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Nano Letters

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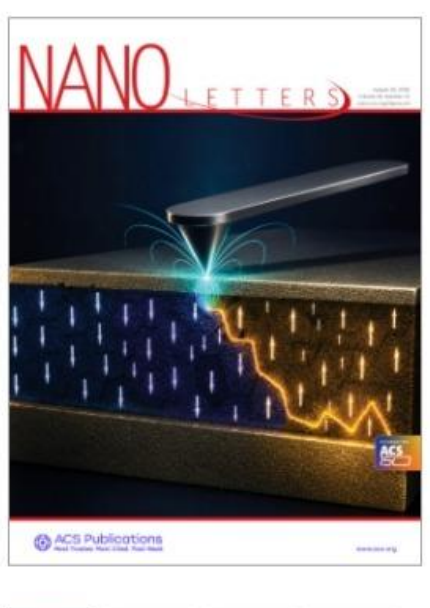

Decade 2020 Year 2026 Issue August 26, - Volume 26, Issue 33, Pages 10929 - 11201

Volume 26, Issue 33

August 26, 2026
ISSN 1530-6984 EISSN 1530-6992

About the Cover

The cover illustrates AFM-guided visualization of polarization reversal in TiN/HZO/TiN capacitors. Nanoscale domains nucleate near grain boundaries and propagate across neighboring grains, revealing simultaneous nucleation and growth-assisted switching in polycrystalline HZO.

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Mini-Reviews

Subscribed

Semiconductor Magic-Size Clusters: Distinct Features beyond Quantum Dots

Liguo Zhang; Siyu Lu; Baowei Zhang

Nano Lett. (2026) 26 (33): 10929–10942.

https://doi.org/10.1021/acs.nanolett.6c02010

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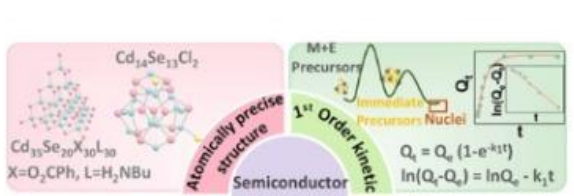
Atomically precise structure
1st Order kinetic
Semiconductor Magic-sized Clusters
Hierarchical assembly
Chemical reaction

Letters

Open Access

Lipid Nanoparticle Protein Coronas Arise through Lipoprotein Fusion Rather Than Shell-like Adsorption

Shaun Grumelot; Naseeha Mohammed; Ghafar Yerima; Jorge Colonrosado; Seyed Amirhossein Sadeghi; Fei Fang; Kylie Hilsen; Brooke Shango; Amir Ata Saei; Amanda M. Murray; Michael J. Mitchell; Babak Borhan; Lianglang Sun; Hojatollah Vali; Mohammad R. K. Mofrad; Kathryn A. Whitehead; Morteza Mahmoudi

Nano Lett. (2026) 26 (33): 10943–10953.

https://doi.org/10.1021/acs.nanolett.6c00689

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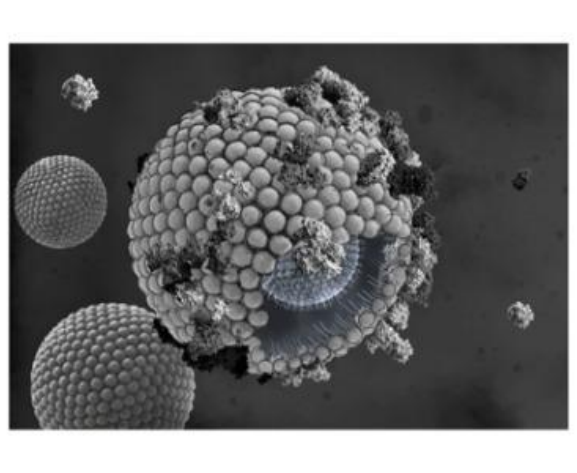

Subscribed

Chemically Gated Reconfigurable Nanofluidic Synapse Enables Metaplasticity and Neuromorphic Sound Recognition

Yuchun Zhang; Lin Liu; Yu Qiao; Wenhui Zhao; Fengfan Li; Xiaojing Feng; Tian Yao; Yuxin Liu; Xing Zhao; Yong Yan

Nano Lett. (2026) 26 (33): 10954–10963.

https://doi.org/10.1021/acs.nanolett.6c00926

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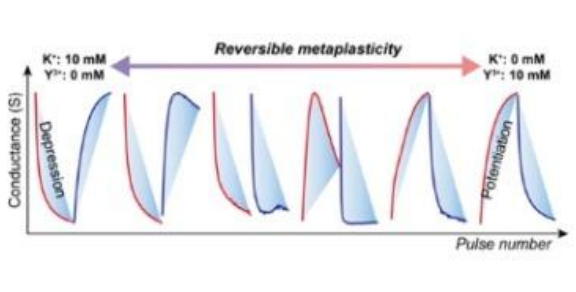

Subscribed

Symmetry-Tunable Skyrmions and Merons in Magnetic Nanodisks via Spatially Engineered Anisotropy

