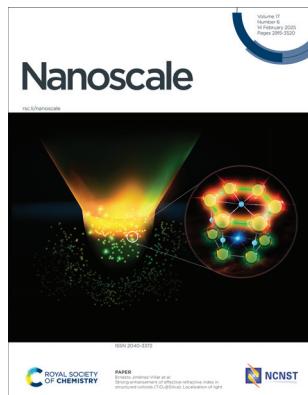


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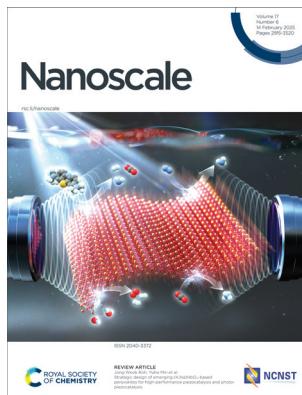
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Cover

See Ernesto Jiménez-Villar et al., pp. 3061–3070.

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See Jong Wook Roh, Yuho Min et al., pp. 2931–2960.

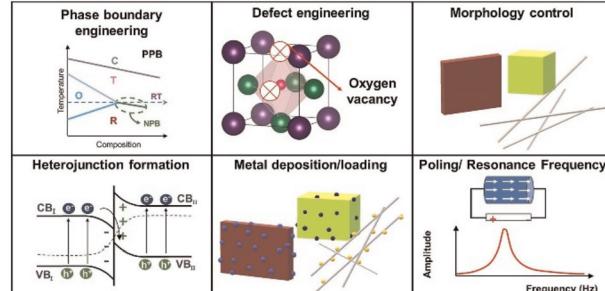
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REVIEWS

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Strategic design of emerging (K,Na)NbO₃-based perovskites for high-performance piezocatalysis and photo-piezocatalysis

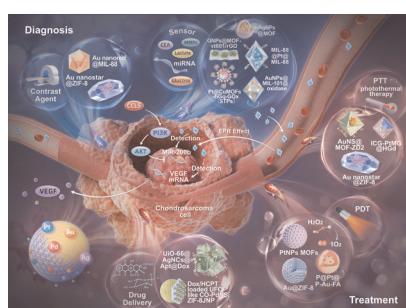
Seonhwa Park, Hui Yong Jeong, Seokhwan Kim, Mahesh Peddigari, Geon-Tae Hwang, Geon Dae Moon, Jong Wook Roh* and Yuho Min*



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A promising role of noble metal NPs@MOFs in chondrosarcoma management

Ziheng Huang, Keyue Tian, Yiyuan Xue and Feng Luo*



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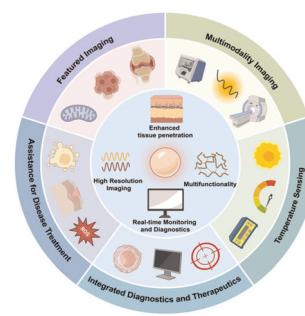


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NIR-II upconversion nanomaterials for biomedical applications

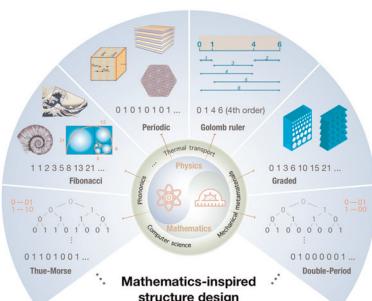
Ranran Luo, Chenxi Zhang, Zening Zhang, Pengchen Ren, Zhongsheng Xu* and Yun Liu*



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Mathematically inspired structure design in nanoscale thermal transport

Xin Wu* and Masahiro Nomura*

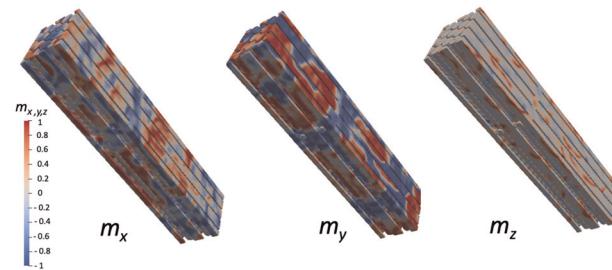


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Magnetoelastic anisotropy drives localized magnetization reversal in 3D nanowire networks

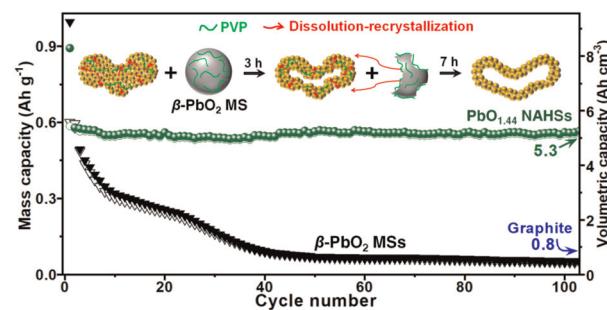
Laura G. Vivas,* Alejandra Ruiz-Clavijo, Olga Caballero-Calero, David Navas, Amanda A. Ordoñez-Cencerrado, Cristina V. Manzano, Ruy Sanz and Marisol Martín-González*



