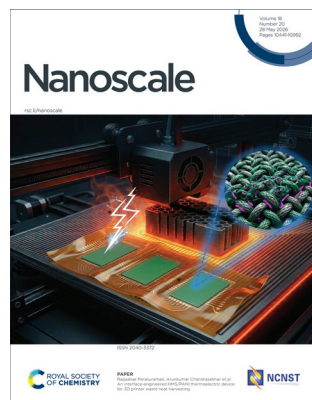


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ISSN 2040-3372 CODEN NANOHL 18(20) 10441–10992 (2026)

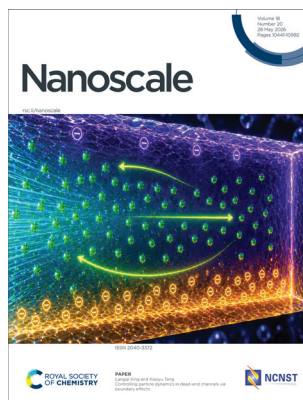


Cover

See Rajasekar Parasuraman, Arunkumar Chandrasekhar *et al.*, pp. 10593–10604.

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Inside cover

See Langqi Xing and Xiaoyu Tang, pp. 10605–10619.

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EDITORIAL

10456

Introduction to advanced semiconductor nanocrystals

Indranath Chakraborty, Angshuman Nag, Klaus Boldt and Jannika Lauth

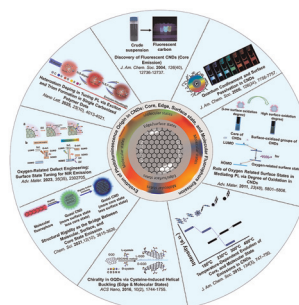


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10459

Experimental and theoretical overview on the origin of photoluminescence in carbon nanodots

Richa Garg, Abdul Salam and Chayan Kanti Nandi*



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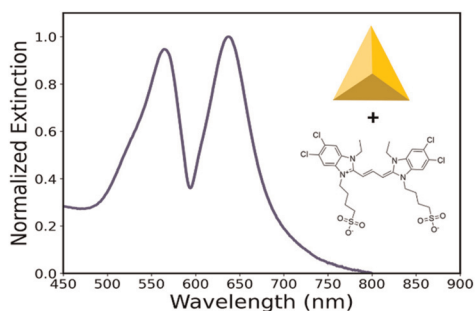
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10584

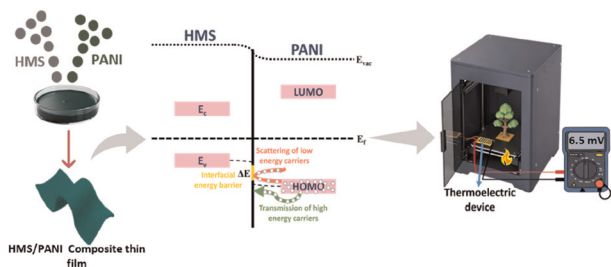


Phonon modulation of strongly coupled gold tetrahedral plasmonic nanoparticles and a carbocyanine J-aggregate

Bailey M. Chandler, Fanrui Cheng, Yi Wang, Xingchen Ye, George C. Schatz, Lin X. Chen* and Richard D. Schaller*

PAPERS

10593



An interface-engineered HMS/PANI thermoelectric device for 3D printer waste heat harvesting

Nishath Begum Jamal Mohammed, Rajasekar Parasuraman,* Pandiyarasan Veluswamy and Arunkumar Chandrasekhar*

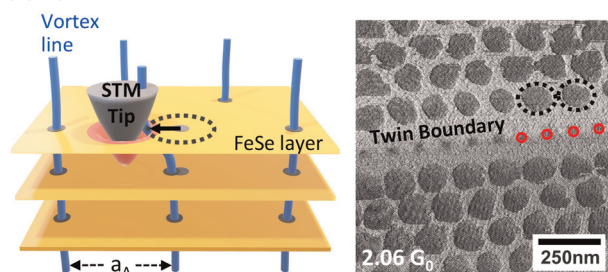
10605



Controlling particle dynamics in dead-end channels via boundary effects

Langqi Xing and Xiaoyu Tang*

10620



Nanoscale control over single vortex motion in an unconventional superconductor

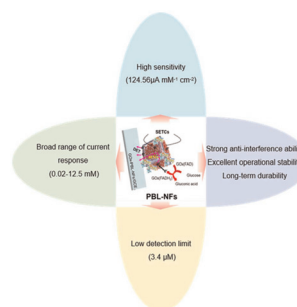
Sang Yong Song, Chengyun Hua, Gábor B. Halász, Wonhee Ko, Jiaqiang Yan, Benjamin J. Lawrie and Petro Maksymovych*



