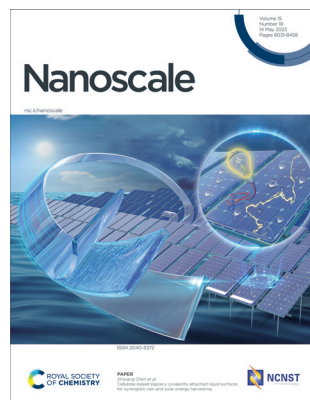


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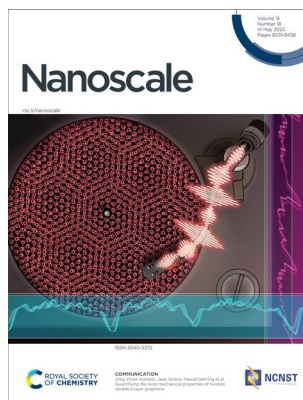
ISSN 2040-3372 CODEN NANOHL 15(18) 8031–8458 (2023)



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See Zhixiang Chen *et al.*, pp. 8158–8168.

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Inside cover

See Oleg Victor Kolosov, Jean Spèce, Pascal Gehring *et al.*, pp. 8134–8140.

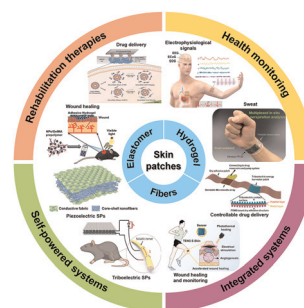
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Evolution of nanostructured skin patches towards multifunctional wearable platforms for biomedical applications

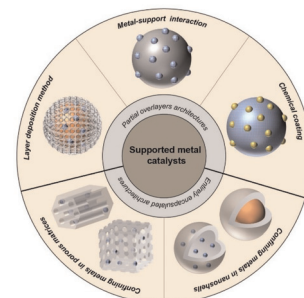
Daniel Rybak, Yu-Chia Su, Yang Li, Bin Ding,* Xiaoshuang Lv, Zhaoling Li, Yi-Cheun Yeh, Pawel Nakielski, Chiara Rinoldi, Filippo Pierini* and Jagan Mohan Dodda*



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Review on supported metal catalysts with partial/porous overlayers for stabilization

Kun Lu, Xiao Kong, Junmeng Cai, Shirui Yu and Xingguang Zhang*



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A review on accelerated development of skin-like MXene electrodes: from experimental to machine learning

Romy Garg, Nikhil Ram Patra, Soumyajit Samal, Shubham Babbar and Kaushik Parida*

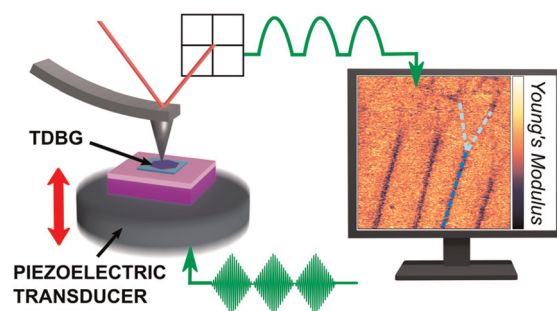


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Quantifying the local mechanical properties of twisted double bilayer graphene

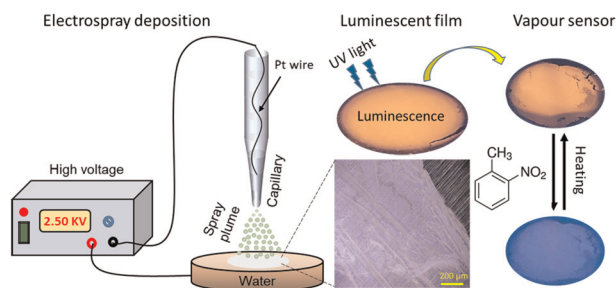
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A luminescent Cu₄ cluster film grown by electro-spray deposition: a nitroaromatic vapour sensor

