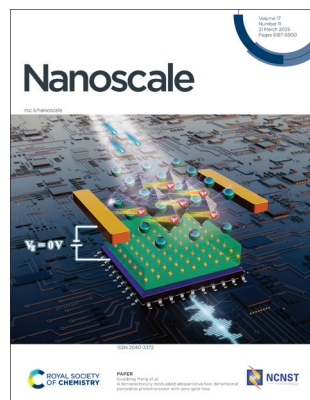


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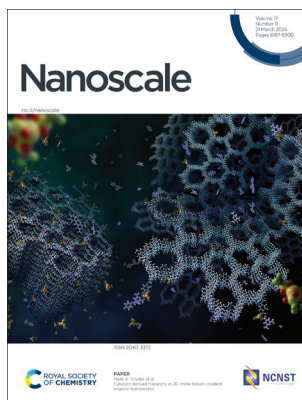
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Cover

See Guodong Meng *et al.*, pp. 6481–6487.

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Inside cover

See Mark A. Snyder *et al.*, pp. 6488–6504.

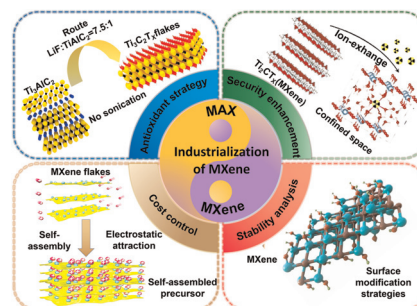
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Engineering the next generation of MXenes: challenges and strategies for scalable production and enhanced performance

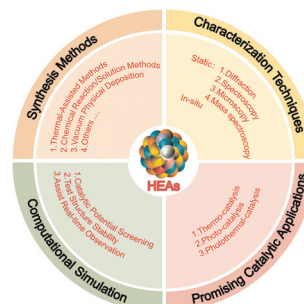
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Nanoscale high-entropy alloys for solar and thermal applications

Xinyang Li, Yalong Zou, Haijiao Lu* and Lianzhou Wang



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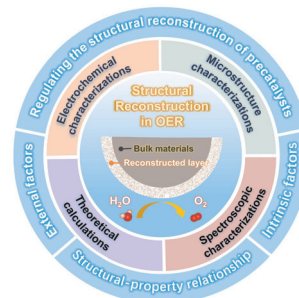


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Insight into the structural reconstruction of alkaline water oxidation electrocatalysts

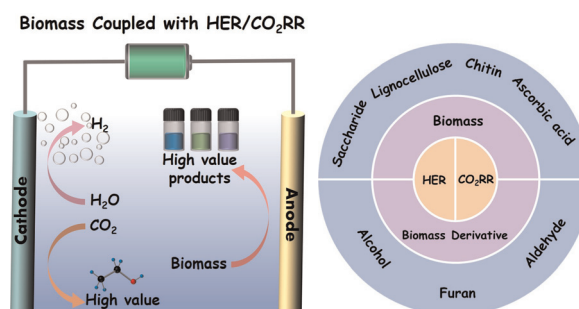
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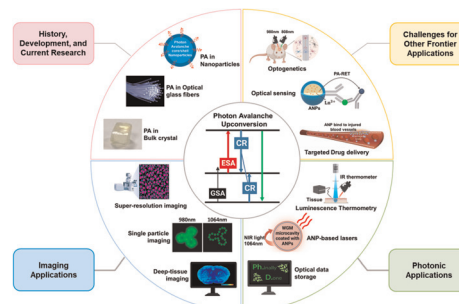
Shuke Li, Lin Ye, Wanglai Cen and Dengrong Sun*



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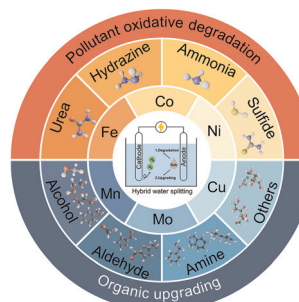
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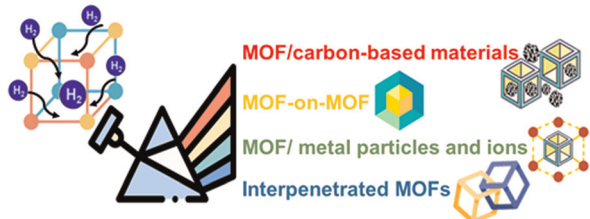
Recent progress in non-noble metal nano-electrocatalysts for hybrid water splitting

