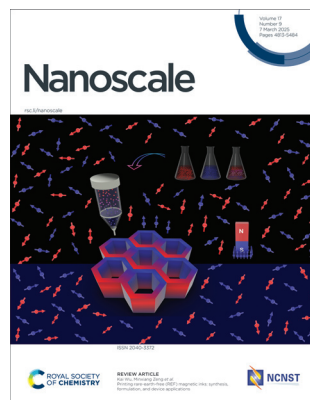


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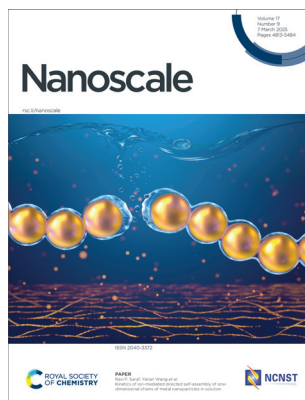
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See Kai Wu,
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pp. 4830–4853.

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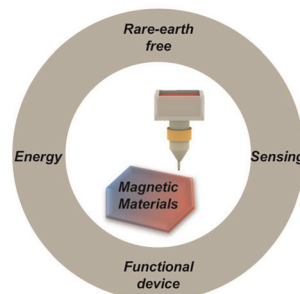
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Printing rare-earth-free (REF) magnetic inks: synthesis, formulation, and device applications

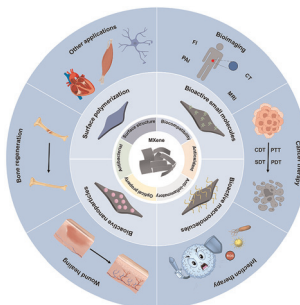
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Ioannis H. Karampelas, Mortaza Saeidi-Javash,
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Bioactive surface-functionalized MXenes for biomedicine

Ting Li, Weipeng Qiang and Bo Lei*



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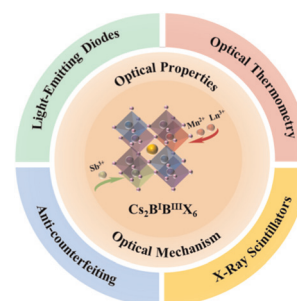


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The impact of antimony on all-inorganic lead-free perovskites: progress in optical advancement and applications

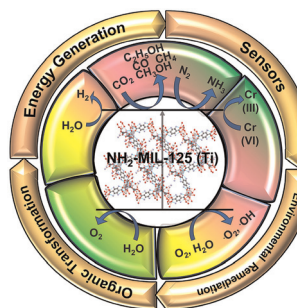
Qiaochu Chen, Yanjin Shen,* Rong Cai, Zicheng Zhao and Guifu Dong*



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NH₂-MIL-125(Ti) and its functional nanomaterials – a versatile platform in the photocatalytic arena

Priyanka Priyadarshini, Anshumika Mishra, Susanginee Nayak and Kulamani Parida*



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Carbon dots derived from organic drug molecules with improved therapeutic effects and new functions

Zhao-Fan Wu, Xiao-Xiao Luo, Xiao-Feng Shi, Bao-Juan Wang, Hao-Wen Sun, Zhao-Nan Sun, Yuan-Qing Mao* and Huan-Ming Xiong*

Carbon Dots Derived from Organic Chemical Drugs



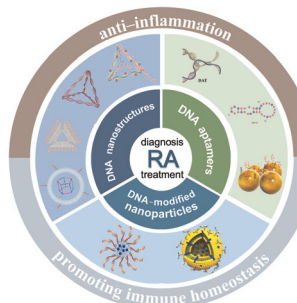
- Improved water solubility
- Enhanced therapeutic effect
- Fluorescence property
- Sensing and imaging
- More new functions

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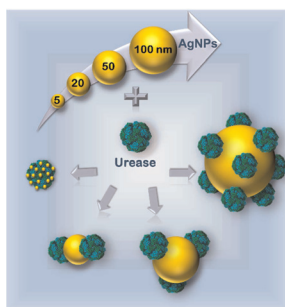
Multifunctional DNA nanomaterials: a new frontier in rheumatoid arthritis diagnosis and treatment

Yiyi Zhang, Yue Sun, Hang Liao and Sirong Shi*



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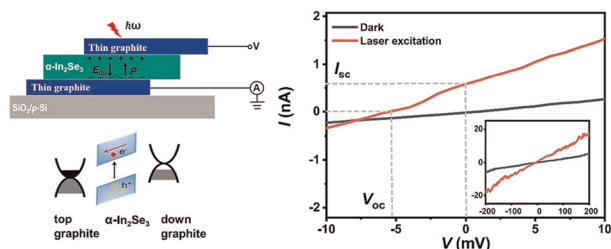
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Nanoscale size impact of nanoparticle interaction and activity studies with urease

