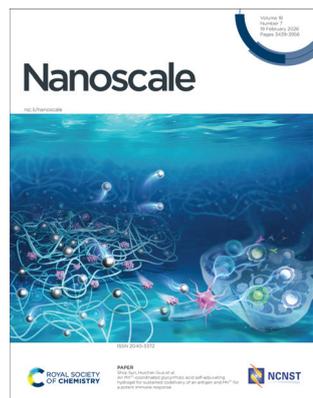


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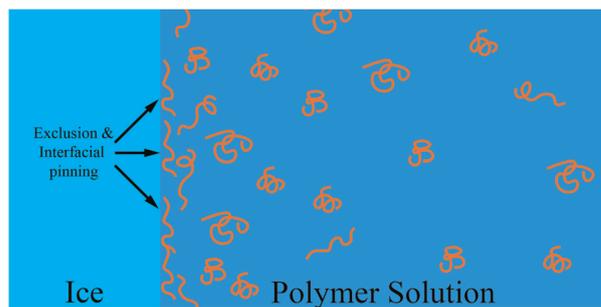
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Interfacial mechanisms in the freezing of polymer solutions

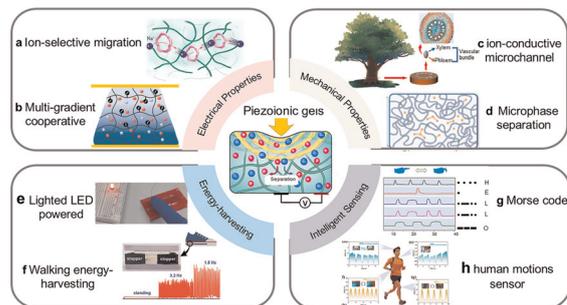
Nicolas Gustav Ulrich and Jean-François Louf*



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Piezoionic effect in gels: multifunctional applications from energy harvesting to intelligent sensing

Yanrong Li, Yufei Zhang, Bochao Chang,
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Hulin Zhang*



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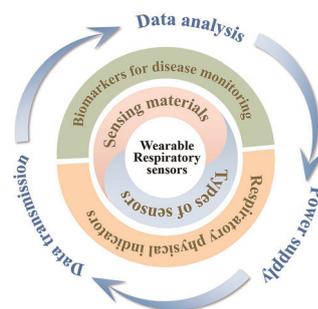
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REVIEWS

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Wearable respiratory sensors for non-invasive healthcare monitoring: applications and intelligent technologies

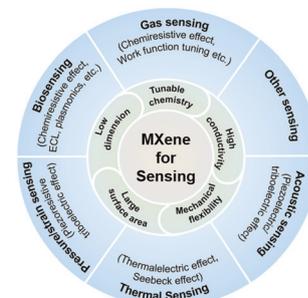
Luming Yu, Guiyan Liu, Hao Zhang and Dan Wen*



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MXenes for sensing technology: from fundamental properties to diverse applications

Haowen Qin, Haitao Dai,* Menghua Wu, Zhuangfei Zhang and Ye Wang*

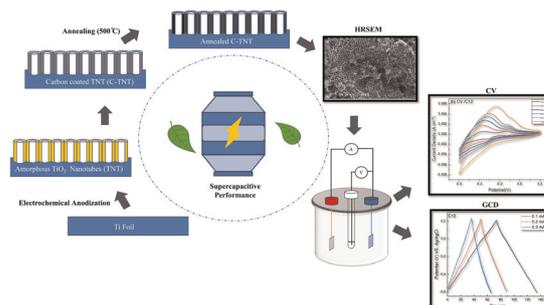


COMMUNICATIONS

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Surface engineering of titanium dioxide nanotube electrodes via *in situ* carbon incorporation for enhanced supercapacitance