10628

Super electron transfer channels enable Prussian-blue-like nanocarbon felts for ultrasensitive glucose biosensing applications

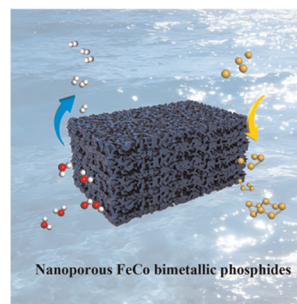
Taotao Liang, Xiaogang Guo,* Ran Jin, Molong Chen, Junfeng Guo, Chuyue Tang, Hong Zhao, Xun Cui,* Yihuang Chen* and Lin Guo*



10639

FeCo bimetallic phosphide heterostructure for hydrogen production via sulfion oxidation assisted alkaline seawater splitting

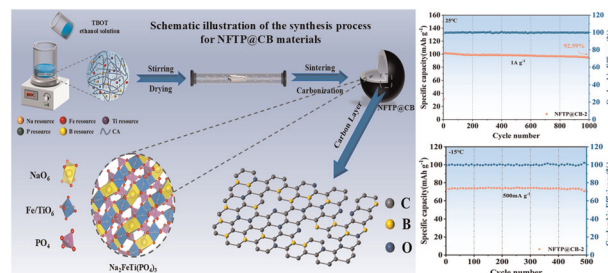
Junyang Ding, Hao Wang, Guolong Lu, Liuyu Ji, Hengwen Li, Peipei Jia,* Chengjie Li, Xijun Liu* and Jun Luo*



10649

Boron doping in a carbon layer: a facile strategy to boost the electrochemical performance of Na₂FeTi(PO₄)₃@C

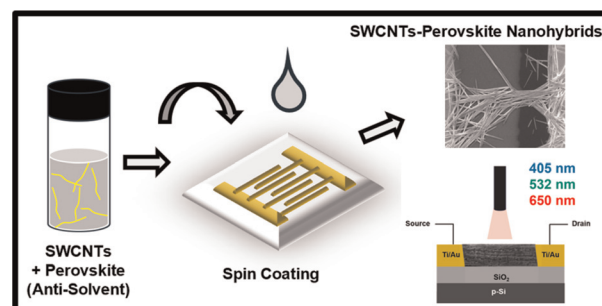
Ziyan Wang, Zhilong Tan, Yuening Zou, Rongzheng Zhang, Peng Zhou, Diye Wei, Zhifeng Huang, Hai Hu* and Li Liu*



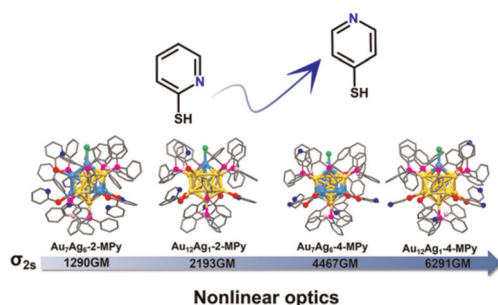
10662

Templated growth of perovskite shells on single-walled carbon nanotubes: a solution-processable route towards tailored devices

Gririraj Manoharan, Xuan Li, Stoichko Dimitrov* and Matteo Palma*



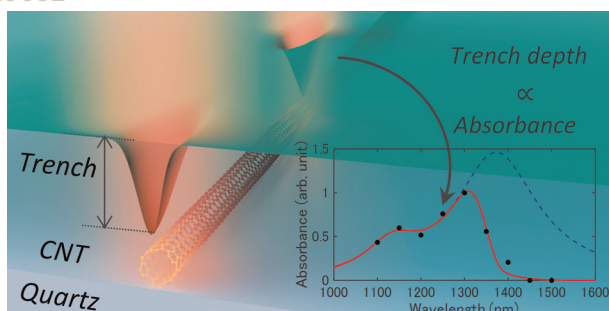
10671



Enhancing multiphoton absorption in atomically precise (AuAg)₁₃ clusters via 2-/4-mercaptopyridine ligand positional isomerism

