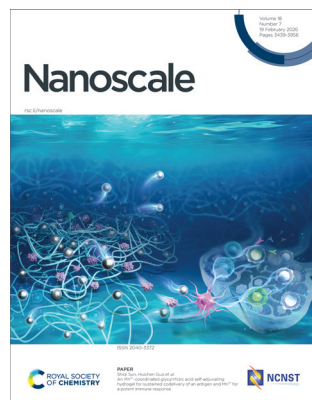


IN THIS ISSUE

ISSN 2040-3372 CODEN NANOHL 18(7) 3439–3956 (2026)



Cover

See Shiqi Sun,
Huichen Guo *et al.*,
pp. 3559–3574.

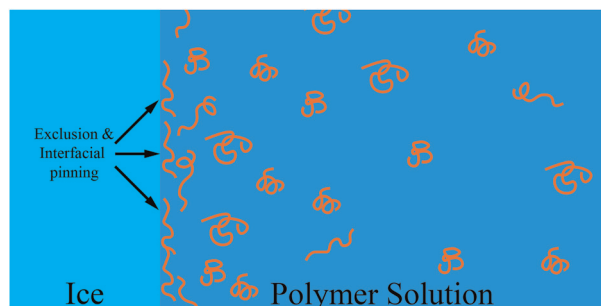
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REVIEWS

3453

Interfacial mechanisms in the freezing of polymer solutions

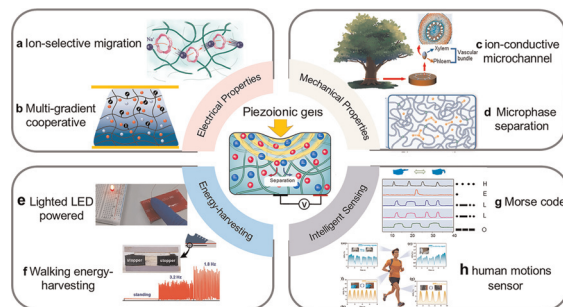
Nicolas Gustav Ulrich and Jean-François Louf*



3472

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

Yanrong Li, Yufei Zhang, Bochao Chang,
Saeed Ahmed Khan, Xiaojing Cui, Jie Zhang* and
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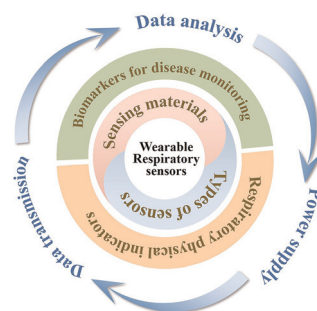
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REVIEWS

3496

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

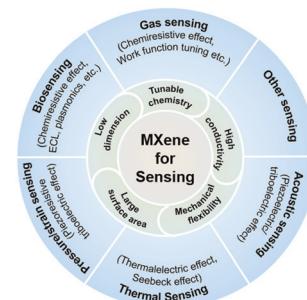
Luming Yu, Guiyan Liu, Hao Zhang and Dan Wen*



3513

MXenes for sensing technology: from fundamental properties to diverse applications