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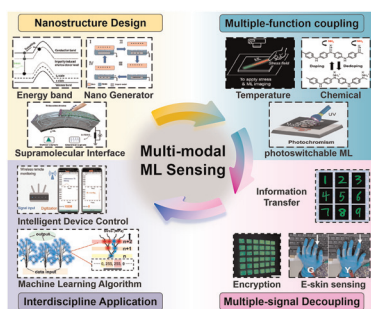
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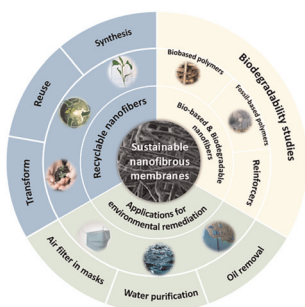
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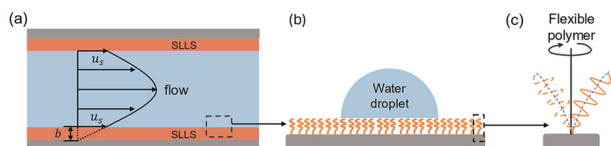


Sustainable nanofibrous membranes for air filtration, water purification and oil removal

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Slippery liquid-like surfaces as a promising solution for sustainable drag reduction

Lingxuan Hao and Bei Fan*

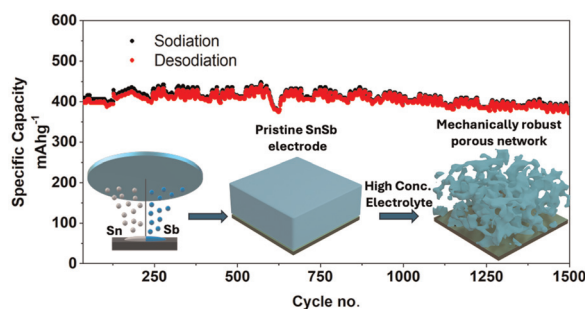


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SnSb as a long cycle life anode material for sodium-ion batteries enabled by a high concentration electrolyte

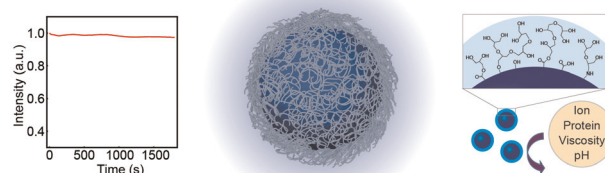
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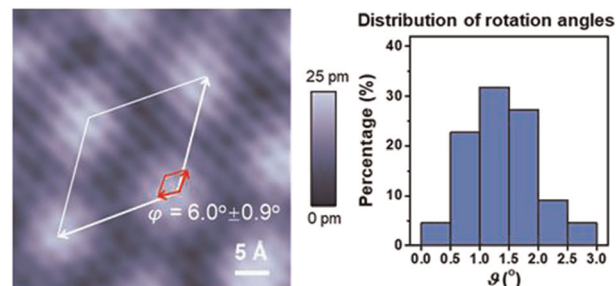
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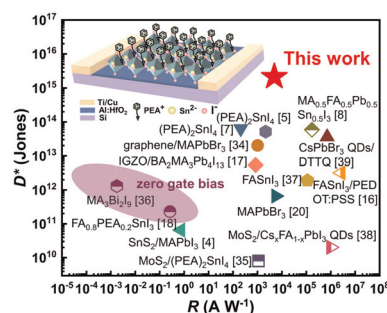


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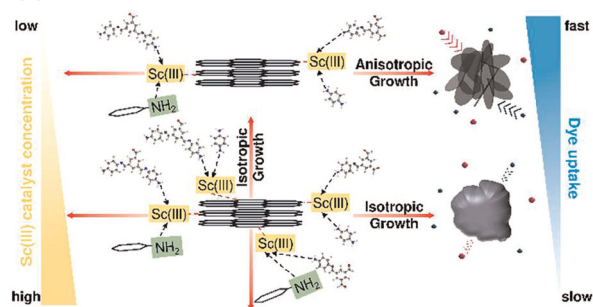
A ferroelectrically modulated ultrasensitive two-dimensional perovskite phototransistor with zero-gate-bias

Junyi She, Hanlin Cen, Zhiheng Shen, Jianyu Wang, Xin Liu, Jun Xi, Yonghong Cheng and Guodong Meng*