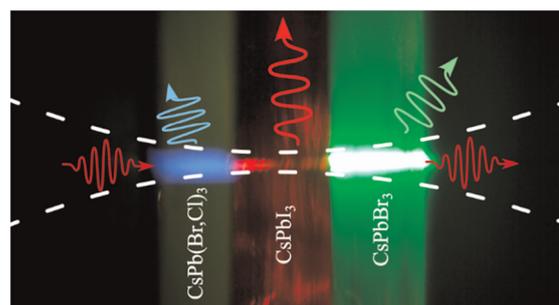
Soumya Jha and R. Prasanth*



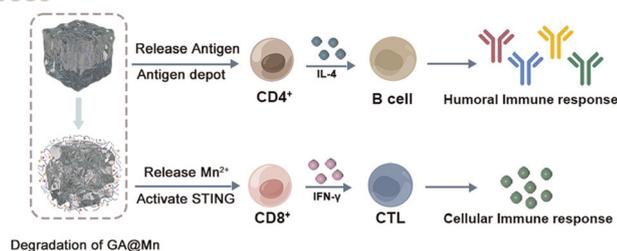
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Two-photon photoluminescence excitation spectra of perovskite nanocrystals in a glass matrix

Matvei N. Bataev,* Ivan V. Ignatiev, Evgenii V. Ubyivovk, Dmitrii V. Pankin, Mikhail B. Smirnov, Maria. S. Kuznetsova and Elena. V. Kolobkova



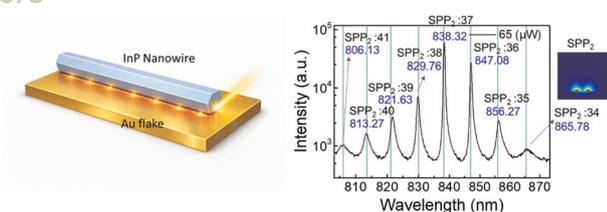
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An Mn²⁺-coordinated glycyrrhizic acid self-adjuvating hydrogel for sustained codelivery of an antigen and Mn²⁺ for a potent immune response

Jingjing Zhou, Shengying Zhang, Hu Dong, Yunhua Li, Haoyue Zang, Zhidong Teng, Mingyang Zhang, Yifan Liu, Shiqi Sun* and Huichen Guo*

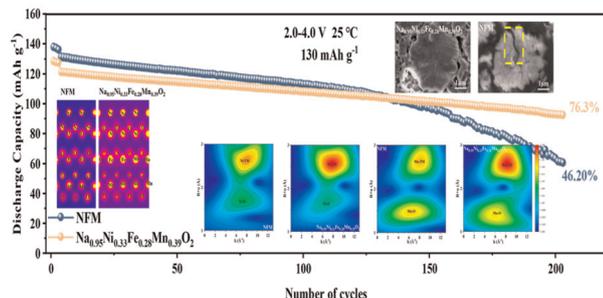
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Deterministic mode analysis of InP plasmonic nanowire lasers

Yu-Shi Tsai, Hung-Jung Shen, Chia-Hung Wu, Guan-Ting Lin, Kuo-Ping Chen, Jhih-Sheng Wu and Tien-Chang Lu*

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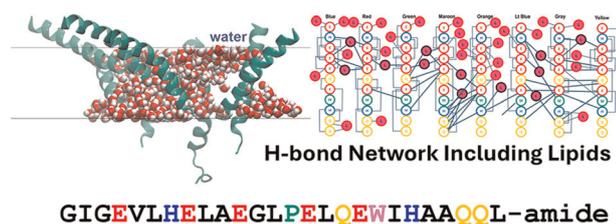


Dopant-free synergy of Fe gradient and Na vacancies for boosted Na⁺ transport in O3-type cathodes

Cheng Peng, Yutong Nong, Weigang Wang, Xinglong Liang, Yi Tian, Jingyi Zhang, Xiaowei Wang,* Xing Ou, Xi Li,* Jiafeng Zhang* and Ji Liang*

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pH-responsive Peptide Nanopores



pH-Responsive peptide nanopores are stabilized by lipid and water-mediated hydrogen bonding networks

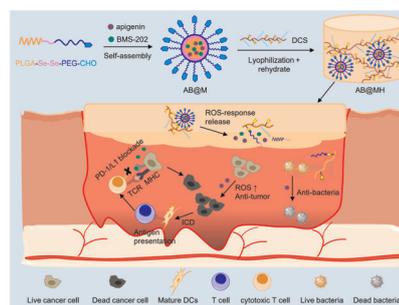
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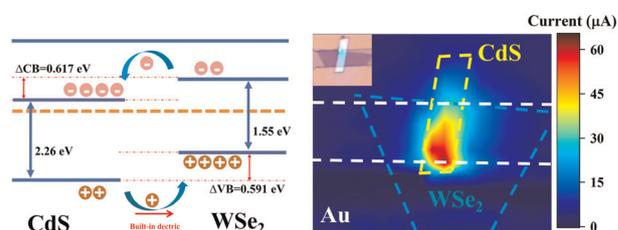
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A van der Waals stacked CdS /WSe₂ heterostructure for high-performance photodetection