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

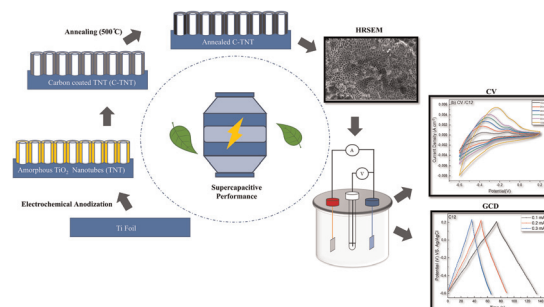


COMMUNICATIONS

3537

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

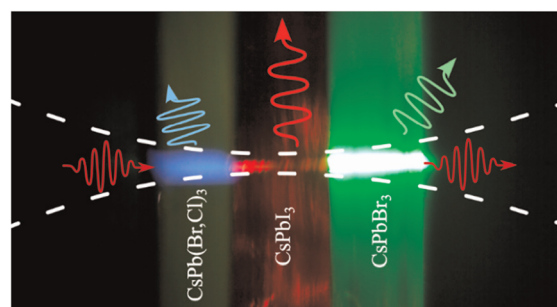
Soumya Jha and R. Prasanth*



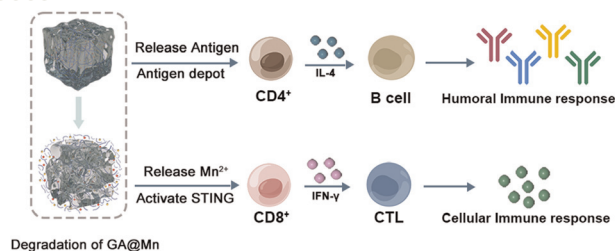
3551

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



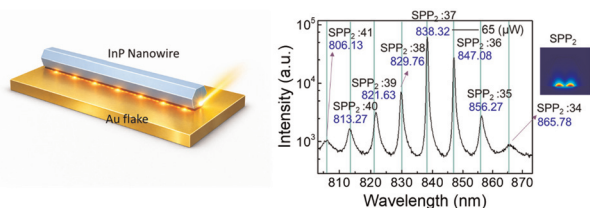
3559



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*

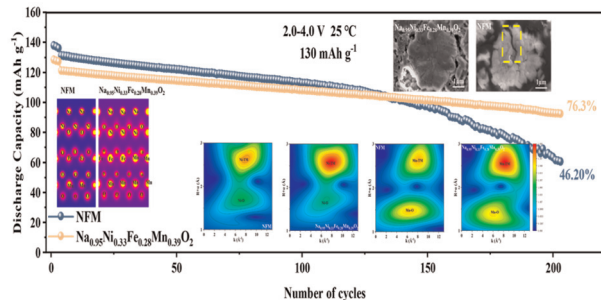
3575



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*

3585

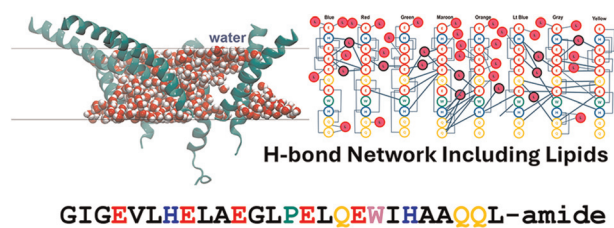


Dopant-free synergy of Fe gradient and Na vacancies for boosted Na⁺ transport in O3-type cathodes

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

3598

pH-responsive Peptide Nanopores



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

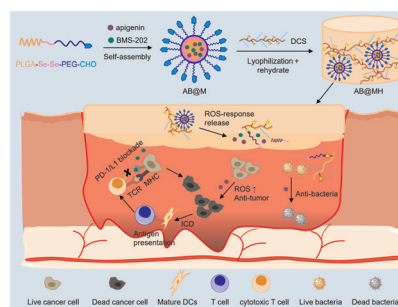
Ana-Nicoleta Bondar,* Samo Lešnik, Kalina Hristova and William C. Wimley*



3613

ROS-responsive multifunctional DCS-based micelle hydrogel for simultaneously inhibiting post-resection melanoma recurrence and promoting wound healing

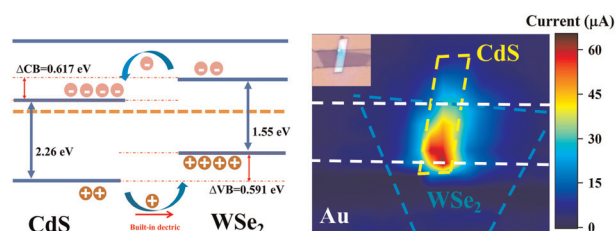
Sha Liu,* Lina Wang, Yupeng Wang* and Lina Geng*



3625

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

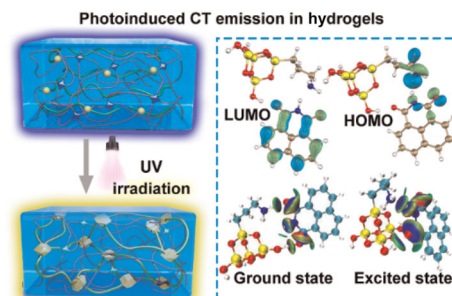
Lei Liu, Dafei Chen, Fan Mu, Yan Yang, Lujun Yang, Haiqiang Huang, Yifei Huang, Hui Zhang and Yingkai Liu*



