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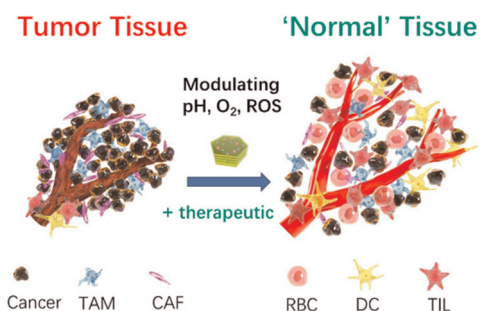
Fundamental questions
Elemental answers

REVIEWS

25964

Recent advances in pH-sensitive clay nanomaterials for enhanced immunotherapy of solid tumors

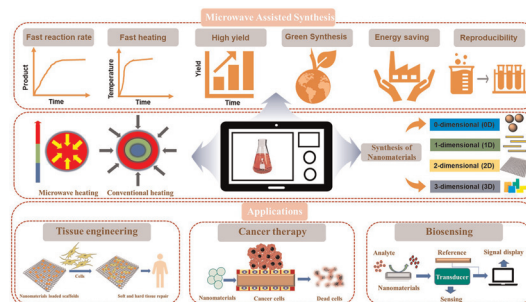
Zhi Ping Xu



25975

Microwave chemistry and microwave-assisted synthesis of nanomaterials in biomedicine: a focused review

Ankur Sood, Kanika, Arpita Roy, Shubham Mahajan, Sung Soo Han, Rehan Khan* and Sumanta Sahoo*

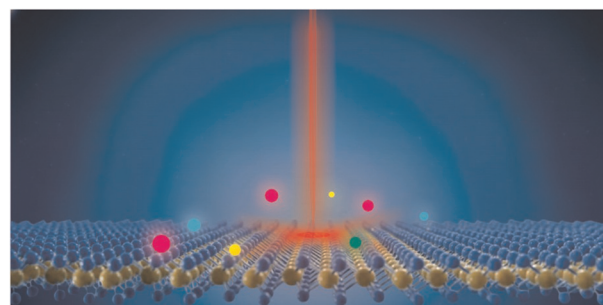


MINIREVIEWS

26010

Unveiling quantum phases in two-dimensional materials with optical quasiparticle probes

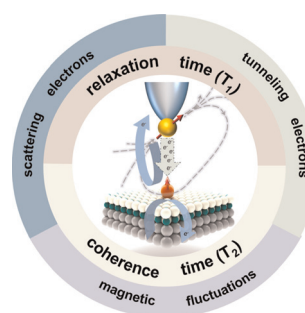
Bruno R. Carvalho* and Victor Carozo*



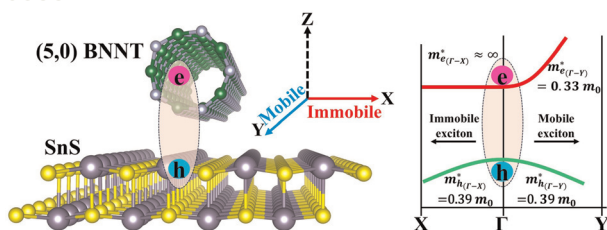
26024

Quantum coherence and relaxation of single spins on surfaces probed by ESR-STM

Dalong Xuan, Di'an Wu, Xiaobin Geng, Sihao Li, Xianglong Wu, Yu Wang* and Xue Zhang*



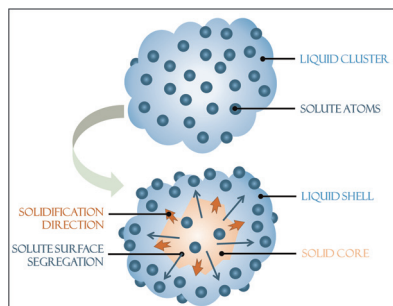
26033



Interfacial excitons across dimensional boundaries: a mixed-dimensional SnS/BNNT heterostructure

