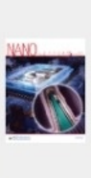

May 6, 2026
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About the Cover:

This cover depicts simulated superconducting nanohelices with opposite handedness. These chiral structures are not superimposable on their mirror images, breaking spatial inversion symmetry. An applied magnetic field breaks time-reversal symmetry and gives rise to a chirality-dependent superconducting diode effect, enabling non-reciprocal supercurrent transport. **View the article.**

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MINI-REVIEWS

Strain-Mediated Control of Magnetic Properties in Thin Films

Hong Xu, Huali Yang*, Yali Xie, and Run-Wei Li*

Nano Letters 2026, 26, 17, 5585-5597 **(Mini-Review)**
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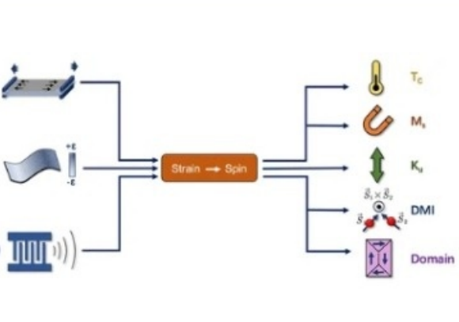
ABSTRACT



Dual-Stimuli Injectable Platforms for Localized Breast Cancer Therapy

Celia Nieto, Álvaro González-Garcinuño, Antonio Tabernero, and Eva M. Martín del Valle*

Nano Letters 2026, 26, 17, 5598-5611 **(Mini-Review)** Open Access
Publication Date (Web): April 26, 2026

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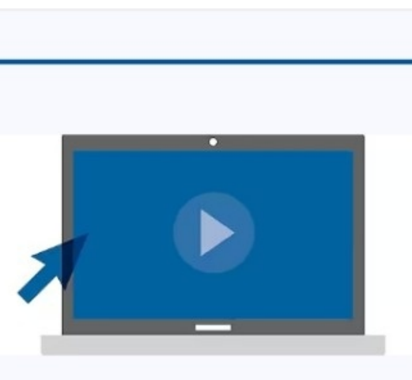

LETTERS

Multimodal Topological Textures Arising from Coupled Structural Orders in $SrTiO_3$

Fernando Gómez-Ortiz*, Louis Bastogne, and Philippe Ghosez*

Nano Letters 2026, 26, 17, 5612-5617 **(Letter)**
Publication Date (Web): April 20, 2026

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Nanomotor-Assisted Intravesical Chemotherapy for Bladder Tumor Reduction and Suppression of Early Tumor Regrowth

Kristin Fichna, Maria Crespo-Cuadrado, Acsah Konuparamban, Valerio Di Carlo, David Esporrín-Ubieto, Ines Macías-Tarrío, Oriol Jutglar Soler, Shuqin Chen, María Gómez-Martínez, Anna C. Bakenecker, Antoni Vilaseca, Jordi Llop, and Samuel Sánchez*

Nano Letters 2026, 26, 17, 5618-5627 **(Letter)** Open Access
Publication Date (Web): April 23, 2026

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Wavelength-Dependent Electrical Readout of Spin Ensembles in a Thin-Film SiC-on-Insulator Platform

Alexander Zappacosta*, Ben Haylock, Paul Fisher, Naoya Morioka, and Robert Cernansky*

Nano Letters 2026, 26, 17, 5628-5635 **(Letter)** Open Access
Publication Date (Web): April 20, 2026

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ABSTRACT

Photoionization Current Spectroscopy of Individual Silicon Vacancies in Silicon Carbide

Kazuki Okajima, Tetsuri Nishikawa, Hiroshi Abe, Koichi Murata, Takeshi Ohshima, Hidekazu Tsuchida, Naoya Morioka*, and Norikazu Mizuochi

Nano Letters 2026, 26, 17, 5636-5643 **(Letter)**
Publication Date (Web): April 18, 2026

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ABSTRACT

Reconfigurable in-Sensor Image Enhancement Based on Tunable Band Alignment of $In_2Se_3/PdSe_2$ Heterojunction

Yuting Ye, Jianghong Wu*, Yin Zhang, Hui Ma, Qingyan Deng, Jialing Jian, Renjie Tang, Boshu Sun, Yuxiang Zeng, Yinyin Song, Juan Wang, Hongtao Lin, Shiyu Zhao, and Lan Li*