Anqi Xu, Ye Wang, Daqiao Hu, Shengli Li,* Lin Xiong,* Shan Jin,* Qiong Zhang and Manzhou Zhu

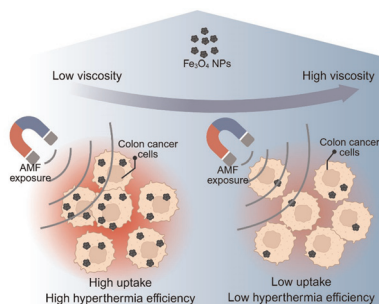
10682



Nanoscale thermocapillary flow as a recording medium for infrared absorption spectra of individual carbon nanotubes

Kai Watanabe, Shigeo Maruyama and Keigo Otsuka*

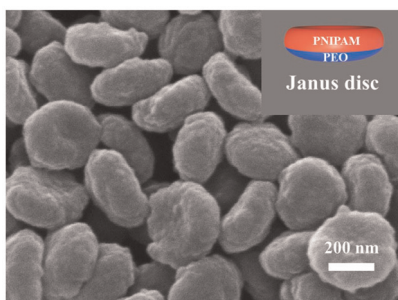
10691



Influence of microenvironmental viscosity on the cellular uptake of Fe₃O₄ nanoparticles and their anticancer effect

Man Wang, Huajian Chen, Rui Sun, Tianjiao Zeng, Chengyu Lu, Toru Yoshitomi, Naoki Kawazoe, Yingnan Yang and Guoping Chen*

10703



Janus polymeric discs by seeded swelling emulsion polymerization

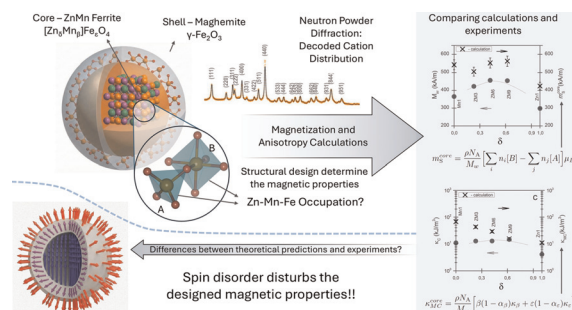
Linlin Zhang,* Fuyan Huang, Shiyu Du, Guolin Zhang and Dayin Sun*



10711

Decoding magnetization and magnetic anisotropy in core@shell ferrite nanoparticles: interplay between cation distribution and spin disorder

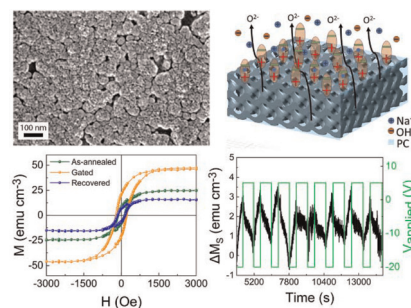
Rafael Cabreira Gomes,* Vanessa Pilati, Fernando Henrique Martins, Franciscarlos Gomes da Silva, Guilherme Gomide, Bárbara C. C. Pereira, Priscilla Coppola, Fabio Luis de Oliveira Paula, Alex Fabiano Cortez Campos, Cynara Kern, Gerardo F. Goya, Florence Porcher, Renata Aquino, Emmanuelle Dubois, Régine Perzynski and Jérôme Depeyrot*



10724

Voltage control of magnetism in Ni-Co oxide mesoporous films: impact of porosity on oxygen magneto-ionics performance

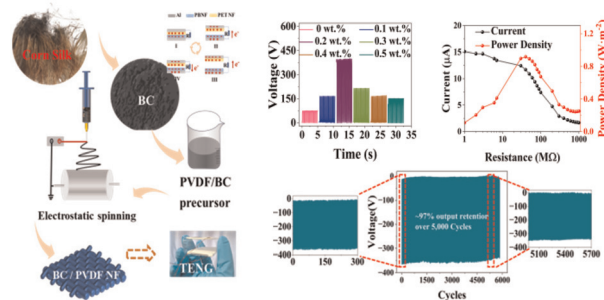
Aitor Arredondo-López, Konrad Eiler, Alberto Quintana, Zheng Ma, Maciej Oskar Liedke, Eric Hirschmann, Andreas Wagner, Enric Menéndez,* Jordi Sort* and Eva Pellicer*



