

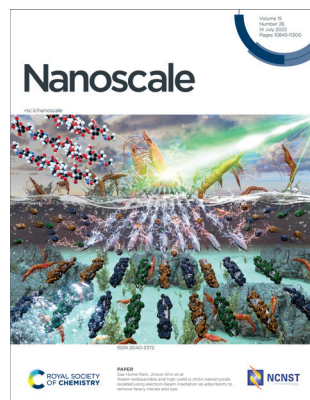
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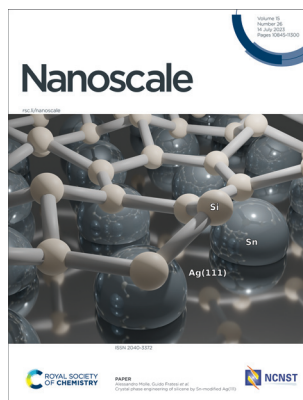
ISSN 2040-3372 CODEN NANOHL 15(26) 10845–11300 (2023)



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.

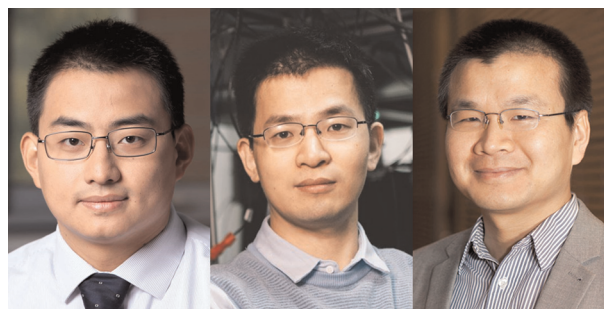
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EDITORIAL

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Introduction to nanoscale quantum technologies

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

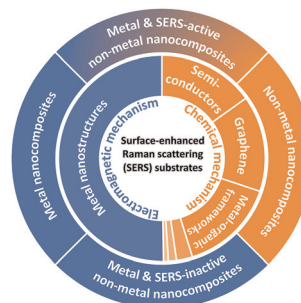


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Material design, development, and trend for surface-enhanced Raman scattering substrates

Yue Ying, Zhiyong Tang and Yaling Liu*



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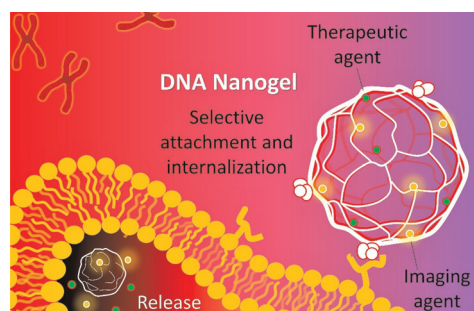


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DNA hydrogels and nanogels for diagnostics, therapeutics, and theragnostics of various cancers

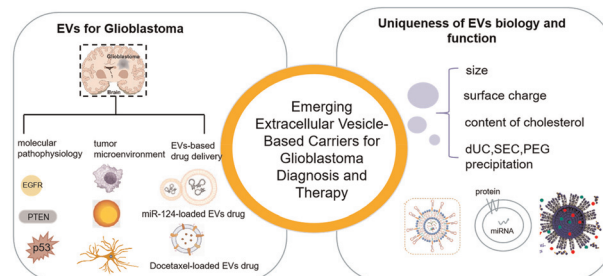
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Emerging extracellular vesicle-based carriers for glioblastoma diagnosis and therapy

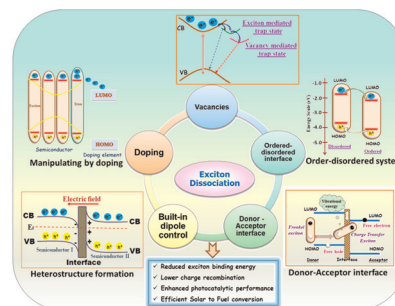
Jingjing Wang, Yue Liu, Fengbo Liu, Shaoyan Gan, Shubham Roy, Ikram Hasan, Baozhu Zhang* and Bing Guo*



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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

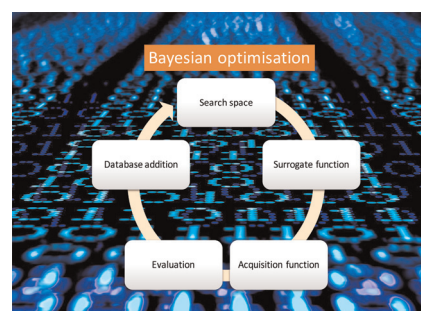


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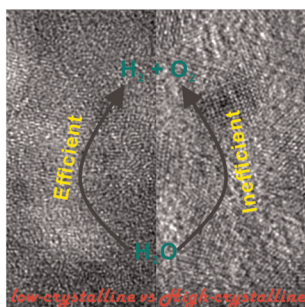
Bayesian optimisation for efficient material discovery: a mini review