Nano Letters 2026, 26, 17, 5644-5651 **(Letter)**
Publication Date (Web): April 21, 2026

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ABSTRACT

Coexistence of Dirac Nodal Lines and Rashba Bands in the Topological Superconductor Candidate $AuSn_4$

Liwei Deng, Yu Huang, Tongrui Li*, Xiangqi Liu, Shilong Chen, Xun Ma, Jiameng Wang, Zhengtai Liu, Zhe Sun, Gang Mu, Yanfeng Guo*, Dawei Shen*, and Shan Qiao*

Nano Letters 2026, 26, 17, 5652-5659 **(Letter)**
Publication Date (Web): April 22, 2026

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Two Kelvin Operation of Ultrawide-Bandgap β-Ga_2O_3 FinFETs and Logic Inverter Integrated Circuits

Vishal Khandelwal, Glen Isaac Maciel García, Mritunjay Kumar, Francesco Blanda, Na Xiao, Dongxing Zheng, Ganesh Mainali, Manoj Kumar Rajbhar, Xiao Tang, Xixiang Zhang, and Xiaohang Li*

Nano Letters 2026, 26, 17, 5660-5667 **(Letter)** Open Access
Publication Date (Web): February 25, 2026

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HITE: HIV Inspired Lipid Nanoparticle Platform for CAR T Cell Engineering

Dongyoon Kim, So-Jeong Moon, Emily L. Han, Ellie Feng, Amanda M. Murray, Jinjin Wang, Wei Liu, Gu Kong, Carl H. June, and Michael J. Mitchell*

Nano Letters 2026, 26, 17, 5668-5679 **(Letter)**
Publication Date (Web): April 21, 2026

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Superconducting Diode Effect Due to Chiral Meissner Currents in a Hollow Superconducting Helix

Axel J. M. Deenen and Dirk Grundler*

Nano Letters 2026, 26, 17, 5680-5685 **(Letter)**
Publication Date (Web): February 25, 2026

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Stabilizing Oxygen Framework in P3-Type Cathodes for Highly Reversible Sodium-Ion Batteries

Xin-Yu Zhang, Wen-Ye Wang, Guang-Xu Wei, Ziheng Yang, Shao-Wen Xu, Haojie Dong, Hao Qin, Ling-Jiao Hu, Yuan-Meng Li, Shuai Sun, Mengting Liu*, Kai Chen, and Peng-Fei Wang*

Nano Letters 2026, 26, 17, 5686-5694 **(Letter)**
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ABSTRACT

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Atomistic Origin of RTN-like Centers Created and Annihilated by RRAM Write Processes

Paul Solomon*, Manasa Kaniselvan, Hiroyuki Miyazoe, Babar Khan, Takashi Ando, and Mathieu Luisier*

Nano Letters 2026, 26, 17, 5695-5701 **(Letter)** Open Access
Publication Date (Web): April 27, 2026

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Scalable Nanoedge Interfaces for Robust Intracellular Electrophysiology in Cardiomyocytes

Haoran Gong, Jilin Zheng, Qiji Ma, Hao Wang, Jiaru Fang, Chengyun Wang, Tao Liang, Xuelian Lyu, Zhigang Gao, Dongxin Xu*, and Ning Hu*

Nano Letters 2026, 26, 17, 5702-5712 **(Letter)**
Publication Date (Web): April 22, 2026

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Raman and Terahertz Spectroscopy of Low-Frequency Chiral Phonons in Amino Acids

Rahul Rao*, Wonjin Choi*, Joseph M. Slocik, Thuc T. Mai, Michael A. Susner, Kelsey A. Collins, Michael J. Newburger, Petr Bouř*, and Nicholas A. Kotov*

Nano Letters 2026, 26, 17, 5713-5719 **(Letter)** Open Access
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Flexible and Thermally Regulable High-Temperature Sensing Electronics

Yingzhe Li, Weiwei Li, Manzhang Xu, Ruoyan Miao, Zheng Liu, Lu Zheng, Guang Pan*, Xuewen Wang*, and Wei Huang*

Nano Letters 2026, 26, 17, 5720-5730 **(Letter)**
Publication Date (Web): April 21, 2026

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Magnetic-Tunnel-Junction-Based Probabilistic Processor for Efficient Embodied Evolution