Dhanjit Talukdar,* Dambarudhar Mohanta and Gazi A. Ahmed

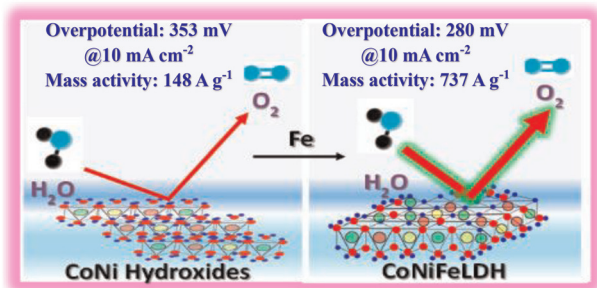
26041



A corus line: nanophase diagrams of miscible bimetallic nanoparticles

Zhixuan Lin, E. Toulkeridou, Junlei Zhao, Yue Wang, Jeffrey E. Shield and P. Grammatikopoulos*

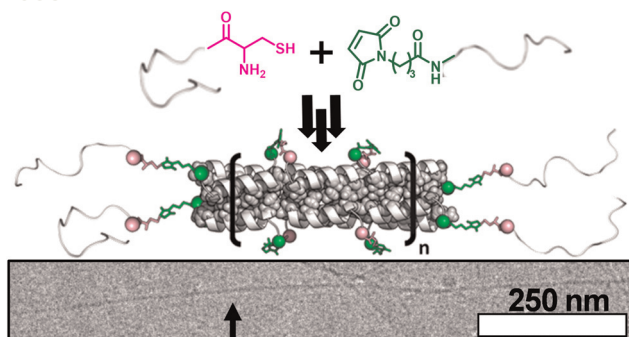
26050



Unveiling the transformation of CoNi hydroxides to CoNiFe layered double hydroxides with implications for electron modulation in one-step coprecipitation for efficient oxygen evolution electrocatalysis

Jony Saha* and Firdosh Alam Molla

26057



Supramolecular assembly of unstructured peptides into rigid bundlemer polymers

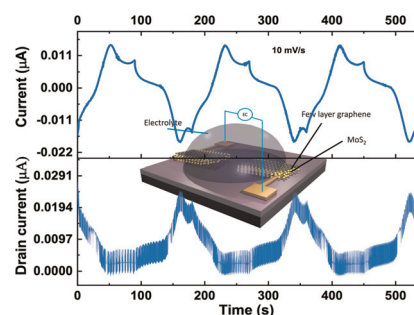
Joshua E. Meisenhelter, Matthew Langenstein, Jacquelyn E. Blum, Dai-Bei Yang, Darrin J. Pochan, Jeffery G. Saven* and Christopher J. Kloxin*



26062

Planar supercapacitor devices with nanometer electrodes

Sumana Kumar, Rahul Tripathi, Rajesh P. Achary and Abha Misra*

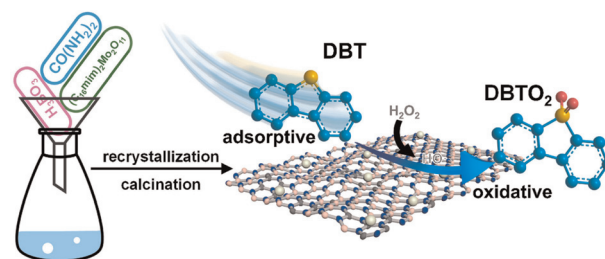


PAPERS

26068

Enhanced catalytic oxidative desulfurization performance via facile synthesis of a MoO₂/BCN nanocomposite under solventless and mild reaction conditions

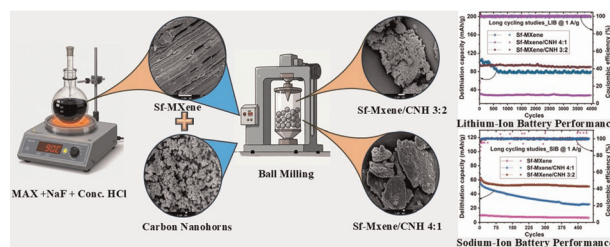
Chao Wang,* Xiaoyu Yao, Qi Sun, Hui Liu, Man-Keung Fung,* Ming Zhang and Huaming Li



26077

Synergistic enhancement in energy storage in lithium/sodium ion batteries using engineered composites of MXenes and carbon nanohorns