10736

A high-performance low-cost triboelectric nanogenerator enabled by biomass-derived carbon in PVDF nanofibers

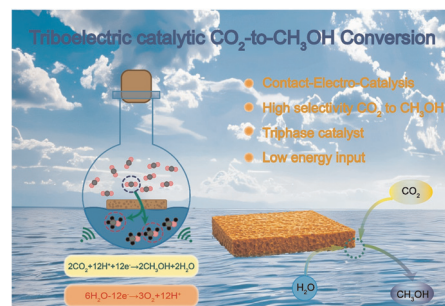
Wei Shen, Tianjie Deng, Juan Shi, Dinghua Yang, Ya Nie, Xi Zhang* and Gang Xiang*



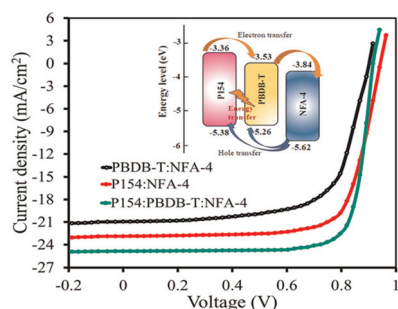
10744

Ultrasound-driven triphasic contact-electro-catalytic CO₂ reduction to methanol

Youlin Zhang, Wenpeng Wang, Kunpeng Li, Haoyu Deng, Liucheng Wang, Nannan Wang* and Daoai Wang*



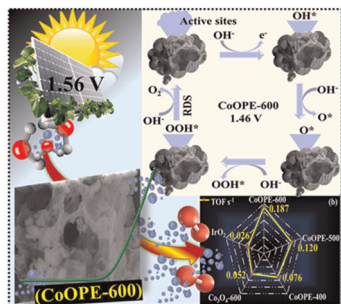
10755



A new benzotriazole-containing wide bandgap D1–D'A–D2 conjugated polymer for air-processed ternary organic solar cells with efficiency approaching 17%

M. L. Keshtov, A. R. Khokhlov, Zh. Xie, D. Y. Shikin, D. P. Kalinkin, Rahul Singhal and Ganesh D. Sharma*

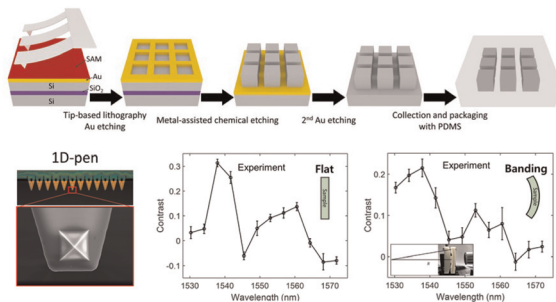
10770



Green combustion synthesis of Co_3O_4 – CoO heterostructures for efficient alkaline oxygen evolution reaction

Murugan Muthamildevi, Krishnan Umopathy and Jayaraman Jayabharathi*

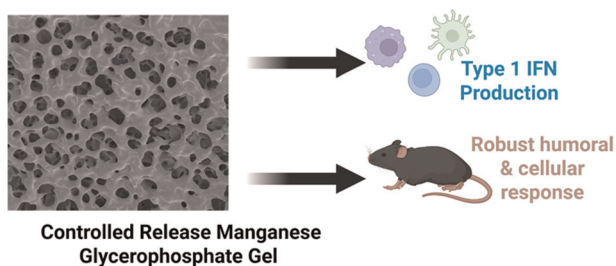
10786



Flexible metamaterials with near-infrared chirality fabricated by 1D multi-pen tip-based lithography

Jeong-Sik Jo, Jihoon Choi, Chiwon Choi, Heeso Noh* and Jae-Won Jang*

10795



A novel manganese glycerophosphate vaccine gel elicits broad and durable immunity across an aged and pox virus model

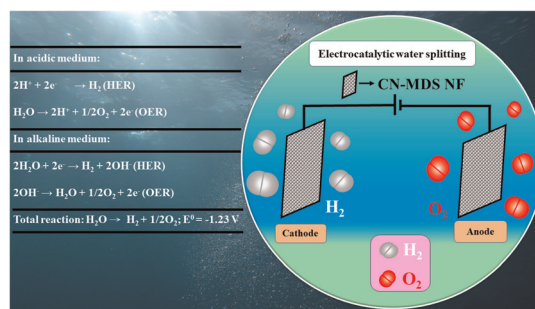
Md Jahirul Islam, Luis Ontiveros-Padilla, Stephen A. Ehrenzeller, Denzel D. Middleton, John A. Roque, III, Connor T. Murphy, Nicole Rose Lukesh, Dylan A. Hendy, Erik S. Pena, Ryan N. Stack, William J. Polacheck, Eric M. Bachelder and Kristy M. Ainslie*