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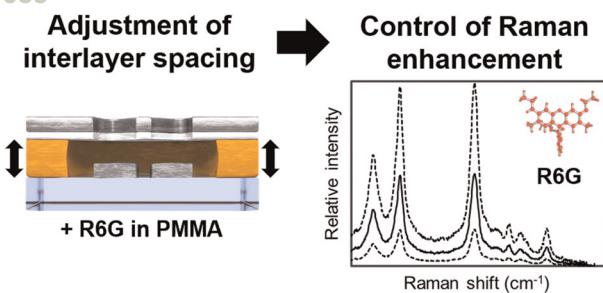
Nanoparticle-assembled interconnected $\text{PbO}_{1.44}$ hollow spheres enabled by PVP-driven transformation of $\beta\text{-PbO}_2$ and self-sacrificial templating for superior lithium storage

Xiaoxu Bo,* Jiatong Zhang, Qian Zhang, Ruijie Wu, Sheng Wang, Shiqiang Zhao* and Shun Wang*



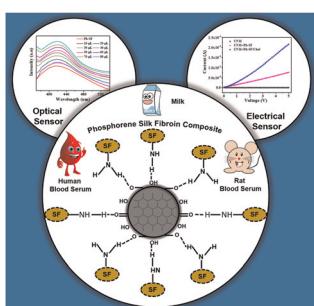
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**Controlling Raman enhancement in particle-aperture hybrid nanostructures by interlayer spacing**

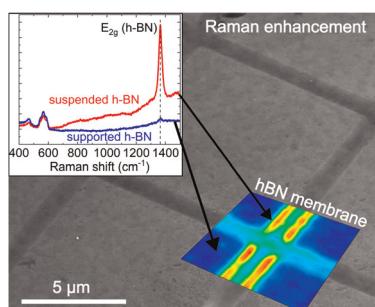
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Nasrin Sultana, Shreyash Vijay Andagonde, Ratul Chakraborty, Asis Bala and Neelotpal Sen Sarma*

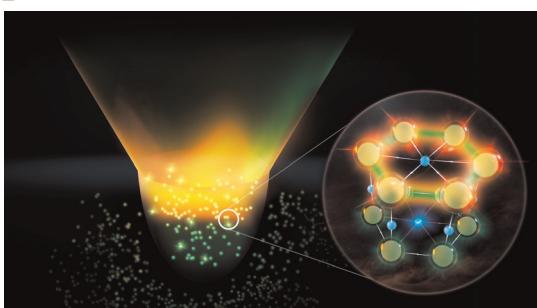
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**Polarisation-dependent Raman enhancement in hexagonal boron nitride membranes**

Jakub Rogoża, Johannes Binder,* Kirill V. Voronin, Iris Niehues, Katarzyna Ludwiczak, Aleksandra K. Dąbrowska, Mateusz Tokarczyk, Rafał Bożek, Alexey Y. Nikitin, Rainer Hillenbrand, Roman Stępniewski and Andrzej Wysmołek

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**Strong enhancement of effective refractive index in structured colloids (TiO₂@Silica): Localization of light**

Jessica Dipold, Niklaus U. Wetter, Francisco C. Marques, Aristide Dogariu and Ernesto Jiménez-Villar*

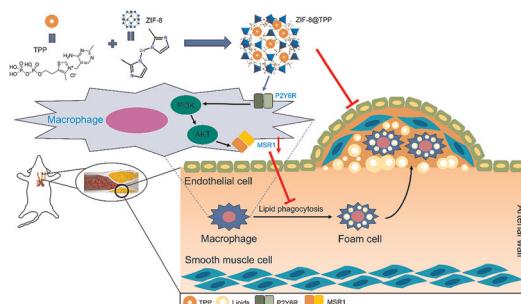


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Metal–organic framework-based nanoplatforms for synergistic anti-atherosclerosis therapy by regulating the PI3K/AKT/MSR1 pathway in macrophages

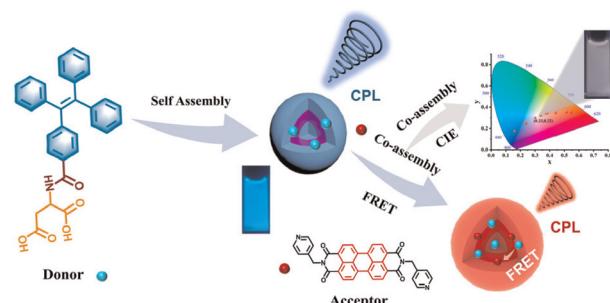
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White circularly polarized luminescence from a dual-component emitter induced by FRET between tetraphenylenes and PDI derivatives