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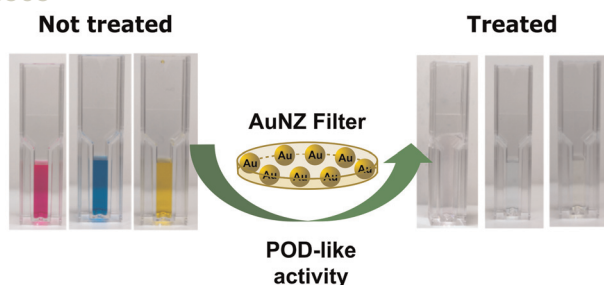
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Catalyst-derived hierarchy in 2D imine-based covalent organic frameworks

Hao Guo, Joseph P. Cline, Ryan Thorpe, Christopher J. Kiely, Srinivas Rangarajan and Mark A. Snyder*

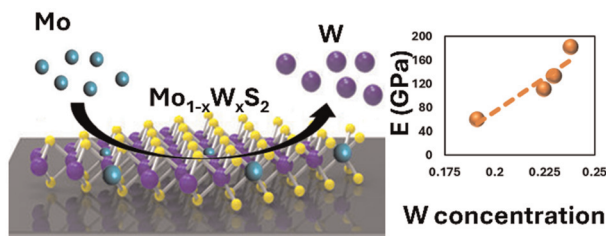
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Gold nanozymes for efficient degradation of organic dye pollutants: outperforming natural enzymes

Giulia Mirra, Lorenzo Cursi, Marina Veronesi, Luca Boselli and Pier Paolo Pompa*

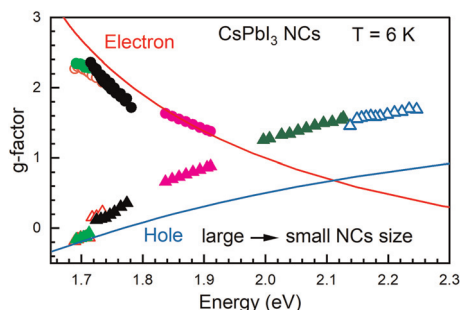
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Mechanical modulation of 2D transition metal dichalcogenide alloys

Guy Alboteanu, Dan Mordehai and Assaf Ya'akovovitz*

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Landé g -factors of electrons and holes strongly confined in CsPbI_3 perovskite nanocrystals in glass

Sergey R. Melnikov*, Evgeny A. Zhukov, Vasilii V. Belykh, Mikhail O. Nestoklon, Elena V. Kolobkova, Maria S. Kuznetsova, Manfred Bayer and Dmitri R. Yakovlev*

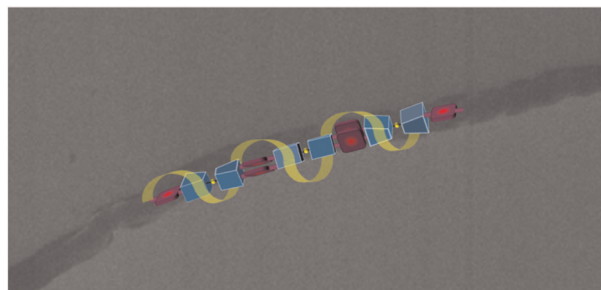


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Towards 1D supramolecular chiral assemblies based on porphyrin–calixarene complexes

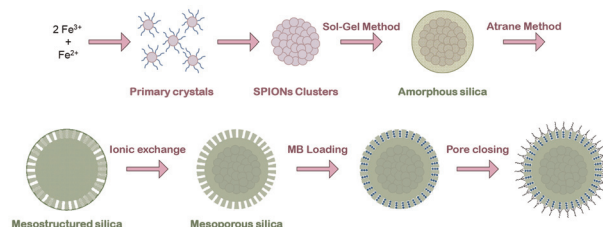
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A rapid synthesis of magnetic-core mesoporous silica-shell nanostructures – as potential theranostic agents – by means of microwave irradiation and the atrane method

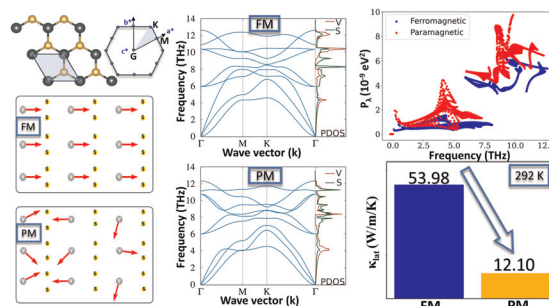
M. Dolores Garrido,* Bejan Hamawandi, José Francisco Serrano-Claumarchirant, Giovanni Marco Saladino, Adem B. Ergül, M. Dolores Marcos, José Vicente Ros-Lis, Pedro Amorós and Muhammet S. Toprak*