Priya Bhardwaj, Bhawana Bisht and Vijayender Bhalla*

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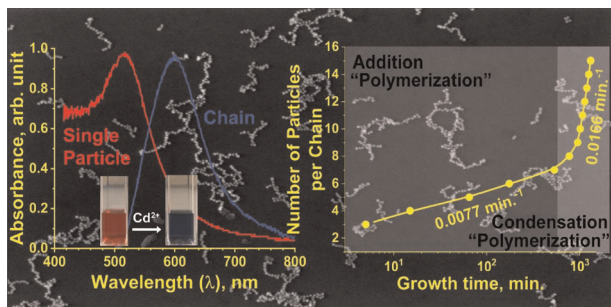


Bulk photovoltaic effect in a two-dimensional ferroelectric semiconductor α -In₂Se₃

Xiaojuan Chen,* Kang Xu, Tingxiao Qin, Yubin Wang, Qihua Xiong and Haiyun Liu*

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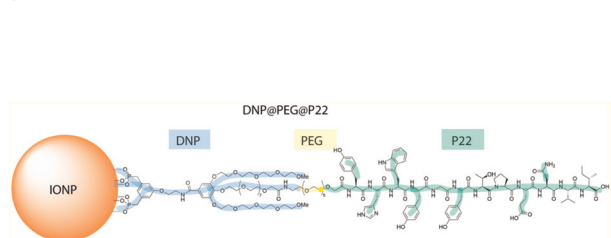
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Kinetics of ion-mediated directed self-assembly of one-dimensional chains of metal nanoparticles in solution

Jay Min Lim, Muhammad Ashar Naveed, Yanan Wang and Ravi F. Saraf*

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Spacer engineering in nanoparticle–peptide conjugates boosts targeting specificity for tumor-associated antigens

María de los Angeles Ramírez, Jolie Bou-Gharios, Barbara Freis, Julien Draussin, Clémence Cheignon, Loïc J. Charbonnière, Sophie Laurent, Thomas Gevart, Adeline Gasser, Sebastian Jung, Fabien Rossetti, Olivier Tillement, Georges Noel, Xavier Pivot, Alexandre Detappe,* Sylvie Bégin-Colin* and Sébastien Harlepp*

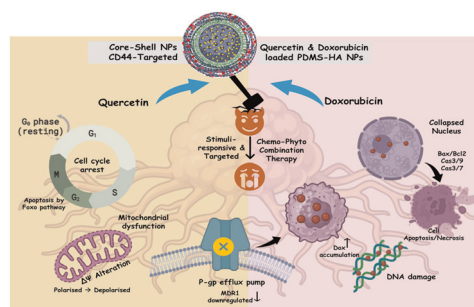


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Active tumor targeting by core-shell PDMS-HA nanoparticles with sequential delivery of doxorubicin and quercetin to overcome P-glycoprotein efflux pump

Madhu Verma, Krishna Yadav, Rashmi Parihar, Debjani Dutta,* Surabhi Chaudhuri* and Sri Sivakumar*



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Constructing fecal-derived electrocatalysts for CO₂ upcycling: simultaneously tackling waste and carbon emissions

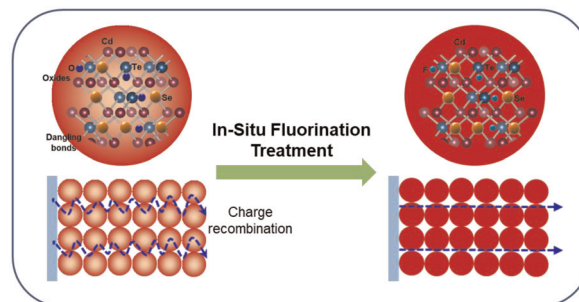
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Defect passivation engineering of chalcogenide quantum dots *via in situ* fluorination treatment

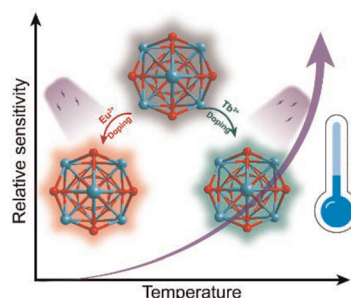
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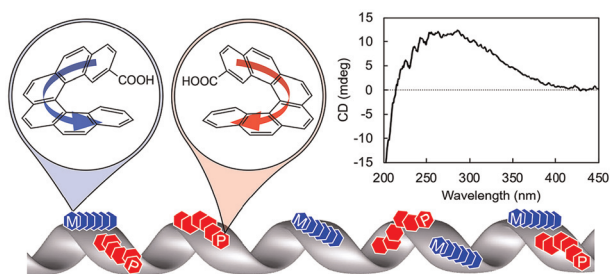
Doping Gd₁₆ nanoclusters for expanded optical properties and thermometry applications