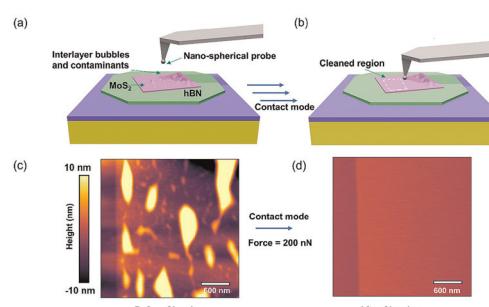
Huanhuan Dong, Huajing Li, Enquan Tian, Yijun Zhang, Jian Kong and Yuangang Li*



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Nano-spherical tip-based smoothing with minimal damage for 2D van der Waals heterostructures

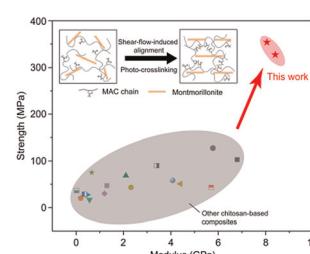
Xiaolei Ding, Boshi Qiao, Paul C. Uzoma, Muhammad Abid Anwar, Yuxuan Chen, Lansheng Zhang, Yang Xu* and Huan Hu*



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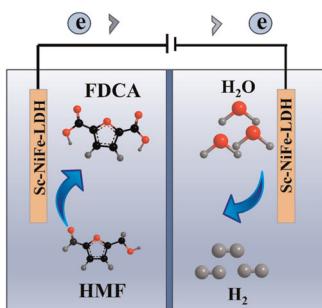
High strength chitosan-based nanocomposites with aligned nanosheets and crosslinked networks

Xiaodong Yu, Jihao Fan, Shengquan Zheng, Linlin Ma, Xiaojing Liu, Yue Wu, Chuangqi Zhao* and Lei Jiang



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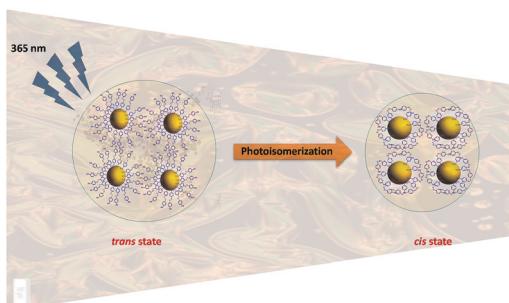
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Construction of an Sc-NiFe-LDH electrocatalyst for highly efficient electrooxidation of 5-hydroxymethylfurfural at industrial current density

Yufeng Wu, Zhiyan Hou and Changlong Wang*

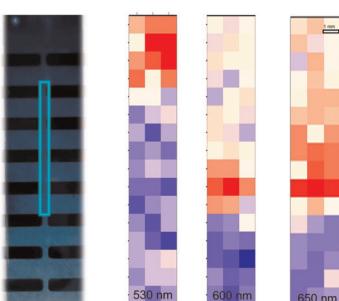
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Tuning the optical properties of gold nanoparticles via photoactive liquid crystalline azo ligands

Sachin Ashok Bhat,* Shankar Rao, Subbarao Krishna Prasad and Channabasaveshwar Yelamaggad*

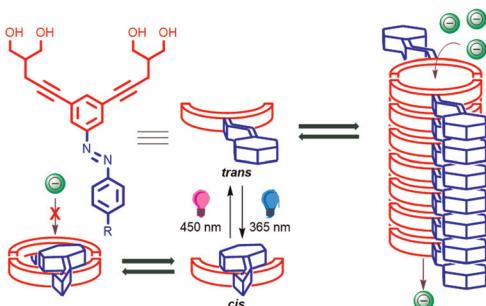
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Film thickness dependence of nanoscale arrangement of a chiral electron donor in its blends with an achiral electron acceptor

Giulia Pancotti, C. Elizabeth Killalea, Thomas W. Rees, Letizia Liirò-Peluso, Sergi Riera-Galindo, Peter H. Beton, Mariano Campoy-Quiles, Giuliano Siligardi and David B. Amabilino*

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Dynamic regulation of ion transport through a bis(1,3-propanediol)-based channel via allosteric azobenzene photoswitching

Manzoor Ahmad, Susmita Sarkar, Ravindra Bhogade, Abhishek Mondal, Debasish Mondal, Jagannath Mondal and Pinaki Talukdar*

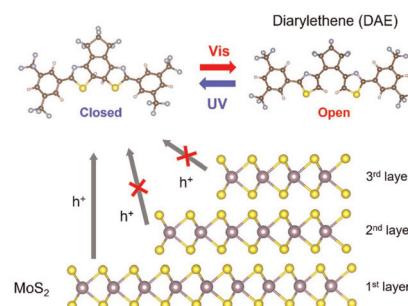


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Layer-number-dependent photoswitchability in 2D MoS₂-diarylethene hybrids

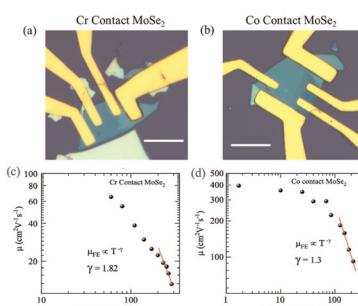
Sewon Park, Jaehoon Ji, Srajan Pillai, Henry Fischer, Jean Rouillon, Carlos Benitez-Martin, Joakim Andréasson, Jeong Ho You and Jong Hyun Choi*