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Unveiling magnetic transition-driven lattice thermal conductivity switching in monolayer VS₂

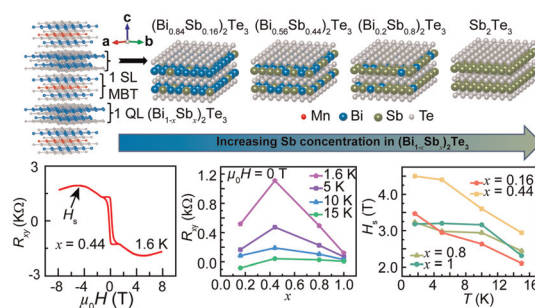
Zimmi Singh, Abhishek Kumar and Sankha Mukherjee*



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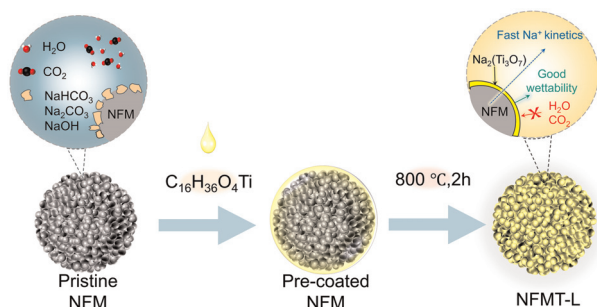
Controllable magnetism and an anomalous Hall effect in (Bi_{1-x}Sb_x)₂Te₃-intercalated MnBi₂Te₄ multilayers

Peng Chen, Jieyi Liu,* Yifan Zhang, Puyang Huang, Jack Bollard, Yiheng Yang, Ethan L. Arnold, Xinqi Liu, Qi Yao, Fadi Choueikani, Gerrit van der Laan, Thorsten Hesjedal and Xufeng Kou*



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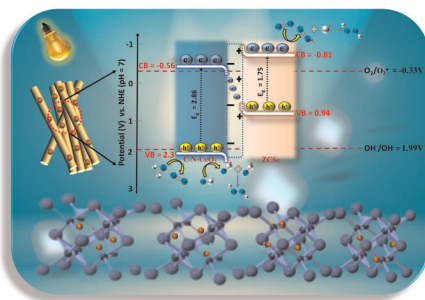
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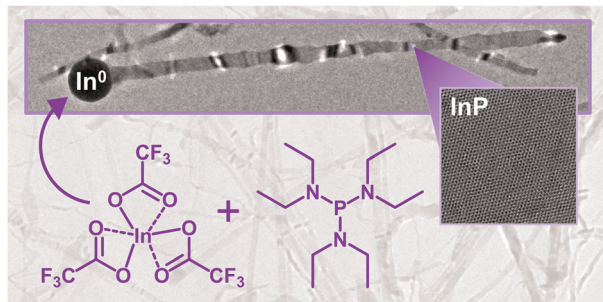
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Zn_{0.5}Cd_{0.5}Se quantum dot-integrated MOF-derived C/N-CeO₂ photocatalyst for enhanced H₂O₂ production and O₂ evolution reactions

Jayashree Panda, Jyotirmayee Sahu and Kulamani Parida*

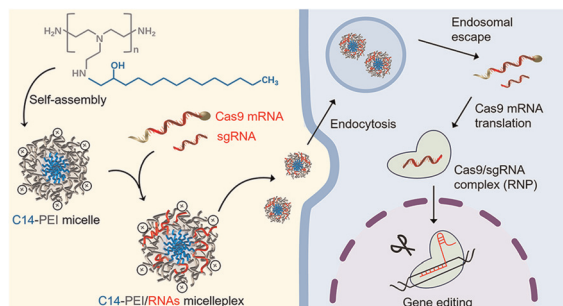
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Alternate InP synthesis with aminophosphines: solution-liquid-solid nanowire growth

Helen C. Larson, Zhixing Lin, François Baneyx and Brandi M. Cossairt*

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A novel micelleplex for tumour-targeted delivery of CRISPR-Cas9 against KRAS-mutated lung cancer

