

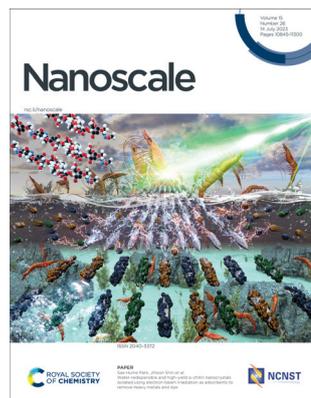
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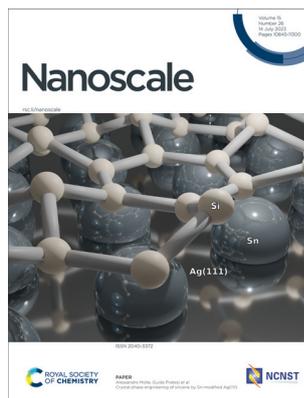
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Cover

See Sae Hume Park, Jihoon Shin *et al.*, pp. 10990–11004.

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Inside cover

See Alessandro Molle, Guido Fratesi *et al.*, pp. 11005–11012.

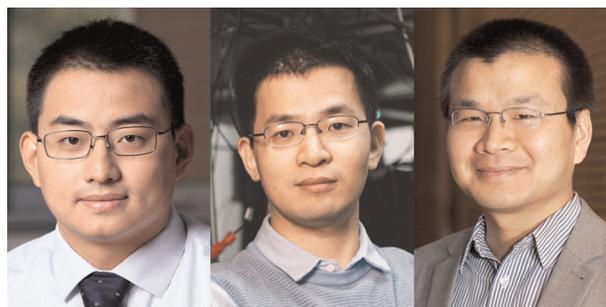
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EDITORIAL

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Introduction to nanoscale quantum technologies

Qing Dai,* Chao-Yang Lu* and Zhipei Sun*

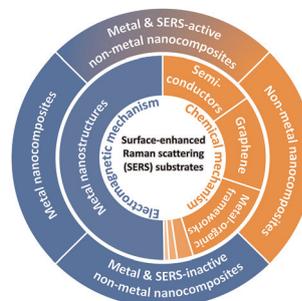


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Material design, development, and trend for surface-enhanced Raman scattering substrates

Yue Ying, Zhiyong Tang and Yaling Liu*



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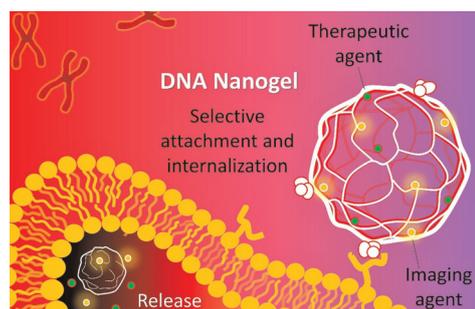


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DNA hydrogels and nanogels for diagnostics, therapeutics, and theragnostics of various cancers

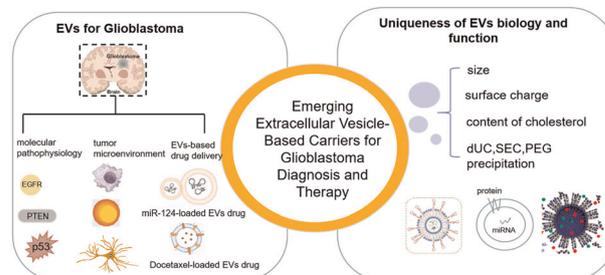
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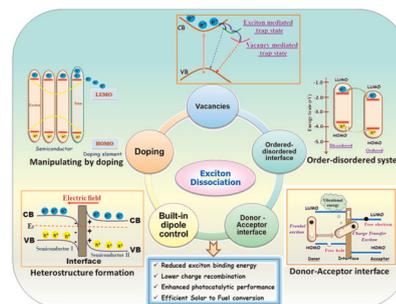
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Band-structure tunability via the modulation of excitons in semiconductor nanostructures: manifestation in photocatalytic fuel generation

