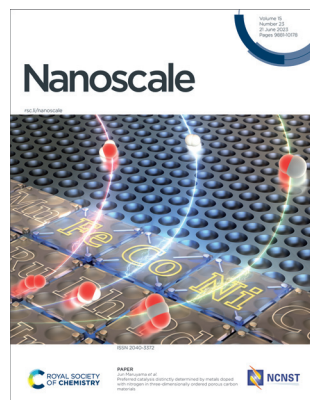


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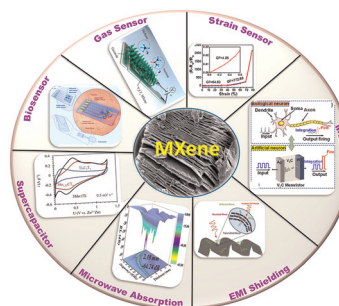
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Recent progress in energy, environment, and electronic applications of MXene nanomaterials

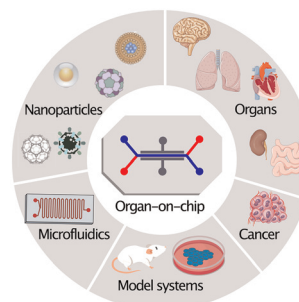
Ruhan E. Ustad, Somnath S. Kundale, Kasturi A. Rokade, Snehal L. Patil, Vijay D. Chavan, Kalyani D. Kadam, Harshada S. Patil, Sarita P. Patil, Rajanish K. Kamat, Deok-kee Kim* and Tukaram D. Dongale*



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Organ-on-chip systems as a model for nanomedicine

Marios Stavrou, Ngan Phung, Jan Grimm and Chrysafis Andreou*



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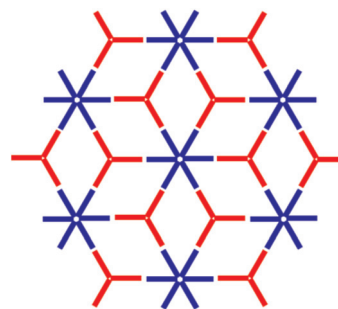


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Surface-assisted self-assembly of 2D, DNA binary crystals

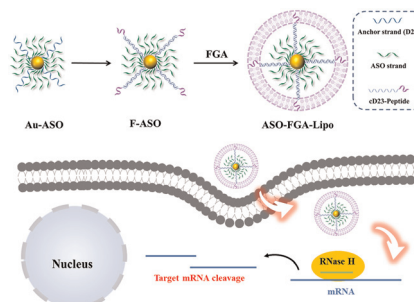
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Wei Yuan, Jiafeng Cheng, Chenyou Zhu, Guizhi Dong, Xiaoping Zhao, Siwen Meng, Dongsheng Liu and Yuanchen Dong*

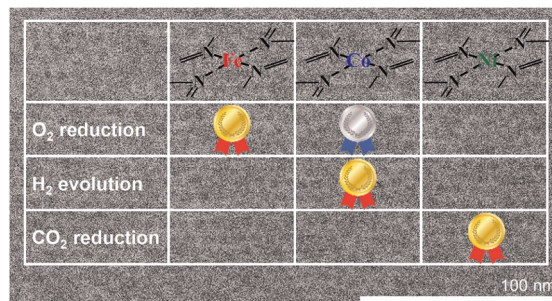


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Preferred catalysis distinctly determined by metals doped with nitrogen in three-dimensionally ordered porous carbon materials

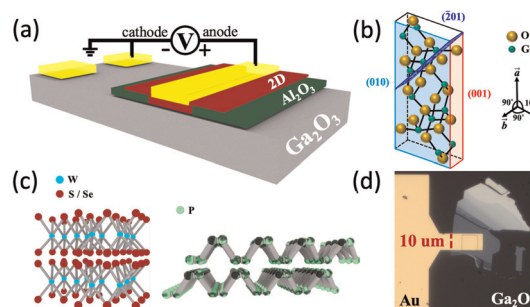
Jun Maruyama,* Hirohumi Sato, Yuko Takao, Shohei Maruyama, Shintaro Kato, Kazuhide Kamiya, Koki Chida, Takeharu Yoshii, Hiroto Nishihara and Fumito Tani



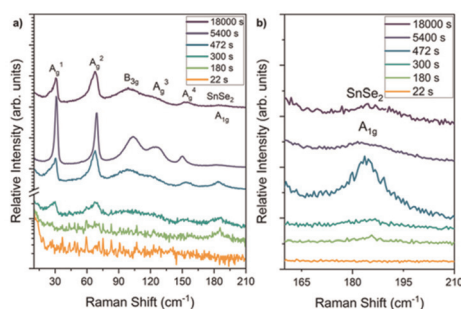
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Vertical van der Waals heterojunction diodes comprising 2D semiconductors on 3D β -Ga₂O₃