10810

Ni/Co-doped 1T/2H MoS₂ as a robust bifunctional electrocatalyst for hydrogen and oxygen evolution in both acidic and alkaline media

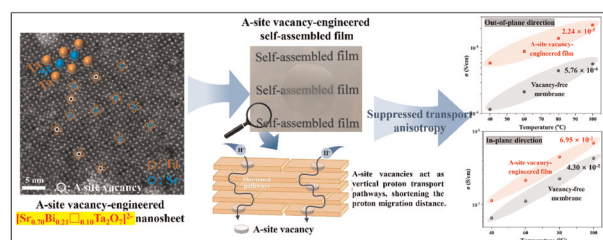
Praveena Gurusamy, Kannan Nagarajan, Sundara Venkatesh Perumalsamy,*
Thamilmaran Pandian, Jeganathan Kulandaivel,
K. M. Mithra, Rajkamal Anand and S. Sinthika



10823

Defect-assisted vertical proton channels in highly oriented bismuth strontium tantalum oxide nanosheet laminar films

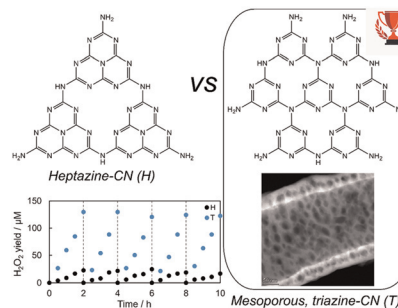
Xiang Sun, Mohammad Atiqur Rahman, Satsuki Tomatsu, Yuichi Sakuda, Kazuto Hatakeyama and Shintaro Ida*



10836

Hollow porous carbon nitride nanotubes with efficient photocatalytic H₂O₂ generation in pure water

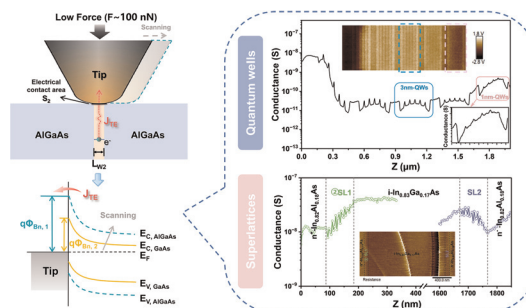
Hanggara Sudrajat,* Ari Susanti, Jakkapon Phanthuwongpakdee and Muharani Asnal



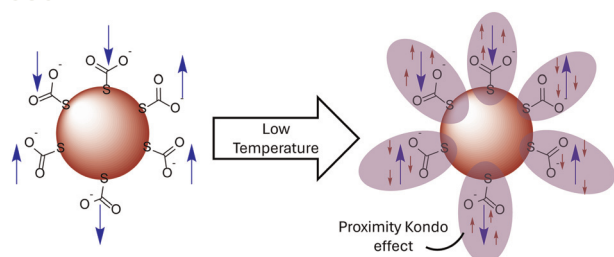
10851

Electrically resolving 1 nanometer semiconductor quantum wells and superlattices in photodiodes by conductive scanning probe microscopy

Rui Xin, Zhen Chen, Tao Li, Yue Cheng, Wenji Jing, Hui Xia, Shufan Yao, Zhen Deng and Tianxin Li*



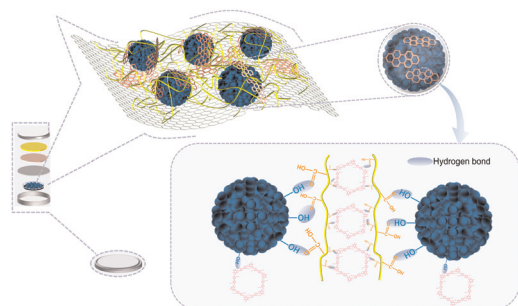
10861



Using molecular amphiphiles to dope nano-Au with Cu^{2+} : 20-fold higher magnetic dopant density and evidence for a proximity Kondo effect