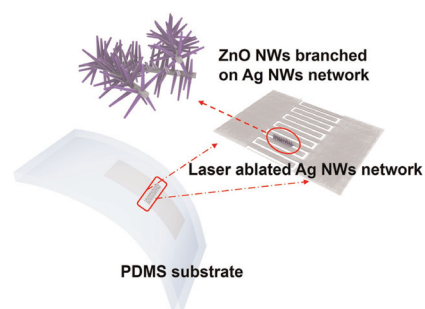
Mukul Swain, Saibrata Punyasloka, Sameer Nirupam Mishra, Kottisa Sumala Patnaik, Chinmay Ghoroi* and Noriyoshi Matsumi*



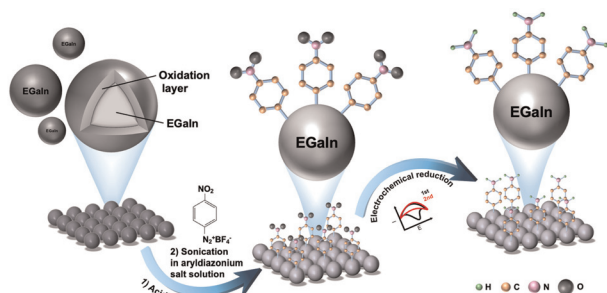
26095

Flexible piezo-responsive photodetector based on hierarchical zinc oxide nanowire branches on a silver nanowire backbone

Changwook Lee, Taeseung Hwang, Hee Jin Lee, Jehoon Lee, Seonmi Ko, Hoon Eui Jeong* and Junyeob Yeo*



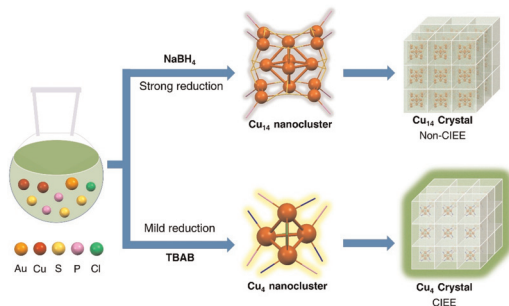
26109



Formation of covalent Ga–C bonds on liquid metal nanoparticles with enhanced stability and anti-oxidation

Chuangxin Zhou, Zhiheng Zhang, Yuan Gao, Weize Diao, Siyi Zou, Jun Zhu, Jiangtao Xu and Guozhen Liu*

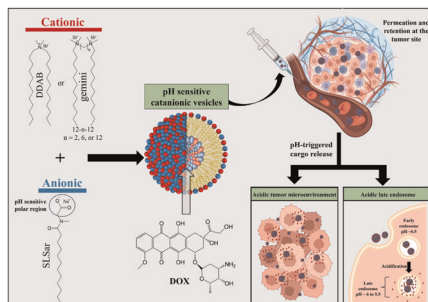
26123



Reductant-selected formation of copper nanoclusters with crystallization-induced emission enhancement performance

Ye Tian, Wenlong Xu, Jian Zhu, Jiayu Lu, Zhaohang Chen, Fakhari Alam, Honglei Shen,* Xi Kang* and Manzhou Zhu

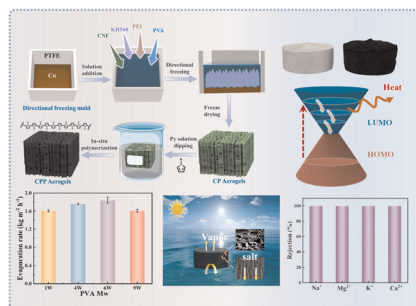
26129



Smart sarcosinate-based catanionic vesicles for efficient doxorubicin delivery in tumor microenvironments

Rui L. Machado, Isabel S. Oliveira,* Karenina Santos, Andreia C. Gomes and Eduardo F. Marques*

26143



Synergistic engineering of polypyrrole-cellulose aerogels with vertical channels for salt-resistant solar evaporation and multipollutant water purification

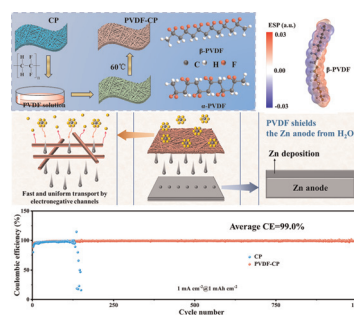
Xin Zhao, Ling Niu, Yuchen Jin, Di Wu,* Zheng Sun* and Zhiqiang Su*