X. D. Wang; J. F. Oliveira da Silva; Z. H. Tao; H. M. Dong; K. Chang; M. V. Milošević

Nano Lett. (2026) 26 (33): 10964–10970.

https://doi.org/10.1021/acs.nanolett.6c01154

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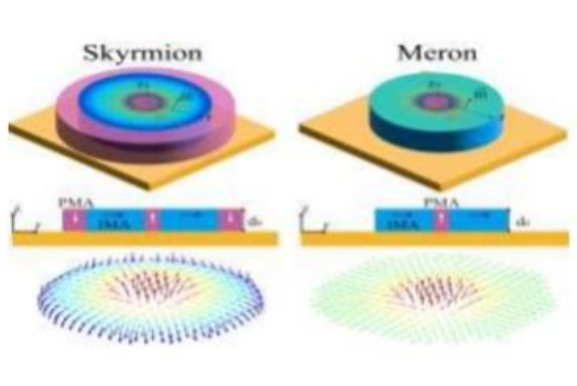
Skyrmion
Meron
PMA
IMA

Subscribed

Nucleation-to-Propagation Switching Modes in Ferroelectric $Hf_{0.5}Zr_{0.5}O_2$ Capacitors

Batzorig Buyantogtokh; Sheung Hun Kim; Hoon Kim; Byung Jin Cho; Uwe Schroeder; Seungbum Hong

Nano Lett. (2026) 26 (33): 10971–10979.

https://doi.org/10.1021/acs.nanolett.6c01580

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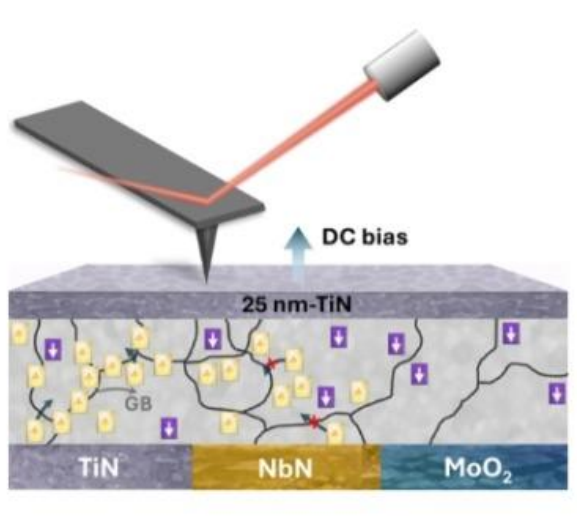
DC bias
25 nm-TiN
GB
TiN
NbN
MoO2

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Enhancing Lipid Nanoparticle-Mediated Circular RNA and mRNA Expression in the Placenta through Inhibition of IFNAR-JAK-STAT Signaling

Hannah C. Safford; Hannah C. Geisler; Ajay S. Thatte; Kuo-Chieh Liao; Alexandre Poirier; Marshall Padilla; Hannah M. Yamagata; Anushka Agrawal; Amanda M. Murray; Alex G. Hamilton; Kelsey L. Swingle; Emily Fitzgerald; Ori Chalom; Yue Wan; Michael J. Mitchell

Nano Lett. (2026) 26 (33): 10980–10991.

https://doi.org/10.1021/acs.nanolett.6c01762

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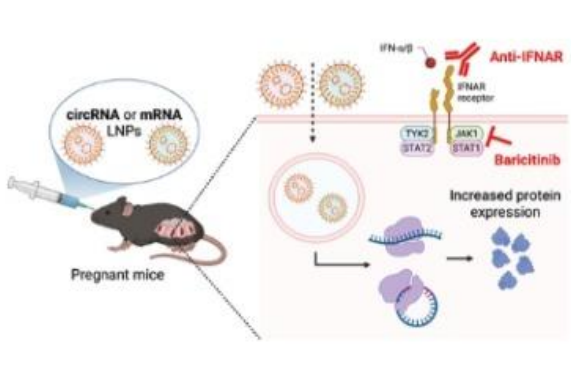
circRNA or mRNA LNPs
Pregnant mice
Anti-IFNAR
Baricitinib
Increased protein expression

Subscribed

High-Speed and High-Gain Graphene Photovoltaic Phototransistor Gated by a van der Waals Heterojunction

Yihan Yin; Jiayi Zhang; Xiaolong Zhang; Jiongtao Zhang; Liang Liu; Haiya Ma; Xiaoguang Luo; Xuetao Gan

Nano Lett. (2026) 26 (33): 10992–11001.

https://doi.org/10.1021/acs.nanolett.6c01932

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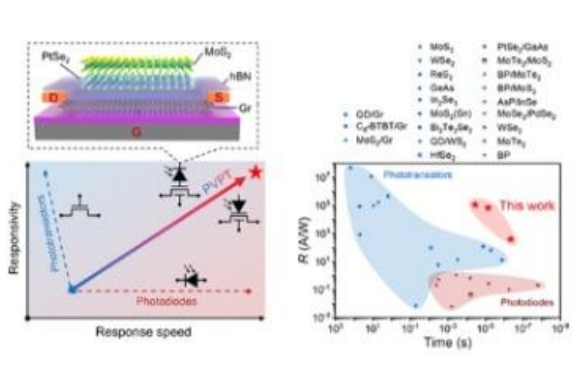