Chloe Leblanc, Dinusha Herath Mudiyanse, Seunguk Song, Huairuo Zhang, Albert V. Davydov, Houqiang Fu and Deep Jariwala*



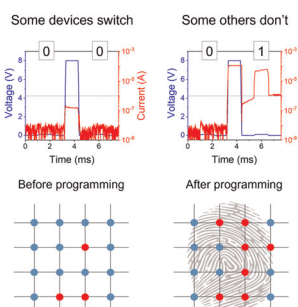
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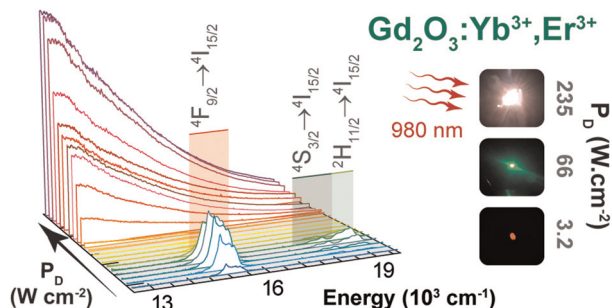
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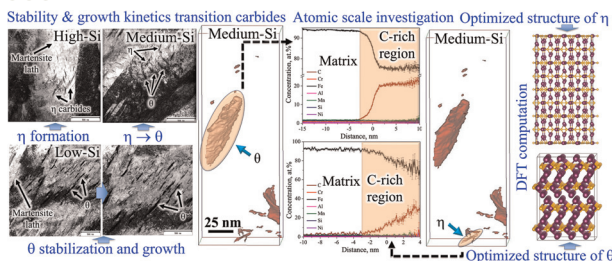
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Exploring the intra-4f and the bright white light upconversion emissions of Gd₂O₃:Yb³⁺,Er³⁺-based materials for thermometry

Talita J. S. Ramos, Ricardo L. Longo,* Carlos D. S. Brites, Rute A. S. Ferreira, Oscar L. Malta and Luís D. Carlos*

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A combined 3D-atomic/nanoscale comprehension and *ab initio* computation of iron carbide structures tailored in Q&P steels via Si alloying

Sumit Ghosh,* Khushboo Rakha, Assa Aravindh Sasikala Devi, Shahriar Reza, Sakari Pallaspuro, Mahesh Somani, Marko Huttula and Jukka Kömi

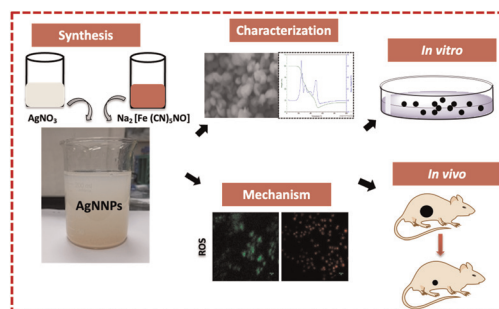


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Silver nitroprusside nanoparticles for breast cancer therapy: *in vitro* and *in vivo* approach

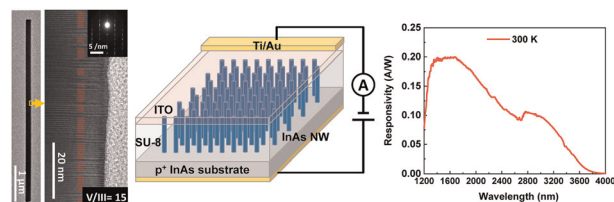
Swapnali Londhe, Shagufta Haque, Sanchita Tripathy, Sreedhar Bojja and Chitta Ranjan Patra*



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InAs nanowire arrays for room-temperature ultra-broadband infrared photodetection

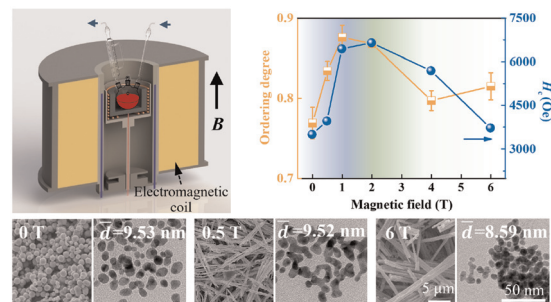
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Regulating the morphology and structures of wet-chemical synthesized $L1_0$ -FePtMn nanoparticles by applying magnetic fields