Yimeng Jin and Priyank V. Kumar*



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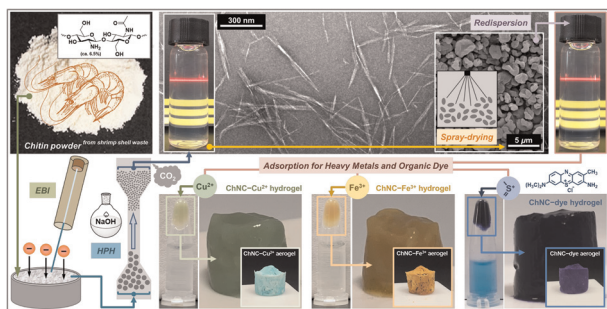


Ammonia-assisted synthesis of low-crystalline FeCo hydroxides for efficient electrochemical overall water splitting

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

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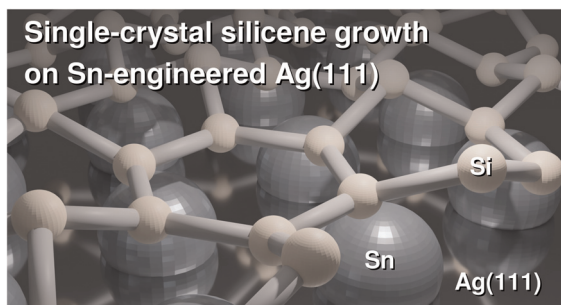
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Water-redispersible and high-yield α -chitin nanocrystals isolated using electron-beam irradiation as adsorbents to remove heavy metals and dye

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

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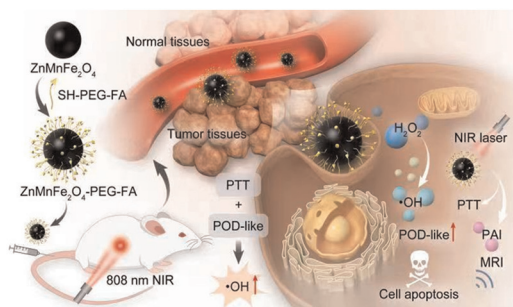


Single-crystal silicene growth on Sn-engineered Ag(111)

Crystal phase engineering of silicene by Sn-modified Ag(111)

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*

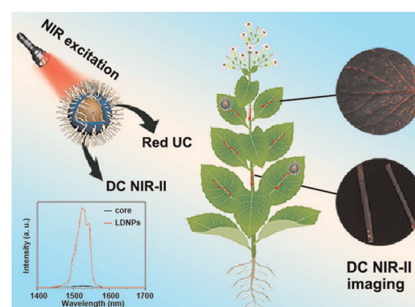


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Optimized core–shell lanthanide nanoparticles with ultrabright Ce^{3+} -modulated second near-infrared emission for “lighting” plants

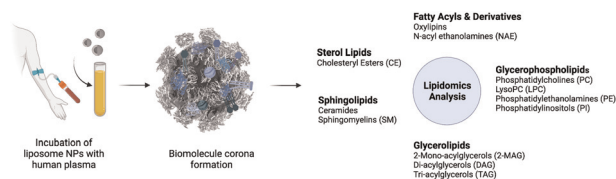
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The lipidomic profile of the nanoparticle-biomolecule corona reflects the diversity of plasma lipids

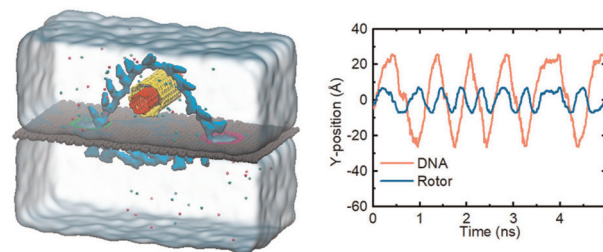
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Precise control of CNT-DNA assembled nanomotor using oppositely charged dual nanopores