Subscribed

Localization of Apicomplexa Motor Myosin A with Axial Nanometric Precision Using Graphene Energy Transfer

Giovanni Ferrari; Yuan Song; Michael Hensel; Olympia Ekaterini Psathaki; Doan Thuy Nguyen; Simon Gras; Markus Meissner; Philip Tinnefeld; Javier Periz

Nano Lett. (2026) 26 (33): 11002–11008.

https://doi.org/10.1021/acs.nanolett.6c01982

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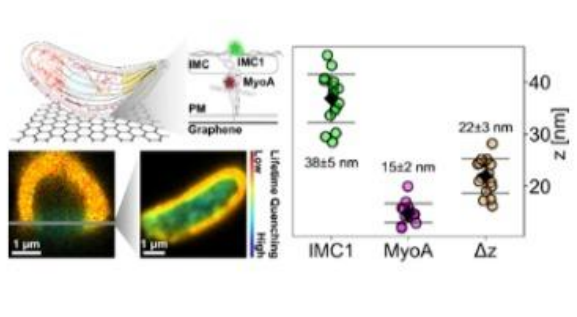
IMC1
MyoA
Graphene
IMC1 MyoA Δz

Subscribed

Heterohalogen Polarization for 2D High-κ Rare-Earth Oxyhalide Dielectrics

Renfei Wei; Haoying Han; Kang Chen; Xinyu Bai; Yan Wang; Liang Huang

Nano Lett. (2026) 26 (33): 11009–11016.

https://doi.org/10.1021/acs.nanolett.6c02034

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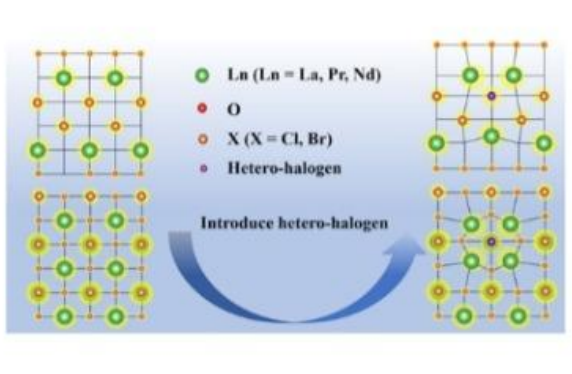
Ln (Ln = La, Pr, Nd)
O
X (X = Cl, Br)
Hetero-halogen
Introduce hetero-halogen

Subscribed

Symmetry-Dictated Switching of Antiferromagnetic Magnon Transport in 2D Multiferroics

Yibo Liu; Jiale Wang; Jiexiang Wang; Ying Dai; Baibiao Huang; Xinru Li; Yandong Ma

Nano Lett. (2026) 26 (33): 11017–11024.

https://doi.org/10.1021/acs.nanolett.6c02164

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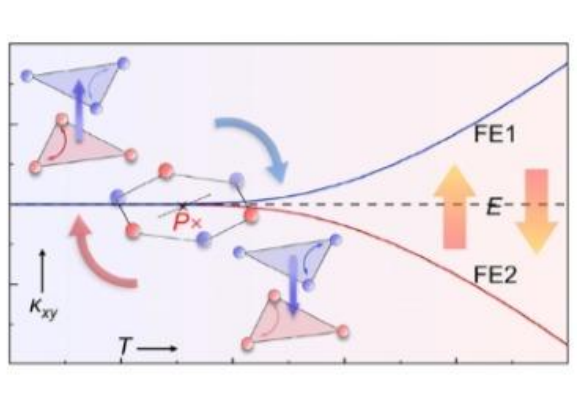

Subscribed

Exploring the Geometry and Interface Effects in Correlation between Steady-State and Ultrafast Responses of Chiral Plasmonic Nanoparticles

Lizhi Jiao; Shihao Lin; Yinrui Lu; Hao Xie; Yi-Yu Cai; Menghui Jia; Weixiang Ye; Jinquan Chen; Wenxin Niu; Xiang Lan

Nano Lett. (2026) 26 (33): 11025–11033.

https://doi.org/10.1021/acs.nanolett.6c02254

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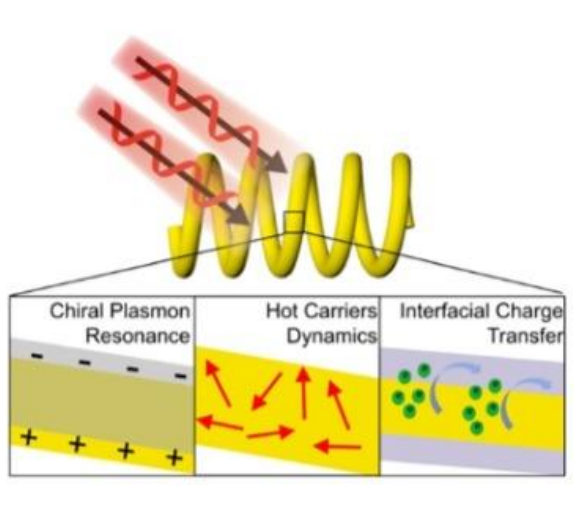
Chiral Plasmon Resonance
Hot Carriers Dynamics
Interfacial Charge Transfer