Srabanti Ghosh,* Dipendu Sarkar, Sweta Bastia and Yatendra S. Chaudhary

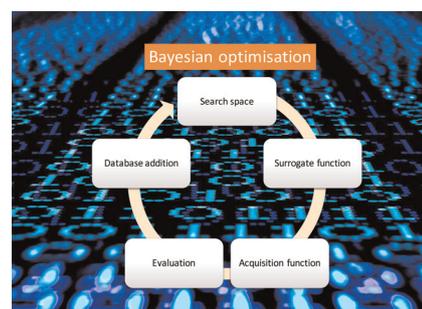


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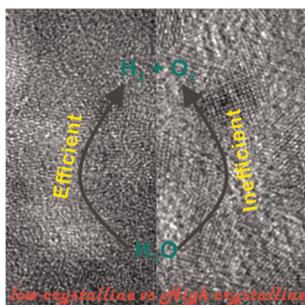
Bayesian optimisation for efficient material discovery: a mini review

Yimeng Jin and Priyank V. Kumar*



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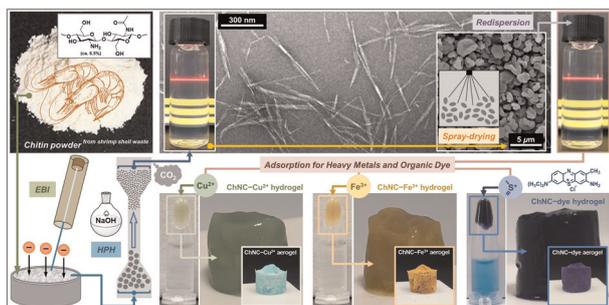


Ammonia-assisted synthesis of low-crystalline FeCo hydroxides for efficient electrochemical overall water splitting

Huijun Ren, Changgen Cheng, Peiqun Yin,* Qing Qin* and Lei Dai*

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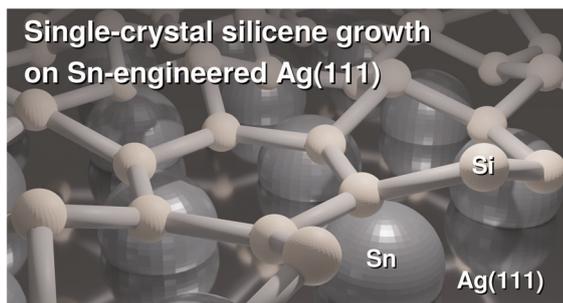
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Water-redispersible and high-yield α -chitin nanocrystals isolated using electron-beam irradiation as adsorbents to remove heavy metals and dye

Hyunho Lee, Min Haeng Heo, Haemin Jeong, Se Young Kim, Jeong Suk Yuk, Sae Hume Park* and Jihoon Shin*

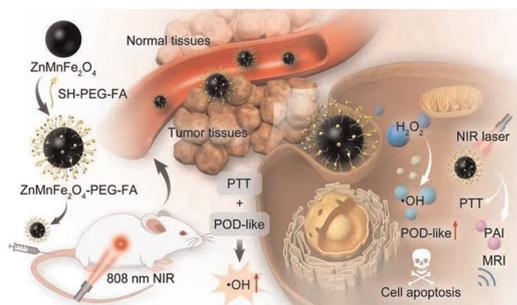
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Simona Achilli, Daya Sagar Dhungana, Federico Orlando, Carlo Grazianetti, Christian Martella, Alessandro Molle* and Guido Fratesi*

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Jifa Liu, Xinglong Shi, Yangcui Qu and Guannan Wang*

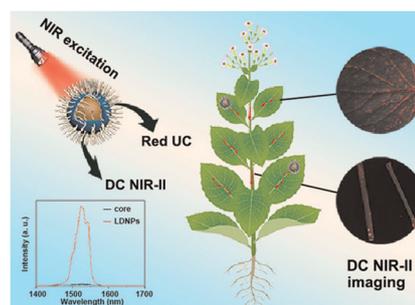


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Optimized core–shell lanthanide nanoparticles with ultrabright Ce³⁺-modulated second near-infrared emission for “lighting” plants