Tingting Li, Jinyu Liu, Feng Jiang, Shengrong He, Jinzhe Liu, Weinan Dong, Ying Zhang,* Yanan Li* and Zhennan Wu*



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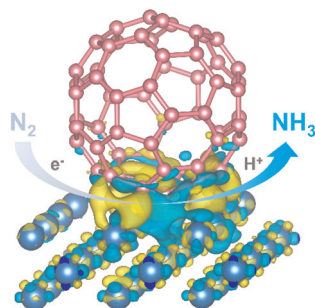
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Hierarchical chirality observed from chiral supramolecular assembling of racemic and enantiopure helicene derivatives on silica nanohelix surfaces

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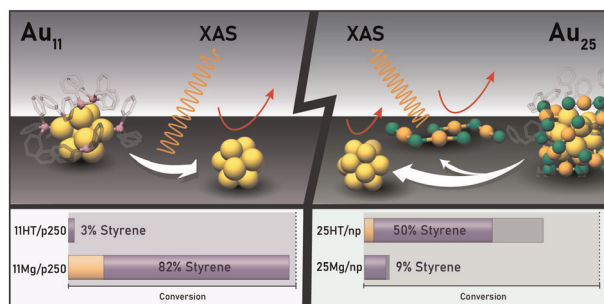
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Built-in electric field in the Mn/C₆₀ heterojunction promotes electrocatalytic nitrogen reduction to ammonia

Hao Xue, Kaiheng Zhao, Denglei Gao, Fangying Duan, Zijian Gao, Wenjia Yu, Sha Li,* Menglei Yuan* and Zongjing Lu*

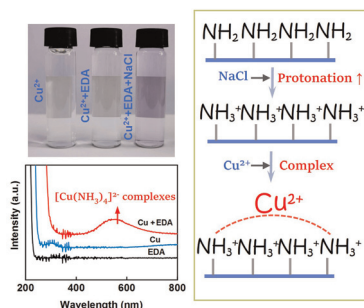
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Synergistic effect of ligand-cluster structure and support in gold nanocluster catalysts for selective hydrogenation of alkynes

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Boosting Cu ion capture in high-salinity environments with amino-functionalized millispheres

Jiaming Hu, Jianheng Hong, Weiting Yu, Xiuzhen Wei and Meilan Pan*

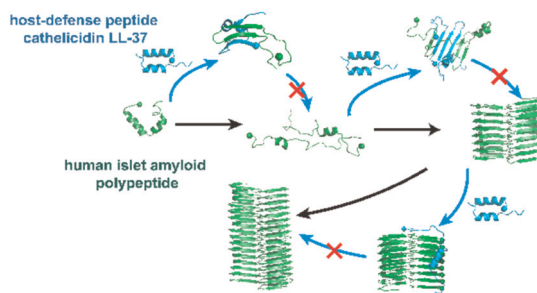


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Unveiling the inhibition mechanism of host-defense peptide cathelicidin LL-37 on the amyloid aggregation of the human islet amyloid polypeptide

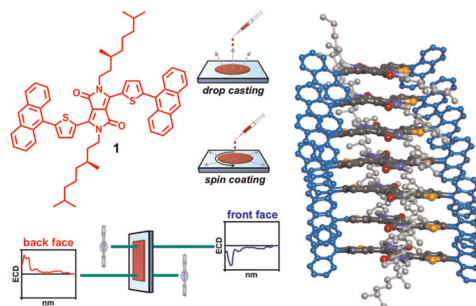
Huayuan Tang*



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Unravelling the origin of strong non-reciprocal chiroptical features in thin films of a chiral diketopyrrolo[3,4-c]pyrrole dye

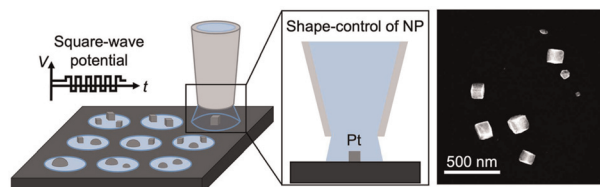
Gianluigi Albano,* Marco Bertuolo, Francesco Zinna, Andrea Taddeucci, Tamás Jávorf, Rohanah Hussain, Gianluca M. Farinola, Gennaro Pescitelli, Angela Punzi, Giuliano Siligardi and Lorenzo Di Bari*



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Facet-controlled electrosynthesis of nanoparticles by combinatorial screening in scanning electrochemical cell microscopy