Subscribed

Highly Ion-Selective Gel Polymer Electrolyte Facilitates Stable 4.6 V LRMO-Based Solid-State Lithium Metal Batteries

Jilin Tang; Linghong Xu; Hangjun Ying; Gaorong Han; Yong Shi

Nano Lett. (2026) 26 (33): 11034–11041.

https://doi.org/10.1021/acs.nanolett.6c02329

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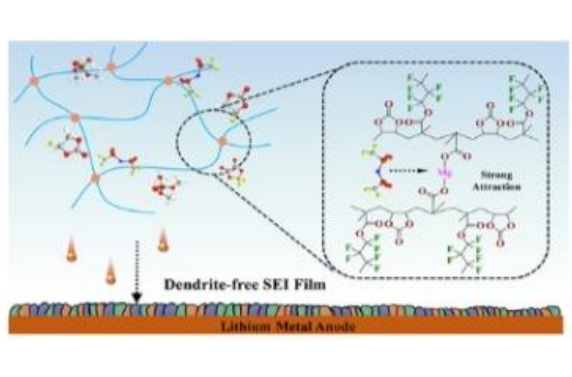
Dendrite-free SEI Film
Lithium Metal Anode

Subscribed

Ultralow-Loading Multilayer Liquid Metal Conductors with Leakage Immunity and Uncompromised Electro-Mechanical Performance

Junyao Guan; Yangyang Xu; Jialin Wang; Weihong Zhu; Yuli Song; Kaili Li; Yun Xia; Kai Chen; Ting Zhu; Long Jiang; Qing Song; Yu Wang; Yuping Ou; Dezhen Xue; Kai Wu; Sen Yang; Gang Liu; Jun Sun

Nano Lett. (2026) 26 (33): 11042–11052.

https://doi.org/10.1021/acs.nanolett.6c02336

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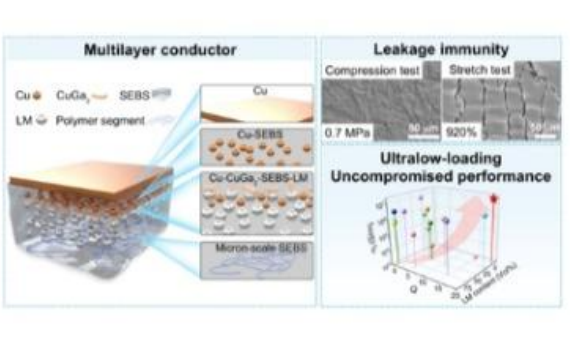
Multilayer conductor
Leakage immunity
Ultralow-loading
Uncompromised performance

Subscribed

Pushing the Limits of Ultrasmall PbSe Magic-Sized Clusters

Pranshu Puri; Chenjie Zeng

Nano Lett. (2026) 26 (33): 11053–11059.

https://doi.org/10.1021/acs.nanolett.6c02367

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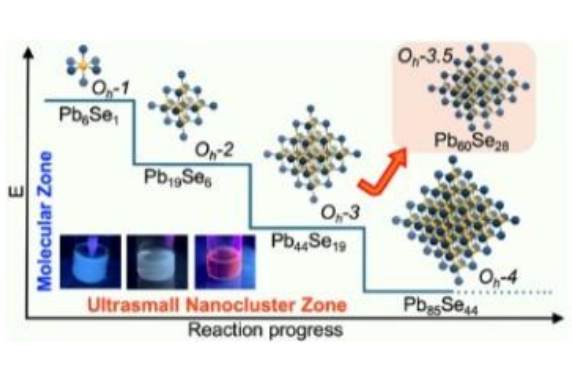
Molecular Zone
Ultrasmall Nanocluster Zone
Reaction progress

Subscribed

Three-Dimensional Visualization of Conductive Filaments in TiO_2 via Conductive Atomic Force Microscopy Tomography

Kunwoo Park; Chaewon Gong; Sunghwan Park; Sang-Hee Ko Park; Seungbum Hong

Nano Lett. (2026) 26 (33): 11060–11066.

https://doi.org/10.1021/acs.nanolett.6c02423

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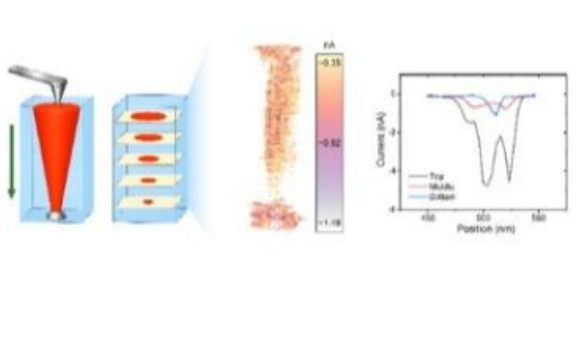