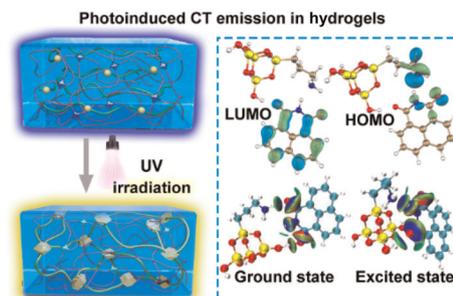
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A crosslinking confined charge-transfer complex for the construction of photo-responsive hydrogels

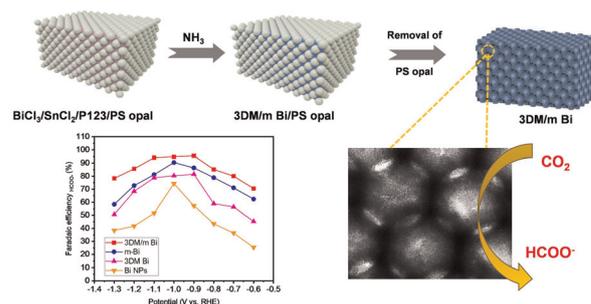
Menglin Wu, Baochuan Zhang, Pengcheng Wang, Tongyu He, Xin Jiang, Lulu Qian, Mingyue Cui,* Bin Song* and Yao He*



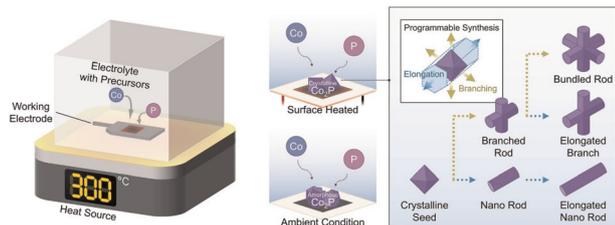
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Three-dimensionally ordered macro-/mesoporous bismuth for efficient electrocatalytic CO₂ reduction to formate

Yixin Zhang, Fulin Li, Kunlong Liu, Tingming Xu, Tingting Sun and Lianbin Xu*



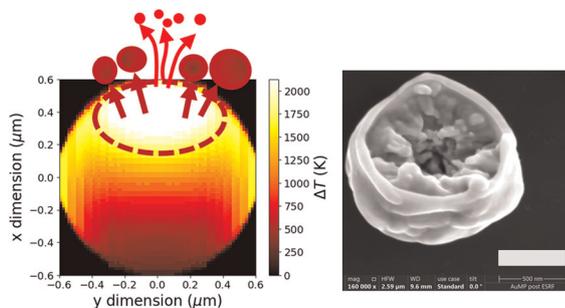
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Thermo-electrochemistry-enabled phase and morphology control of metal phosphide nanocrystals

Hyokyum Ahn, Yunwoo Nam, Taeyeon Kang and Hyun S. Ahn*

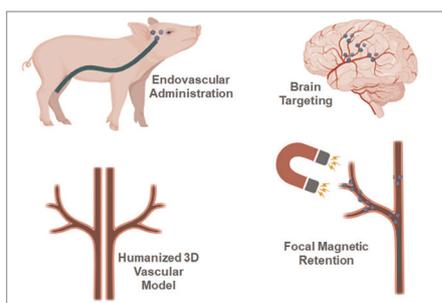
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Pulsed-laser induced gold microparticle fragmentation by thermal strain

Yogesh Pokhrel, Meike Tack, Sven Reichenberger, Matteo Levantino and Anton Plech*

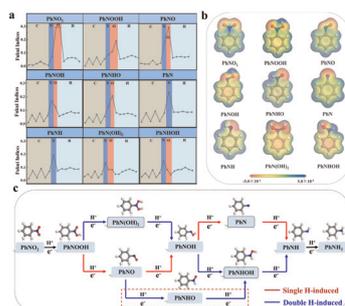
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Endovascular administration and magnetic retention of nanocapsules for improved brain delivery in large cerebral vascular models

