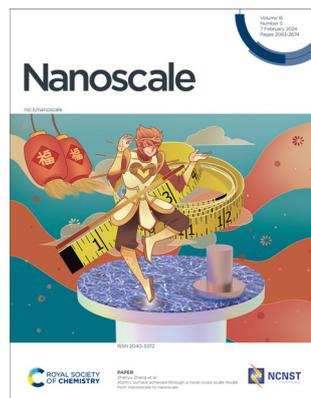


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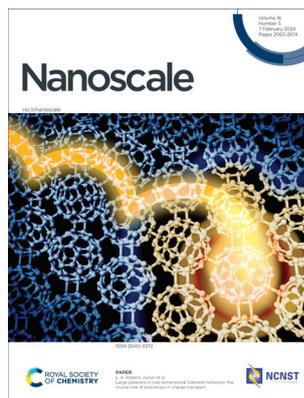
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See Zhenyu Zhang *et al.*, pp. 2318–2336.

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See L. A. Ribeiro, Junior *et al.*, pp. 2337–2346.

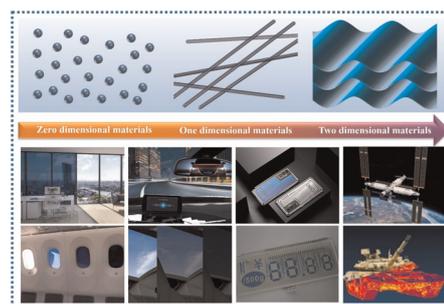
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Advanced inorganic nanomaterials for high-performance electrochromic applications

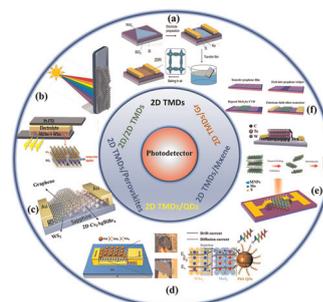
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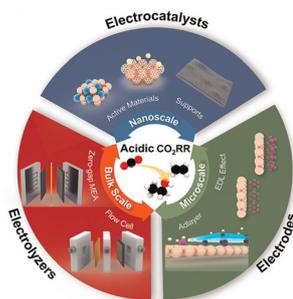
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Fundamental questions
Elemental answers



MINIREVIEWS

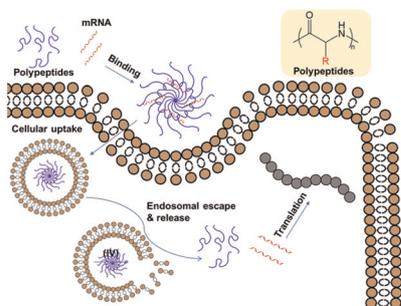
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Acidic CO₂ electroreduction for high CO₂ utilization: catalysts, electrodes, and electrolyzers

Taemin Lee, Yujin Lee, Jungsu Eo and Dae-Hyun Nam*

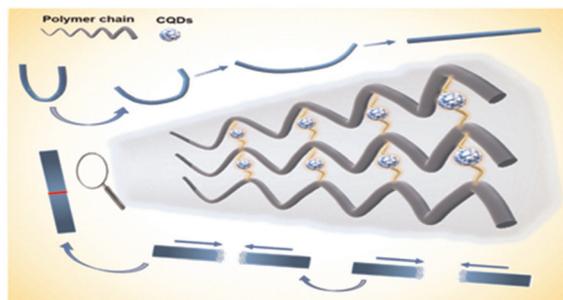
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Development of polypeptide-based materials toward messenger RNA delivery

Bowen Zhao, Xiao Zhang, Molly S. Bickle, Shiwei Fu, Qingchun Li and Fuwu Zhang*

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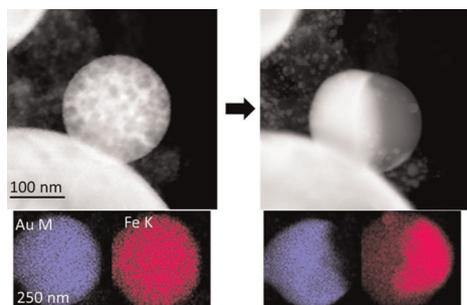