Siyu Chen, Mariem Triki, Simone Pinto Carneiro and Olivia Monika Merkel*

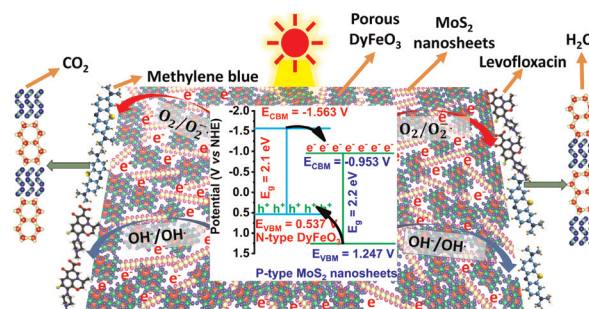


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Mechanistic insights into the enhanced photocatalytic efficiency of MoS₂-tuned DyFeO₃ heterojunction nanocomposites for pollutant degradation

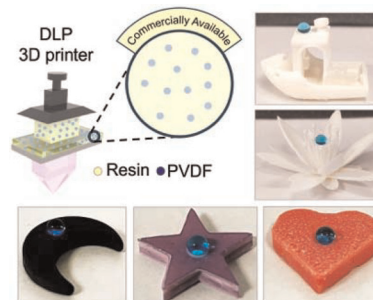
Mohasin Tarek, Ferdous Yasmeen and M. A. Basith*



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3D printing of superhydrophobic and multifunctional objects via simple and inexpensive vat photopolymerization

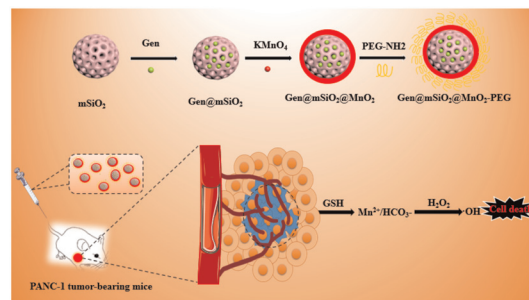
Adil Majeed Rather, Mohammed Barrubeeah, Mohammad Javad Zarei, Young Jae Kim, Sravanthi Vallabhuneni and Arun Kumar Kota*



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Mesoporous SiO₂ based nanocomplex enzymes for enhanced chemodynamic therapy of pancreatic tumors

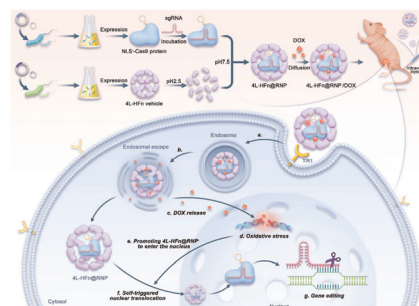
Yue Fan, Shulin Yu, Zhaoshuo Yang and Dingfang Cai*



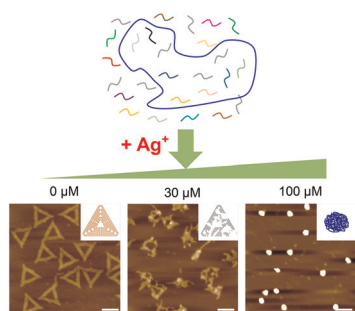
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Non-nuclear localization signal-guided CRISPR/Cas9 ribonucleoproteins for translocation and gene editing via apoferritin delivery vectors

Peng Sun, Shiping Wang, Qi Yan, Jia Zeng, Zhenghong Wu* and Xiaole Qi*



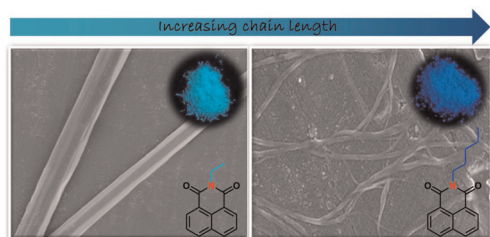
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Nonspecific metal-coordination-driven control over higher-order DNA self-assembly

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- Non-conjugated linear alkyl chain engineering
- Tuning of condensed-state emission and supramolecular nano-assembly
- In-depth analysis of structure and property relationship

Non-conjugated alkyl chain engineering to tune condensed state photophysical and supramolecular assembly properties

Niranjan Meher,* Mst Nasima Khatun, Retwik Parui and Parameswar Krishnan Iyer*

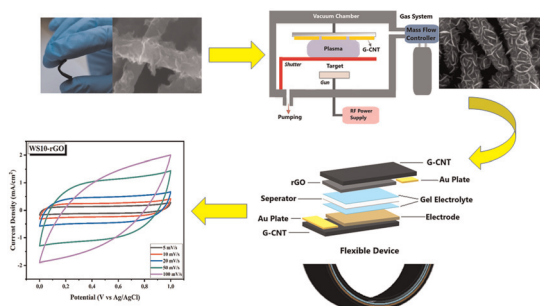
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Enhanced stability and optical performance of CsPbBr₃@FAPbBr₃ core-shell perovskite nanocrystals