26157

Bifunctional interface engineering of fluorinated cosmetic cotton separators: synergistic Zn^{2+} kinetics and hydrophobic shielding for ultra-stable Zn anodes

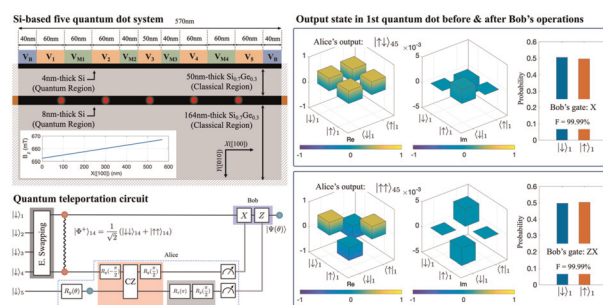
Suhong Li, Yanyan Qin, Ke Su, Jianyong Ren, Lin Li, Zhouyang Long* and Lingdi Shen*



26170

On the feasibility of quantum teleportation protocols implemented with silicon devices

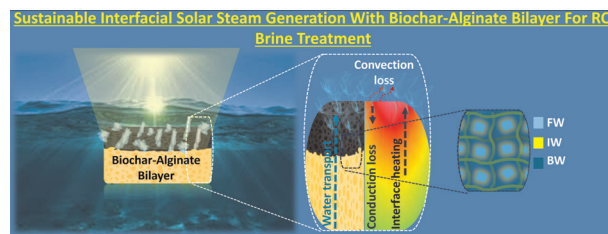
Junghee Ryu and Hoon Ryu*



26181

Sustainable interfacial solar steam generation with a biochar–alginate bilayer for RO brine treatment

Sumina Namboorimadathil Backer,* Ismail W. Almanassra, Alaa Abushawish, Muataz Ali Atieh and Abdallah Shanableh*

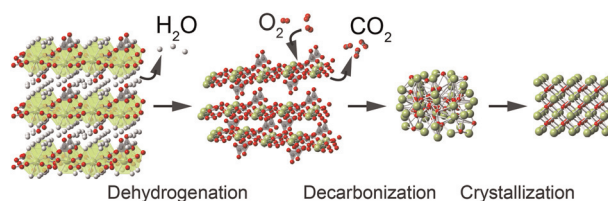


26194

Nucleation and crystallization of metal oxides from carbonates

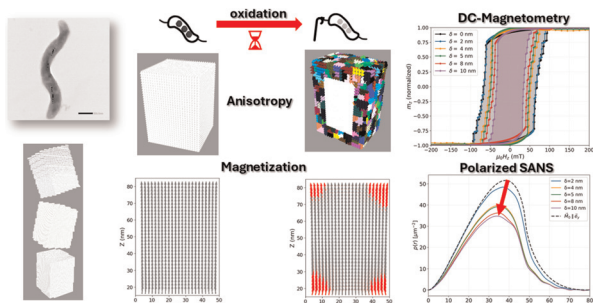
Yingying Jiang, Guoming Lin and Utkur Mirsaidov*

Carbonate to metal oxide transformation



PAPERS

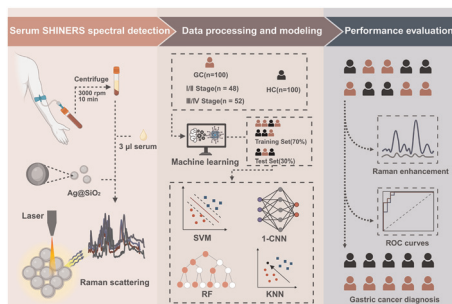
26203



Micromagnetic structure of oxidized magnetite nanoparticles: sharp structural versus diffuse magnetic interface

Elizabeth M. Jefremovas,* Michael P. Adams, Lucía Gandarias, Lourdes Marcano, Javier Alonso, Andreas Michels and Jonathan Leliaert