Carbon quantum dots (CQDs)-modified polymers: a review of non-optical applications

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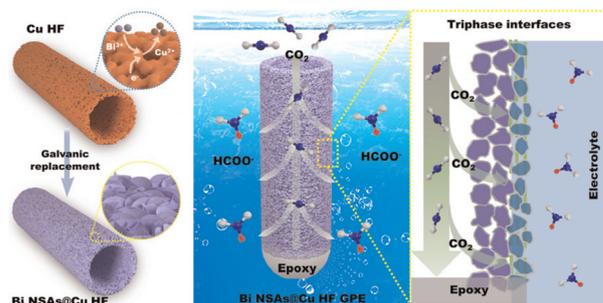


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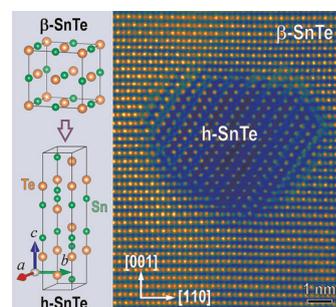
Zhe Meng, Fang Wang, Zhengguo Zhang and Shixiong Min*



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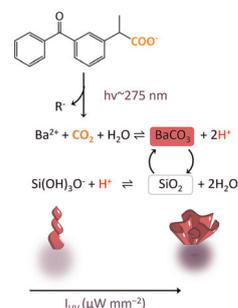
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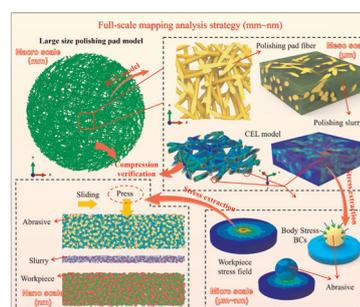


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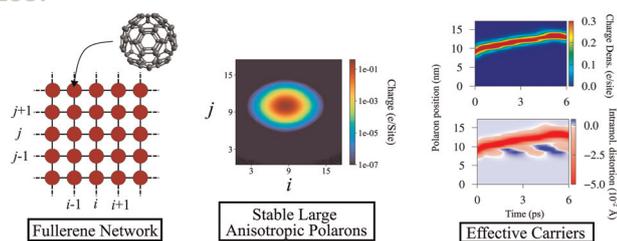
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Atomic surface achieved through a novel cross-scale model from macroscale to nanoscale

Feng Zhao, Zhenyu Zhang,* Xingqiao Deng, Junyuan Feng, Hongxiu Zhou, Zhensong Liu, Fanning Meng and Chunjing Shi



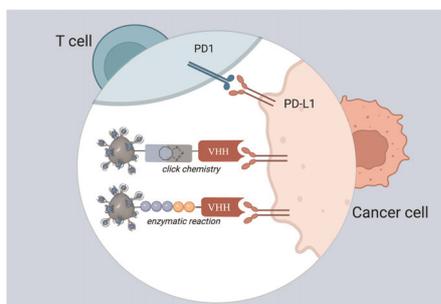
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Large polarons in two-dimensional fullerene networks: the crucial role of anisotropy in charge transport

T. S. A. Cassiano, M. L. Pereira, Junior, G. M. e Silva, P. H. de Oliveira Neto and L. A. Ribeiro, Junior*

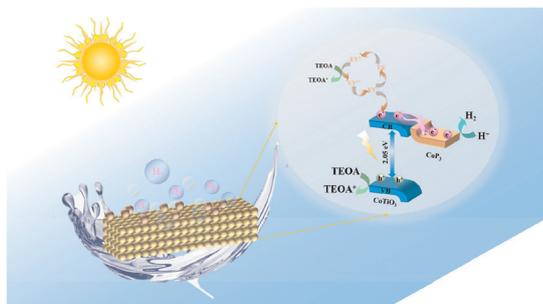
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AGuIX nanoparticle-nanobody bioconjugates to target immune checkpoint receptors