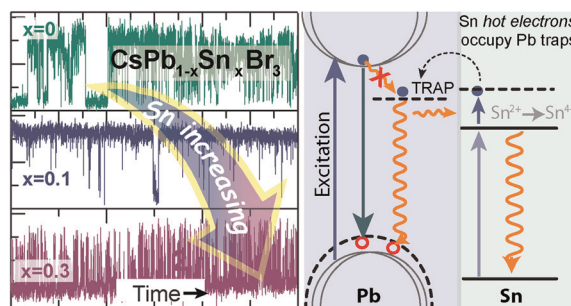
Heekwon Lee, Jesús Alberto Muñoz-Castañeda and Hang Ren*



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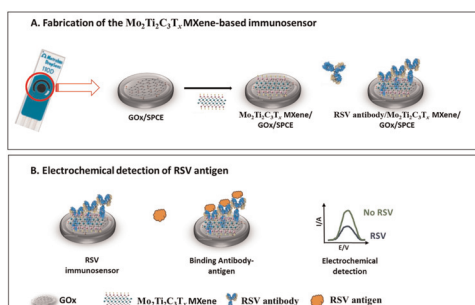
Mixed metal halide perovskite $\text{CsPb}_{1-x}\text{Sn}_x\text{Br}_3$ quantum dots: insight into photophysics from photoblinking studies

Anusha A, Anjali Yadav, Pratap Vishnoi and Dharmendar Kumar Sharma*



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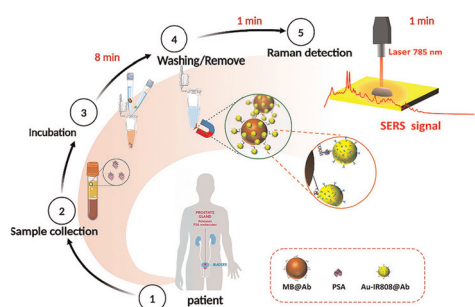
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Investigation of the $\text{Mo}_2\text{Ti}_2\text{C}_3\text{T}_x$ MXene in the electrochemical immunosensing of the respiratory syncytial virus (RSV)

Amina Rhouati, Anupma Thakur, Babak Anasori and Mohammed Zourob*

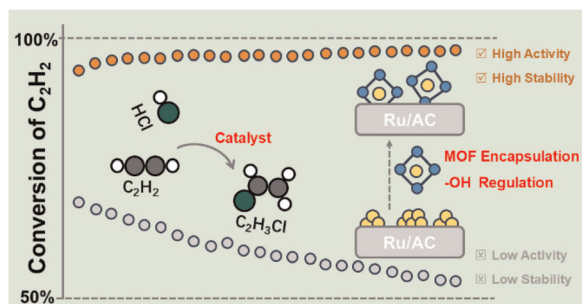
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A high sensitivity prostate-specific antigen SERS detection platform based on laser resonance nanoparticles

Shi-Ying Fu, Shanshan Xu, Hongmei Li, Xian-Ming Guo, Jia-Sheng Lin, Bing Guan, Bin Chen, Tao Wang,* Yue-Jiao Zhang* and Jian-Feng Li*

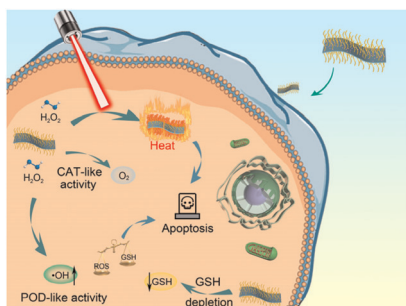
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Encapsulated ruthenium sites in reaction microenvironment-regulated UiO-66 for stable acetylene hydrochlorination

Digao Chai, Qidi Liu, Yunsheng Dai, Yongsheng Xu,* Yu Zi, Shuo Yang, Yanzhao Dong, Dongyang Xie, Jinli Zhang and Haiyang Zhang*

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Anchoring Ru single-atoms on MXene achieves dual-enzyme activities for mild photothermal augmented nanocatalytic therapy

Wenzhuo Wang, Yanlin Zhu, Lili Feng,* Ruoxi Zhao, Chenghao Yu, Yaoyu Hu, Zhen Hu, Bin Liu, Lei Zhong and Piaoping Yang*

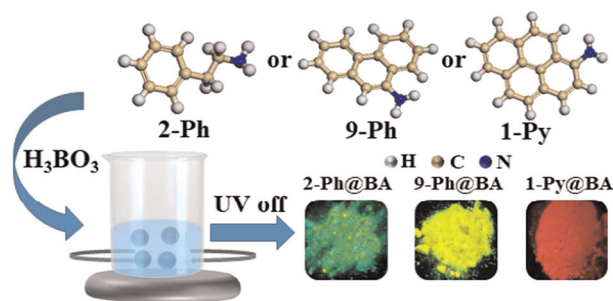


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Aromatic ring compounds with different conjugation degrees in a boronic acid matrix to realize multicolor phosphorescence for time division colorful multiplexing