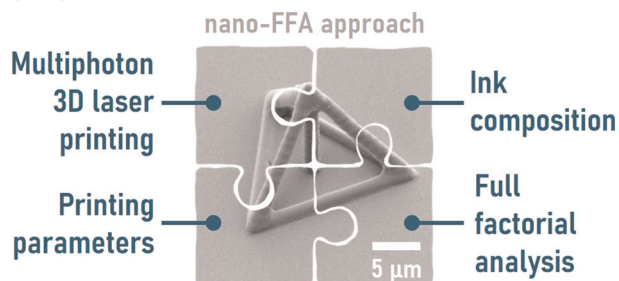
26214



A machine learning-enhanced gastric cancer diagnostic method based on shell-isolated nanoparticle-enhanced Raman spectroscopy

Mengya Li, Liyi Li, Pan Yang, Jiangan Zeng, Ruijia Ma, Jingzhe Peng, Yongzhong Wu, Wei Zhou,* Weiling Fu* and Yang Zhang*

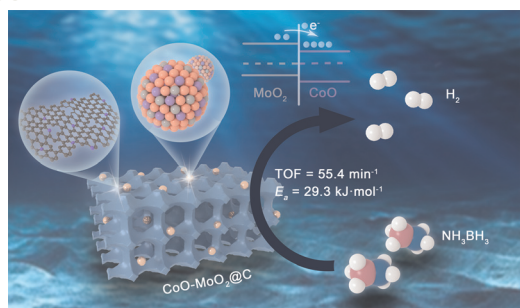
26225



nano-FFA: ink formulation and process optimization in multiphoton 3D laser printing using full factorial analysis

Clara Vazquez-Martel, Samantha O. Catt and Eva Blasco*

26238



π - π electron conjugation-assisted synthesis of a robust heterostructured CoO-MoO₂ catalyst: accelerated ammonia borane hydrolysis for hydrogen evolution

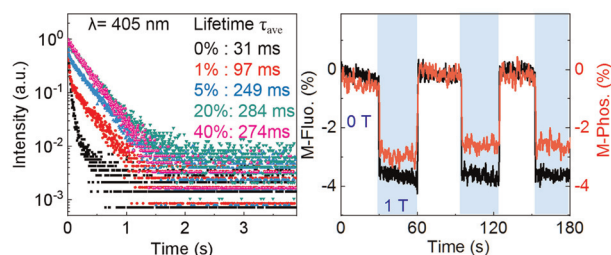
Junrui Zhang, Nuo Lei, Yunqi Jia, Shengrong Guo, Liuzhang Ouyang* and Xuezhong Xiao*



26248

Abnormal homodirectional responses of magneto-phosphorescence and magneto-fluorescence in organic phosphorescent crystals under third-component doping

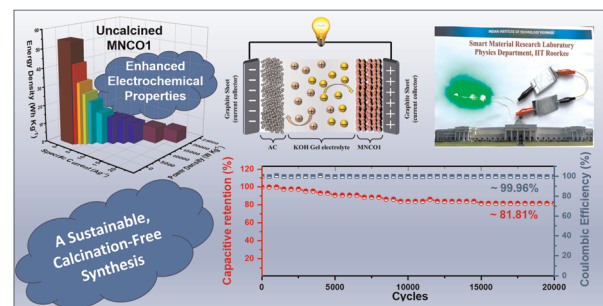
Wanlong Zhang, Yongcheng Zhang,* Zhiyan Chen* and Wei Qin*



26257

A sustainable synthesis of mesoporous $\text{Mn}_{1-x}\text{Ni}_x\text{Co}_2\text{O}_4$ nanoparticles: exploring calcination effects on supercapacitor performance

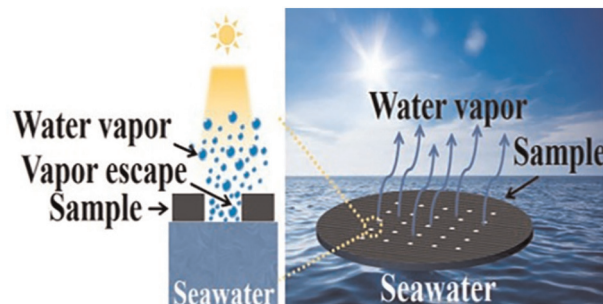
Shivam Kumar Mittal and K. L. Yadav*



26271

A PDMS@Fe₃O₄ nanocomposite material-based solar interfacial evaporator prepared using a picosecond laser