Youwei Bao, Shuhan Yang, Edward Humianto, and Hyunsoo Yang*

Nano Letters 2026, 26, 17, 5731-5739 **(Letter)**
Publication Date (Web): April 22, 2026

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Stabilizing Topological States in $ZrTe_5$ from First-Principles Defect Physics

Chia-Hsiu Hsu, Zezhi Wang, Sen Shao, Yoshinori Okada, Feng-Chuan Chuang, Dong Xing, Ilya Belopolski, Cheng-Long Zhang*, and Guoqing Chang*

Nano Letters 2026, 26, 17, 5740-5746 **(Letter)**
Publication Date (Web): April 26, 2026

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Harnessing Supramolecular J-Aggregates in Deep Eutectic Solvents for Tunable NIR Photothermal and Photodynamic Therapy

Krishan Kumar*, Meltem Gurol, Pegah Sanjarnia, María Soledad Orellano, Ana Beloqui, Lisa Ebo, Matias L. Picchio*, and Marcelo Calderón*

Nano Letters 2026, 26, 17, 5747-5756 **(Letter)** Open Access
Publication Date (Web): April 24, 2026

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Robust SERS Platform Enabled by Silver-Nanoparticle-Loaded Hydrogel Millibeads for Trace Detection in High-Salt and Protein-Rich Complex Matrixes

Xiaotong Su, Ke Liu, Zhiyang Zhang*, Qirui Shen, Yu Feng, Yan Chen, Yifan Sui, Jiadong Chen, Renshuang Liu, Haoyuan Zhou, Yanzhou Wu, Jaebum Choo*, and Lingxin Chen*

Nano Letters 2026, 26, 17, 5757-5765 **(Letter)**
Publication Date (Web): April 20, 2026

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Simultaneous Profiling and Quantification of Tau and Its Phosphorylated Isomers Using Engineered FraC Nanopores

Yu Xin, Defu Liu, Yue Ma, Zhijing Zhang, Peng Chen, Mengze Wu, Yue Li, Shanchuan Chen, Shixin Yan, Guiqin Song, Lu Chen*, Qiantao Wang*, Jia Geng*, and Ke Sun*

Nano Letters 2026, 26, 17, 5766-5774 **(Letter)**
Publication Date (Web): April 20, 2026

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Photoluminescence from 2D Perovskite Single-Crystal Films: Dynamic Coexistence of Excitons and Polaritons

Jingyuan Qiao, Wei Jia, Guangchao Shi, Fulong Hu, Xuewen Zhang, Xinyu Zhang, Hanwei Hu, Qixuan Zhong, Yuming Wang, Xutao Zhang, Zi-Qiang Rong, and Jingzhi Shang*

Nano Letters 2026, 26, 17, 5775-5783 **(Letter)**
Publication Date (Web): April 20, 2026

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Electromagnetic vs Chemical Interfacial Interactions at the Single-Molecule-Confined Sub-nanometer Molecule–Metal Gap: A Solution-Phase Chiroptical Study

Huacheng Li, Weixiang Ye, Ziwei Zhou, Hong Wu*, Lizhi Jiao, Menghui Jia, Tao Ding, Yi-Yu Cai, Alexander O. Govorov, Wenhua Zhang, Jinlong Yang, and Xiang Lan*

Nano Letters 2026, 26, 17, 5784-5791 **(Letter)**
Publication Date (Web): April 21, 2026

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Dual Kinetic Promotion of Sulfur Redox Reactions in Lithium–Sulfur Batteries Driven by a Magneto-optical Synergistic Effect

Fei Zhao, Shuo Chen, Yuxuan Du, Chunyuan Song, Xiangyu Chen, Yuanzhi Jiang, Shuheng Zhang, Yibo He*, and Xuqing Liu

Nano Letters 2026, 26, 17, 5792-5801 **(Letter)**
Publication Date (Web): April 23, 2026

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Hybrid MXene/Hydrogel Integration with Modulated Bioactivities for Synergistic Diabetic Wound Therapy

Ligang Zou, Yuanyuan Liu, Jiaqi Liu, Min Zhang, Xuemei He*, and Xiang Mao*

Nano Letters 2026, 26, 17, 5802-5810 **(Letter)**
Publication Date (Web): April 23, 2026