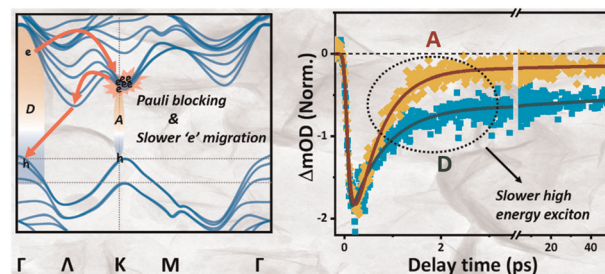
Qing Yao, Zeyu Wang,* Nikolai V. Gaponenko, Jindou Shi, Zheyuan Da, Chen Zhang, Junnan Wang, Wangchao Wan and Minqiang Wang



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Ultrafast broadband spectroscopy of widely spread excitonic features in WSe₂ nanosheets

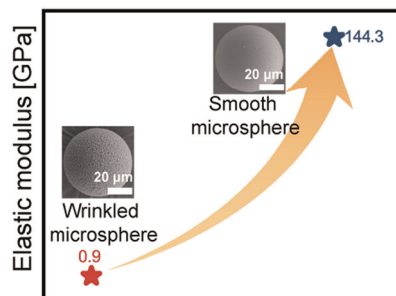
Tanmay Goswami, Himanshu Bhatt, Dharmendra Kumar Yadav and Hirendra N. Ghosh*



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Microfluidic-assisted sol–gel preparation of monodisperse mesoporous silica microspheres with controlled size, surface morphology, porosity and stiffness

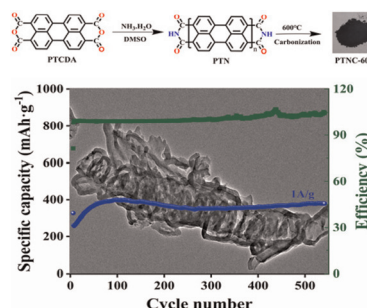
Zhang Dai, Yue Liu, Yahui Liu, Xiuling Jiao, Dairong Chen, Ningji Gong* and Ting Wang*



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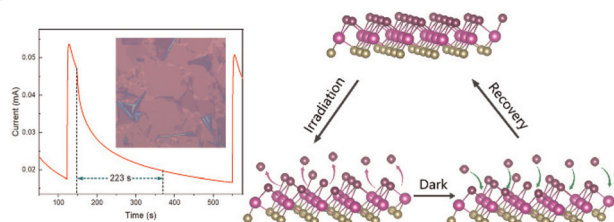
Carbon nanofibre frameworks based on a π -extended oligo(perylen) diimide for high-rate lithium-ion batteries

Ying Feng, Jiaxin Wang, Zehui Yang, Ye Cheng, Binbin Tian and Encai Ou*



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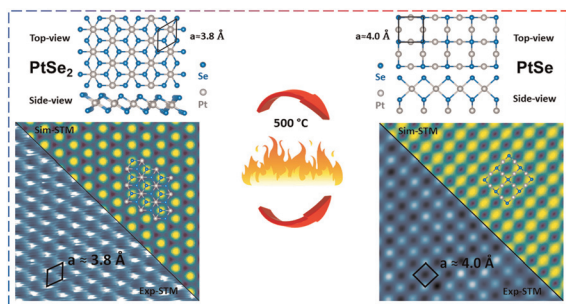
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Two-dimensional BiTeX crystals with persistent luminescence induced by photochemical reactions

Jiajing Wu,* Pengjia Zhu, Fei Meng, Juntao Dong, Xiao Yan, Zhenlong Tu, Zheng-Jie Chen, Xuexia Lan, Lili Zhang, Tao Zhang, Jian Zheng, Xinzhong Wang and Jing Peng*

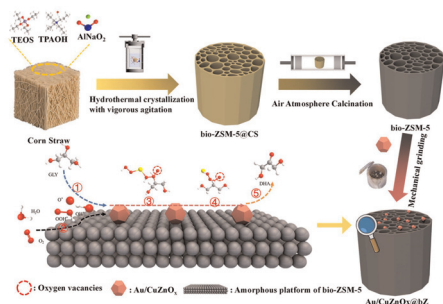
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Structural and electronic transition of layered PtSe₂ into non-layered PtSe