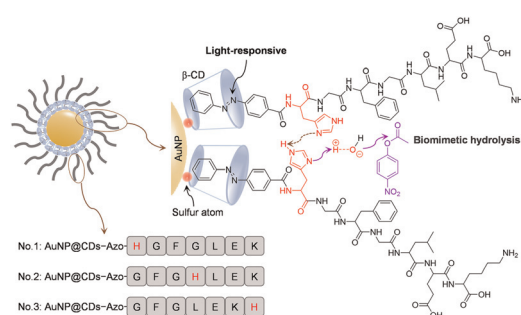
Arijit Jana, B. K. Spoorthi, Akhil S. Nair, Ankit Nagar, Biswarup Pathak,* Tomas Base* and Thalappil Pradeep*



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Tuning the enzyme-like activity of peptide-nanoparticle conjugates with amino acid sequences

Xiaojin Zhang, Yichuan Wang, Yu Dai* and Fan Xia*



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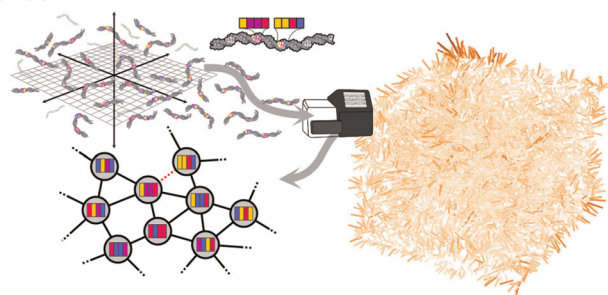
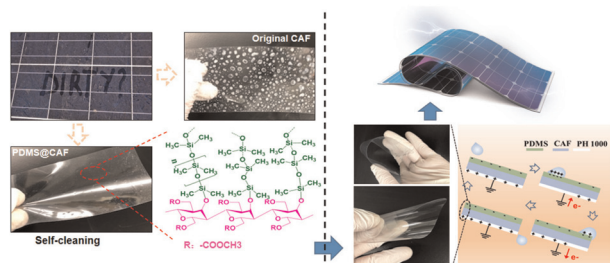


Image recovery from unknown network mechanisms for DNA sequencing-based microscopy

David Fernandez Bonet and Ian T. Hoffecker*

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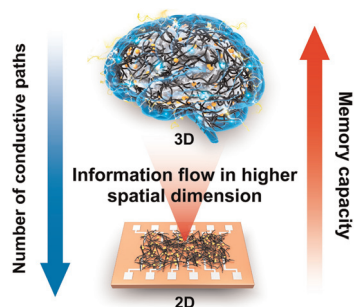
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Cellulose-based slippery covalently attached liquid surfaces for synergistic rain and solar energy harvesting

Zhixiang Chen,* Yi Lu, Rogerio Manica, Jianting Lu, Di Shi, Jingqiao Li and Qingxia Liu

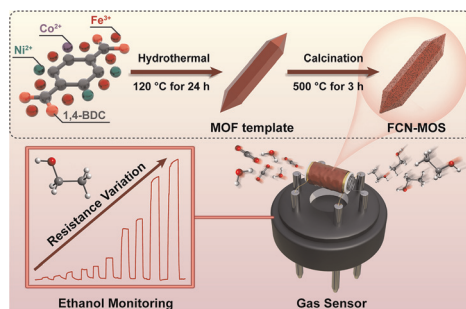
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Influence of junction resistance on spatiotemporal dynamics and reservoir computing performance arising from an SWNT/POM 3D network formed via a scaffold template technique

Saman Azhari,* Deep Banerjee, Takumi Kotooka, Yuki Usami and Hirofumi Tanaka*

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Metal-organic framework-derived trimetallic oxides with dual sensing functions for ethanol