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Advanced flexible supercapacitors: vertical 2D MoS₂ and WS₂ nanowalls on graphenated carbon nanotube cotton

Ufuk Perişanoğlu,* Esra Kavaz Perişanoğlu, Züleyha Kudaş, Duygu Ekin, Ismayadi Ismail and Emre Gür*

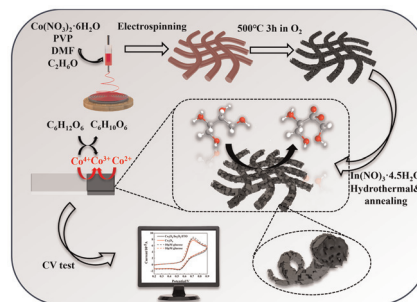


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Nanofiber-shaped $\text{Co}_3\text{O}_4@\text{In}_2\text{O}_3$ composite for high-performance enzymeless glucose sensing

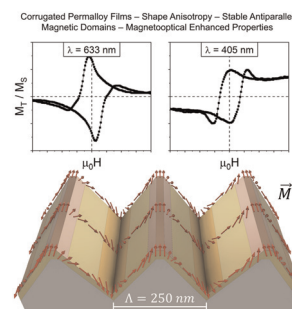
Xinda Xu, Chao Zhang, Woonchul Yang,* Yujia Li, Bing Li,* Yuvaraj Haldorai, Jiang Zhenyu and Wanfeng Xie*



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Stable antiparallel domains in 3D corrugated magnetic thin films

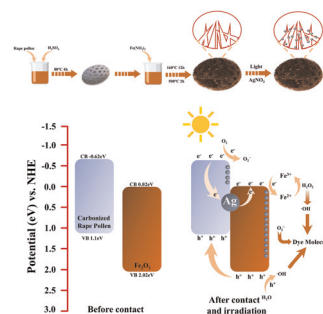
Rafael Delgado-García,* Ruben Guerrero, Gabriel Rodríguez-Rodríguez, Fernando Gálvez, Miguel Ángel Arranz and Jose Miguel Colino



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Unveiling the synergistic interface effects of Ag-deposited Fe_2O_3 /biochar catalysts to enhance wastewater degradation

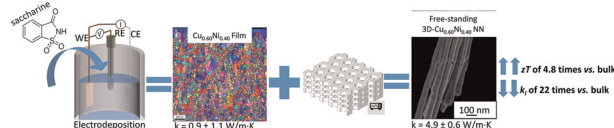
Jialin Gu, Xinshang Li, Yanping Ma, Tianyi Yang, Rui Zhang, Wenquan Zhou, He Wang and Jiangang Jiang*



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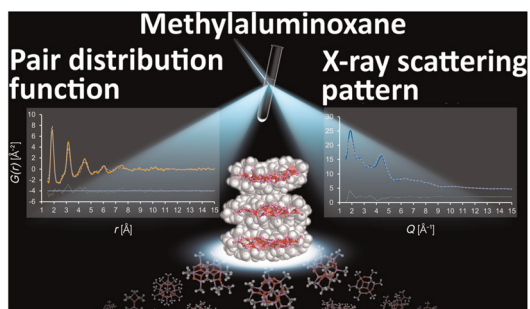
~5-Fold enhancement in the thermoelectric figure of merit of sustainable 3D-CuNi interconnected nanonetworks due to ultralow lattice thermal conductivity

Cristina V. Manzano,* Olga Caballero-Calero, Daniele Casari, Amit Sharma, Alba Díaz-Lobo, Xavier Maeder and Marisol Martín-González



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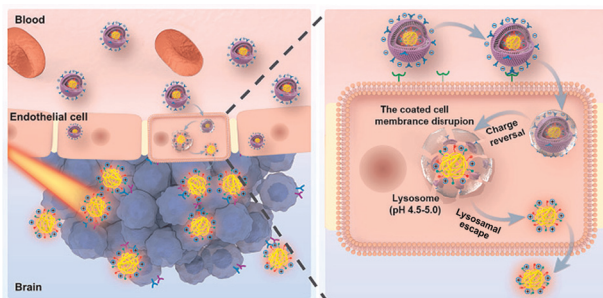
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Elucidation of the nano-sized molecular structure of methyaluminoxane using synchrotron X-ray total scattering