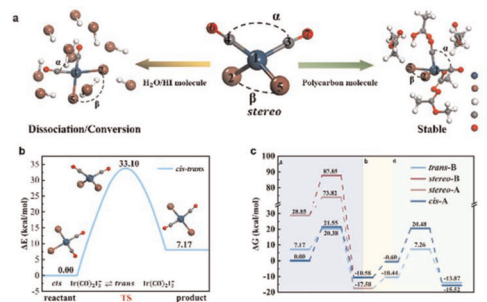
Shuangshuang Hu, Zhiliang Tang, Dongkai Chu,* Ming Li,* Jun Huang, Fanguy Yang, Shouyu Shao, Shuoshuo Qu and Peng Yao



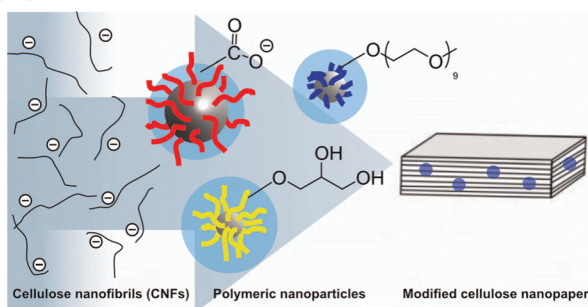
26281

Solvent stabilization mechanisms and deactivation pathways of the inert stereo-configuration in iridium carbonyl iodide complexes ($\text{Ir}(\text{CO})_2\text{I}_2^-$)

Qiyue Wei, Yue Li, Jinhui Xie, Yanxun Wu, Xiaokun Zhou, Shiyu Lv, Ruifeng Wang, Zengxi Wei* and Shuangliang Zhao*



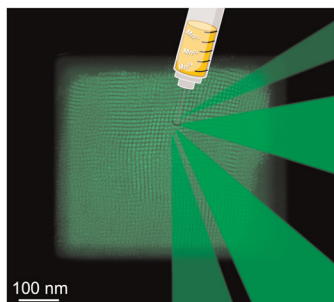
26294



Cellulose nanopaper with polymeric nanoparticle additives – what is the role of nanoparticle surface functionality?

Åsa Jerlhagen, Korneliya Gordeyeva,
Vishnu Arumughan, Lars Berglund and Eva Malmström*

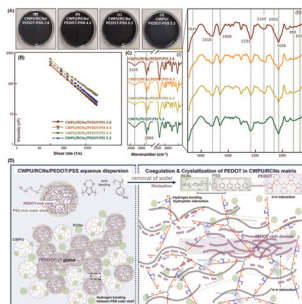
26306



Mn²⁺-doped CsPbBr₃ perovskite supercrystals: enhancing morphology and substrate variation

Victoria Lapointe and Marek B. Majewski*

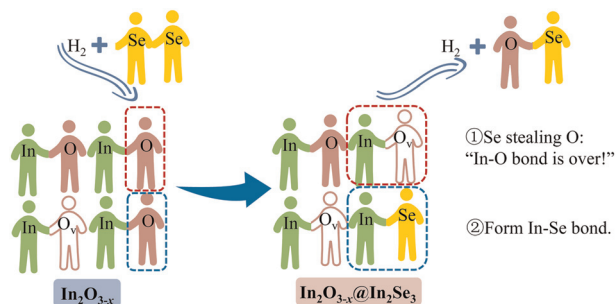
26318



Mechanistic insight into RCNs-induced conductivity enhancement in sustainable CWPU/PEDOT:PSS nanocomposites for flexible and biocompatible electronics

Soon Mo Choi, Chul Min Kim, Ankur Sood, Sun Mi Zo,
V. Govinda, Sung Soo Han* and Eun Joo Shin*

26331



Selenium-modified In₂O₃ photoanode: oxygen vacancy-mediated "defect capture-interface transport" and extended light absorption for efficient photoelectrochemical water splitting