Xin-Yu Huang, Ya-Ru Kang, Shu Yan, Ahmed Elmarakbi, Yong-Qing Fu* and Wan-Feng Xie*

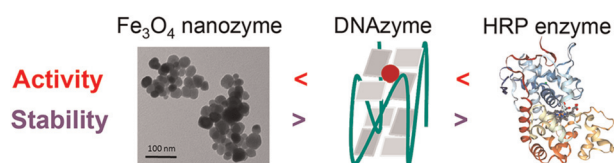


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Comparison of the peroxidase activities of iron oxide nanozyme with DNAzyme and horseradish peroxidase

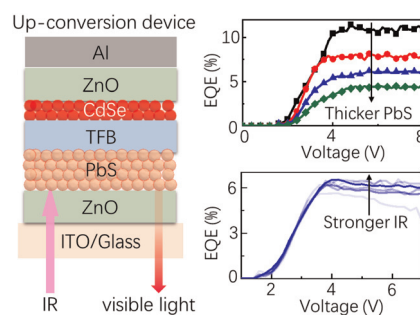
Chang Lu, Mohamad Zandieh, Jinkai Zheng* and Juewen Liu*



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Elaborating the interplay between the detecting unit and emitting unit in infrared quantum dot up-conversion photodetectors

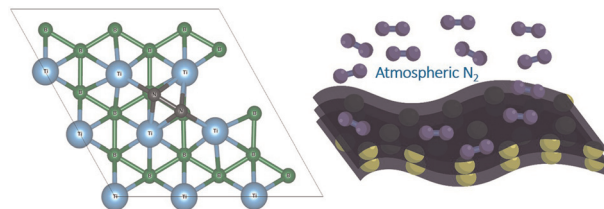
Qiulei Xu, Xinxin Yang, Jiao Jiao Liu, Fei Li, Ruiguang Chang, Lei Wang, A Qiang Wang,* Zhenghui Wu,* Huaibin Shen and Zuliang Du



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Nitrogen adsorption *via* charge transfer on vacancies created during surfactant assisted exfoliation of TiB₂

Anshul Rasyotra, Anupma Thakur, Raviraj Mandalia, Raghavan Ranganathan and Kabeer Jasuja*

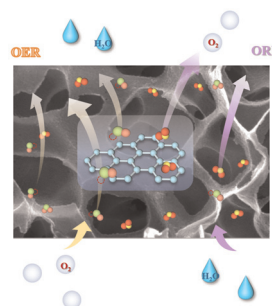


Defects present in TiB₂ nanosheets chemisorb N₂ under ambient conditions

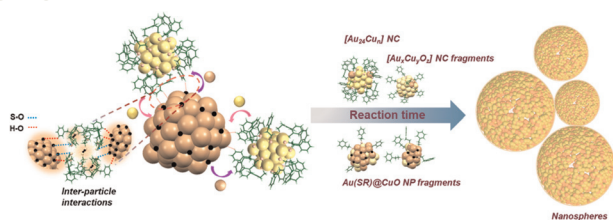
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Boosting oxygen evolution electrocatalysis *via* CeO₂ engineering on Fe₂N nanoparticles for rechargeable Zn–air batteries

Minghui Wang, Jianwei Ren,* Hui Wang, Xuyun Wang and Rongfang Wang*



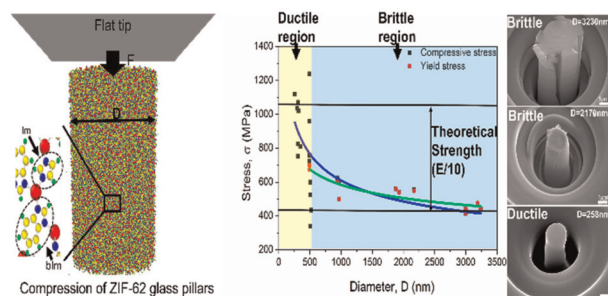
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Dissociative reactions of $[\text{Au}_{25}(\text{SR})_{18}]^{-}$ at copper oxide nanoparticles and formation of aggregated nanostructures