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Percolative phase transition in few-layered MoSe₂ field-effect transistors using Co and Cr contacts

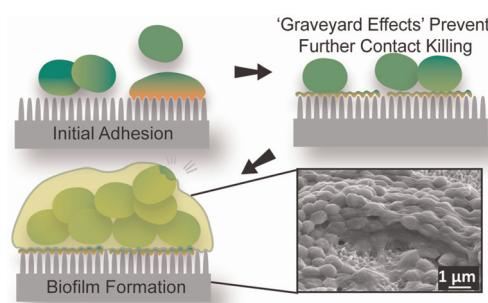
Roshan Padhan, Carlos Garcia, Ralu Divan, Anirudha V. Sumant, Daniel Rosenmann, Sujit A. Kadam, Akshay Wali, Suzanne Miller, Stephen A. McGill* and Nihar R. Pradhan*



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Graveyard effects of antimicrobial nanostructured titanium over prolonged exposure to drug resistant bacteria and fungi

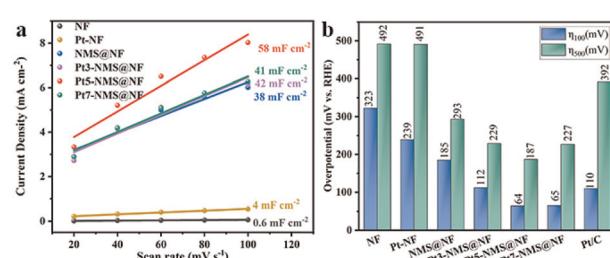
Louisa Z. Y. Huang, Rowan Penman, Rashad Kariuki, Pierre H. A. Vaillant, Soroosh Gharehgozlo, Z. L. Shaw, Vi Khanh Truong, Jitraporn Vongsivut, Aaron Elbourne* and Rachel A. Caruso*



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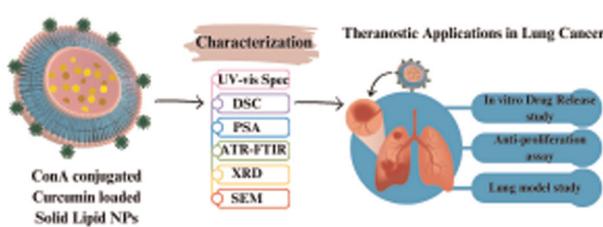
An efficient hydrogen evolution catalyst constructed using Pt-modified Ni₃S₂/MoS₂ with optimized kinetics across the full pH range

Maoyuan Li, Zhongrui Yu, Zulin Sun, Yuchen Liu, Simiao Sha, Jiancheng Li, Riyue Ge, Liming Dai, Bin Liu,*, Qingqiao Fu* and Wenxian Li*



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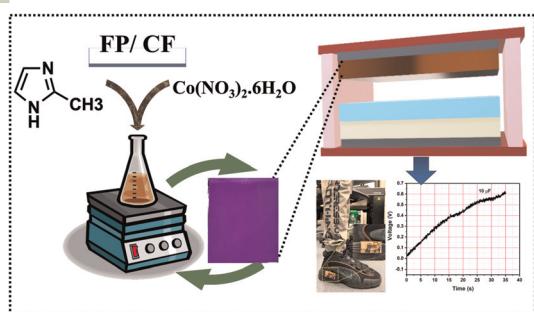
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Fabrication and characterization of ConA-conjugated curcumin-loaded solid lipid nanoparticles for theranostic applications in lung cancer treatment

Vinit Nikwade, Nisha Choudhary, Raghu Solanki, Ashish Patel,* Virendra Kumar Yadav,* Saleh H. Salmen, Abdullah A. Alarfaj, Mohammad Javed Ansari and Vivekanand Chatap*

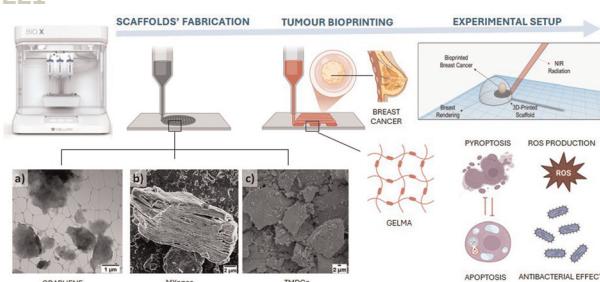
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Growth of the metal–organic framework ZIF-67 on cellulosic substrates for triboelectric nanogenerators

Gaurav Khandelwal,* Dina Anna John, Venkateswaran Vivekananthan, Nikolaj Gadegaard, Daniel M. Mulvihill* and Sang-Jae Kim*

