

Nanoscale Horizons

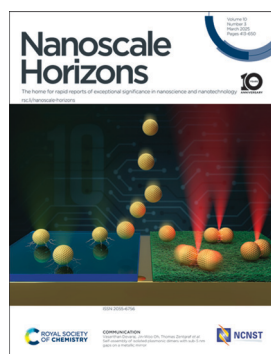
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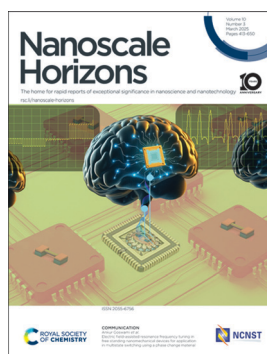
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See Vasanthan Devaraj, Jin-Woo Oh, Thomas Zentgraf *et al.*, pp. 537–548. Image reproduced by permission of Vasanthan Devaraj from *Nanoscale Horiz.*, 2025, 10, 537.



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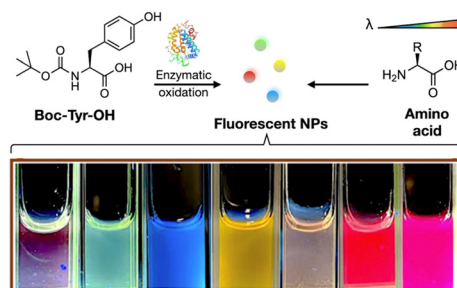
See Ankur Goswami *et al.*, pp. 549–560. Image partly generated using Google Gemini AI tool and reproduced by permission of Durgesh Banswar, Jay Krishna Anand and Ankur Goswami from *Nanoscale Horiz.*, 2025, 10, 549.

EDITORIAL

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Nanoparticle assembly with customisable fluorescence properties and excellent biocompatibility

Ignacio Insua



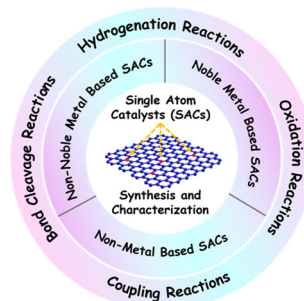
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Tailoring catalysis at the atomic level: trends and breakthroughs in single atom catalysts for organic transformation reactions

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REVIEWS

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Revolutionizing healthcare: inorganic medicinal nanoarchitectonics for advanced theranostics

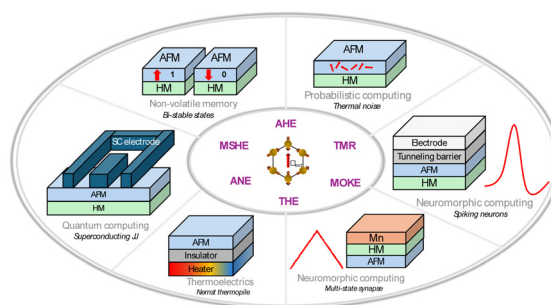
Seungjin Yu, N. Sanoj Rejinold, Goeun Choi and Jin-Ho Choy*



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Spintronic devices and applications using noncollinear chiral antiferromagnets

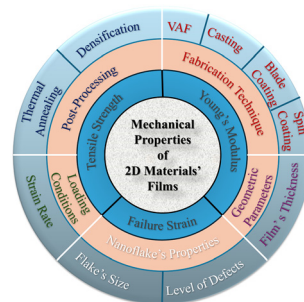
Ankit Shukla, Siyuan Qian and Shaloo Rakheja*



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Abdallah Kamal, Baosong Li, Abdullah Solayman, Shaohong Luo, Ian Kinloch, Lianxi Zheng and Kin Liao*

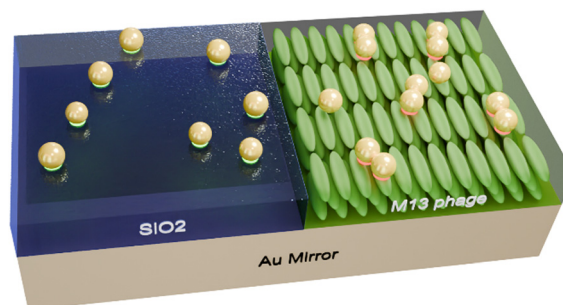


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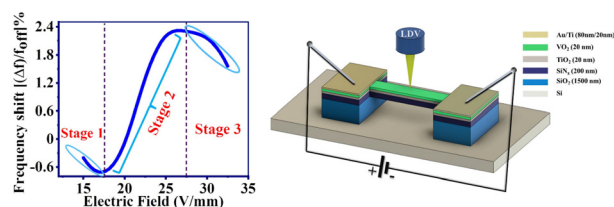
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Self-assembly of isolated plasmonic dimers with sub-5 nm gaps on a metallic mirror