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Unlocking Wavefront Manipulation in Exciton-Polaritons by Structuring WS_2 as Phase Gradient Metasurfaces

Kai Ding, Yuefeng Wang, Yinchang Liao, Hongxin Sun, Yuhua Chen, Zhiwei Yan, Meng Xia, Tao Wang, and Xingwang Zhang*

Nano Letters 2026, 26, 17, 5811-5817 **(Letter)**
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Mid-Infrared Metaplasmonic Sensing

Divya Hungund, Noah Mansfield, Jeffery Allen, Monica Allen, Zarko Sakotic, and Daniel Wasserman*

Nano Letters 2026, 26, 17, 5818-5824 **(Letter)**
Publication Date (Web): April 24, 2026

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Metasurface-Based Wavelength-Multiplexed Diffractive Neural Networks for Multilabel Intelligent Vision

Rui Yang, Lei Chen, Zhao Wang, Liangpeng Wei, Mingke Wu, Daqi Zhu*, and Yinan Zhang*

Nano Letters 2026, 26, 17, 5825-5832 **(Letter)**
Publication Date (Web): April 21, 2026

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Transition from Conventional Ferroelectricity to Ion-Conduction-Like Ferroelectricity

Yuanhang Yan and Menghao Wu*

Nano Letters 2026, 26, 17, 5833-5838 **(Letter)**
Publication Date (Web): April 24, 2026

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Portable Integrated Composite Aerogels for High-Power Electricity Generation and Efficient Seawater Desalination

Rong Chen, Shengze Hu, Junye Chen, Enhao Zhang, Wei Chen, Yutong Huang, Wenjie Dou, Chaohui Wang, Xuyang Tang, Weitong Chen, Quanzhen Zhang, Baofei Hou*, Denan Kong*, Haifei Wu, Qiaojun Cao, Xianbao Wang*, Xu Han, and Weidong Dou*

Nano Letters 2026, 26, 17, 5839-5847 **(Letter)**
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Triggering Spontaneous Reconstruction of Ruddlesden–Popper Perovskites for Enhanced Oxygen Evolution

Limei Wang, Chaoxia Peng, Quanhui Li, Hang Bao, Tenghui Yuan, and Bote Zhao*

Nano Letters 2026, 26, 17, 5848-5857 **(Letter)**
Publication Date (Web): April 22, 2026

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Ultrafast Nonvolatile Graphene Memory Enabled by InP@ZnS Core–Shell Quantum Dots

Zhenhua Sun*, Jiamin Wen, Guohao Wen, Guanlin Ke, and Honglei Wu

Nano Letters 2026, 26, 17, 5858-5865 **(Letter)**
Publication Date (Web): April 21, 2026

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ARPES Signatures of Trions in van der Waals Materials

Giuseppe Meneghini*, Maja Löwe, Raul Perea-Causin, Jan Philipp Bange, Wiebke Bennecke, Marcel Reutzel, Stefan Mathias, and Ermin Malic

Nano Letters 2026, 26, 17, 5866-5872 **(Letter)** Open Access
Publication Date (Web): April 24, 2026

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Enhanced Damping-Like Torque through Strain Modulation in RuO_2

Jun Qiao, Yuhao Jiang, Bin Hong*, Ziyue Wang, Jiahao Liu, Jiangxiao Li, Zhaochun Liu, Boyu Wang, Shuo Wang, Yue Zhang, Weisheng Zhao, and Shouzhong Peng*

Nano Letters 2026, 26, 17, 5873-5881 **(Letter)**
Publication Date (Web): April 20, 2026

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Emergent One-Dimensional Charge Order at Domain Walls of Competing Charge-Density-Wave Orders

Zhongyi Cao, Hui Chen*, Wen-Han Dong, Yanhao Shi, Qi Qi, Haitao Yang, and Hong-Jun Gao

Nano Letters 2026, 26, 17, 5882-5890 **(Letter)**
Publication Date (Web): April 20, 2026

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Synthetic Control over the Electron-Beam Stability of Upconverting Nanoparticles

Xiao Qi, Peter Ercius, P. James Schuck, Bruce E. Cohen*, and Emory M. Chan*

Nano Letters 2026, 26, 17, 5891-5900 **(Letter)**
Publication Date (Web): April 22, 2026