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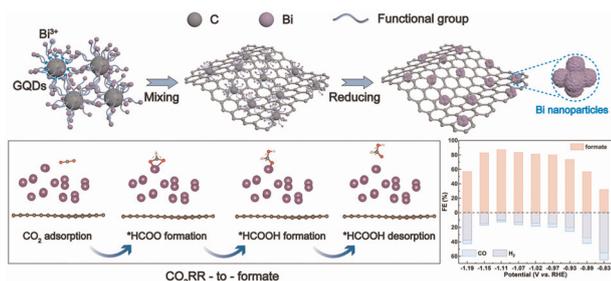
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Self-induced electron attraction center formation with pyrophosphorylation strategy for photocatalytic hydrogen evolution

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Graphene quantum dot-mediated anchoring of highly dispersed bismuth nanoparticles on porous graphene for enhanced electrocatalytic CO₂ reduction to formate

Yi Cheng, Ruizhe Yang, Lu Xia, Xiaoli Zhao,* Yuwei Tan, Ming Sun, Suming Li, Fei Li* and Ming Huang*

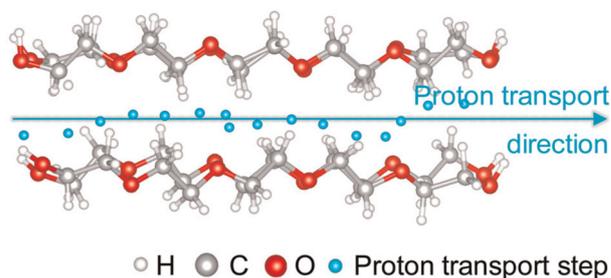


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Fast proton transport enables the magnetic relaxation response of graphene quantum dots for monitoring the oxidative environment *in vivo*

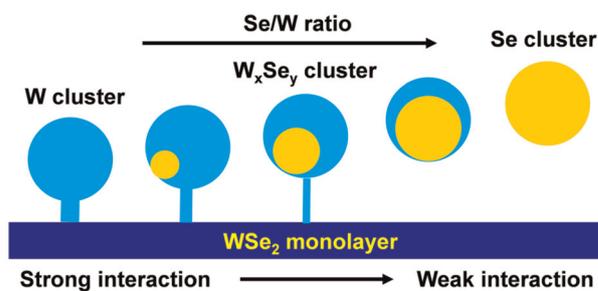
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Atomic insight into the effects of precursor clusters on monolayer WSe₂

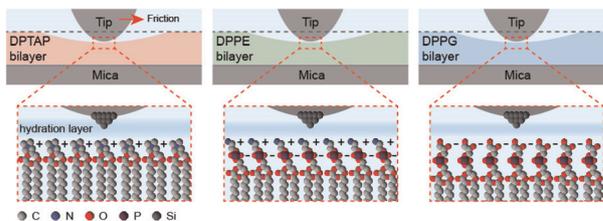
Yanxue Zhang, Yuan Chang, Luneng Zhao, Hongsheng Liu* and Junfeng Gao



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Insight into the hydration friction of lipid bilayers

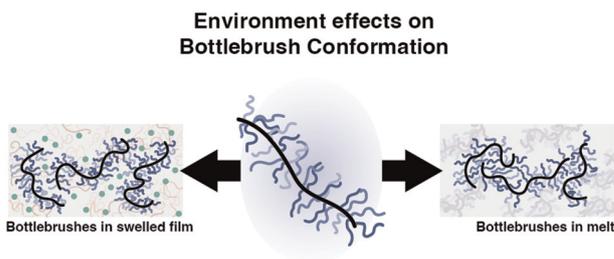
Xiaoxue Qin, Mingdong Dong* and Qiang Li*



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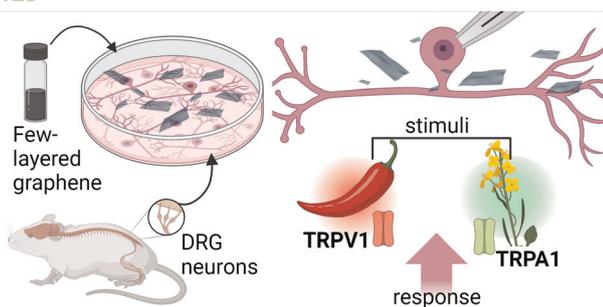
Investigating the effects of the local environment on bottlebrush conformations using super-resolution microscopy