Toru Wada* and Toshiaki Taniike*

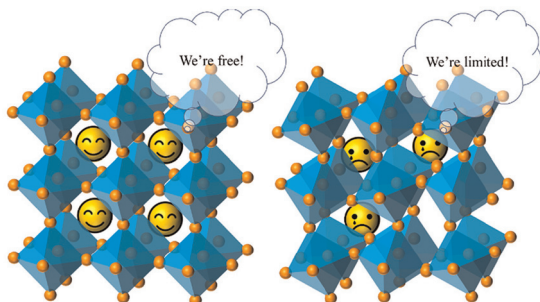
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Promoting transcellular traversal of the blood–brain barrier by simultaneously improving cellular uptake and accelerating lysosomal escape

Li Zhang, Weibin Li, Zhen Xu, Zhennan Mao, Mengqian Yang, Caixia Wang* and Zhihong Liu*

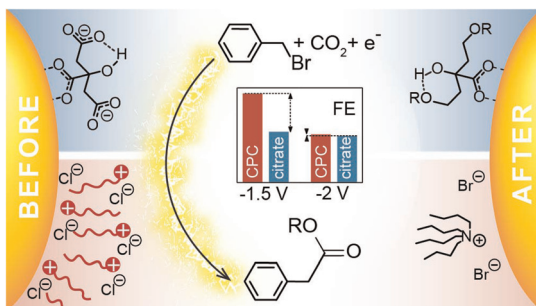
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Effect of Cs vacancy on thermal conductivity in CsPbBr₃ perovskites unveiled by deep potential molecular dynamics

Shuhao Han, Yujin Ji* and Youyong Li*

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The fate of nanoparticle surface chemistry during reductive electrosynthesis in aprotic media

Xenia V. Medvedeva, Jury J. Medvedev, Xingya Zhao, Elena Smith and Anna Klinkova*

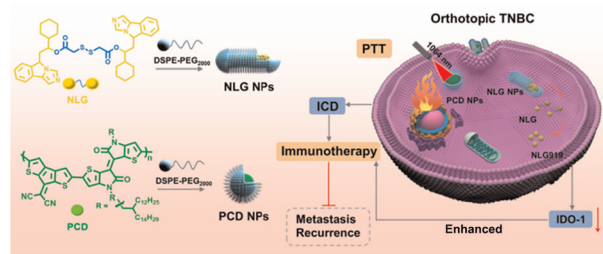


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NIR-II photothermal therapy combined with activatable immunotherapy against the recurrence and metastasis of orthotopic triple-negative breast cancer

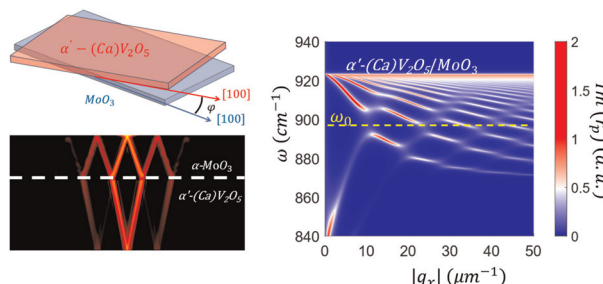
Wentao Lei, Yinghui Wang, Tangyue Zheng, Qihang Wu, Hui Wen, Tingting Sun,* Jun Liu* and Zhigang Xie*



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Tuning polariton hybridization in hyperbolic hetero-bicrystals by twist angle engineering

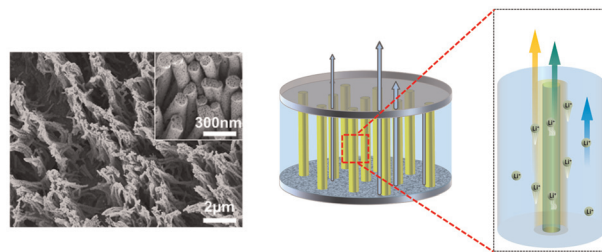
Yaohong Wang, Guolong Ma, Zhiqiang Li* and Lu Wen*



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Constructing vertically aligned Li⁺ transport pathways in a flexible solid polymer composite electrolyte by a soft template approach

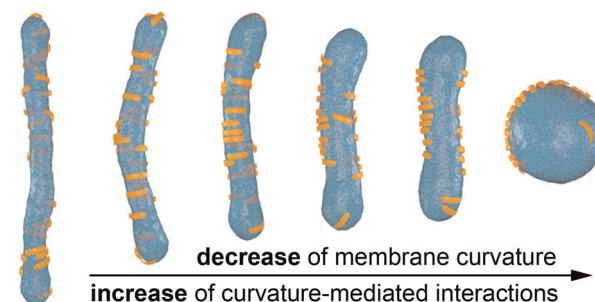
Shaoyin Li, Yunke Wang, Jose Anguita, Kai Yang and S. Ravi P. Silva*