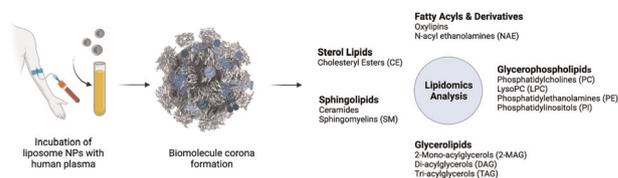
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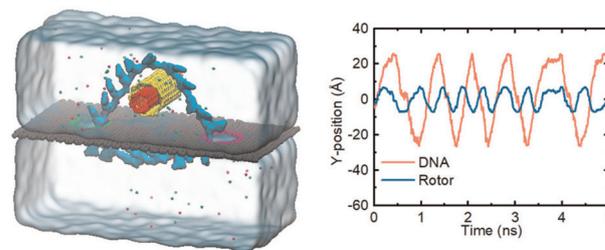
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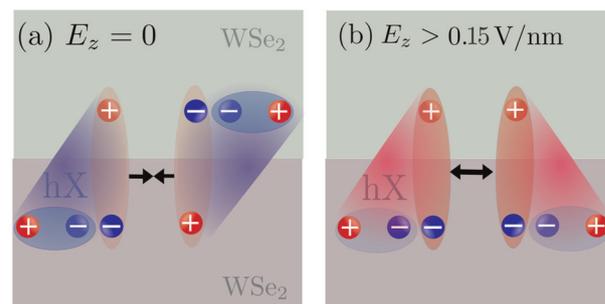
Chaofan Ma, Wei Xu, Wei Liu, Changhui Xu, Wei Si* and Jingjie Sha*



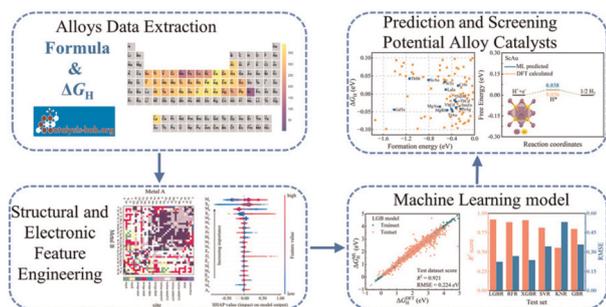
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Daniel Erkensten,* Samuel Brem, Raúl Perea-Causín, Joakim Hagel, Fedele Tagarelli, Edoardo Lopriore, Andras Kis and Ermin Malic*



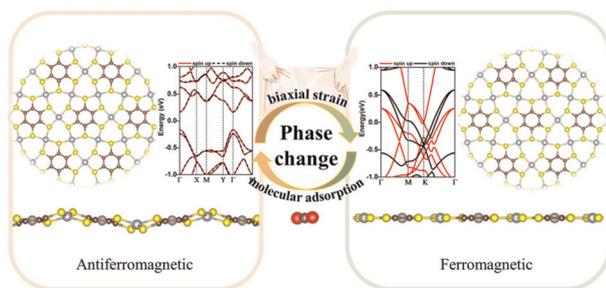
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Jingzi Zhang, Yuelin Wang, Xuyan Zhou, Chengquan Zhong, Ke Zhang, Jiakai Liu, Kailong Hu* and Xi Lin*

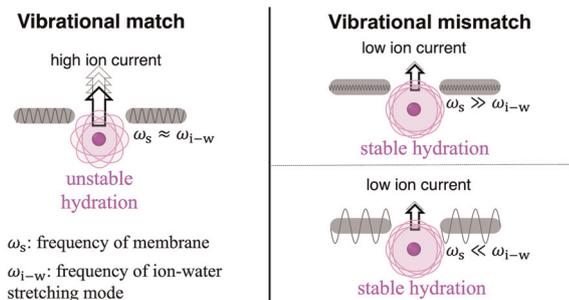
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Tunable electronic and magnetic properties of planar and corrugated phases of two-dimensional metal-organic frameworks