Changxue Dong, Jinwei Chen,* Qiuyan Chen, Han Tan,
Kun Jiang* and Ruilin Wang*

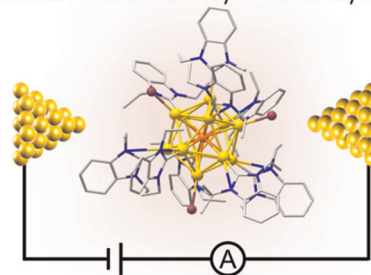


26346

An Rh–Au nanocluster protected by an N-heterocyclic carbene: synthesis, structure, and single-molecule conductance properties

Dan Qiao, Chaochao Pan, Dongjie Zuo, Rong Huo, Simin Li, Jianyu Wei, Zhibing Tan,* Nanfeng Zheng* and Hui Shen*

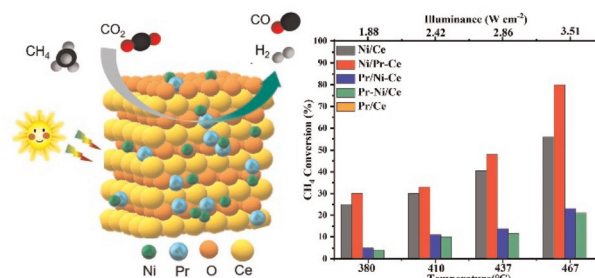
RhAu₁₂ nanocluster stabilized by N-Heterocyclic Carbene



26354

Role of the Pr/Ni loading sequence in boosting the photothermal catalytic activity of CeO₂ for methane dry reforming

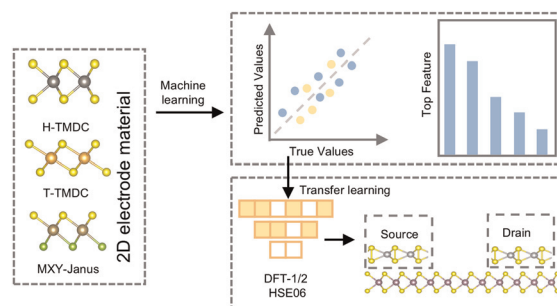
Zeai Huang,* Jing Liu, Yi He, Wei Hu, Jundao Wu, Rustem Zairov, Oleg G. Sinyashin, Weiyao Hu and Ying Zhou*



26367

A study on the prediction of MoS₂ transistor electrode contact characteristics based on transfer learning methods

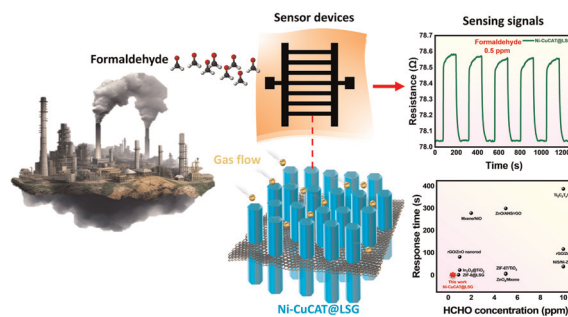
Yan Li, Furui Zhang* and Jie Zhao



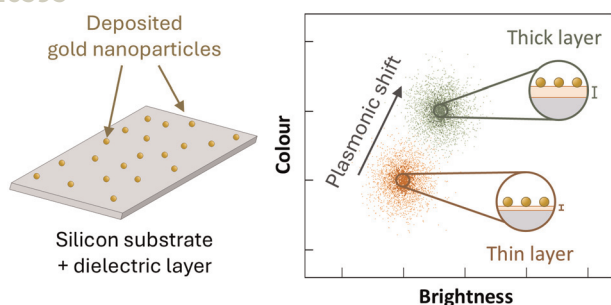
26378

In situ growth of conductive bimetallic catecholate MOFs on porous graphene for high-performance formaldehyde gas sensing

Anh Tuan Trong Tran, Kamrul Hassan, M. A. Jalil, Tran Thanh Tung, Tetsuya Kida and Dusan Losic*