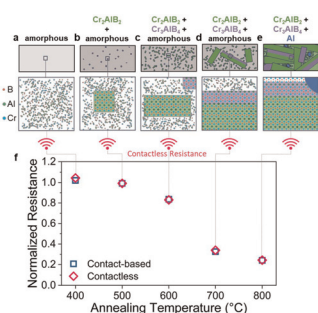
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Membrane-mediated interactions between arc-shaped particles strongly depend on membrane curvature

Francesco Bonazzi and Thomas R. Weikl*



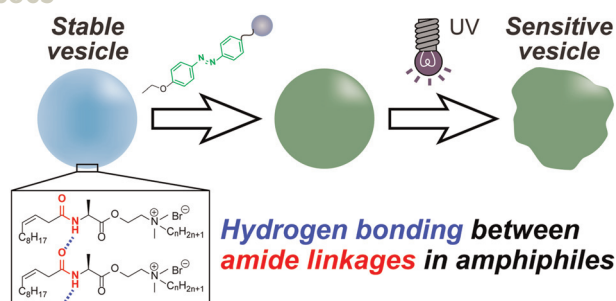
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Contactless health monitoring in autonomous self-reporting ceramic coatings

Peter J. Pöllmann,* Sebastian Lellig,* Dimitri Bogdanovski, Amir Hossein Navidi Kashani, Damian M. Holzapfel, Clio Azina, Peter Schweizer, Marcus Hans, Paula Zöll, Daniel Primetzhofer, Szilárd Kolozsvári, Peter Polcik, Johann Michler and Jochen M. Schneider

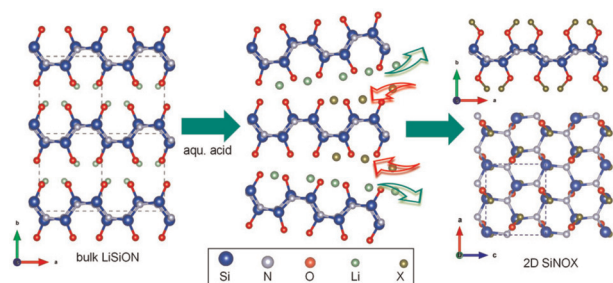
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A molecular strategy for creating functional vesicles with balancing structural stability and stimuli-responsiveness

Shoi Sasaki, Hibiki Ueno, Noriyoshi Arai, Kouichi Asakura and Taisuke Banno*

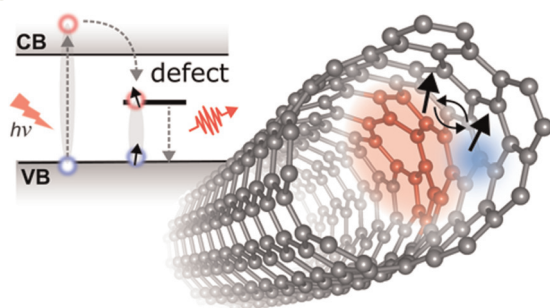
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Theoretical design of 2D $Pca2_1$ SiNOX (X = H, F, and Cl) phases: a new family of flexible wide bandgap semiconductors

Heng Zhang, Jiahao Yu, Sylvain Pitié, Frédéric Guégan, Junjie Wang* and Gilles Frapper*

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Topological defects in semiconducting carbon nanotubes as triplet exciton traps and single-photon emitters

Timur Biktagirov,* Uwe Gerstmann and Wolf Gero Schmidt



CORRECTIONS

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Correction: Copper nitroprusside analogue nanoparticles against melanoma: detailed *in vitro* and *in vivo* investigation

Sanchita Tripathy, Swapnali Londhe, Arti Patel, Sudipta Saha, Yogesh Chandra and Chitta Ranjan Patra*

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Correction: Cost-effective carbon fiber precursor selections of polyacrylonitrile-derived blend polymers: carbonization chemistry and structural characterizations

Qian Mao, Siavash Rajabpour, Mahdi Khajeh Talkhoncheh, Jiadeng Zhu, Malgorzata Kowalik and Adri C. T. van Duin*

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Correction: Optical response of magnetically actuated biocompatible membranes

H. Joisten,* A. Truong, S. Ponomareva, C. Naud, R. Morel, Y. Hou, I. Jourmard, S. Auffret, P. Sabon and B. Dieny