Jonathan M. Chan, Avram C. Kordon and Muzhou Wang*



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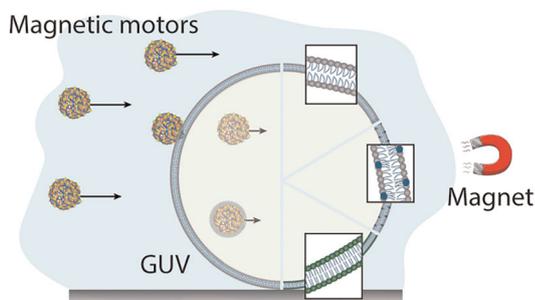
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Few-layered graphene increases the response of nociceptive neurons to irritant stimuli

Lieselot Deleye, Francesca Franchi, Martina Trevisani, Fabrizio Loiacono, Silvia Vercellino, Doriana Debellis, Nara Liessi, Andrea Armirotti, Ester Vázquez, Pierluigi Valente,* Valentina Castagnola* and Fabio Benfenati*

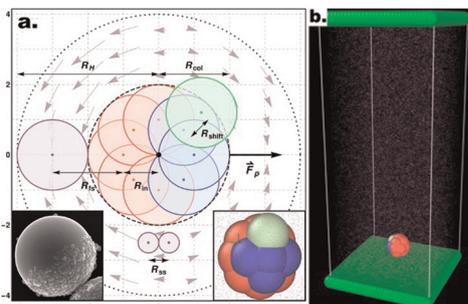
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Magnetic micromotors crossing lipid membranes

Miguel A. Ramos Docampo, Ondrej Hovorka and Brigitte Städler*

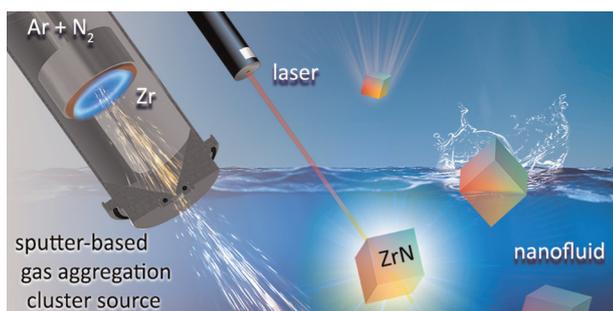
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Minimal numerical ingredients describe chemical microswimmers' 3-D motion

Maximilian R. Bailey, C. Miguel Barriuso Gutiérrez, José Martín-Roca, Vincent Niggel, Virginia Carrasco-Fadanelli, Ivo Buttinoni, Ignacio Pagonabarraga, Lucio Isa and Chantal Valeriani*

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One-step synthesis of photoluminescent nanofluids by direct loading of reactively sputtered cubic ZrN nanoparticles into organic liquids

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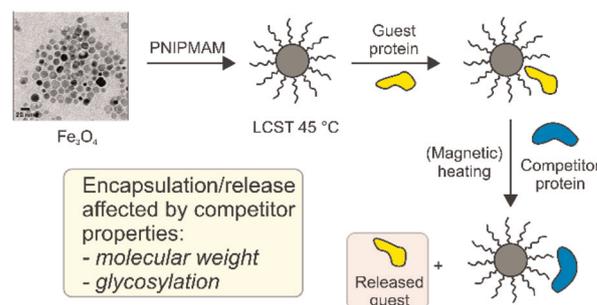


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Functional magnetic nanoparticles for protein delivery applications: understanding protein–nanoparticle interactions

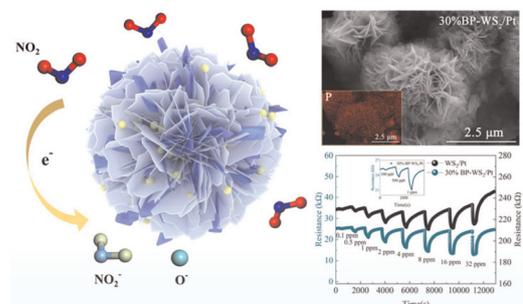
Rajat Sharma, Daniel Ungar, Edward Dyson, Stephen Rimmer and Victor Chechik*