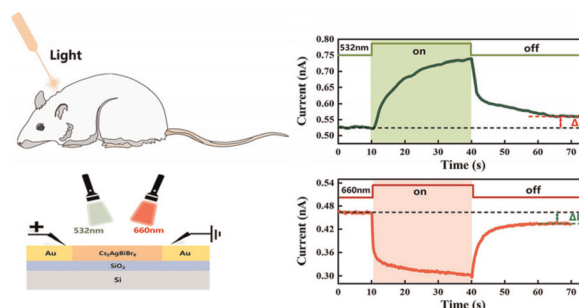
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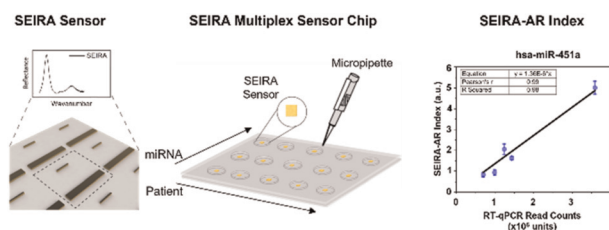
Optogenetics-inspired manipulation of synaptic memory using all-optically controlled memristors

Qihao Sun, Zhecheng Guo, Xiaojian Zhu,* Qian Jiang, Huiyuan Liu, Xuerong Liu, Cui Sun, Yuejun Zhang,* Liu Wu and Run-Wei Li



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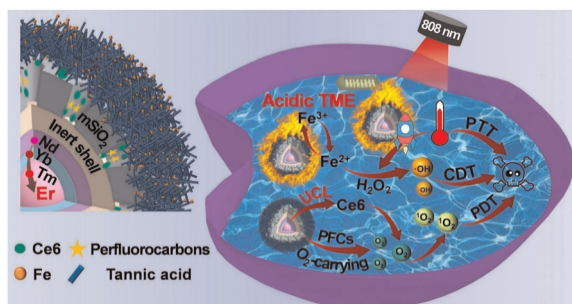
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Label-free detection of MiRNA biomarkers using broadband multi-resonant infrared metasurfaces for early breast cancer diagnosis

Shuyan Zhang, Qing Yang, Steve Wu, Yi Fan Chen, Melissa Hum, Dave Chi Lok Wong, Ern Yu Tan, Ann Siew Gek Lee,* Jinghua Teng,* Dinish U.S.* and Malini Olivo*

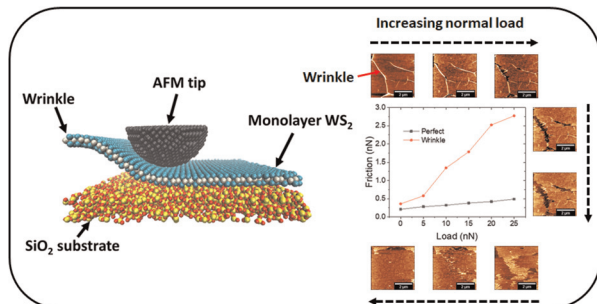
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An engineered cascade-sensitized red-emitting upconversion nanoplatform with a tandem hydrophobic hydration-shell and metal-phenolic network decoration for single 808 nm triggered simultaneous tumor PDT and PTT enhanced CDT

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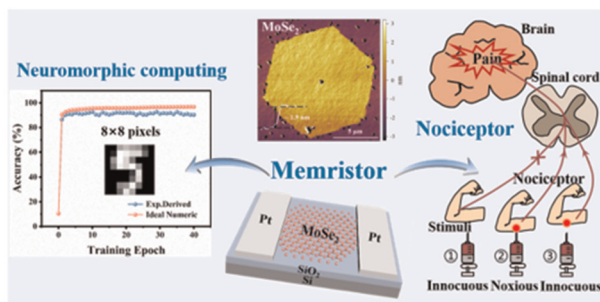
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Nanoscale friction and wear behavior of a CVD-grown aged WS₂ monolayer: the role of wrinkles and surface chemistry

Himanshu Rai, Deepa Thakur, Aayush Gadal, Zhijiang Ye,* Viswanath Balakrishnan* and Nitya Nand Gosvami*

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Memristors based on 2D MoSe₂ nanosheets as artificial synapses and nociceptors for neuromorphic computing