3635

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

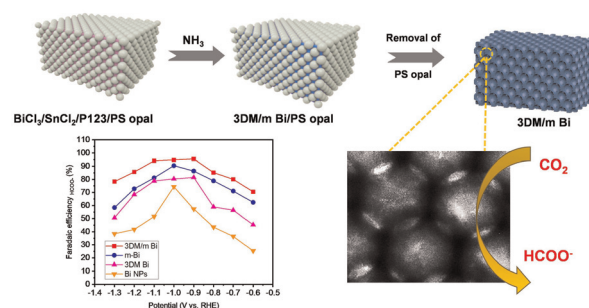
Menglin Wu, Baochuan Zhang, Pengcheng Wang, Tongyu He, Xin Jiang, Lulu Qian, Mingyue Cui,* Bin Song* and Yao He*



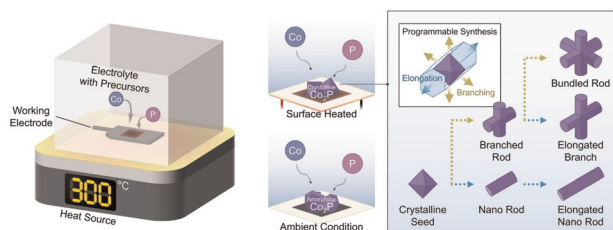
3644

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*



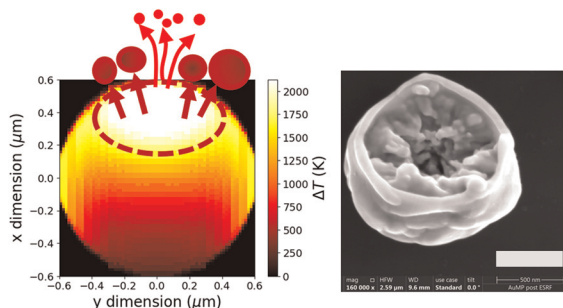
3651



Thermochemistry-enabled phase and morphology control of metal phosphide nanocrystals

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

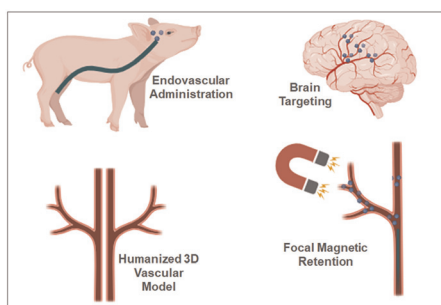
3658



Pulsed-laser induced gold microparticle fragmentation by thermal strain

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

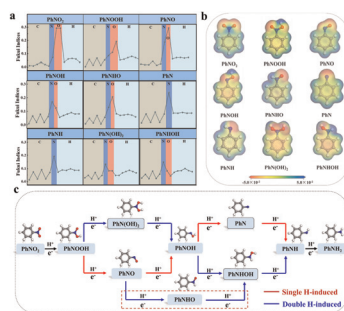
3669



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

Alba Grayston, Miguel Garcia-Gabilondo, Neus Otero-Fornés, Anna Solé-Porta, Itzasne de la Torre-Sánchez, Wid Mekseriwattana, Milan Timko, Jozef Kovac, Peter Kopcansky, Jiahui Li, Riccardo Tiberi, Marielle Esteves, Alejandro Tomasello, David Hernández, Marc Ribó, Anna Roig and Anna Rosell*

3682



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

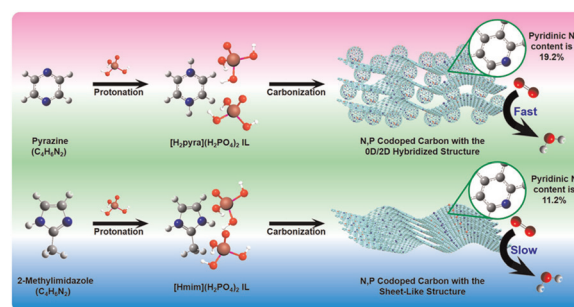
Mingqiang Liu, Yi Yang, Xiaoqing Gong, Yuanyuan Yu, Xiaohong Song and Kefeng Xie*