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Enhanced electrocatalytic activity for nitrobenzene reduction via p-d orbital hybridization in single- and dual-atom catalysis

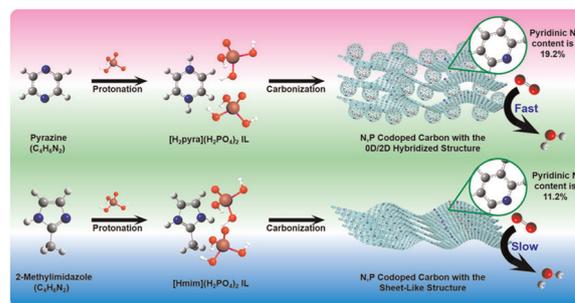
Mingqiang Liu, Yi Yang, Xiaoqing Gong, Yuanyuan Yu, Xiaohong Song and Kefeng Xie*



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Pyrazinium ionic liquid for preparing a 0D/2D hybridized N,P-codoped carbon enriched with pyridinic N and its enhanced electrocatalytic performance toward the oxygen reduction reaction

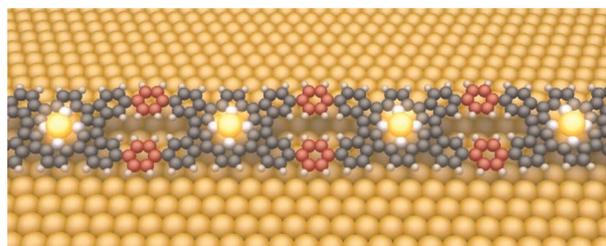
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On-surface synthesis of doubly-linked porphyrin polymers via cycloaromatization of isopropyl substituents on Au(111)

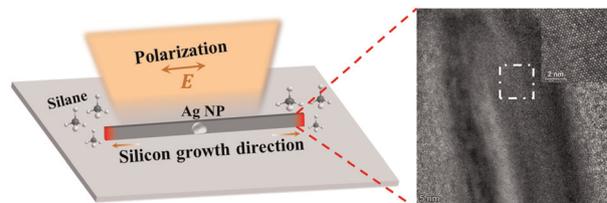
Shenwei Chen, Haiwei Wang, Lixia Kang, Ran Chen, Zhaokun Wang, Suya Dai, Xiang Zhang, Yongjie Chen, Yucheng Song, Cunfeng Zheng, Zechao Yang, Zengfu Ou,* Jin Li* and Hongbing Ji*



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Polarization-directed growth of single-crystalline silicon nanostructures

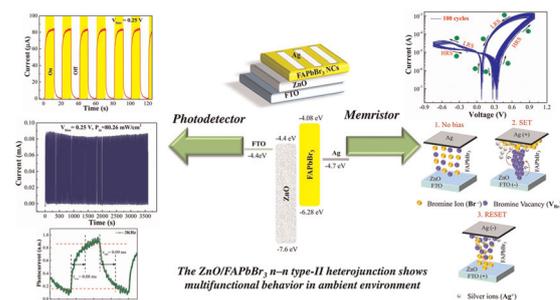
Jin Hu, Jin Qin and Zhikun Liu*



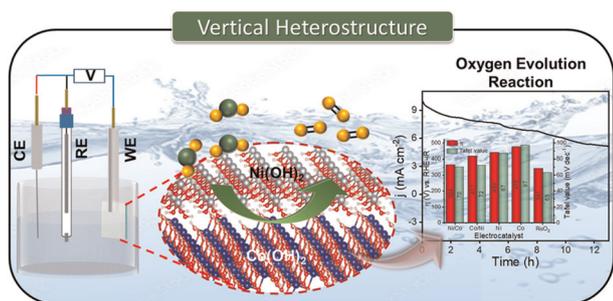
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A synergistic ZnO/FAPbBr₃ nanocrystal n–n heterojunction for low-bias, fast, broadband photodetection and memristive applications

Monisha Nayak, Ashutosh Mohanty, Pragalb Kashyap, Abhijit Bar and Sudip K. Saha*



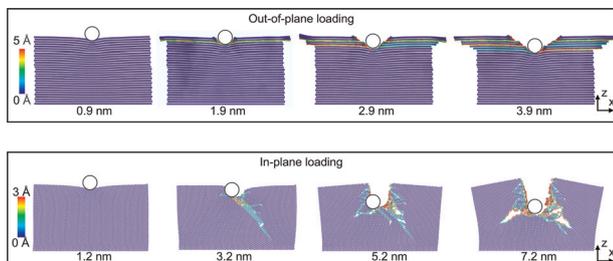
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Large-area freestanding 2D Ni/Co vertical heterostructures with strong interfacial coupling for efficient oxygen evolution reaction