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Sensitive and Reproducible SERS Profiling of Tumor-Derived EVs via Uniform Microfluidic Nanobowl Arrays for Pancreatic Cancer Management

Ruoke Wang; Aipeng Chen; Yuqing Wang; Xiaoying Zhao; Peng Zhang; Xiaoni Fang; Chaoyong Yang

Nano Lett. (2026) 26 (33): 11067–11078.

https://doi.org/10.1021/acs.nanolett.6c02493

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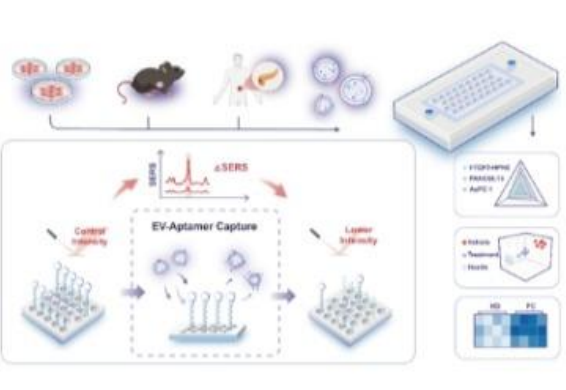

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Acoustic Control of Spin States in Diamond Nitrogen-Vacancy Centres

Emirhan Kutsal; Amir Farokh Payam; Eihab Abdel-Rahman; Mustafa Yavuz; Lijie Li

Nano Lett. (2026) 26 (33): 11079–11085.

https://doi.org/10.1021/acs.nanolett.6c02496

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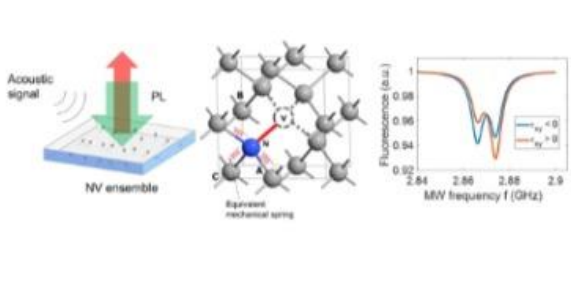

Subscribed

Mesostructure-Dependent Ionogel Infiltration in Electrochromic Nanocrystal Thin Films

Chanyong Lee; Hyeyeon Jung; Janghan Na; Sungbin Kim; Juna Lee; Sungyeon Heo

Nano Lett. (2026) 26 (33): 11086–11093.

https://doi.org/10.1021/acs.nanolett.6c02630

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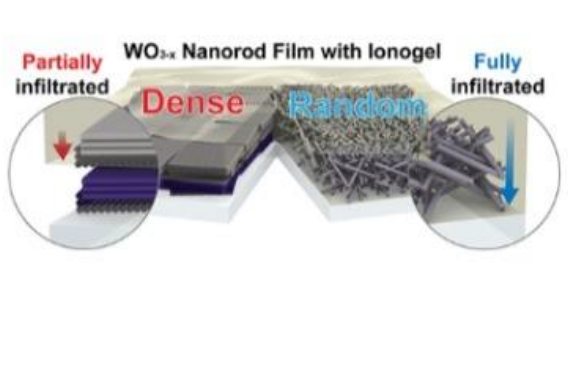
WO3-x Nanorod Film with Ionogel
Partially infiltrated
Fully infiltrated
Dense

Subscribed

Interfacial Hydrogen-Bond Networks at Bi–H_2O Interfaces Govern Hydroxylamine Selectivity in Nitrate Electroreduction

Jiangchen Zhu; Jian-Wen Zhao; Zhengwu Yang; Xia Zhu; Zhimin Song; Ming-Hui Fan; Zhi Zhao; Xiangdong Kong; Jin-Xun Liu; Zhigang Geng

Nano Lett. (2026) 26 (33): 11094–11102.

https://doi.org/10.1021/acs.nanolett.6c02673

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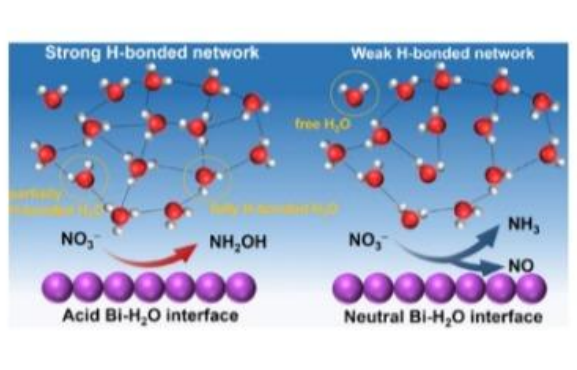
Strong H-bonded network
Weak H-bonded network
Acid Bi-H2O interface
Neutral Bi-H2O interface

Subscribed

Step-Induced Strain in Curved van der Waals Nanoribbons

Wenyan Shi; Wen Qin; Cui Guo; Zude Shi; Kangshu Li; Hang Xia; Haowei Ge; Zhixiong Xu; Caitian Gao; Song Liu; Xiaoxu Zhao; Xiuyun An; Zhuhua Zhang; Yongmin He