3698

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

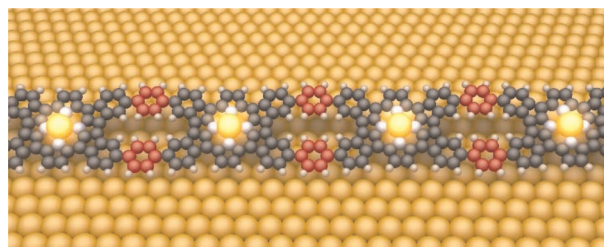
Jian Gao, Yuejiao Sun, Na Ma, Yunyuan Chu, Hong Wang, Hanmin Tian,* Zhen Yin,* Xiaoyao Tan and Peng Zhang*



3709

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

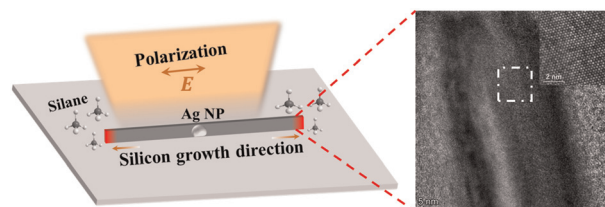
Shenwei Chen, Haiwei Wang, Lixia Kang, Ran Chen, Zhaokun Wang, Suya Dai, Xiang Zhang, Yongjie Chen, Yucheng Song, Cunfeng Zheng, Zechao Yang, Zengfu Ou,* Jin Li* and Hongbing Ji*



3716

Polarization-directed growth of single-crystalline silicon nanostructures

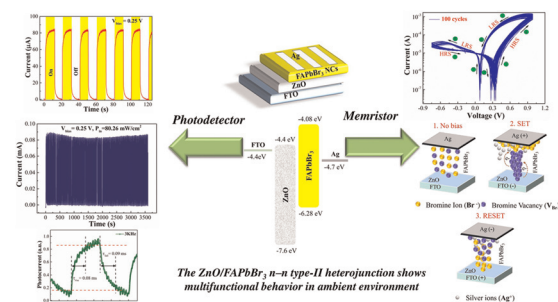
Jin Hu, Jin Qin and Zhikun Liu*



3723

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

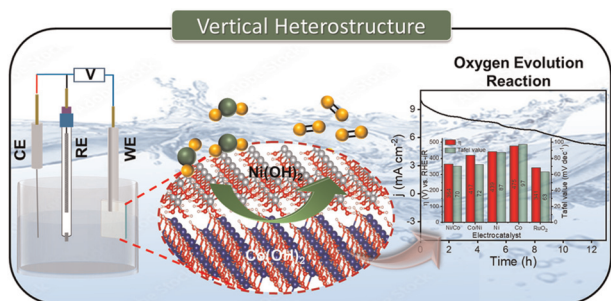
Monisha Nayak, Ashutosh Mohanty, Pragalb Kashyap, Abhijit Bar and Sudip K. Saha*



The ZnO/FAPbBr₃ n–n type-II heterojunction shows multifunctional behavior in ambient environment



