incorporation onto polymer-based spherical activated carbon supports

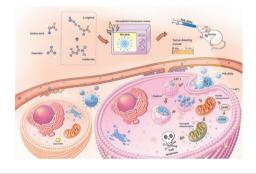
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# Carbonized polymer dots derived from metformin and L-arginine for tumor cell membrane- and mitochondria-dual targeting therapy

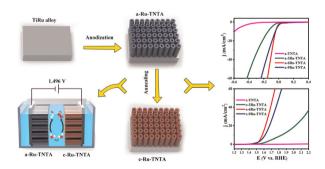
Manling Chen, Yang Li, Yangcheng Liu, Baohua Jia, Xue Liu\* and Tianyi Ma\*



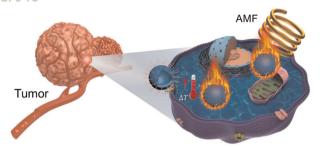
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# Preparation of Ru-doped TiO<sub>2</sub> nanotube arrays through anodizing TiRu alloys for bifunctional **HER/OER electrocatalysts**

Yuejiao Liu, Xixin Wang, Mengyao Yang, Ying Li, Yue Xiao and Jianling Zhao\*



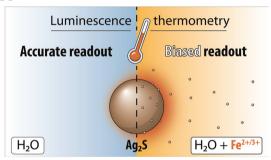
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# Hollow spherical Mn<sub>0.5</sub>Zn<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub> nanoparticles with a magnetic vortex configuration for enhanced magnetic hyperthermia efficacy

Kaiming Shen, Lixian Li, Funan Tan, Shuo Wu, Tianli Jin, Jingxiang You, Mun Yin Chee, Yunfei Yan\* and Wen Siang Lew\*

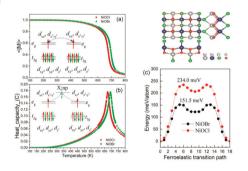
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# Ion-induced bias in Ag<sub>2</sub>S luminescent nanothermometers

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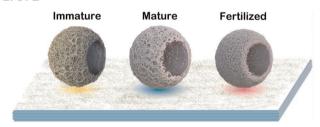
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# Two-dimensional ferroelastic and ferromagnetic NiOX (X = Cl and Br) with half-metallicity and a high Curie temperature

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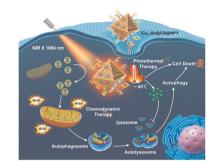
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Hollow Cu<sub>2-x</sub>Se-based nanocatalysts for combined photothermal and chemodynamic therapy in the second near-infrared window

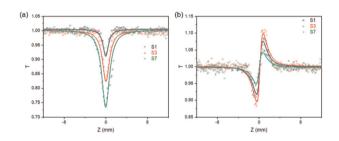
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Thickness-modulated optical nonlinearity of colloidal CdSe-CdS core-shell nanoplatelets: large two-photon absorption and self-focusing effects

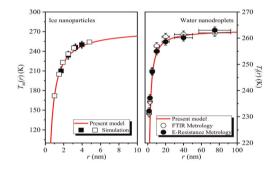
Wenbin Xiang, Baohua Zhu,\* Chunzheng Bai, Bing Gu, Changgui Lv and Jiayu Zhang\*



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# Freezing of water and melting of ice: theoretical modeling at the nanoscale

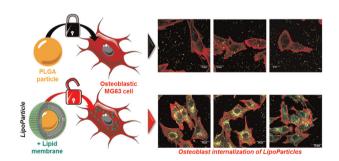
Yanli Ma, Pan Dong, Yi He, Ziyuan Zhao, Xuyao Zhang, Jiabin Yang, Jiabo Yan and Weiguo Li\*



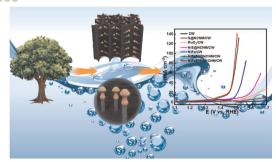
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# LipoParticles: a lipid membrane coating onto polymer particles to enhance the internalization in osteoblast cells

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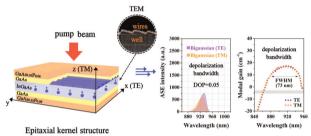
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Hollow N-doped carbon nano-mushroom encapsulated hybrid Ni<sub>3</sub>S<sub>2</sub>/Fe<sub>5</sub>Ni<sub>4</sub>S<sub>8</sub> particle anchored to the inner wall of porous wood carbon for efficient oxygen evolution electrocatalysis

Ying Wang, Yuntang Zhuang, Yaru Hu, Fangong Kong, Guihua Yang, Orlando J. Rojas and Ming He\*

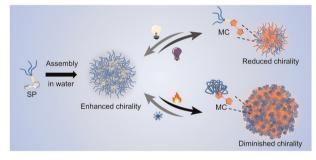
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Ultra-broadband depolarization based on directly-coupled quantum wire-to-well modulation and their aliasing effect for polarization-insensitive light-emitting diodes

Yuhong Wang, Hanxu Tai, Ruonan Duan, Ming Zheng, Yue Shi, Jianwei Zhang, Xing Zhang, Yongqiang Ning and Jian Wu\*

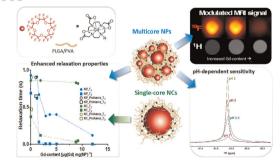
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Supramolecular assembly of dendronized spiropyrans in aqueous solutions into nanospheres with photo- and thermo-responsive chiralities

Shanbin Qi, Xueting Lu, Wenli Mei, Guanglei Gu, Wen Li\* and Afang Zhang\*

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# The internal structure of gadolinium and perfluorocarbon-loaded polymer nanoparticles affects <sup>19</sup>F MRI relaxation times

Alvja Mali, Margot Verbeelen, Paul B. White, Alexander H. J. Staal, N. Koen van Riessen, Cyril Cadiou, Françoise Chuburu, Olga Koshkina and Mangala Srinivas\*

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Deciphering DNA nucleotide sequences and their rotation dynamics with interpretable machine learning integrated  $C_3N$  nanopores

Milan Kumar Jena, Sneha Mittal, Surya Sekhar Manna and Biswarup Pathak\*