Nano Lett. (2026) 26 (33): 11103–11111.

https://doi.org/10.1021/acs.nanolett.6c02781

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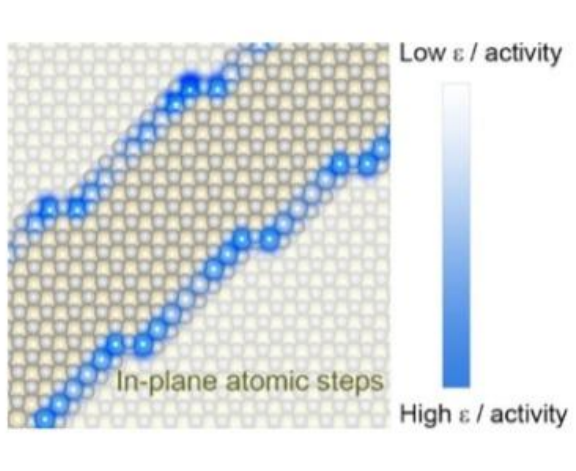
Low ε / activity
High ε / activity
In-plane atomic steps

Subscribed

Decoding Conductance Dispersion using Single-Molecule Raman Spectroscopy

Ruihao Li; Ran Liu; Lucas Domulevicz; Dianting Zou; Joshua Hihath

Nano Lett. (2026) 26 (33): 11112–11117.

https://doi.org/10.1021/acs.nanolett.6c02803

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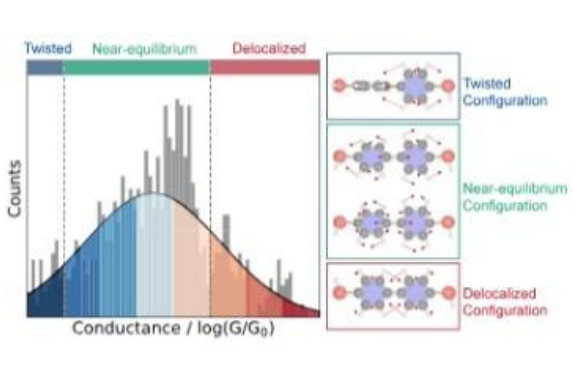

Subscribed

Geometric Engineering of Flat Bands in a Single-Layer Photonic Graphene

Dun Wang; Shupeng Xu; Jia-Chen Shi; Xuyang Li; Ritesh Agarwal

Nano Lett. (2026) 26 (33): 11118–11125.

https://doi.org/10.1021/acs.nanolett.6c02836

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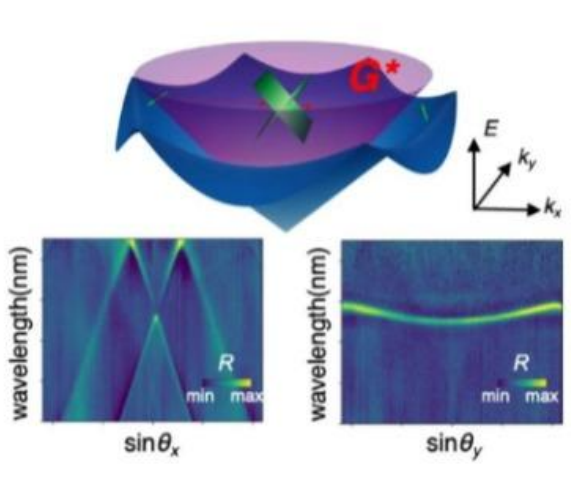

Subscribed

Femtosecond Laser Architecting FeCo Oxides Engineered Ni Foam for Magnetically Controllable Adsorption of Bubbles/Oil Droplets

Kai Yin; Lingxiao Wang; Xin Deng; Jiaqing Pei; Xinghao Song; Yu Chen; Zhi Luo; Guoqiang Li

Nano Lett. (2026) 26 (33): 11126–11135.

https://doi.org/10.1021/acs.nanolett.6c02929

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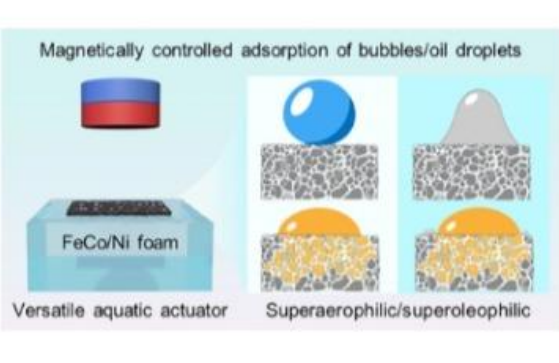
Magnetically controlled adsorption of bubbles/oil droplets
FeCo/Ni foam
Versatile aquatic actuator
Superaerophilic/superoleophilic

Subscribed

Multifunctional Single-Transistor Architecture Enabled by Nonvolatile Band Rearrangement in 2D Ferroelectric Tunneling Junction

Jialin Yang; Chuyao Chen; Zuyun Chen; Xuemin Hu; Lain-Jong Li; Shengli Zhang

Nano Lett. (2026) 26 (33): 11136–11144.