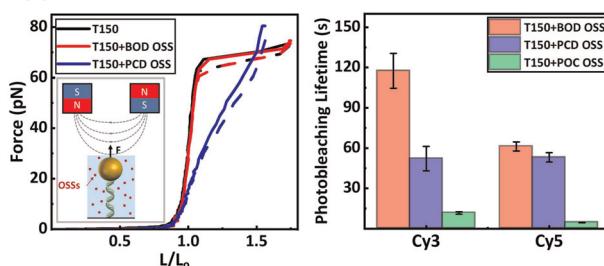
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Impact of different 2D materials on the efficacy of photothermal and photodynamic therapy in 3D-bioprinted breast cancer

Giordano Perini, Antonio Minopoli, Dario Zambrano, Lishan Cui, Valeria Ferrara, Caterina Perfili, Giulia Artemi, Marco De Spirito, Valentina Palmieri,* Andreas Rosenkranz and Massimiliano Papi*

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An oxygen-scavenging system without impact on DNA mechanical properties in single-molecule fluorescence experiments

Shang Gao, Jialun Liang, Chuang Tan* and Jie Ma*

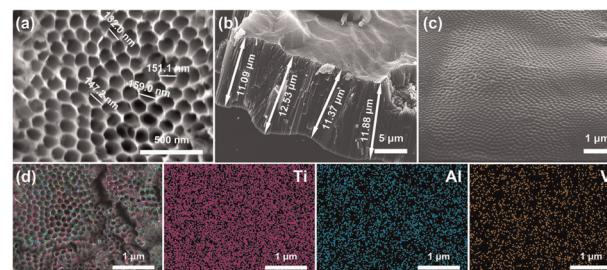


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***In situ* synthesis of an Al and V co-doped TiO₂ NTA interlayer-enhanced PbO₂ composite for efficient zinc electrowinning**

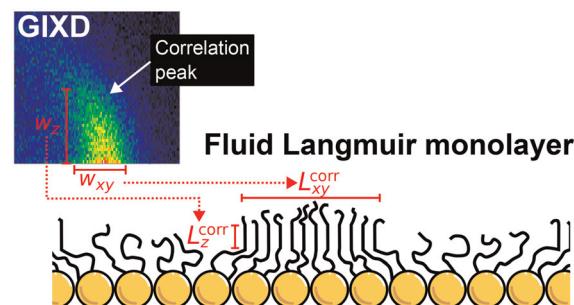
Shengyou Su, Xuanbing Wang, Linjing Yang, Tianyang Liu, Junli Wang* and Ruidong Xu*



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Grazing-incidence X-ray diffraction elucidates structural correlations in fluid monolayers of lipids and surfactants

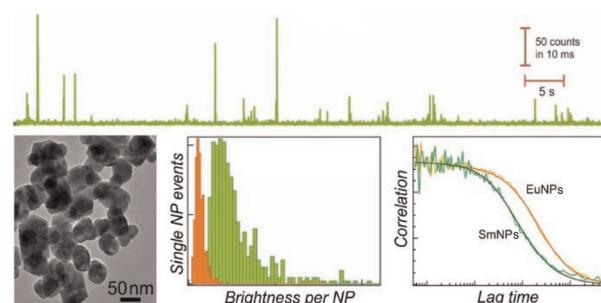
Joshua Reed, Miriam Grava, Chen Shen, Gerald Brezesinski and Emanuel Schneck*



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Watching lanthanide nanoparticles one at a time: characterization of their photoluminescence dynamics at the single nanoparticle level

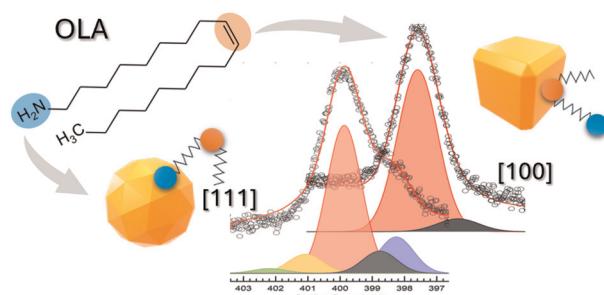
Malavika Kayyil Veedu, Gemma Lavilley, Mohamadou Sy, Joan Goetz, Loïc J. Charbonnière and Jérôme Wenger*



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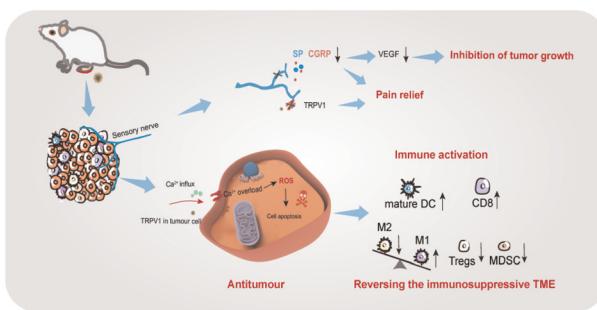
Versatile role of oleylamine in the controlled synthesis of copper nanoparticles with diverse morphologies