Huan Duan, Dehui Wang, Jingxi Gou, Feng Guo, Wenjing Jie* and Jianhua Hao*

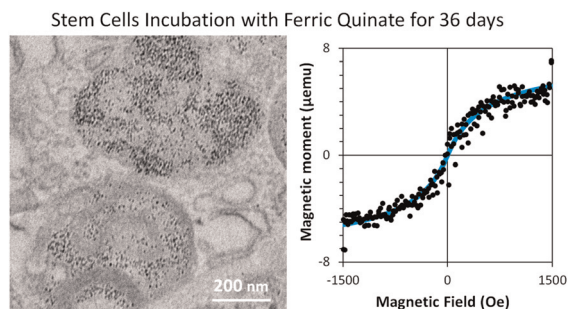


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Biominingalization of magnetic nanoparticles in stem cells

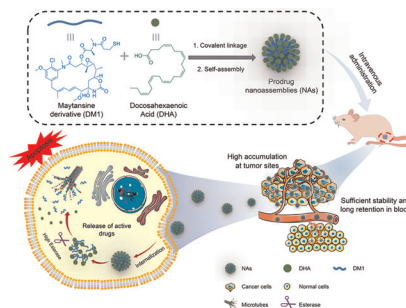
Alexandre Fromain, Aurore Van de Walle, Guilhem Curé, Christine Péchoux, Aida Serrano, Yoann Lalatonne, Ana Espinosa and Claire Wilhelm*



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Transforming a highly toxic agent DM1 into injectable safe nanomedicines via prodrug self-assembly for the treatment of taxane-resistant cancer

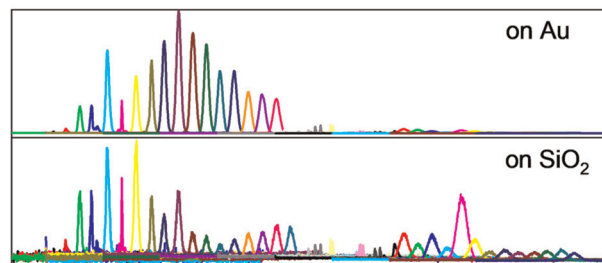
Jiangling Huang, Shanshan Song, Min Wang* and Hangxiang Wang*



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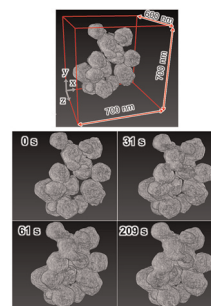
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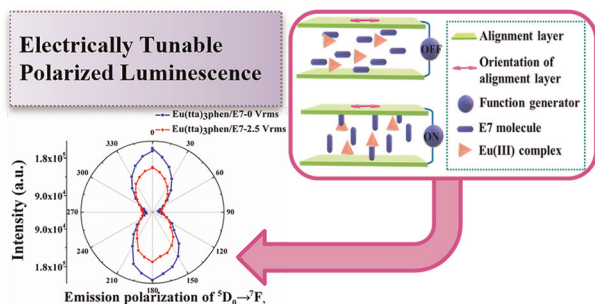
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In situ electron tomography for the thermally activated solid reaction of anaerobic nanoparticles

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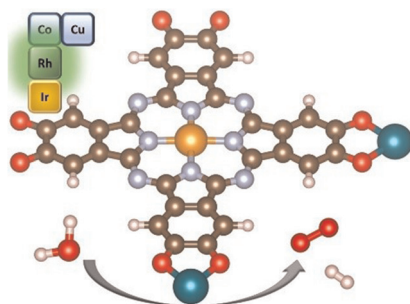
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Electrically tunable polarized luminescence from guest–host composites *via* interaction between rare earth complexes and liquid crystals

Xu Sang, Kang Zhang, Adnan Khan, Rui Xu, Yan Li, Jiaxin Yang, Ming Feng, Lisa Liu, Feng Song* and Wei Huang*

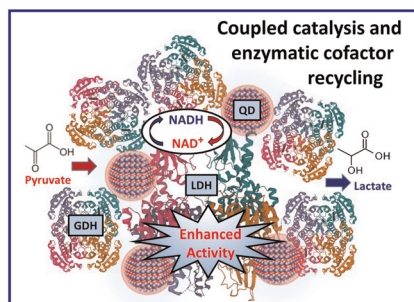
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Bimetallic conjugated metal–organic frameworks as bifunctional electrocatalysts for overall water splitting

Tsz Lok Wan, Junxian Liu, Xin Tan, Minghao Liu, Sean Smith* and Liangzhi Kou*

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Enzyme assembly on nanoparticle scaffolds enhances cofactor recycling and improves coupled reaction kinetics

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