Manav Saxena,* Sayali Ashok Patil, Anjali Prajapati, Ranjit Thapa, Sebastien Royer and Pramila K. Misra*

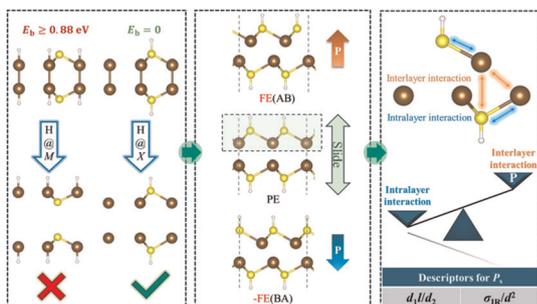
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Anisotropy deformation behavior of multi-layer black phosphorus

Zihan Li, Guangrui Zhao, Xiaosong Zhang, Yongda Yan and Yanquan Geng*

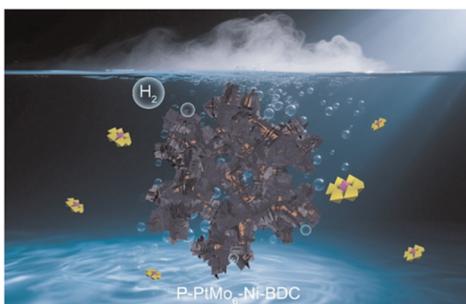
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Intra-interlayer competition: a key regulator for sliding ferroelectricity in hydrogen-functionalized group-III monochalcogenide monolayer

Shimao Xie, Pengcheng Yang, Weiyang Peng, Daijian Li, Yanan Wang, Hua Lin, Jianfeng Tang* and Chunmei Li*

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Surface phosphating activation of PtMo₆-Ni-BDC nanosheets for an enhanced hydrogen evolution reaction

Bo-Cong Shi, Man Jin, Jun-Rui Chen, Pengfei Wu, Dongsheng Geng and Yu-Jia Tang*

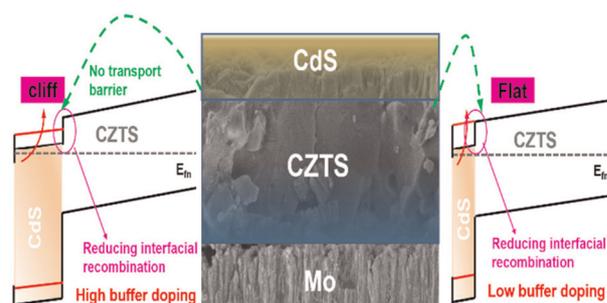


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Optimizing the performance of wide-bandgap CZTS solar cells: influence of heterojunction structure, buffer thickness and doping concentration

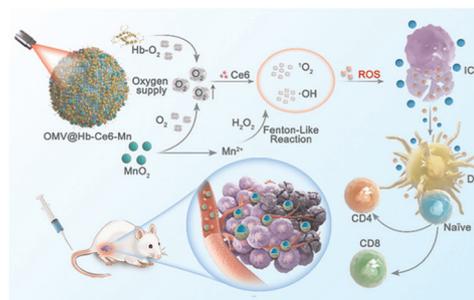
Siyu Wang,* Yue Liu, Haoran Li and Yi Zhang*



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Enhancing tumor ROS generation via nanozyme-amplified photodynamic therapy with oxygen-supplying bacterial OMVs

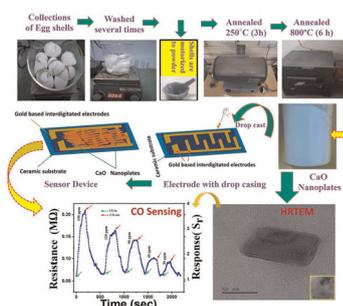
Haibing Dai, Yongqi Wang, Xiang Chen, Jiale Zhu, Han Wang, Daizong Cui, Huibin Wu, Guan Huang, Ran Luo, Jianbo Yu, Weiqun Li,* Min Zhao* and Lin Mei*