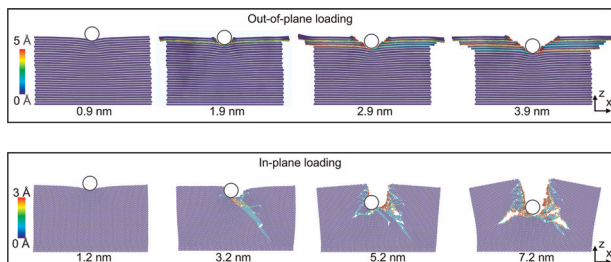
3739



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*

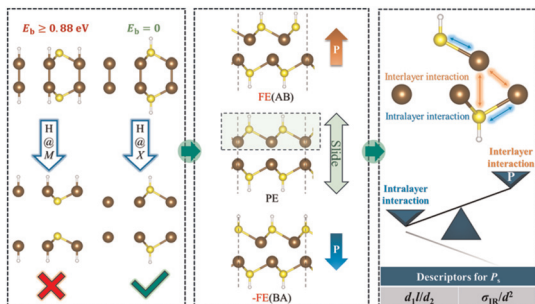
3749



Anisotropy deformation behavior of multi-layer black phosphorus

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

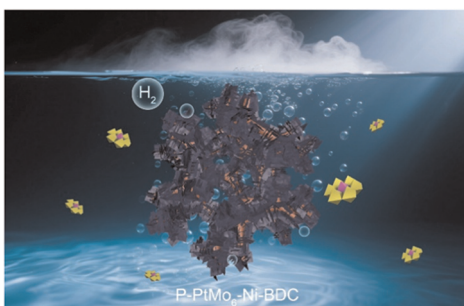
3764



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*

3776



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*

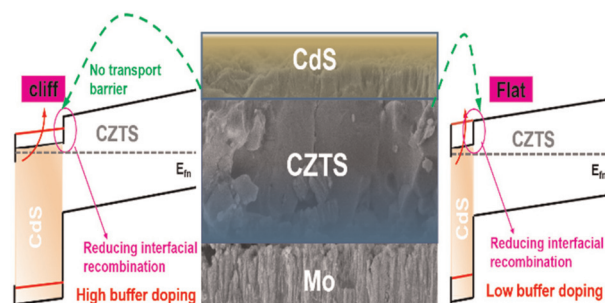


PAPERS

3784

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

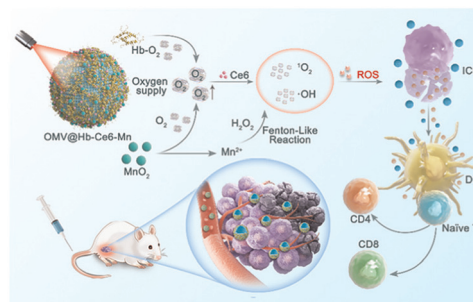
Siyu Wang,* Yue Liu, Haoran Li and Yi Zhang*



3794

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

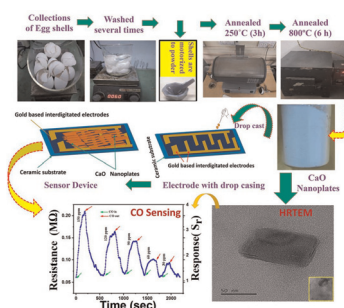
Haibing Dai, Yongqi Wang, Xiang Chen, Jiale Zhu, Han Wang, Daizong Cui, Huibin Wu, Guan Huang, Ran Luo, Jianbo Yu, Weiqun Li,* Min Zhao* and Lin Mei*



3799

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

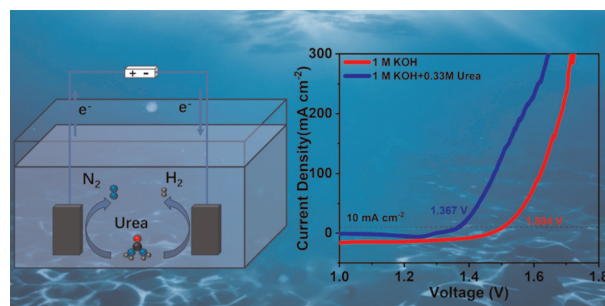
Amit Kumar Bhunia,* Abhijit Narayan Eshore and Prasanta Kumar Guha