Ran Wang, Chaozheng He* and Weixing Chen*

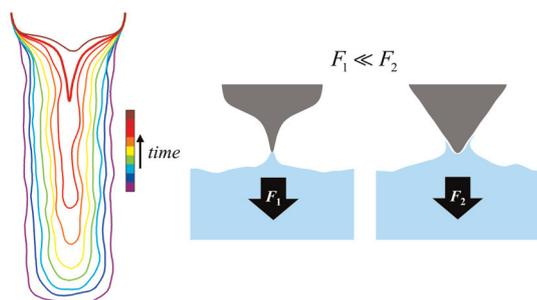
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Ion transport in two-dimensional flexible nanoporous membranes

Yechan Noh and Narayana R. Aluru*

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Shihao Tian, Xudong Chen and Quanzi Yuan*

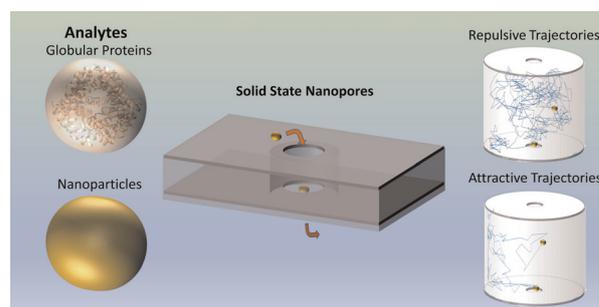


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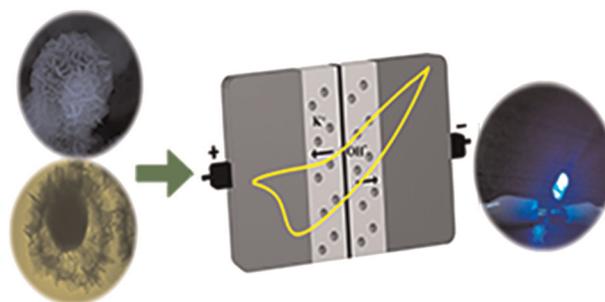
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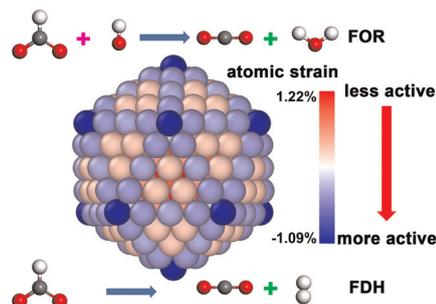
Majid Shirvani and Saied Saeed Hosseiny Davarani*



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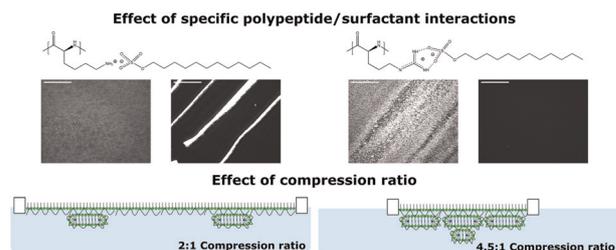
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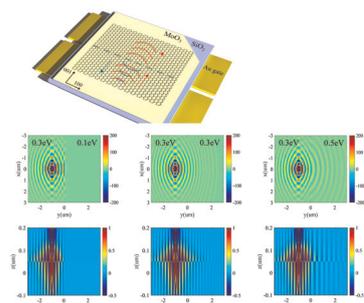
Control of the structure and morphology of polypeptide/surfactant spread films by exploiting specific interactions

Javier Carrascosa-Tejedor,* Laura M. Miñarro, Marina Efstratiou, Imre Varga, Maximilian W. A. Skoda, Philipp Gutfreund, Armando Maestro, M. Jayne Lawrence* and Richard A. Campbell*



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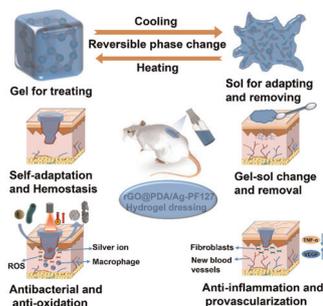
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High-efficiency *in situ* amplitude and phase control of infrared light using topological polaritons