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Pt and black phosphorus co-modified flower-like WS₂ composites for fast NO₂ gas detection at low temperature

Xiaoyang Duan, Dan Xu,* Wenjun Jia, Bohao Sun, Ran Li, Ruitian Yan and Wenjie Zhao*



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Cellular uptake and fate of cationic polymer-coated nanodiamonds delivering siRNA: a mechanistic study

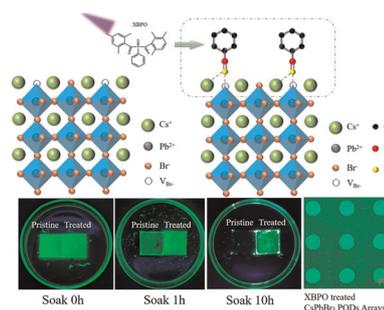
Jan Majer, Marek Kindermann, Dominik Pinkas, David Chvatil, Petr Cigler* and Lenka Libusova*



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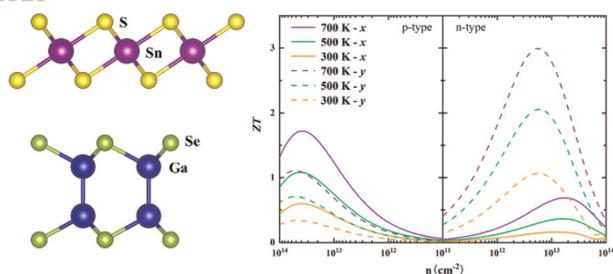
Direct *in situ* photolithography of ultra-stable CsPbBr₃ quantum dot arrays based on crosslinking polymerization

Yanli Wan, Yixing Zhao, Yaling Li, Zhenwei Zhang, Sen Li, Tingfang Tian* and Li Wang*



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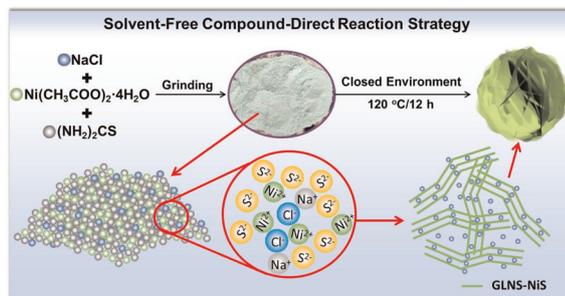
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A van der Waals p–n heterostructure of GaSe/SnS₂: a high thermoelectric figure of merit and strong anisotropy

Zhiyuan Xu, Qiong Xia, Long Zhang and Guoying Gao*

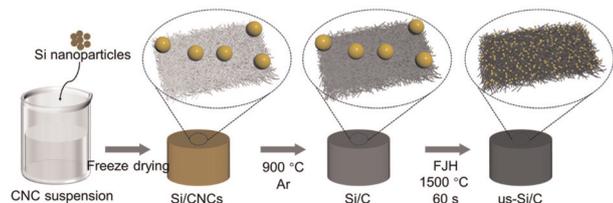
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Innovative solvent-free compound-direct synthesis of defect-rich ultra-thin NiS nanosheets for high-performance supercapacitors

Wutao Wei, Zijie Guo, Xuyan Qin and Liwei Mi*

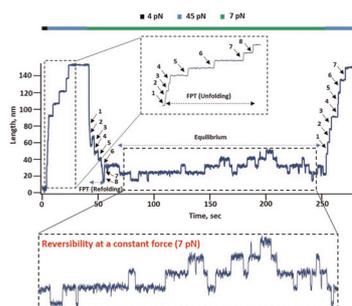
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Rapid, *in situ* synthesis of ultra-small silicon particles for boosted lithium storage capability through ultrafast Joule heating

Shigang Liu, Bowen Liu, Ming Liu, Junjie Xiong, Yang Gao,* Bin Wang* and Yingcheng Hu*

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Structurally different chemical chaperones show similar mechanical roles with independent molecular mechanisms

Deep Chaudhuri, Debojyoti Chowdhury, Soham Chakraborty, Madhu Bhatt, Rudranil Chowdhury, Aakashdeep Dutta, Ayush Mistry and Shubhasis Haldar*