Sean Colford and Al-Amin Dhirani*

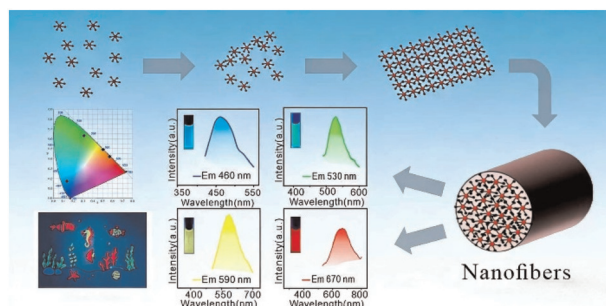
10869



A covalent organic framework-modified polyacrylic acid binder enhances the cycling performance of silicon-carbon anodes

Juan Li,* Jiajia Gao, Linrong Yue, Zhongyuan Zheng, Yukun Liu, Xin Wang and Dongsheng Wang

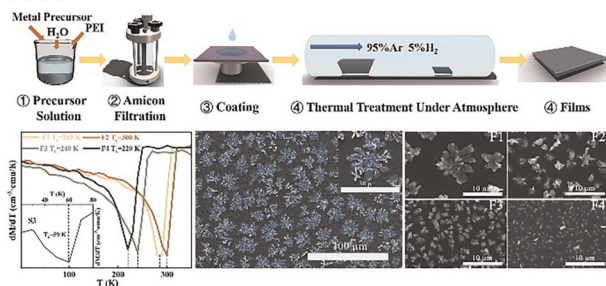
10880



Kinetically controlled self-assembly of atom-precise gold nanoclusters into multicolor emissive supramolecular assemblies

Mengting Zhang, Yin Wang and Lina Yang*

10888



Solution-processable Fe-doped SnSe_2 flakes with tunable morphology and robust near-room-temperature ferromagnetism

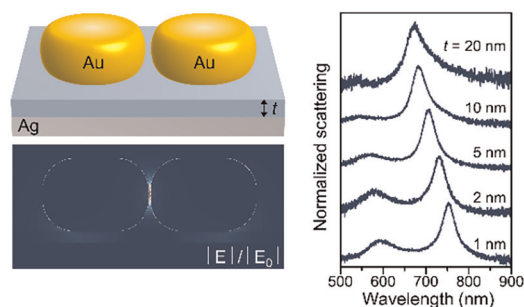
Diqin Xiao, Xia Chen, Ya Nie, Hongyu Zhu, Xingli Su, Cheng Zhang, Xi Zhang* and Gang Xiang*



10896

Controlled construction of nanodisk dimer-over-mirror for near-field enhancement and linewidth shrinking

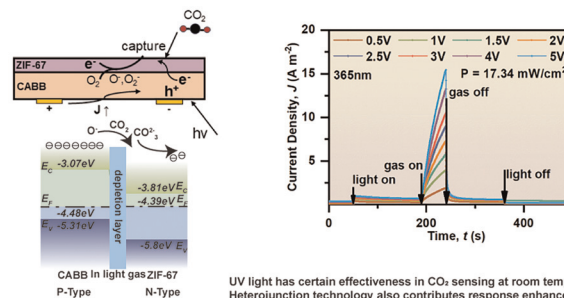
Cidu Lin, Zhengyi Lu, Haiming Ye, Xiang Lin, Hao Zhang, Hongli Zhou, Shunping Zhang* and Hongxing Xu



10907

Highly sensitive photoinduced carbon dioxide sensors made using a ZIF-67/Cs₂AgBiBr₆ heterojunction

Mengrou Wang, Lei Mao, Wenbo Jia, Xinbo Fu, Xin Wang, Jing Chen, Zhuoya Zhu, Zhiwei Zhao, Jun Wu, Damian Chinedu Onwudiwe, Byung Seong Bae, Mehmet Ertuğrul, Zaman Ashraf, Jianming Zhou, Qing Li and Wei Lei*

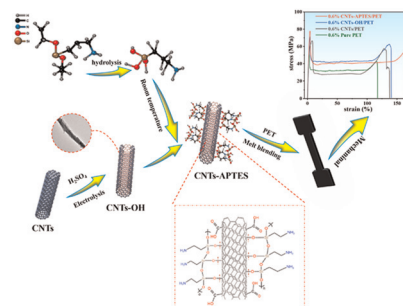


UV light has certain effectiveness in CO₂ sensing at room temperature. Heterojunction technology also contributes response enhancement.