Sonia Hadaoui, Giang Tran, Ahmed Naitabdi* and Alexa Courty*



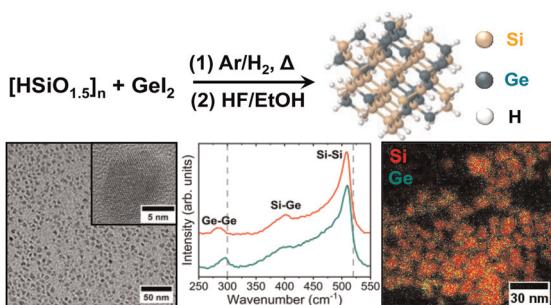
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**Capsaicin-induced Ca^{2+} overload and ablation of TRPV1-expressing axonal terminals for comfortable tumor immunotherapy**

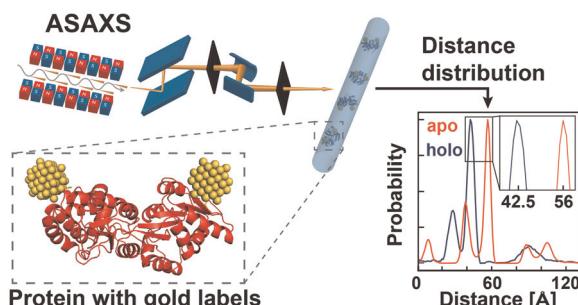
Jian Sun, Deqiang Wang, Yiyi Wei, Danyang Wang, Zhengkun Ji, Wanru Sun, Xin Wang, Pingyu Wang, Nicola Paccione Basmadji, Eider Larrarte, José Luis Pedraz, Murugan Ramalingam,* Shuyang Xie* and Ranran Wang*

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**Solid-state synthesis of $\text{Si}_{1-x}\text{Ge}_x$ nanoalloys with composition-tunable energy gaps and visible to near infrared optical properties**

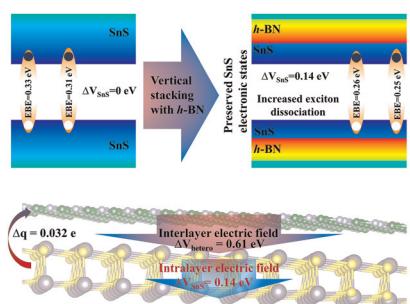
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**Enhancing the optoelectronic properties of SnS via mixed-phase heterostructure engineering**

Dhanjiti Talukdar,* Dambarudhar Mohanta and Gazi A. Ahmed

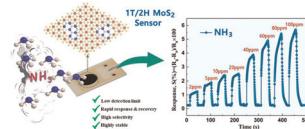


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Harnessing mixed-phase MoS₂ for efficient room-temperature ammonia sensing

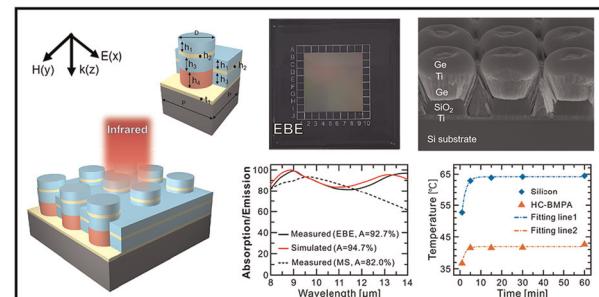
M. A. Jalil, Kamrul Hassan, Anh Tuan Trong Tran, Tran Thanh Tung, Manas Ranjan Panda, Sally El Meragawi, Tetsuya Kida, Mainak Majumder and Dusan Losic*



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Long-wavelength infrared metamaterial absorber with polarization and angle insensitivity using compact hybrid cylindrical structures

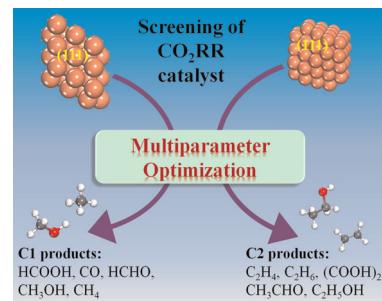
Wenqian Zhang, Youxin Chen,* Jiang Wei, Yan Miao, Qingkang Wang and Kaiyu Wu



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Size-, shape-, facet- and support-dependent selectivity of Cu nanoparticles in CO₂ reduction through multiparameter optimization

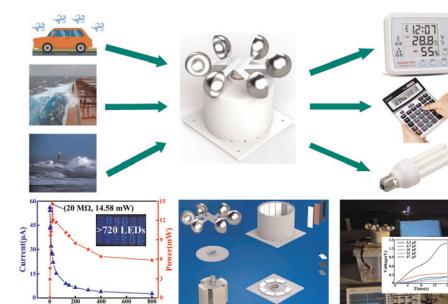
Anjana Tripathi and Ranjit Thapa*



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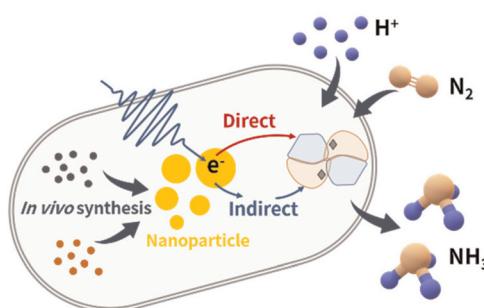
A roller-type triboelectric nanogenerator based on rotational friction between wool and stacked interfaces for omnidirectional wind energy harvesting