Guoyu Luo, Xinyu Lv, Weijie Kong, Changtao Wang, Mingbo Pu, Yanqin Wang, Xiaoliang Ma, Zhiqiang Li* and Xiangang Luo*

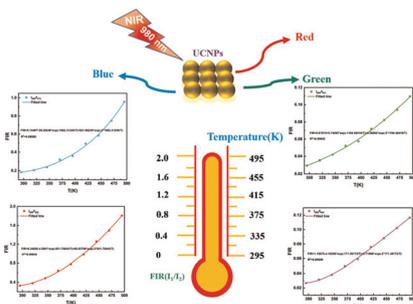
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A cooling-driven self-adaptive and removable hydrogel coupled with combined chemo-photothermal sterilization for promoting infected wound healing

Jun Cao, Tao Zhang, Wei Zhu, Hou-Bin Li and Ai-Guo Shen*

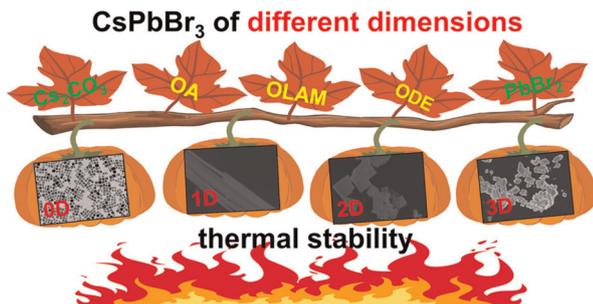
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High-sensitivity $\text{NaYF}_4:\text{Yb}^{3+}/\text{Ho}^{3+}/\text{Tm}^{3+}$ phosphors for optical temperature sensing based on thermally coupled and non-thermally coupled energy levels

Zhenlong Cheng, Mingzhou Meng, Jiaoyu Wang, Zhuoyue Li, Jiao He, Hao Liang, Xin Qiao, Yuanli Liu and Jun Ou*

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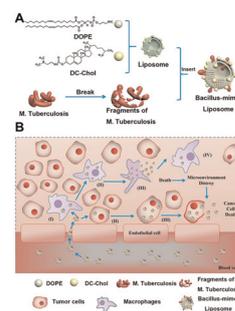
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Preparation of Bacillus-mimic liposomes destroying TAMs for the treatment of cancer

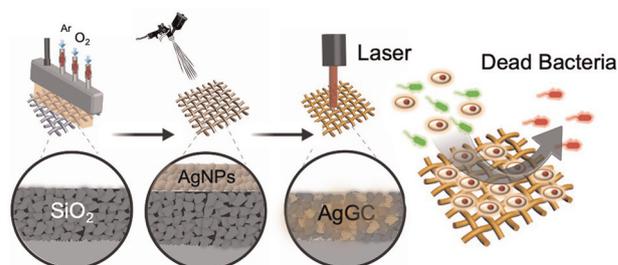
Yanan Li, Zichao Yan, Hailin Cong,* Tingting Han, Bing Yu* and Youqing Shen



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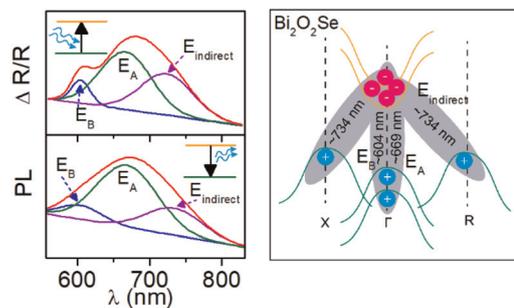
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Room temperature exciton formation and robust optical properties of CVD-grown ultrathin Bi₂O₂Se crystals on arbitrary substrates