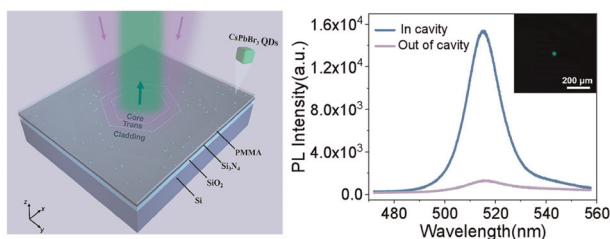
3813

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



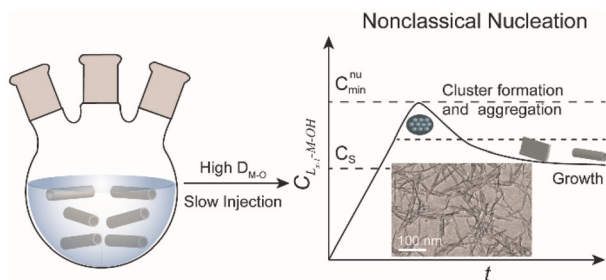
3828



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*

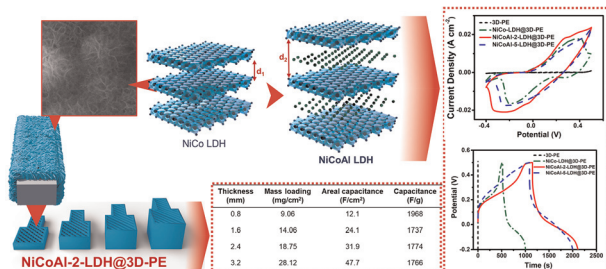
3839



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*

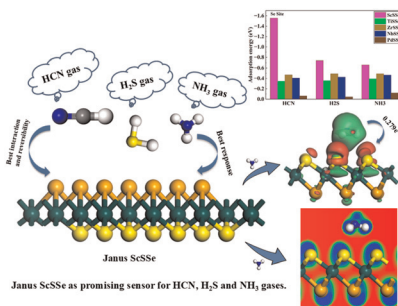
3851



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*

3865



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*

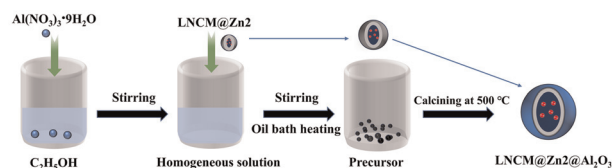


PAPERS

3885

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

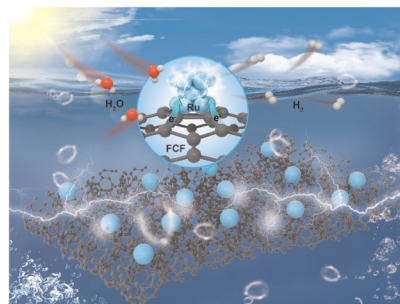
Biao Wang, Kaibo Fan, Kai Cao, Haozhong Huang, Xiaowu Fu, Jie Chen, Chenyang Zhang, Li Wang, Yong Zhao* and Zhengguang Hu*



3897

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

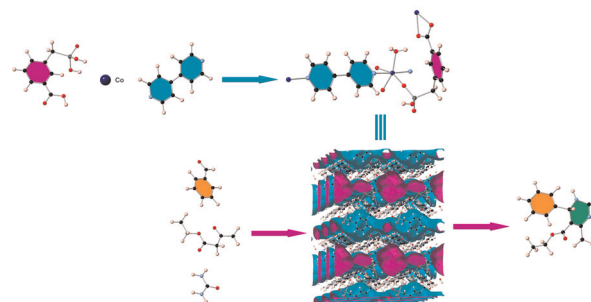
Ying Wang, Yongqiang Feng,* Jun Zhang, Qunzhi Ma, Jiayi Li, Wei Liu, Wenyu Wang, Yirong Qi, Qingqing Liu, Xu Li and Xiaojie Ma



3904

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

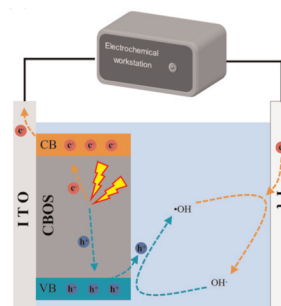
Ehsan Joukar Bahaderani, Khosro Mohammadi,* Payam Hayati* and Jan Janczak



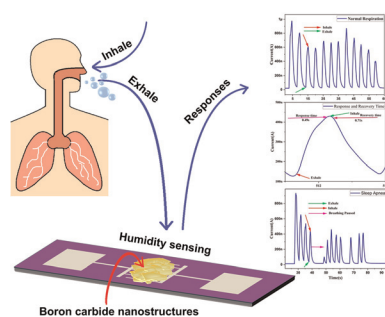
3920

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



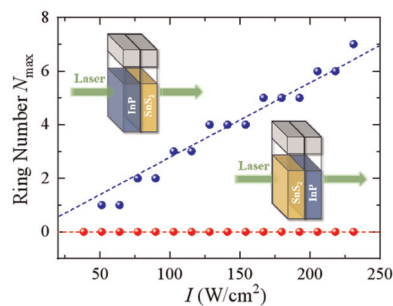
3930



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*

3941



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*