Xiaonan Su, Yuxiang Su,* Hongjun Yan,* Xinyao Zhang, Guanyu Dai, Xin Dong, Jinlin Wu, Xizeng Zhao, Keyang Zhao and Zhenhua Li*



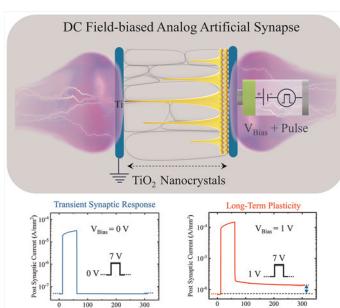
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**In vivo synthesis of semiconductor nanoparticles in *Azotobacter vinelandii* for light-driven ammonia production**

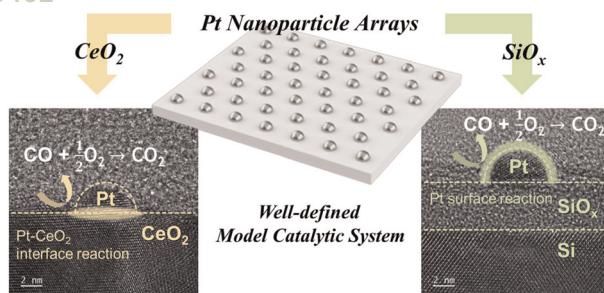
Gui-Min Kim, Yoojin Choi, Kyeong Rok Choi, Ilsong Lee, Jayeong Kim, Byunghyun Lee, Sang Yup Lee* and Doh C. Lee*

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**DC field-biased multibit/analog artificial synapse featuring an additional degree of freedom for performance tuning**

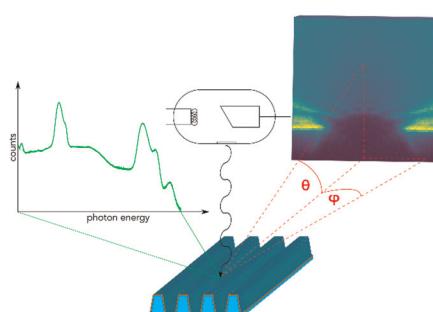
Milad Jabri and Faramarz Hosseini-Babaei*

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**Monodisperse Pt nanoparticle arrays via block copolymer nanopatterning and their reaction kinetics on CO oxidation**

Geon Gug Yang, Hyeong Min Jin, Minsu Park, Minha Kim, Dong-Wook Shin, Sang Ouk Kim,* WooChul Jung* and Siwon Lee*

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**Investigation of Ti nanostructures via laboratory scanning-free GEXRF**

Steffen Staech,* Jonas Baumann, Philipp Hönicke, Nils Wauschkuhn, Ferdinand Spikermann, Daniel Grötzsch, Holger Stiel and Birgit Kanngießer

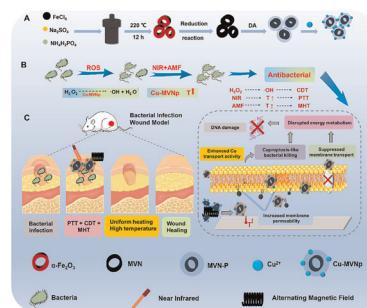


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Copper doped magnetic vortex nanoring based nanotherapeutics for bacterial infection tri-therapy: interplay of magnetic hyperthermia, chemodynamic therapy and photothermal therapy

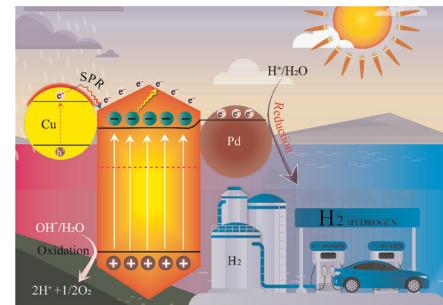
Jing Wang,* Wenqian Zhao,* Hui Tu, Xiangyang Zu, Jinghua Li, Kun Lei, Jing Li, Yuchuan Zhuang, Yanbo Dong, Andrey Tulupov, Fengshou Zhang* and Jianfeng Bao*



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Unveiling the potential of Cu–Pd/CdS catalysts to supply and rectify electron transfer for H₂ generation from water splitting