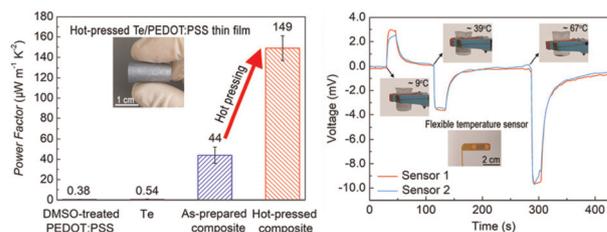
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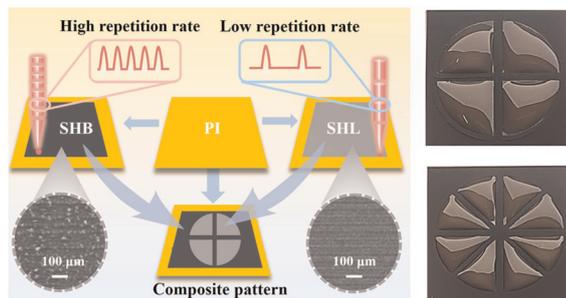
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Flexible Te/PEDOT:PSS thin films with high thermoelectric power factor and their application as flexible temperature sensors

Ming Li, Yucheng Xiong, Haoxiang Wei, Fengju Yao, Yang Han, Yanjun Du and Dongyan Xu*



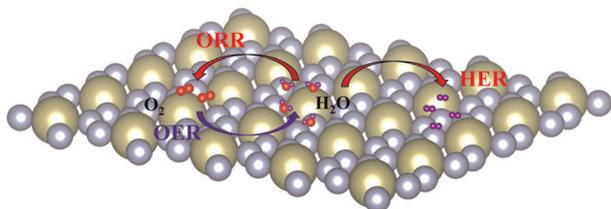
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Femtosecond laser-scribed superhydrophilic/superhydrophobic self-splitting patterns for one droplet multi-detection

Qiaqiao Huang, Kai Yin,* Lingxiao Wang, Qinwen Deng and Christopher J. Arnusch

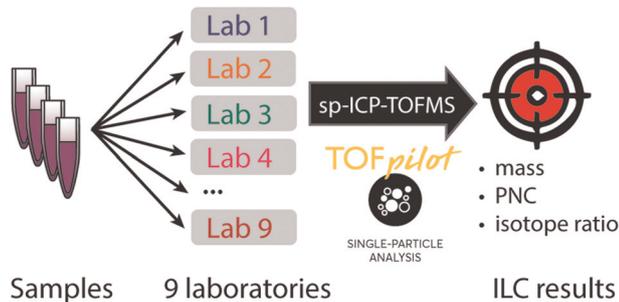
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Two-dimensional MN₄ materials as effective multi-functional electrocatalysts for the hydrogen-evolution, oxygen-evolution, and oxygen-reduction reactions

Xian Zhang, Zhifen Luo, Jiayi Fan, Tengfei Cao, Junqin Shi and Xiaoli Fan*

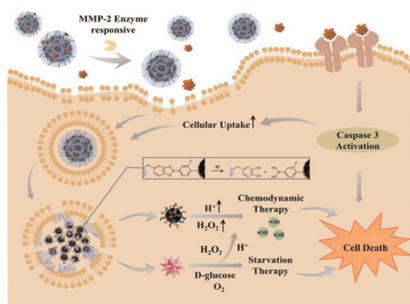
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Results of an interlaboratory comparison for characterization of Pt nanoparticles using single-particle ICP-TOFMS

L. Hendriks,* R. Brünjes, S. Taskula, J. Kocic, B. Hattendorf, G. Bland, G. Lowry, E. Bolea-Fernandez, F. Vanhaecke, J. Wang, M. Baalousha, M. von der Au, B. Meermann, T. R. Holbrook, S. Wagner, S. Harycki, A. Gundlach-Graham and F. von der Kammer*

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A smart magnetic nanosystem for sequential extracellular and intracellular release of proteins for cancer therapy

Yaxuan Zhao, Kai Feng, Guojun Lei, Jingjing Shen, Yang Liu, Yiling Ruan and Xiaolian Sun*



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Giant coercivity enhancement in a room-temperature van der Waals magnet through substitutional metal-doping

Hyo-Bin Ahn, Soon-Gil Jung, Hyungjong Lim, Kwangsu Kim, Sanghoon Kim, Tae-Eon Park, Tuson Park* and Changgu Lee*