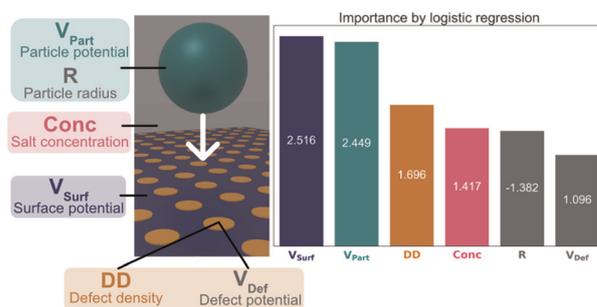


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The multivariate interaction between Au and TiO₂ colloids: the role of surface potential, concentration, and defects

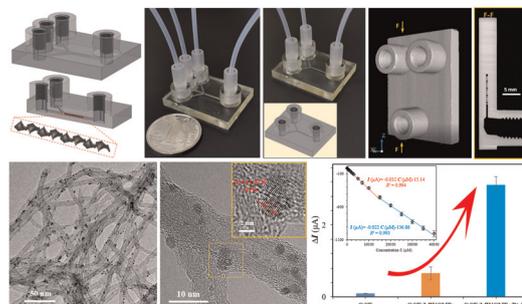
Kinran Lau, Brian Giera, Stephan Barcikowski* and Sven Reichenberger*



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Continuous production of bimetallic nanoparticles on carbon nanotubes based on 3D-printed microfluidics

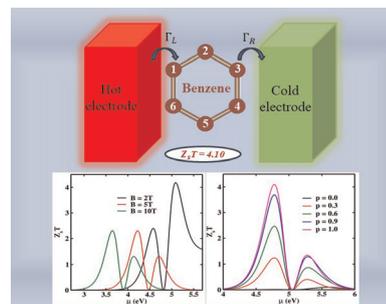
Bo Liu, Jing Jin,* Bin Ran, Chaozhan Chen, Jiaqian Li, Ning Qin and Yonggang Zhu*



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Charge and spin thermoelectric transport in benzene-based molecular nano-junctions: a quantum many-body study

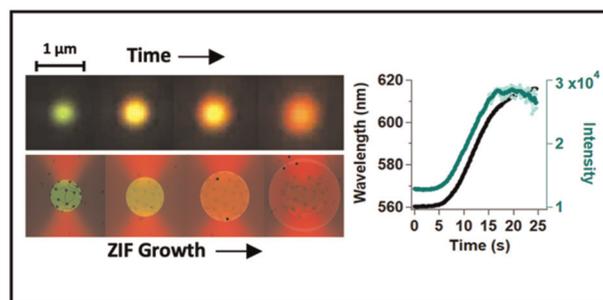
Parbati Senapati and Prakash Parida*



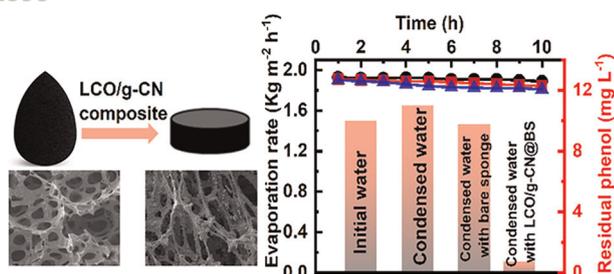
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Tunable growth of a single high-density ZIF nanoshell on a gold nanoparticle isolated in an optical trap

Daniel Jackson, Maitreya Rose and Maria Kamenetska*



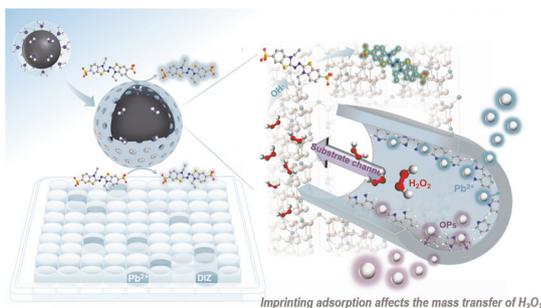
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Super-hydrophilic $\text{LaCoO}_3/\text{g-C}_3\text{N}_4$ nanocomposite coated beauty sponge for solar-driven seawater desalination with simultaneous volatile organic compound removal

