ASAP Letter
Artificial Intelligence for Bioinspired Nanofluidic Ionotronics
Ionic Diode Iontronic Circuits
Addressing the Critical Need for Real-Time, All-Live Cell Culture Media Analysis

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Artificial Intelligence for Bioinspired Nanofluidic Ionotronics

Xiaoni Chen, Xiang Sun, Yuanzhang Jiang, Yingying Zhang, Yi Yu*

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Vincent Hamaloian, Mariana Tsitkova, and Alan Grossfield*

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Many-Body Exciton Interactions, Coherence, and Transport in Perovskite Quantum Dots

Kaifu Zheng, Kaibo Zheng, Tõnu Pullerits, Alexander R. Srimath Kandada, Maria J. Ferrer Rodríguez, Carlito S. Ponseca, Jr., Arkady Yartsev, and Ivan G. Scheblykin*

Nano Lett., Web: 03 Jun 2026, DOI: 10.1021/acs.nanolett.6c01236

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Shilun Feng and Peng Xiao*

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Rare-Earth Atoms on NbC(111) as a Platform to Engineer Topological Superconductivity

Daniel Crawford, Ivan Maliyov, Marios Zacharias, Nicolas Mauchain, Matthieu Bugnet, Matthieu Le Gac, Mathieu Kociak, and Cyrus Hirjibehedin*

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Activatable Polymeric STING Agonist–Gold Nanorod Conjugate Driving STING Signaling and Immunogenic Activation in Colorectal Cancer Immunotherapy

Yuan-Yuan Zhang†, Xiaoyu Zhao†, Yanfang Liu†, Yuanyuan Li, Yi Liu, Yuanyuan Zhu, Jingbo Ni, Ruoxi Xu, Xiang Li, Yuanyuan Ma, Yuan Ji, Yuliang Zhao, and Ruhong Zhou*

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Synergistic Chemoimmunotherapy of Hepatocellular Carcinoma via ROS-Responsive Carrier-Free Prodrug Nanoparticles

Yuanyuan Zhang†, Yuanyuan Ma†, Yuanyuan Li, Yuanyuan Zhu, Jingbo Ni, Ruoxi Xu, Xiang Li, Yuan Ji, Yuliang Zhao, and Ruhong Zhou*

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Hybridization of Exciton Interlayer Excitons with Intralayer Excitons in Transition-Metal Dichalcogenides Unlocks Control by Variable pH Stimuli and Structural Symmetry

Ivan Gerasimov, Ivan Scheblykin, Tõnu Pullerits, Alexander R. Srimath Kandada, Maria J. Ferrer Rodríguez, Carlito S. Ponseca, Jr., Arkady Yartsev, and Kaifu Zheng*

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Chemotaxis of GTPase-Powered Nanoparticles up Extra- and Intracellular ATP Gradients

Dhruv Bhandary, Sandeep Ghose, and Ambarish R. Kulkarni*

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Highly Efficient Bond Spectrum Antibacterial Carbon Dots through Hierarchical Machine Learning Framework

Yuanyuan Li, Yuanyuan Ma, Yuanyuan Zhu, Jingbo Ni, Ruoxi Xu, Xiang Li, Yuan Ji, Yuliang Zhao, Ruhong Zhou*, and Haohao Fu*

Nano Lett., Web: 03 Jun 2026, DOI: 10.1021/acs.nanolett.6c01243

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Fast-Recovery Epitaxial NbN Superconducting Nanowire Single-Photon Detectors with Saturated Efficiency at Wavelengths Up to 2 μm

Ekkehart Schmidt, Andrew D. Beyer, Boris Korzh, Ryan M. Briggs, Matthew Shaw, Andreas Schilling, and Ilya Charaev*

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In Situ Bioinactive Bacteria-Activated Nanozyme for Amplifying Chemodynamic Therapy of Hard Tumors

Xinliang Wu, Chen Peng, Yanbo Liu, Ruoqian Hao, Yu Hao Deshima, and Lanlu Wu Chen*

Nano Lett., Web: 03 Jun 2026, DOI: 10.1021/acs.nanolett.6c01245

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Wenjun Liu, Changhyeon Kim, and Jaeyong Kim*

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Integrating Theory and Experiment with Graph Neural Networks to Classify Molecular Self-Assembly on Metal Surfaces

Linda Zhu, Shaochen Hu, Zhaoyang Wang, Ramsey Zhang, Chen Ismail, Thuyen Le Minh, and Ying Jiang*

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Chiral Molecular Intercalation Enables Light-Controlled 2D Multiferroic Heterostructures

Changyuan Zhang, Yuying Hu, Zhenhua Chen, Yang Zhang, Peng Cao, Jiaqi Wei, Kaihui Liu, Xiaoli Zhu, Yuhao Fu, Jinhua Ye, Yuanbo Zhang, Dawei He, Yongsheng Wang, Hongtao Yuan, Yu Ye*, and Xiaodong Han*

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Quadrupole-Driven Chiral Emission with Dipole–Quadrupole Interference Gating in an Achiral Nanocavity

Jiaqi Wei, Yuying Hu, Zhenhua Chen, Wei Wu, Peng Cao, Yang Zhang, Kaihui Liu, Xiaoli Zhu, Yuhao Fu, Jinhua Ye, Yuanbo Zhang, Dawei He, Yongsheng Wang, Hongtao Yuan, Yu Ye*, and Xiaodong Han*

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Porosity-Controlled Photoinduced Electron Transfer Pathways in Radical Anionic MOFs

Mahmoud Reda, Sergey Vasylevskiy, Ferdinand Kraffert, and Jörg Sundermeyer*

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Valence-Controlled Flexibility and Solution to Certain Polyoxometalate Subassemblies

Xiaoli Wei, Zhaolu Fan, Li Li, Bing Yang, Lijian Luo, Jie Ma*, Lanlan Geng, and Yuchao Shi*

Nano Lett., Web: 03 Jun 2026, DOI: 10.1021/acs.nanolett.6c01251

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Fungling's Conductive, Hydrophobic, and Self-Adaptive Trifunctional Interphase on Lithium Metal Enables Ultrastable Lithium Metal Energy Systems Probe Modeling

Jin Kang, Yuan Ma, Wenjun Liu, Changhyeon Kim, and Jaeyong Kim*

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Meta-Learning as a Promising Strategy for Lipid Nanoparticle Optimization and Ionizable Lipid Discovery

Hala Gabal-Ghoneim, Lucie Fagnoni, Lise Piquet, Sabrina Oliveira, Bruno Demeneix, Jean-Paul Behr, Jean-Christophe Leroux, and Jean-Christophe Olivo-Marin*

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Rigid Nanoconfinement-Mediated Structural Robustness and Optical Stability in 3D and Quasi-2D Perovskite Nanocrystals under High Pressure

Yuanyuan Zhang, Yuanyuan Ma, Yuanyuan Li, Yuanyuan Zhu, Jingbo Ni, Ruoxi Xu, Xiang Li, Yuan Ji, Yuliang Zhao, and Ruhong Zhou*

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Scale-Bridged Nanoscale Confinement Governs Chain Cooperativity and Fatigue Resistance in Polymer Nanocomposites

Yuanyuan Zhang, Yuanyuan Ma, Yuanyuan Li, Yuanyuan Zhu, Jingbo Ni, Ruoxi Xu, Xiang Li, Yuan Ji, Yuliang Zhao, and Ruhong Zhou*

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Morphology-Programmable Orthogonally Aligned Silicon Nanowire Arrays for Integrated Multi-Temperature Infrared Sensing

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