Vasanthan Devaraj,* Isaac Azahel Ruiz Alvarado, Jong-Min Lee, Jin-Woo Oh,* Uwe Gerstmann, Wolf Gero Schmidt and Thomas Zentgraf*



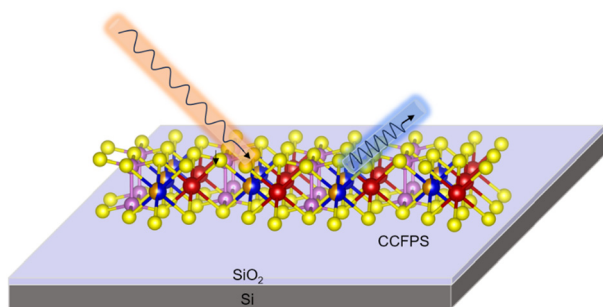
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Electric field-assisted resonance frequency tuning in free standing nanomechanical devices for application in multistate switching using a phase change material

Durgesh Banswar, Jay Krishna Anand, Syed A. Bukhari, Sonika Singh, Rahul Prajesh, Hemant Kumar, S. K. Makineni and Ankur Goswami*

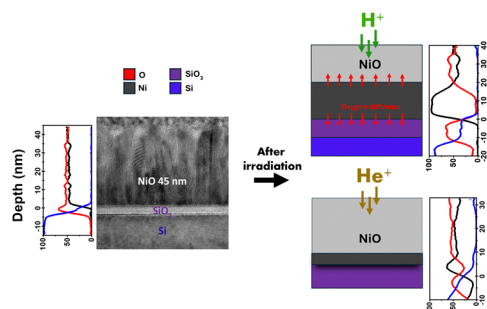
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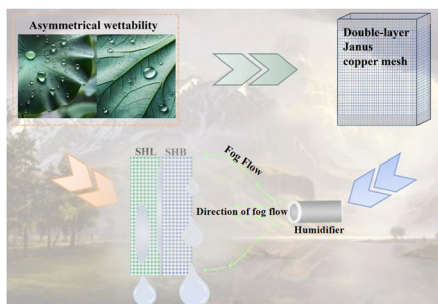
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Mechanism of oxygen reduction *via* chemical affinity in NiO/SiO₂ interfaces irradiated with keV energy hydrogen and helium ions for heterostructure fabrication

Mario Mery,* Claudio Gonzalez-Fuentes, Igor Stanković,* Jorge M. Nuñez, Jorge E. Valdés, Myriam H. Aguirre and Carlos García*

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Matchbox Janus membrane fog collector with highly efficient directional transport

Feifeng Hu, Huayang Zhang, Guangyi Tian, Shangzhen Xie* and Zhiguang Guo*

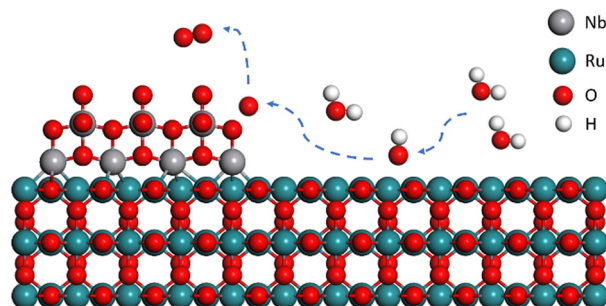


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Spillover of active oxygen intermediates of binary $\text{RuO}_2/\text{Nb}_2\text{O}_5$ nanowires for highly active and robust acidic oxygen evolution

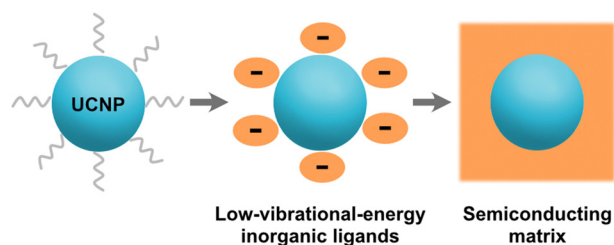
Linqing Liao, Wangyan Gou, Mingkai Zhang, Xiaohe Tan, Zening Qi, Min Xie, Yuanyuan Ma* and Yongquan Qu*