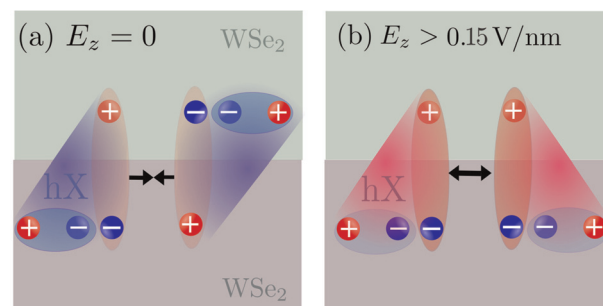
Chaofan Ma, Wei Xu, Wei Liu, Changhui Xu, Wei Si* and Jingjie Sha*



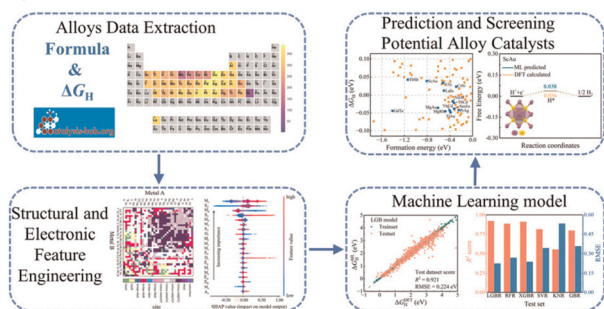
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Daniel Erkensten,* Samuel Brem, Raúl Perea-Causín, Joakim Hagel, Fedele Tagarelli, Edoardo Lopriore, Andras Kis and Ermin Malic*



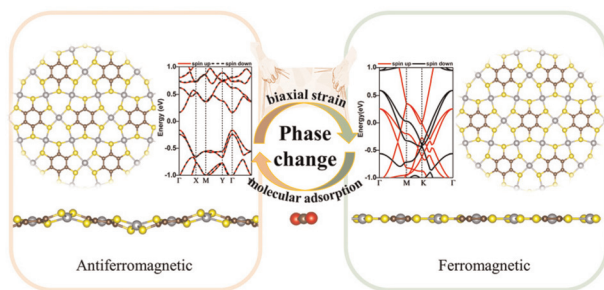
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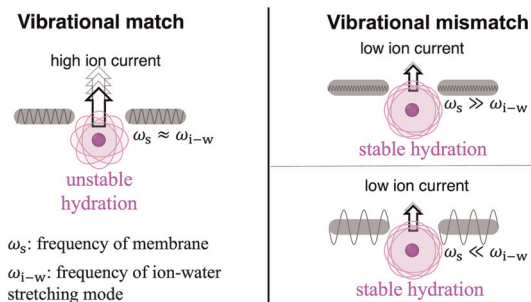
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Tunable electronic and magnetic properties of planar and corrugated phases of two-dimensional metal-organic frameworks

Ran Wang, Chaozheng He* and Weixing Chen*

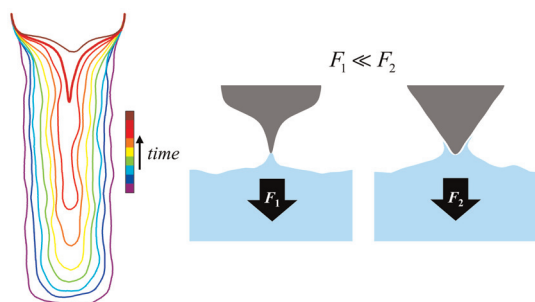
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Ion transport in two-dimensional flexible nanoporous membranes

Yechan Noh and Narayana R. Aluru*

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Shape optimization of a meniscus-adherent nanotip

Shihao Tian, Xudong Chen and Quanzi Yuan*

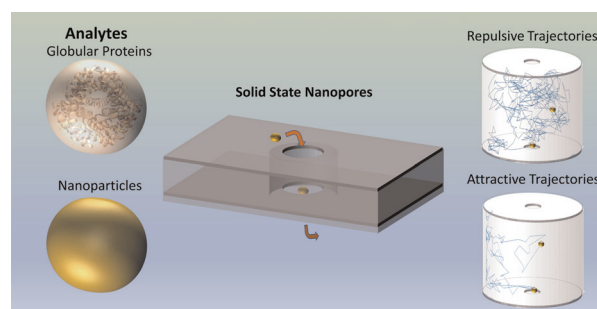


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Surface–particle interactions control the escape time of a particle from a nanopore-gated nanocavity system: a coarse grained simulation