Lokesh Kumar Rathore, Parul Garg, Piyush Kumar and Ashok Bera*

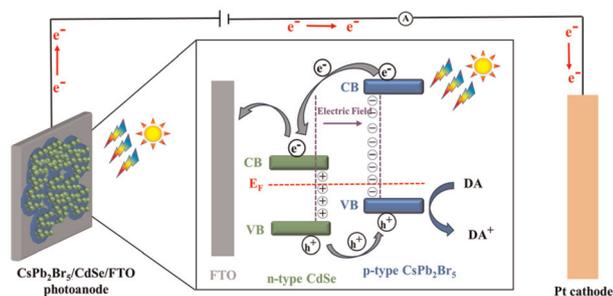
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Multifunctional molecularly imprinted nanozymes with improved enrichment and specificity for organic and inorganic trace compounds

Zhanyi Ge, Yilin Zhao,* Jiayi Li, Zhaobo Si, Wenbo Du and Haijia Su*

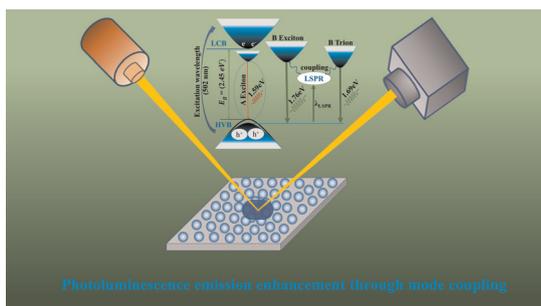
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Water-stable perovskite $\text{CsPb}_2\text{Br}_5/\text{CdSe}$ quantum dot-based photoelectrochemical sensors for the sensitive determination of dopamine

Gang Zhao, Xinhang Sun, Songyan Li, Jiale Zheng, Junhui Liu* and Mingju Huang*

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On the unique temperature-dependent interplay of a B-exciton and its trion in monolayer MoSe_2

Durgesh Banswar, Renu Raman Sahu, Rupali Srivatsava, Md. Samim Hassan, Sahil Singh, Sameer Sapra, Tapajyoti Das Gupta, Ankur Goswami and Krishna Balasubramanian*

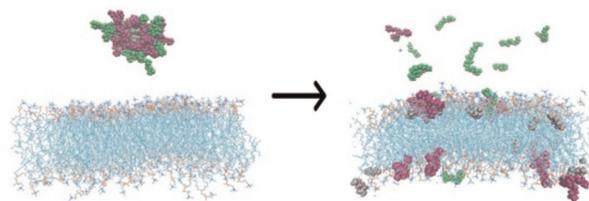


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Digestion of lipid micelles leads to increased membrane permeability

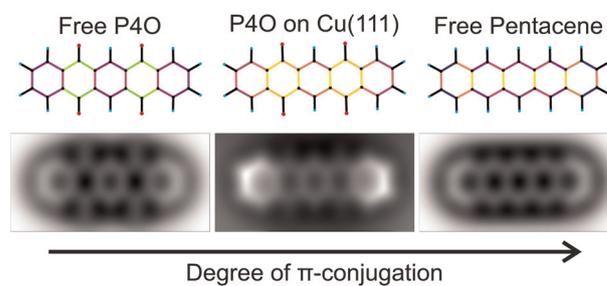
Jun Xie, Demi L. Pink, M. Jayne Lawrence and Christian D. Lorenz*



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Partial restoration of aromaticity of pentacene-5,7,12,14-tetrone on Cu(111)

Lorenz Brill, Jonas Brandhoff, Marco Gruenewald, Fabio Calcinelli, Oliver T. Hofmann,* Roman Forker and Torsten Fritz*



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X-ray-triggered through-space charge transfer and photochromism in silver nanoclusters

Zhen Ren, Jun-Jun Sun, Long Xu, Peng Luo, Zi-Wei Ma, Si Li, Yu-Bing Si, Xi-Yan Dong* and Fangfang Pan*