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Enhanced upconversion and photoconductive nanocomposites of lanthanide-doped nanoparticles functionalized with low-vibrational-energy inorganic ligands

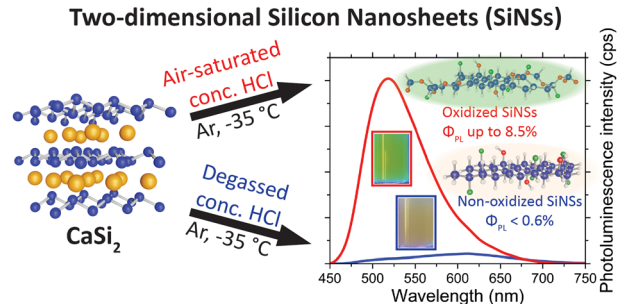
Jia-Ahn Pan,* Xiao Qi and Emory M. Chan*



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Elucidating the role of oxidation in two-dimensional silicon nanosheets

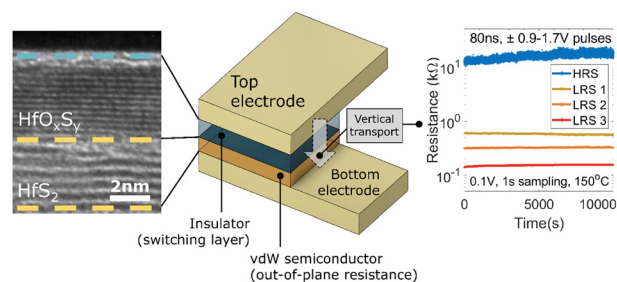
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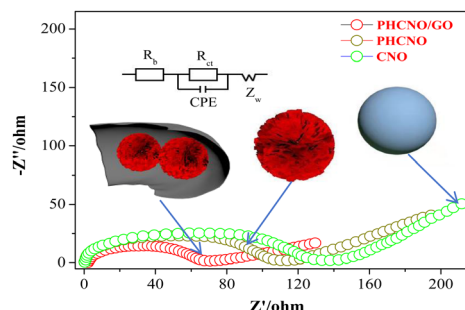
Forming and compliance-free operation of low-energy, fast-switching $\text{HfO}_x\text{S}_y/\text{HfS}_2$ memristors

Aferdita Xhameni, AbdulAziz AlMutairi, Xuyun Guo, Irina Chircă, Tianyi Wen, Stephan Hofmann, Valeria Nicolosi and Antonio Lombardo*



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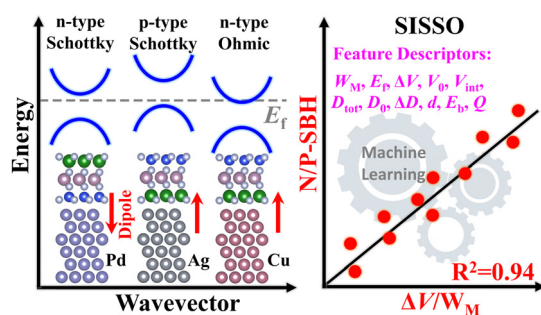
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Effects of porous hedgehog-like morphology and graphene oxide on the cycling stability and rate performance of $\text{Co}_3\text{O}_4/\text{NiO}$ microspheres

Guozhen Zhu,* Xinsong Xu, Yiyao Zhang, Jiale Lian, Yuhao Li, Zhen Yang* and Renchao Che*

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Dipole-induced transitions from Schottky to Ohmic contact at Janus MoSiGeN_4 /metal interfaces

Wen Ai, Xiaohui Hu,* Tao Xu, Jian Yang* and Litao Sun

CORRECTION

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Correction: Single glucose molecule transport process revealed by force tracing and molecular dynamics simulations

Yangang Pan, Yuebin Zhang, Pianchou Gongpan, Qingrong Zhang, Siteng Huang, Bin Wang, Bingqian Xu, Yuping Shan,* Wenyong Xiong,* Guohui Li* and Hongda Wang*