Kuanys Zhussupbekov,* Samuel Berman, Maximilian Precht, Marc Busch, Ainur Zhussupbekova, Georg S. Duesberg, Valeria Nicolosi, Kostya S. Novoselov, Cormac Ó Coileáin* and Igor V. Shvets*

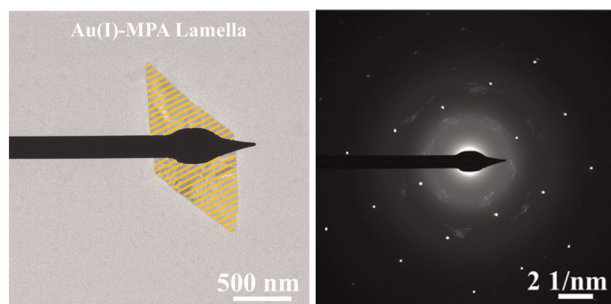
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Manipulating the interfacial integration mode of a bio-templated porous ZSM-5 platform with an Au/CuZnO_x catalyst for enhanced efficiency and recycling stability in glycerol conversion to 1,3-dihydroxyacetone

Zhen Yuan, Yimin Wang, Weidong Xie, Yuewen Chen, Xiaoli Zhang, Xiya Zhang, Zhile Xiong, Li Cui* and Hai Liu*

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Self-assembly processes of 2D Au(I)–S(CH₂)₂COOH lamellae

Shengrui Zhang, Zhongqi Yu, Aude Demessence,* Nathalie Guillou, Shujue Xu, Han Liu, Yuru Fu, Jingpei Zhang and Minjie Li*



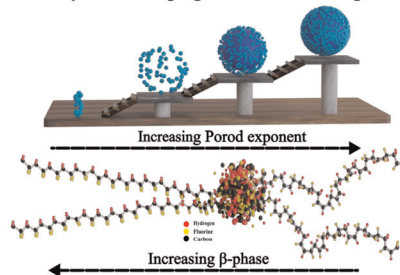
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Insights into the electroactive impact of magnetic nanostructures in PVDF composites *via* small-angle neutron scattering

Paula Rodriguez-Lejarraga, Viktor Petrenko, Andrey Shibaev, Joachim Kohlbrecher, Rui Carvalho, Senentxu Lanceros-Mendez* and Pedro Martins*

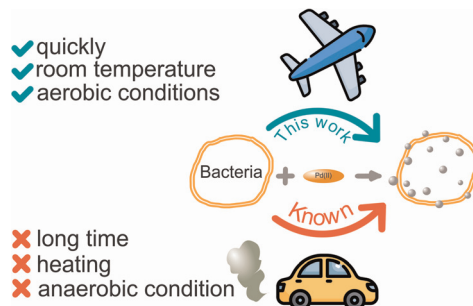
Nano Dynamics Shaping PVDF's Macro Properties



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Sustainable catalysts in a short time: harnessing bacteria for swift palladium nanoparticle production

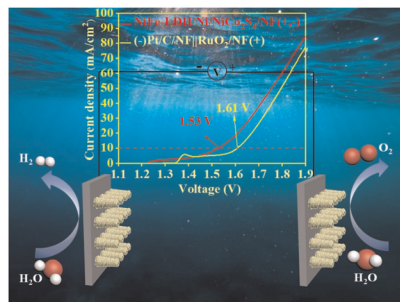
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Unique hierarchical NiFe-LDH/Ni/NiCo₂S₄ heterostructure arrays on nickel foam for the improvement of overall water splitting activity

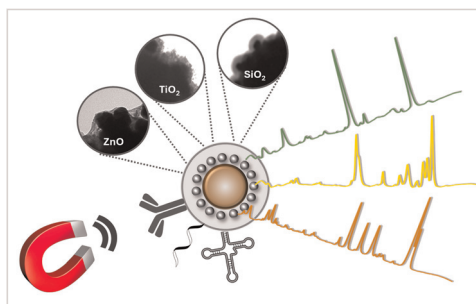
Xi-Song Gong, Xing Liu and Jian Zhou*



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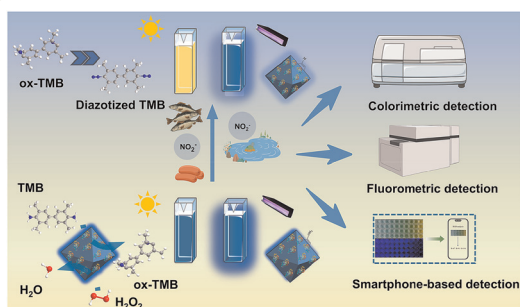
Versatile methodology for the synthesis of stable magnetic SERS-encoded clusters for sensing applications