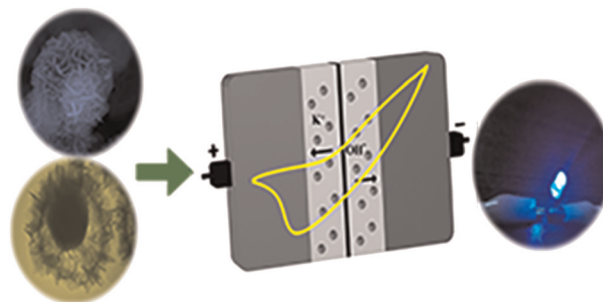
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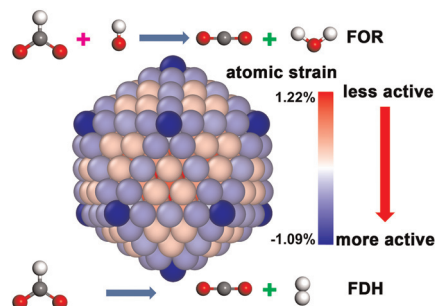
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Atomic strain and catalytic properties of formate oxidation and dehydrogenation in AgPd nanoalloys

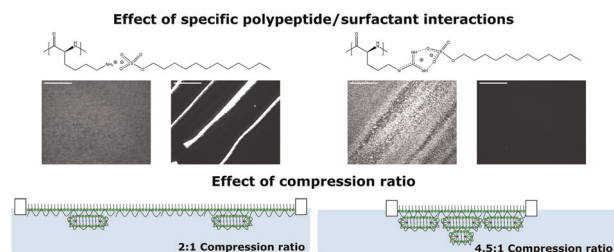
Tao Jin, Longfei Guo, Quan Tang, Junpeng Wang, Bowei Pan, Zhen Li, Chongyang Wang, Shuang Shan and Fuyi Chen*



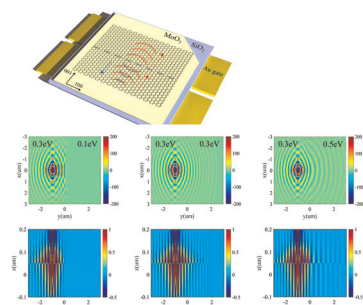
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Control of the structure and morphology of polypeptide/surfactant spread films by exploiting specific interactions

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*



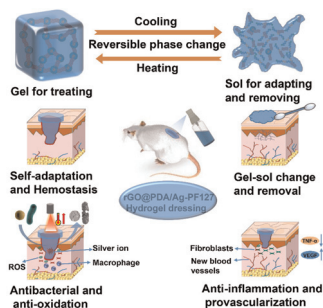
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High-efficiency *in situ* amplitude and phase control of infrared light using topological polaritons

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

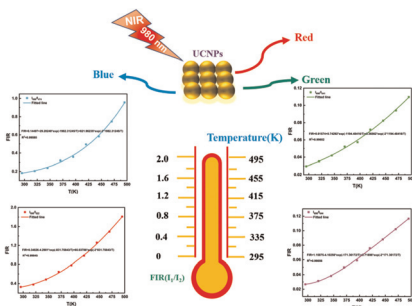
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A cooling-driven self-adaptive and removable hydrogel coupled with combined chemophothermal sterilization for promoting infected wound healing

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

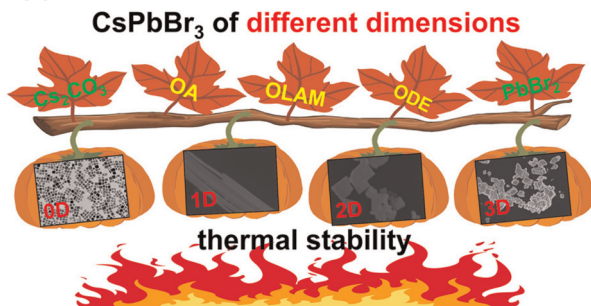
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High-sensitivity NaYF₄:Yb³⁺/Ho³⁺/Tm³⁺ phosphors for optical temperature sensing based on thermally coupled and non-thermally coupled energy levels

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

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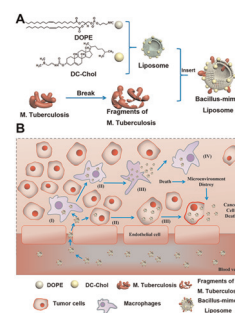
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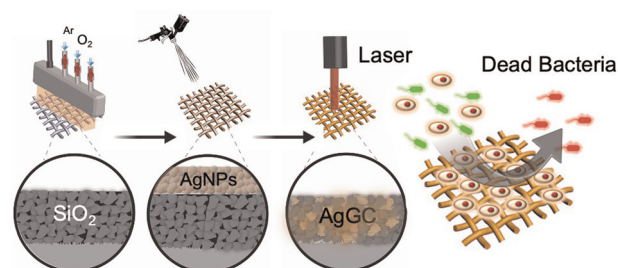
Yanan Li, Zichao Yan, Hailin Cong,* Tingting Han, Bing Yu* and Youqing Shen