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A selective resistive CO gas sensor based on bio-waste derived 2D-CaO nanoplates

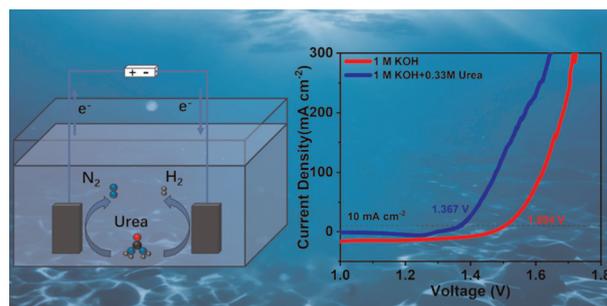
Amit Kumar Bhunia,* Abhijit Narayan Eshore and Prasanta Kumar Guha



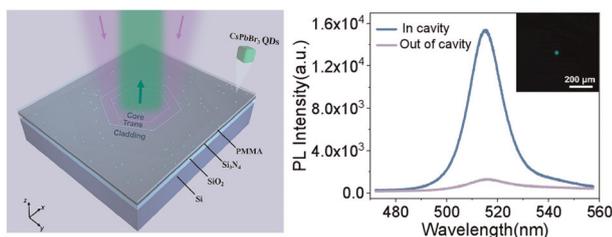
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Construction of Fe regulated NiMoN nanorods as an efficient electrocatalyst for overall water splitting and urea electrolysis

Longlong Liu, Lanli Chen, Huaming Zhang,* Muhammad Humayun, Yuxiao Liu, Junhong Duan, Yanjun Fu, Mohamed Bououdina, Xinying Xue* and Chundong Wang



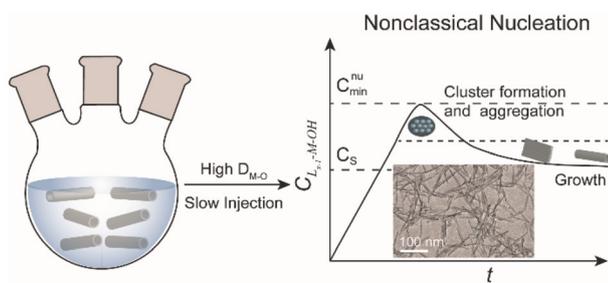
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A highly efficient surface-emitting light source enabled by silicon nitride photonic crystal cavities coupled with perovskite quantum dots

Rongzi Wang, Ying Su, Na Jia, Hongji Fan, Chengxiang Qi and Tun Cao*

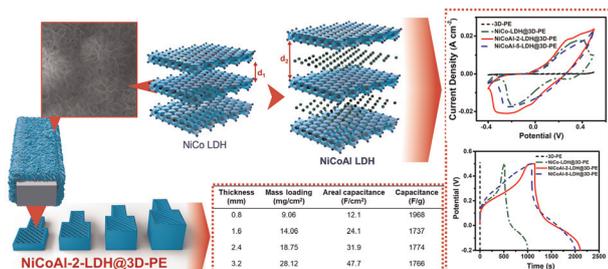
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Template-free synthesis of functional metal oxide nanotubes via nonclassical nucleation in a continuous injection method

Mengxuan Zhang, Ming Jiang, Zhongyao Bao, Zisheng Feng, Kun Han, Tao Han, Chenzhe Sun, Yakun Zhou, Chuanqiang Wu,* Zhen Huang* and Penghui Yin*

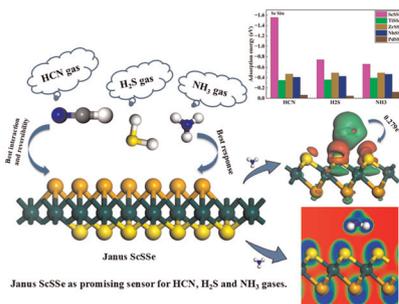
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3D-printed carbon nanoparticle monoliths enabling ultrahigh mass loading of NiCoAl layered double hydroxides for asymmetric supercapacitors

Jungeun Bae, Thang Cao Doan, Anisa Fitriani Rosyadi, Yebin Park and Hyojong Yoo*

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DFT exploration of the sensing performance of Janus transition metal dichalcogenides (ASSe; A = Sc, Ti, Zr, Nb, Pd) monolayers for HCN, H₂S, and NH₃ toxic gases