https://doi.org/10.1021/acs.nanolett.6c02966

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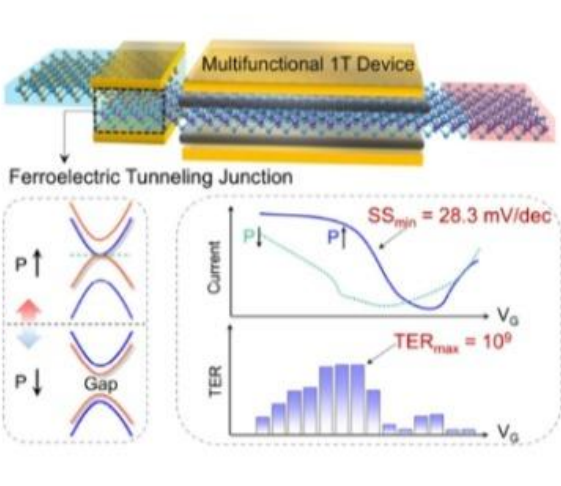
Multifunctional 1T Device
Ferroelectric Tunneling Junction
SSmin = 28.3 mV/dec
TERmax = 10⁶

Subscribed

Rational Ligand Engineering Enables Emission-Tunable Copper Nanoclusters for High-Performance LEDs

Mingshuai Yu; Guizhong Luo; Ying Lv; Hao Tian; Chen Zhu; Xue Bai; Zhennan Wu; Xi Kang; Manzhou Zhu

Nano Lett. (2026) 26 (33): 11145–11152.

https://doi.org/10.1021/acs.nanolett.6c03025

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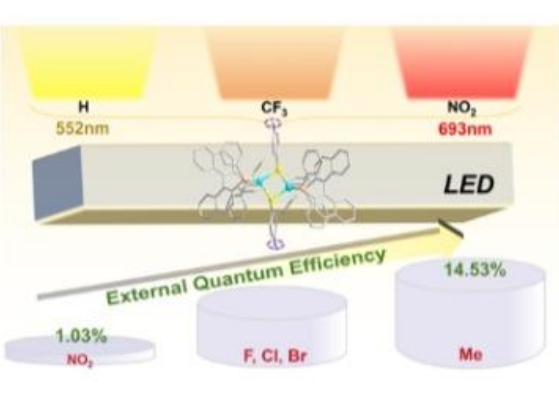
LED
External Quantum Efficiency
14.53%

Subscribed

Efficient Green-Emitting Aminophosphine-Derived InP-Based Quantum-Dot LEDs Enabled by Photo-cross-linked Hole Transport Layer Engineering

Shuaibing Wang; Ouyang Lin; Wentao Niu; Shichao Rao; Yue Qin; Yu Li; Chunhe Yang; Feng Teng; Aiwei Tang

Nano Lett. (2026) 26 (33): 11153–11161.

https://doi.org/10.1021/acs.nanolett.6c03035

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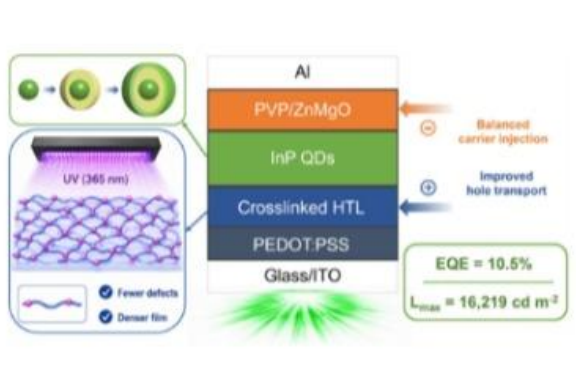
InP QDs
Crosslinked HTL
PEDOT:PSS
Glass/ITO
EQE = 18.6%

Subscribed

Supramolecularly Stabilized Copper(I) Halides for High-Efficiency Near-Ultraviolet Emission and X-ray Scintillation

Shanshan Han; Xiao Han; Huanxin Yang; Jinhui Liu; Junjie Guan; Minghui Chen; Wenqing Han; Mengyu Liu; Yuan Liu; Xiyan Li; Xinyue Li; Yongshen Zheng; Jialiang Xu

Nano Lett. (2026) 26 (33): 11162–11172.

https://doi.org/10.1021/acs.nanolett.6c03066

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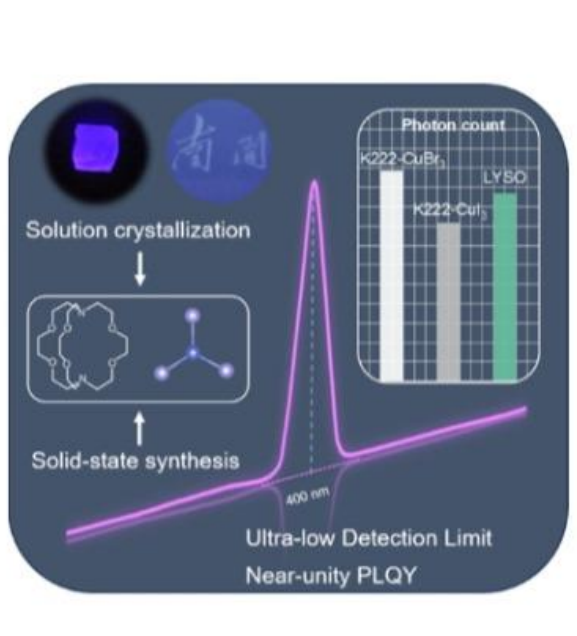
Solution crystallization
Solid-state synthesis
Ultra-low Detection Limit
Near-unity PLQY