Jayoti Roy, Biswajit Mondal, Gaurav Vishwakarma, Nonappa, Nishanthi Vasanthi Sridharan, Pattabiraman Krishnamurthi and Thalappil Pradeep*

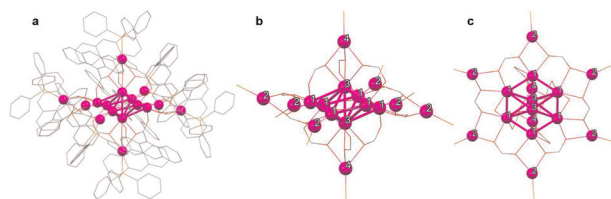
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Brittle-to-ductile transition and theoretical strength in a metal–organic framework glass

Shaohua Yan, Thomas D. Bennett, Weipeng Feng, Zhongyin Zhu, Dingcheng Yang, Zheng Zhong* and Qing H. Qin*

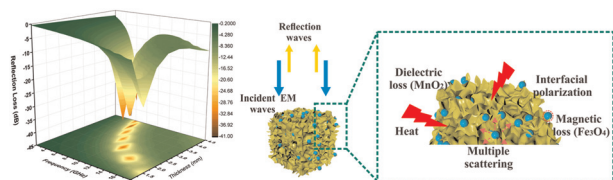
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Monocarboxylate-protected two-electron superatomic silver nanoclusters with high photothermal conversion performance

Hao-Hai Wang, Jianyu Wei, Fahime Bigdeli, Farzaneh Rouhani, Hai-Feng Su, Ling-Xiao Wang, Samia Kahlal, Jean-François Halet, Jean-Yves Saillard,* Ali Morsali* and Kuan-Guan Liu*

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Enhanced electromagnetic wave absorption of $\text{Fe}_3\text{O}_4@\text{MnO}_2@\text{Ni-Co/C}$ composites derived from Prussian blue analogues

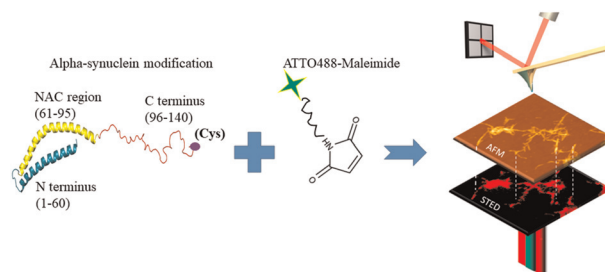
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Fluorescence labeling methods influence the aggregation process of α -syn *in vitro* differently

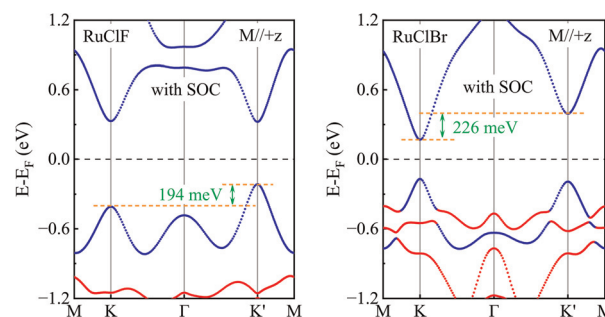
S. Jadavi, S. Dante, L. Civiero, M. Sandre, L. Bubacco, L. Tosatto, P. Bianchini, C. Canale* and A. Diaspro



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Distinct ferrovalley characteristics of the Janus RuClX (X = F, Br) monolayer