10922

Enhancing crystallization and mechanical properties of PET polyester using functionalized carbon nanotubes

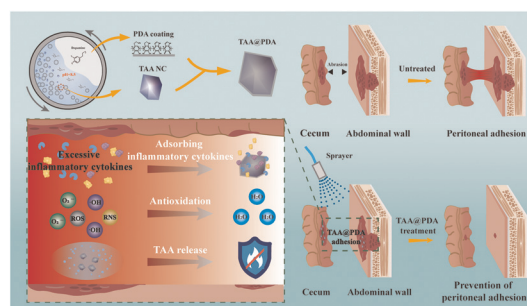
Pengwei Zhang, Yao Wang,* Miaorong Zhang, Linjun Huang, Kang Li, Feng Li, Wei Wang and Jianguo Tang*



10932

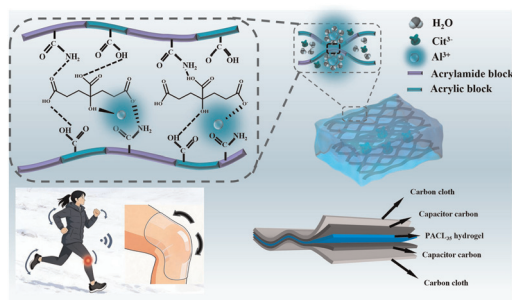
Polydopamine-coated triamcinolone acetate nanocrystals: prevention of postoperative peritoneal adhesion by combining anti-inflammation, oxidative stress scavenging and cytokine adsorption

Yaodong Liu, Daiheng Ji, Sixuan Liu, Xiaoxue Qi, Chenyi Lin, Hui Liu, Yajie Ji, Yu Liu* and Weiyue Lu



PAPERS

10945

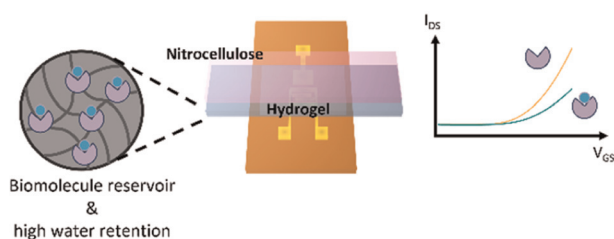


An anti-freezing, mechanically tough hydrogel via hydro-locking for mechanical sensors and flexible supercapacitors at low temperatures

Zeyu Wang, Xiao Lian, Jian Lin, Zhe Huang, Kaixuan Wang and Helin Niu*

10958

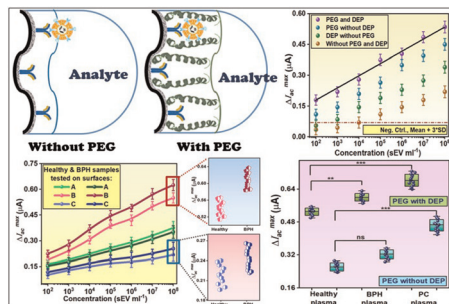
Lateral Flow-Hydrogel gated organic transistor



Bio-modified hydrogels in electrolyte-gated organic field-effect transistors for sensing applications

María Jesús Ortiz-Aguayo, Sara Ruiz-Molina, Carme Martínez-Domingo* and Marta Mas-Torrent*

10967



A scalable electrochemical FET immunosensor with crumpled graphene for sensitive detection of prostate cancer derived exosomes

Piyali Mukherjee, Naresh Bahadursha, Nahid Sultana, Usha Rani Dash, Pratyusha Chikkala, Sayan Kanungo,* Sanghamitra Sengupta* and Chirasree RoyChaudhuri*

CORRECTIONS

10988

Correction: Synergistic regulation of the Zn²⁺ solvation environment and interfacial stability using a rhodamine 6G additive in aqueous zinc ion batteries

Nuo Nian, Lijun Li,* Liping Qin,* Yibo Hao, Lei Liu, Zijie Xu and Guozhao Fang



CORRECTIONS

10989

Correction: MicroRNA-mediated silence of onco-lncRNA MALAT1 in different ESCC cells *via* ligand-functionalized hydroxyl-rich nanovectors

Rui-Quan Li, Yanli Ren, Wenjuan Liu, Wenting Pan, Fu-Jian Xu* and Ming Yang*