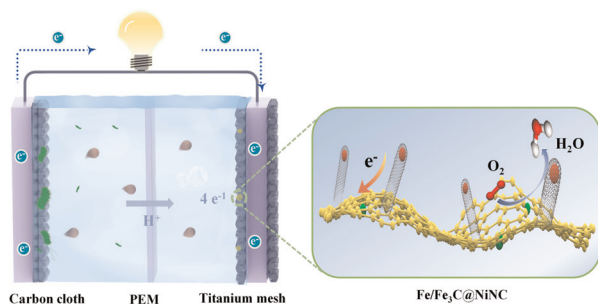
26393



High-throughput nanoscale metrology of ultrathin inert and functionalized dielectric substrates using plasmonic nanoparticles

Tamara Muñoz-Ortiz,* Valerio Pini, Andreas Thon, Carmen Linares, Teresa Ramón, Virginia Cebrián and Óscar Ahumada

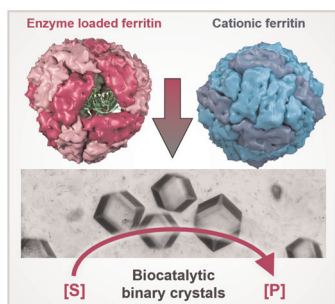
26403



Fe/Fe₃C nanoparticles encapsulated in ZIF-8-derived carbon nanotubes as a cathode oxygen reduction catalyst for microbial fuel cells

Xinyi Wang, Xinlu Lin, Jie Zhou, Yinhua Jiang and Yuqiao Wang*

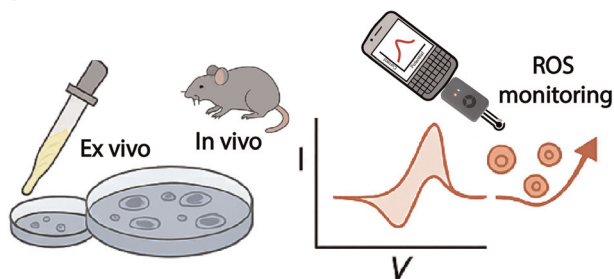
26411



Biocatalytic 3D binary crystals formed through the self-assembly of enzyme-embedded ferritin

Yu Zhou, Lotta Rosenlöf, Boxuan Shen and Mauri A. Kostianen*

26417



A portable and versatile rGO-Co₃O₄-Pt nanocomposite-based electrochemical sensor for *ex vivo* and *in vivo* cardiac oxidative stress monitoring

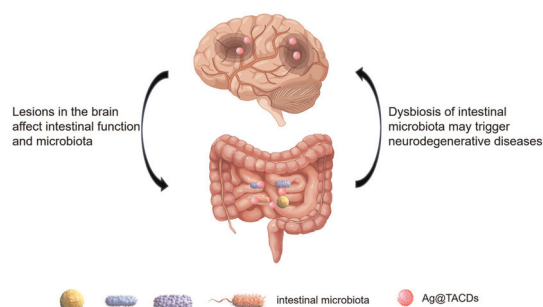
Sima Singh, Stefania Melini, Ada Raucci, Arshid Numan,* Mohammad Khalid, Bey Hing Goh, Rosaria Meli, Claudio Pirozzi* and Stefano Cinti*



26429

Silver-functionalized carbon dots regulate amyloid aggregation and microbial infection

Chao Wang, Xu Shao, Xiuyun Cao, Tiange Fan, Zhuotai Li, Keran Wang, Muqiong Li,* Xin Wang,* Ping Guan* and Xiaoling Hu*

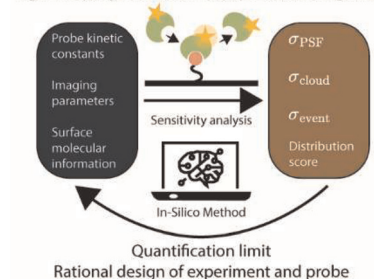


26442

Simulation-guided exploration of PAINT parameter space for accurate molecular quantification

Wei Shan Tan, Arthur M. de Jong and Menno W. J. Prins*

High-Accuracy Molecular Quantification Using PAINT



26454

Stimulated Raman scattering imaging of atomically thin layers and a strained nanotot of hexagonal boron nitride

Kazuhiro Kuruma,* Momoko Onodera, Shun Takahashi, Ichiro Takahashi, Yijin Zhang, Tomoki Machida and Yasuyuki Ozeki