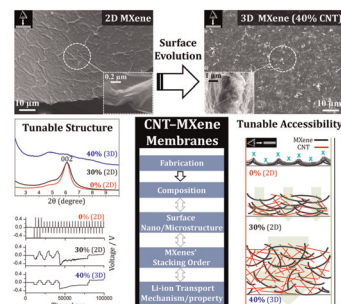
Yubiao Ma, Yanzhao Wu, Junwei Tong, Li Deng, Xiang Yin, Lianqun Zhou, Xiaoli Han, Fubo Tian and Xianmin Zhang*



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CNT–MXene ultralight membranes: fabrication, surface nano/microstructure, 2D–3D stacking architecture, ion-transport mechanism, and potential application as interlayers for Li–O₂ batteries

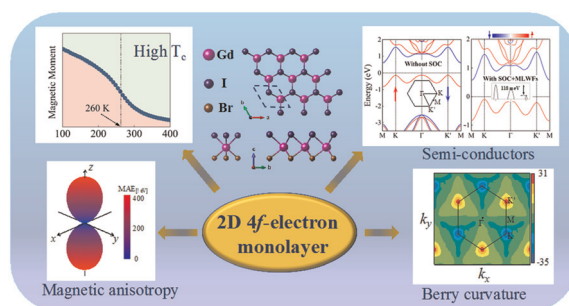
Mehdi Estili,* Shoichi Matsuda,* Lulu Jia, Nobuyuki Sakai, Renzhi Ma, Tohru S. Suzuki and Kohei Uosaki



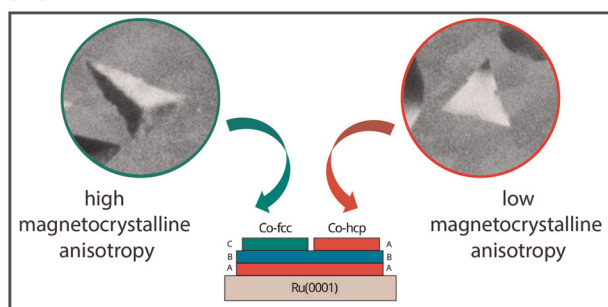
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Two-dimensional ferromagnetic semiconductors of rare-earth Janus 2H-GdI₂Br monolayers with large valley polarization

Cunquan Li and Yukai An*



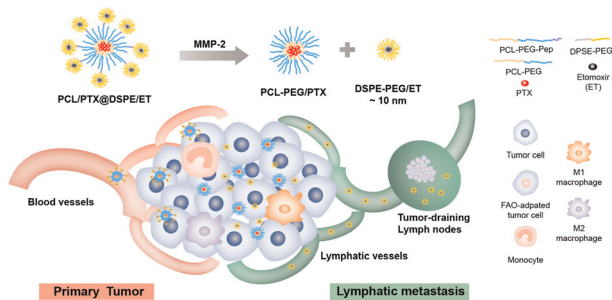
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Stacking influence on the in-plane magnetic anisotropy in a 2D magnetic system

Sandra Ruiz-Gómez, Lucas Pérez, Arantazu Mascaraque, Benito Santos, Farid El Gabaly, Andreas K. Schmid and Juan de la Figuera*

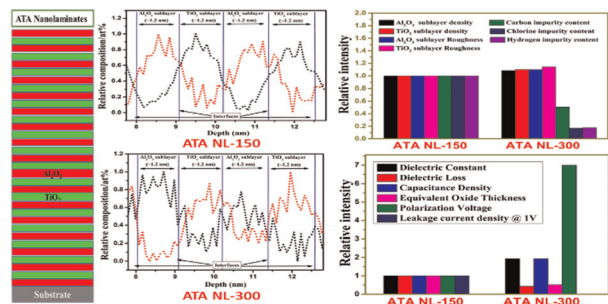
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A core-satellite micellar system against primary tumors and their lymphatic metastasis through modulation of fatty acid metabolism blockade and tumor-associated macrophages

Xuan He, Tao Deng, Jiabin Li, Rong Guo, Yashi Wang, Ting Li, Shuya Zang, Jiabin Li, Ling Zhang, Man Li* and Qin He*