Sifat Reza Khoshnobish, Afiya Akter Piya, Tanu Arefin and Siraj Ud Daula Shamim*

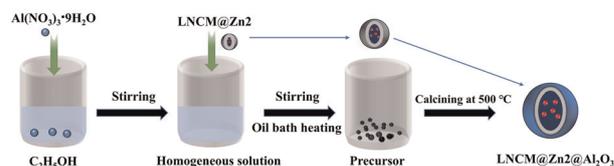


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Synergistically modified lithium-rich manganese-based cathodes *via* Zn doping and Al_2O_3 coating for enhanced lithium-ion batteries

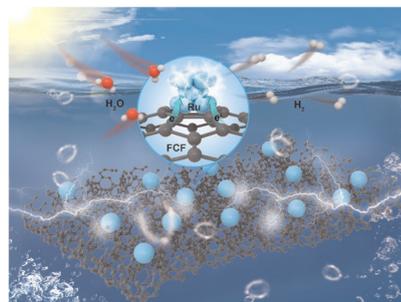
Biao Wang, Kaibo Fan, Kai Cao, Haozhong Huang, Xiaowu Fu, Jie Chen, Chenyang Zhang, Li Wang, Yong Zhao* and Zhengguang Hu*



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Anchoring ruthenium nanoclusters using an electron-donating fullerene carbon matrix for high-performance hydrogen evolution

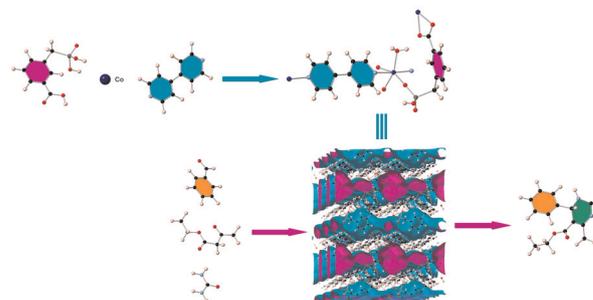
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A mesoporous two-dimensional cobalt-phosphonocarboxylate metal organic framework (Co-MOF) as an efficient and recyclable catalyst for solvent-free multicomponent reactions

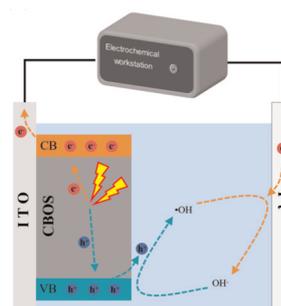
Ehsan Joukar Bahaderani, Khosro Mohammadi,* Payam Hayati* and Jan Janczak



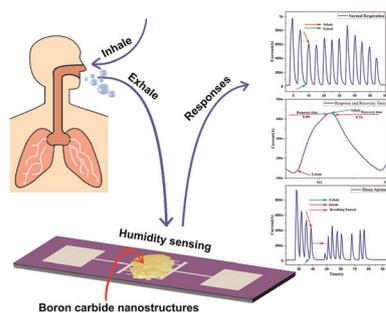
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High performance broadband photoelectrochemical photodetectors based on Cu-doped $\text{Bi}_2\text{O}_2\text{Se}$ nanosheets

Xinyu Guo, Yanning Hu, Jiaying Wang, Ziyang Zhou, Peijie Ma* and Kun Zheng



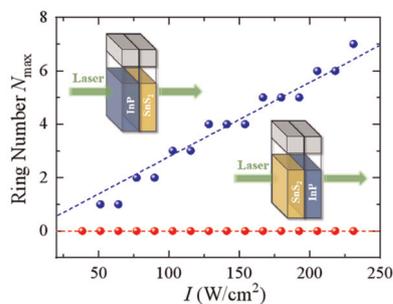
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Surface-engineered boron carbide nanostructures for non-contact respiratory monitoring

Shubham Pandey, Aminul Islam,
Julaiba Tahsina Mazumder, Bishal Kumar Keshari,
Parikshit Sahatiya and Ravindra Kumar Jha*

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Multifunctional nonlinear photonic devices based on spatial self-phase modulation in InP nanosheets

Danyi Weng, Cheng Ling, Jun He, Qiannan Cui,*
Chunxiang Xu* and Bing Gu*