Subscribed

Coordination-Environment-Mediated Selective Recognition of As(III) and Cu(II): Ion-Specific Charge Transfer at Pt Single-Atom Sites on α-Fe_2O_3 Nanospindles

Yong-Yu Li; Kai-Yuan Li; Zong-Yin Song; Wen-Qing Liu; Xing-Jiu Huang

Nano Lett. (2026) 26 (33): 11173–11181.

https://doi.org/10.1021/acs.nanolett.6c03072

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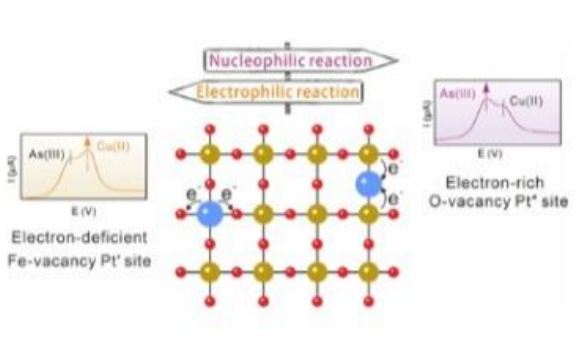
Nucleophilic reaction
Electrophilic reaction
Electron-deficient Fe-vacancy Pt site
Electron-rich O-vacancy Pt site

Subscribed

Kinetic–Thermodynamic Coupling for Enhanced Water Isotopologue Separation Via Solar-Powered Diffusion–Evaporation

Ming-Bang Wu; Hao Ye; Rou-Ming Wen; Yu-Ting Zhao; Jing Yang; Jia-You Chen; Qi-Hui Ye; Juming Yao; Hao-Cheng Yang

Nano Lett. (2026) 26 (33): 11182–11189.

https://doi.org/10.1021/acs.nanolett.6c03188

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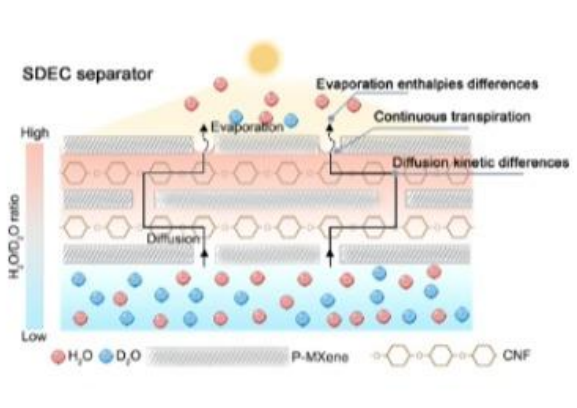
SDEC separator
Evaporation enthalpies difference
Continuous transpiration
Diffusion kinetic differences

Subscribed

Conjugated Coordination Polymer Aerogels with Unsaturated Single-Atom Metal Sites for Efficient Neutral Oxygen Evolution

Ziwei Ma; Li Hu; Yan Liu; Xiaoya Wang; Yuanqi Cao; Hui Zheng; Shouhan Zhang; Longsheng Zhang; Tianxi Liu; Yi Xie

Nano Lett. (2026) 26 (33): 11190–11199.

https://doi.org/10.1021/acs.nanolett.6c03220

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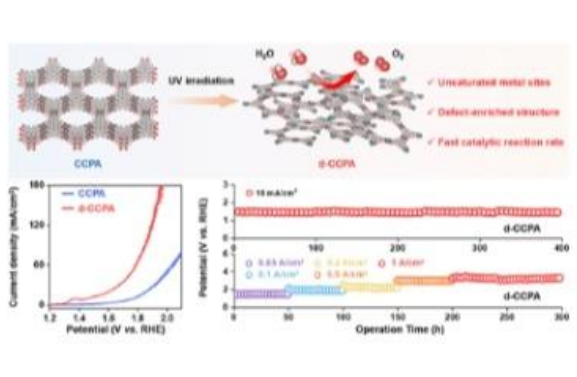

Additions and Corrections

Subscribed

Correction to “Surgical Tumor-Derived Photothermal Nanovaccine for Personalized Cancer Therapy and Prevention”

Tan Li; Gengji Chen; Zecong Xiao; Bo Li; Huihai Zhong; Minzhao Lin; Yujun Cai; Jing Huang; Xi Xie; Xintao Shuai

Nano Lett. (2026) 26 (33): 11200–11201.

https://doi.org/10.1021/acs.nanolett.6c03634

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Mastheads

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Issue Editorial Masthead

Nano Lett. (2026) 26 (33)

https://doi.org/10.1021/nlv026i033_2121627

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