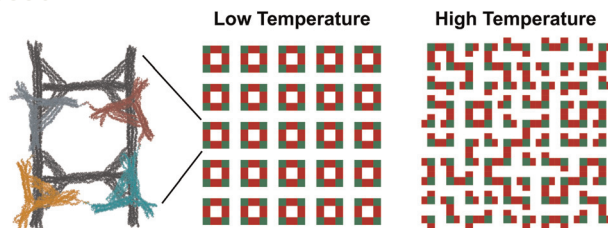
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Process temperature-dependent interface quality and Maxwell–Wagner interfacial polarization in atomic layer deposited $\text{Al}_2\text{O}_3/\text{TiO}_2$ nanolaminates for energy storage applications

Partha Sarathi Padhi,* R. S. Ajimsha, S. K. Rai, U. K. Goutam, Aniruddha Bose, Sushmita Bhartiya and Pankaj Misra*

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Thermally reversible pattern formation in arrays of molecular rotors

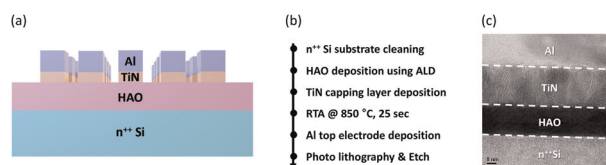
Marcello DeLuca, Wolfgang G. Pfeifer, Benjamin Randoing, Chao-Min Huang, Michael G. Poirier, Carlos E. Castro and Gaurav Arya*



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Ferroelectric synaptic devices based on CMOS-compatible HfAlO_x for neuromorphic and reservoir computing applications

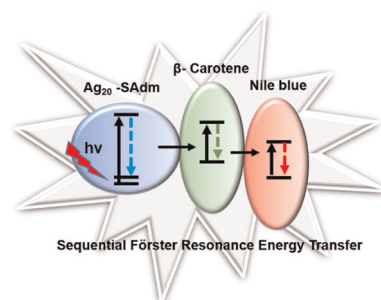
Dahye Kim, Jihyung Kim, Seokyeon Yun, Jungwoo Lee, Euncho Seo and Sungjun Kim*



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Luminescent [CO₂@Ag₂₀(SAdm)₁₀(CF₃COO)₁₀(DMA)₂] nanocluster: synthetic strategy and its implication towards white light emission

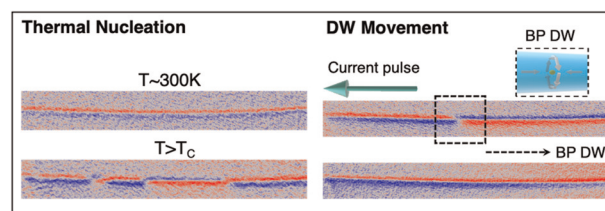
Sourav Biswas, Anish Kumar Das, Avirup Sardar, Surya Sekhar Manna, Pradip Kumar Mondal, Maurizio Polentarutti, Biswarup Pathak and Sukhendu Mandal*



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Domain wall propagation and pinning induced by current pulses in cylindrical modulated nanowires

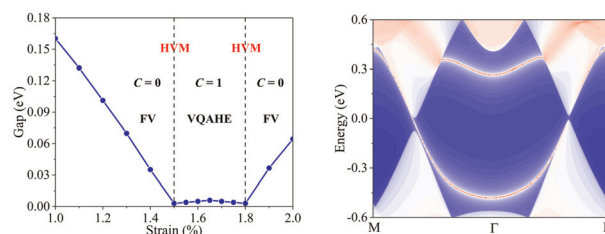
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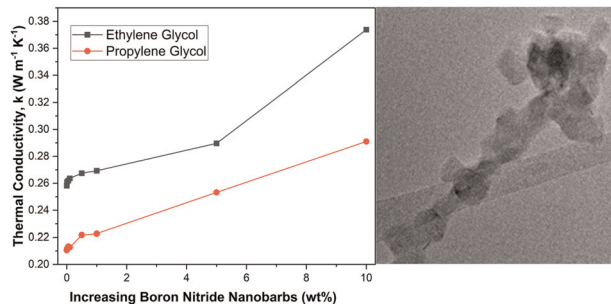
Spontaneous valley polarization and valley-nonequilibrium quantum anomalous Hall effect in Janus monolayer ScBrI