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Refined Density Functional Theory Recipe and Renormalization of Band-Edge Parameters for Electrons in Monolayer MoS_2 Informed by the Measured Spin–Orbit Splitting

Igor Rozhansky*, Michele Masseroni, Ricardo Pisoni, Suad Alshammari, Xue Li, Thomas Ihn, Klaus Ensslin, James McHugh, and Vladimir Fal'ko

Nano Letters 2026, 26, 17, 5901-5908 **(Letter)**
Publication Date (Web): April 27, 2026

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Uniform Narrow Excitonic Spectrum in Large-Area Suspended WSe_2 Monolayers

Giacomo Mariani*, Riccardo Lodo, Keigo Matsuyama, Yoji Kunihashi, Taro Wakamura, Satoshi Sasaki, Louis Smet, Makoto Kohda, Junsaku Nitta, and Haruki Sanada

Nano Letters 2026, 26, 17, 5909-5917 **(Letter)**
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Nanoarrow-Derived Open-Channel Nanoframes Capable of Colloidal Host–Guest Encapsulation

Cheng Chen, Peijian Wang, Zezhou Li, Fuhui Zhang, Mengqi Dai, Jihan Zhou*, and Limin Qi*

Nano Letters 2026, 26, 17, 5918-5924 **(Letter)**
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Rapid Tubular Accumulation of Renal-Clearable Gold Nanoparticles Enhances Computed Tomography Contrast Imaging of the Kidneys

Yuming Lin, Yuanqing Song, Mengyi Zheng, Yexi Peng, Yuming Qi, Xunzhi Wu, Mingze Xu, Junyang Zhong, Xingya Jiang*, and Bujie Du*

Nano Letters 2026, 26, 17, 5925-5933 **(Letter)**
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On-Demand Switching of a pH/ROS-Responsive Ce Single-Atom Nanozyme Spray for Infected Wounds

Mengdie Jin, Le Peng, Yongkang Huang, Jianwei Li, Xinyun Zhai*, and Yaping Du*

Nano Letters 2026, 26, 17, 5934-5944 **(Letter)**
Publication Date (Web): April 24, 2026

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Vanishing Polarizability of Dark Excitons in WSe_2: Implications for Noise-Resilient Quantum States

Ali Soleymani, Qiaohui Zhou, Keyuan Bai, Fei Wang, Kenji Watanabe, Takashi Taniguchi, Jiang Wei, and Xin Lu*

Nano Letters 2026, 26, 17, 5945-5951 **(Letter)** Open Access
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Layered van der Waals Ferroelectric BiOI for High-Performance Multistate Memory

Lele Ren, Zaichun Sun*, Yunfan Wang, Jiaping Li, Ce-Wen Nan, and Bao-Wen Li*

Nano Letters 2026, 26, 17, 5952-5959 **(Letter)**
Publication Date (Web): April 22, 2026

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Chains of Nanoparticles for Flat-Band Emission and Lasing

Rebecca Heilmann, Joel Lehikoinen, Sioneh Eyvazi, Evgeny A. Mamonov, and Päivi Törmä*

Nano Letters 2026, 26, 17, 5960-5966 **(Letter)** Open Access
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ABSTRACT

Photothermally Triggered Bacterial–Manganese Immune Amplifier Enables Spatiotemporal STING Hyper-Activation against Cold Tumors

Dan Meng, Shuai-Wen Li, Chun-Xiao Liang, Qian-Ru Li, Yun Zhang, Xuan Zeng*, and Xian-Zheng Zhang*

Nano Letters 2026, 26, 17, 5967-5976 **(Letter)**
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ABSTRACT

High-*Q* Chiral Flat-Band Guided Resonances in Nonlocal Metagratings

Baohe Zhang, Shuangli Li, Anlong Dong, Meng Qin, Lujun Huang*, Lin Li*, and Hongyu Li*

Nano Letters 2026, 26, 17, 5977-5984 **(Letter)**
Publication Date (Web): April 21, 2026

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ABSTRACT

A Chemical-Potential-Driven Self-Mitigation Mechanism during Calendar Aging

Jiawang Meng, Junwei Liang, Weijie Liu, Chenjie Lou, Likun Chen, Kun Peng, Xudong Li, Qingqing Wang, and Ming Liu*

Nano Letters 2026, 26, 17, 5985-5993 **(Letter)**
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