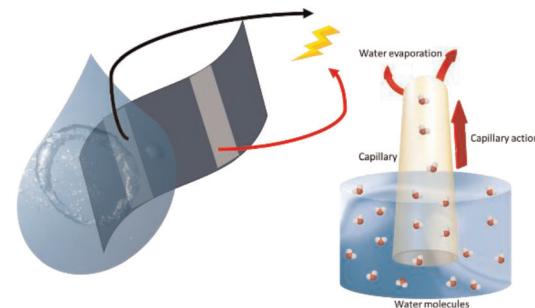
Ejaz Hussain,* Mamoonah Idrees, Muhammad Jalil, Muhammad Zeeshan Abid, Khalid Aljohani and Khezina Rafiq*



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Can structure influence hydrovoltaic energy generation? Insights from the metallic 1T' and semiconducting 2H phases of MoS₂

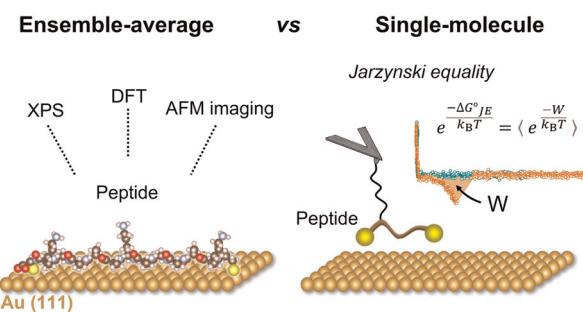
Kaushik Suvigya, Saini Lalita, Siva Nemala Sankar, Andrea Capasso, Li-Hsien Yeh and Kalon Gopinadhan*



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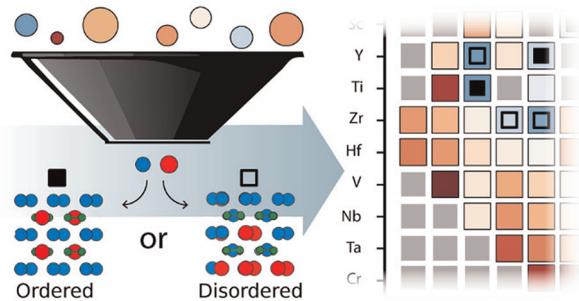
Binding mechanism of oligopeptides on solid surface: assessing the significance of single-molecule approach

Joanne Lé-Chesnais, Marie Steffenhagen, Christophe Méthivier, Dominique Costa, Daniela Rodriguez, Jean-François Lambert,* Emmanuel Maisonhaute* and Jessem Landoulsi*



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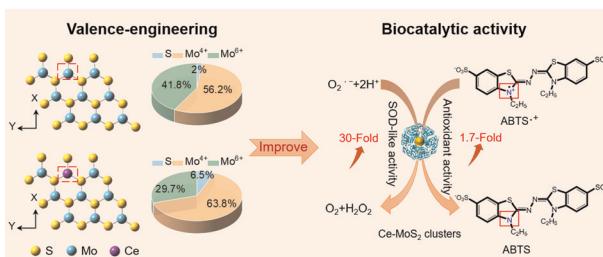
3478



Computational exploration of M-sites with chemical order and disorder in $M'_2M''B_2$ and $M'_4M''B_3$ compounds

Adam Carlsson, Rodrigo Mantovani Ronchi, Johanna Rosen and Martin Dahlqvist*

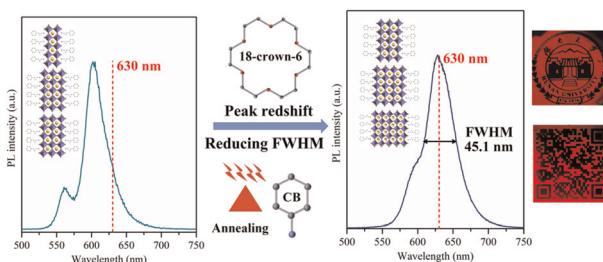
3487



Valence-engineering modulation of MoS_2 clusters for enhancing biocatalytic activity

Xiaoyan Xue, Meili Guo,* Hao Zhang, Qingshan Liu, Xuyan Li, Xin Sun, Xiaoyu Mu* and Xiao-Dong Zhang*

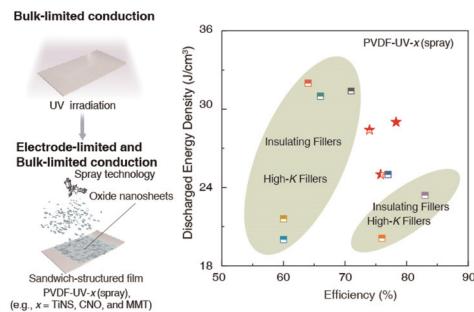
3498



Pure red emission with spectral stability in full iodine-based quasi-2D perovskite films by controlling phase distribution

Zhiqiang Ming, Siyao Li, Xinyi Luo, Siman Liu, Danliang Zhang, Xiaoli Zhu, Anlian Pan and Xiao Wang*

3507



Interface engineering of 2D dielectric nanosheets for boosting energy storage performance of polyvinylidene fluoride-based nanocomposites with high charge-discharge efficiency

Hexing Liu, Jian Wang, Yunfan Wang, Zhonghui Shen, Xin Zhang and Bao-Wen Li*