Francisco J. Caparrós, Paulo Alexandre Gomes, Manuel García-Algar, María Rivero, Samantha Grand, Mario Borràs, Juan Sagales and Sara Gómez-de Pedro*



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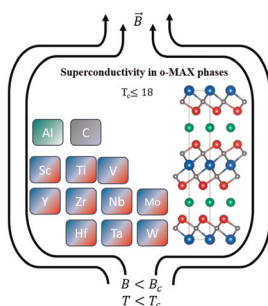
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Immobilization of horseradish peroxidase on UiO-66-NH₂ for colorimetric and fluorometric sensing of nitrite

Zuyao Fu, Lingfeng Yang, Zhaoyang Ding* and Jing Xie*

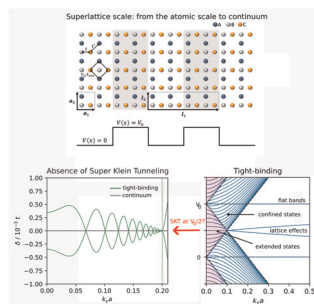
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Superconductivity in o-MAX phases

Mohammad Keivanloo, Mohammad Sandoghchi, Mohammad Reza Mohammadizadeh, Mitsuki Kawamura, Hannes Raebiger, Kenta Hongo, Ryo Maezono and Mohammad Khazaei*

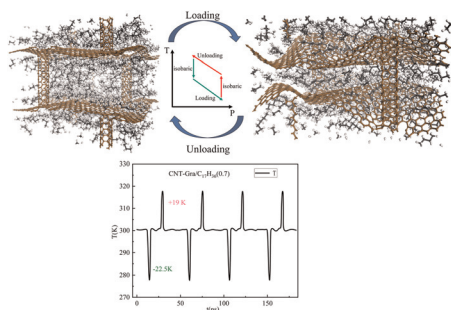
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One-dimensional Lieb superlattices: from the discrete to the continuum limit

Dylan Jones, Marcin Mucha-Kruczynski, Adelina Ilie* and Lucian Covaci*

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Giant inverse elastocaloric effect of *n*-alkanes imbedded in a carbon-frame for room temperature thermal management

Fangbiao Li, Xiong Xu, Guangwei Zhai, Chang Niu, Min Li and Hui Wang*



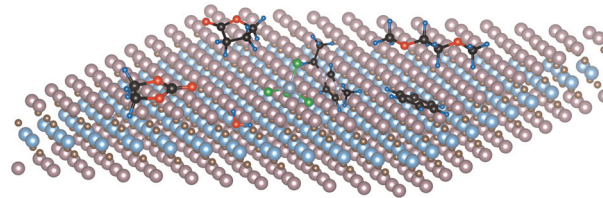
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Revealing the chemical compatibility of common solvents and electrolytes with Mo_2TiC_2 -based MXenes and their interfaces in aluminum-ion batteries (AIBs) through first-principles molecular dynamics simulations

Haoliang Liu, Chao Zeng, Ziang Jing, Kai Wu, Yonghong Cheng and Bing Xiao*

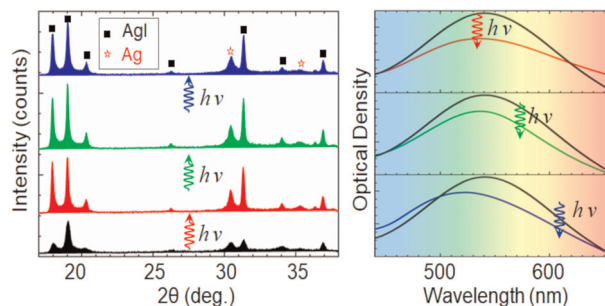
What will happen?



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Laser-induced optical and structural modification in AgI thin films loaded with silver nanoparticles

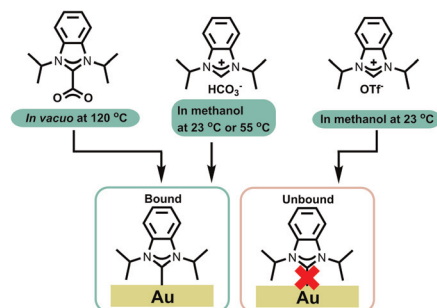
Razieh Talebi,* Lara Gigli and Kateřina Veltruská



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Forming N-heterocyclic carbene monolayers: not all deposition methods are the same