Kang Jia, Xiao-Jing Dong, Sheng-Shi Li, Wei-Xiao Ji and Chang-Wen Zhang*



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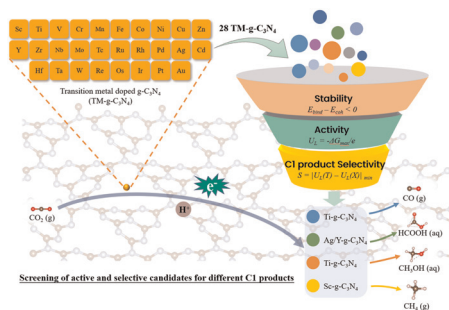
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Thermal conductivity of ethylene glycol and propylene glycol nanofluids with boron nitride nano-barbs

Adesewa O. Maselugbo, Bolaji L. Sadiku and Jeffrey R. Alston*

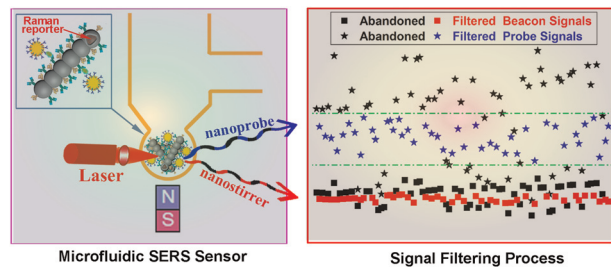
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Computational screening of effective g-C₃N₄ based single atom electrocatalysts for the selective conversion of CO₂

Huiwen Zhu, Shuai Liu, Jiahui Yu, Quhan Chen, Xinyi Mao and Tao Wu*

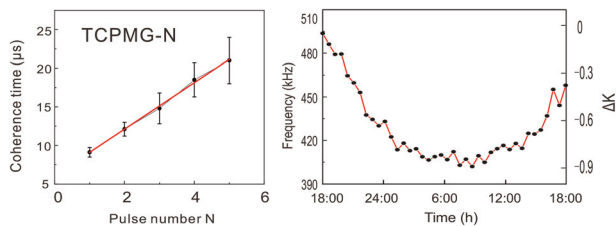
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Design of Raman reporter-embedded magnetic/plasmonic hybrid nanostirrers for reliable microfluidic SERS biosensors

Bingfang Zou, Shiyun Lou, Jie Duan, Shaomin Zhou* and Yongqiang Wang*

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High-sensitivity silicon carbide divacancy-based temperature sensing

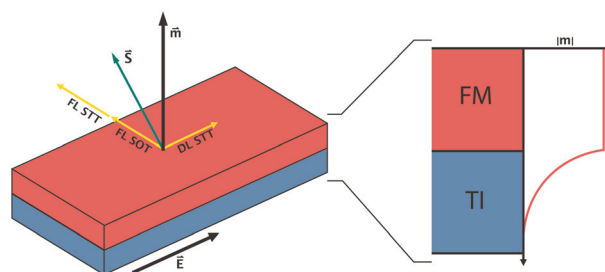
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Spin transfer torques due to the bulk states of topological insulators

James H. Cullen,* Rhonald Burgos Atencia and Dimitrie Culcer



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Large tunneling magnetoresistance in spin-filtering 1T-MnSe₂/h-BN van der Waals magnetic tunnel junction

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