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Non-destructive processing of silver containing glass ceramic antibacterial coating on polymeric surgical mesh surfaces

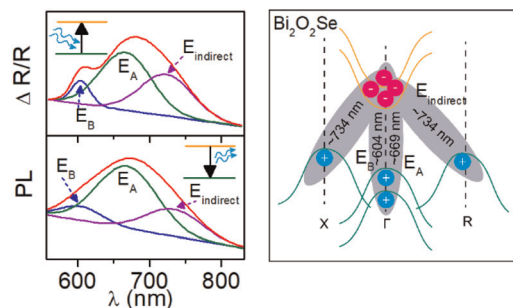
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Room temperature exciton formation and robust optical properties of CVD-grown ultrathin Bi₂O₂Se crystals on arbitrary substrates

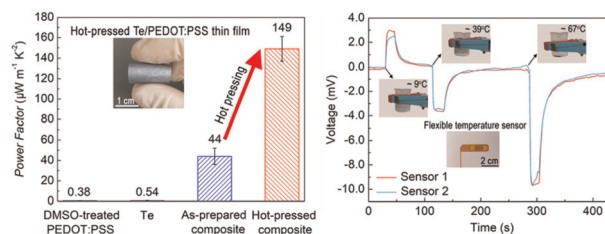
Md Tarik Hossain, Tadasha Jena, Upasana Nath, Manabendra Sarma and P. K. Giri*



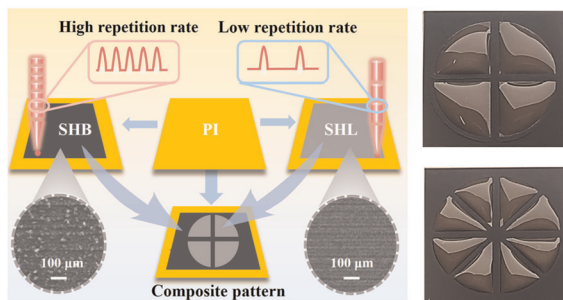
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Flexible Te/PEDOT:PSS thin films with high thermoelectric power factor and their application as flexible temperature sensors

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



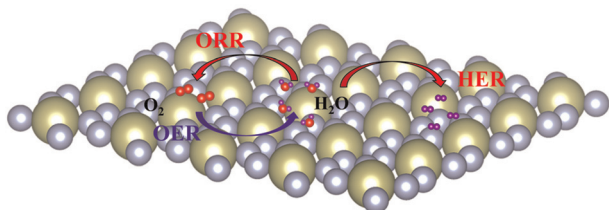
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Femtosecond laser-scribed superhydrophilic/superhydrophobic self-splitting patterns for one droplet multi-detection

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

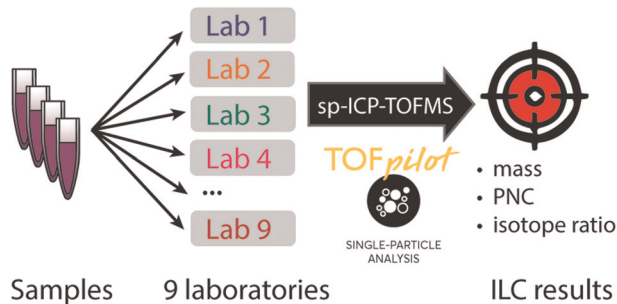
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Two-dimensional MN₄ materials as effective multi-functional electrocatalysts for the hydrogen-evolution, oxygen-evolution, and oxygen-reduction reactions

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

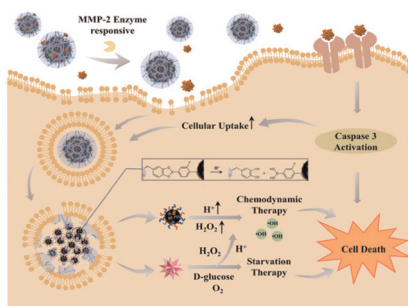
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Results of an interlaboratory comparison for characterization of Pt nanoparticles using single-particle ICP-TOFMS

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*