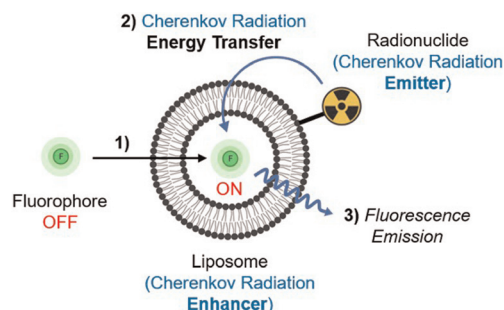
Aruna Chandran, Nathaniel L. Dominique, Gurkiran Kaur, Vincent Clark, Phattananawee Nalaoh, Lilian Chinenye Ekowo, Isabel M. Jensen, Mark D. Aloisio, Cathleen M. Crudden, Netzahualcōyotl Arroyo-Currás, David M. Jenkins* and Jon P. Camden*



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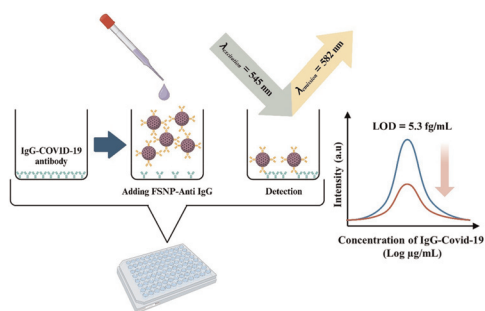
Liposome: a tool to raise the Cherenkov radiation yield and to restore fluorophore properties in aqueous media

Sébastien Saou, Mathieu Moreau, Vivian Lioret, Anne Berrou, Marta Hernandez-Garcia and Richard A. Decréau*



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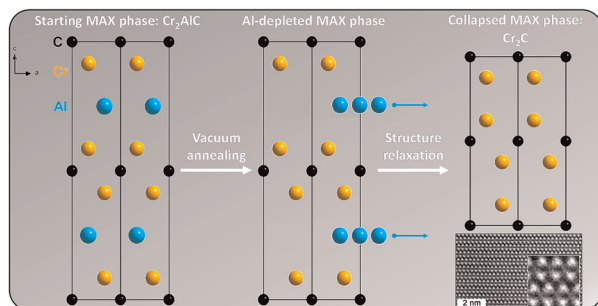
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A fluorescence nanosensor based on modified sustainable silica for highly sensitive detection of the SARS-CoV-2 IgG antibody

Firda Apriyani, Shaimah Rinda Sari, Himawan Tri Bayu Murti Petrus, Marissa Angelina, Robeth V. Manurung, Ni Luh Wulan Septiani, Brian Yuliarto and S. N. Aisyiyah Jenie*

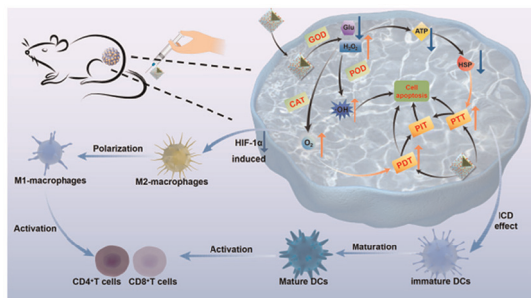
5447



Formation of 3D Cr₂C through solid state reaction-mediated Al extraction within Cr₂AlC/Cu thin films

Clio Azina,* Justinas Palisaitis, Dimitri Bogdanovski, Tim Bartsch, Rajib Sahu, Christina Scheu, Per O. Å. Persson, Per Eklund and Jochen M. Schneider

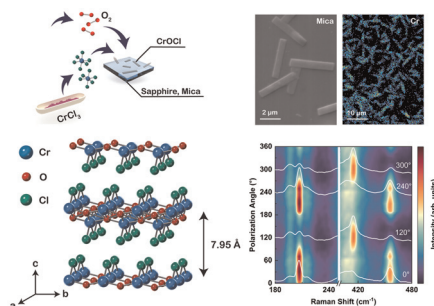
5456



Hollow gold–platinum nanoshells as a delivery platform for Ce6: cascading catalysis for enhanced multimodal therapy in tumor ablation and antitumor immunity

Jia-Hao Feng, Mei-Lian Zhang, Yi-Ming Zou, Xiao-Yan Tang, Xiao-Tong Chen, Wei Meng, Ming Chen,* Rong-Tian Li* and Jin-Xiang Chen*

5472



Controllable synthesis of environmentally stable vdW antiferromagnetic oxyhalide CrOCl

Rounak Banerjee, Sai Uppala, Jan Kopaczek, Sakib Ahmed, Cheng-Lun Wu, Mukesh Kumar, Kentaro Yumigeta, Umberto Celano and Seth Ariel Tongay*



CORRECTION

5481

Correction: Fabrication of nanoporous anodized aluminum oxide based photonic crystals with multi-band responses in the vis-NIR region

Mengqi Li, Chao Feng,* Liye Zhu and Yan Zhao*

