Skip to Main Content

The Sherwin-Williams Company Innovation Award
Nominate by 1 May 2026
$75,000 USD award in organic electronics
Now Accepting Nominations
awards@sherwin.com

Applied Physics Letters

Issues

Select Decade: 2020 | Select Year: 2025 | Issue: 21 April - Volume 126, Issue 16

Volume 126, Issue 16
21 April 2025

All Issues
Cover Image

ISSN 0003-6951
EISSN 1077-3118

In this Issue

PERSPECTIVES
PHOTONICS AND OPTOELECTRONICS
METASURFACES AND METAMATERIALS
ADVANCED MATERIALS
SEMICONDUCTORS
PHONONIC, ACOUSTIC, AND THERMAL PROPERTIES
MAGNETICS AND SPINTRONICS
SUPERCONDUCTIVITY AND SUPERCONDUCTING ELECTRONICS
LOW-DIMENSIONAL AND TOPOLOGICAL MATERIALS
DEVICE PHYSICS AND NANOTECHNOLOGY
ENERGY CONVERSION AND STORAGE
INTERDISCIPLINARY APPLIED PHYSICS

PERSPECTIVES

Dynamical correlation between ions in liquid seen in real space and time

Yuya Shinohara, Takeshi Egami

Appl. Phys. Lett. 126, 160501 (2025) https://doi.org/10.1063/5.0250886

Abstract | View article | PDF

PHOTONICS AND OPTOELECTRONICS

Air-aided coherent detection for broadband terahertz wave

Jialiang Huang, Da Tian, Caihong Zhang, Jingbo Wu, Kebin Fan, Zheng Feng, Wei Tan, Biaobing Jin, Jian Chen, Peiheng Wu

Appl. Phys. Lett. 126, 161101 (2025) https://doi.org/10.1063/5.0250971

Abstract | View article | PDF

Formation of two-dimensional multichannel vertical optical waveguides in a nitrogen-vacancy center diamond using a femtosecond Bessel beam laser for local quantum sensing

Noriko Kurose, Kotaro Obata, Shintaro Nomura, Takayo Ogawa, Satoshi Wada, Koji Sugioka, Yoshinobu Aoyagi

Appl. Phys. Lett. 126, 161102 (2025) https://doi.org/10.1063/5.0253587

Abstract | View article | PDF

METASURFACES AND METAMATERIALS

Coupling-induced perfect absorption in TMD-based metasurface

Jing Du, Keren Wang, Peijuan Dai, Hetian Chen, Xun Zhou, Xiaoyu Kuang, Wei Wang

Appl. Phys. Lett. 126, 161701 (2025) https://doi.org/10.1063/5.0267267

Abstract | View article | PDF

ADVANCED MATERIALS

Strain-tunable magnetism in hydrogen-functionalized WSe_2 monolayer

In Special Collection: Strain-controlled Magnetism: From Fundamental Phenomena to Devices

Tianhao Liao, Anthony C. Iosevya, Chinedu E. Ekuma

Appl. Phys. Lett. 126, 161901 (2025) https://doi.org/10.1063/5.0261138

Abstract | View article | PDF

Lattice arrangement induced the transition from bipolar to n-type enhancing the spin polarization and the magnetic field dependent dipole effect in organic crystals

Xiangqian Lu, Renjie Hu, Xi Wang, Wei Qin

Appl. Phys. Lett. 126, 161902 (2025) https://doi.org/10.1063/5.0256667

Abstract | View article | PDF

SEMICONDUCTORS

Synergistic effects of strain and chemical environment on defect engineering in γ-$CsPbI_3$

Tao Luo, Zhiquan Chen, Chunchi Liu, Jiamin Zhang, Tao Yin, Min Zhang, Xiaobo Chen, Xu Li, Li Guan

Appl. Phys. Lett. 126, 162101 (2025) https://doi.org/10.1063/5.0253443

Abstract | View article | PDF

Investigation of gate conduction mechanisms in p-NiO gate HEMTs with a type-II band aligned NiO/AlGaN heterojunction

Huaiqin Liu, Yanghu Peng, Hui Guo, Na Sun, Ruilong Gong, Guang Qiao, Pengfei Shao, Jiandong Ye, Rong Zhang, Dunjun Chen

Appl. Phys. Lett. 126, 162102 (2025) https://doi.org/10.1063/5.0258921

Abstract | View article | PDF

Stress-engineered single-photon emitters in semiconductor quantum wells

Jian Wang, Xiaomin Zhang, Baoquan Sun

Appl. Phys. Lett. 126, 162103 (2025) https://doi.org/10.1063/5.0266416

Abstract | View article | PDF

PHONONIC, ACOUSTIC, AND THERMAL PROPERTIES

Vibrational lifetimes of strongly coupled nanostructures

Gregory V. Hartland, Vadim Trepalin

Appl. Phys. Lett. 126, 162201 (2025) https://doi.org/10.1063/5.0266433

Abstract | View article | PDF | CHORUS

Cross-Ag disk-covered GaAs microstructure for refractive index sensing by the surface plasmon resonance

Yongxuan Huang, Bo Wang

Appl. Phys. Lett. 126, 162202 (2025) https://doi.org/10.1063/5.0249891

Abstract | View article | PDF

GHz Love-mode TF-SAW phononic crystals based on $LiNbO_3$-on-SiC substrate

Yi-Hsin He, Zhen-Hui Qin, Hua-Yang Chen, Nan-Xin Yu, Zhi-Wen Wang, Si-Yuan Yu, Yan-Feng Chen

Appl. Phys. Lett. 126, 162203 (2025) https://doi.org/10.1063/5.0254667

Abstract | View article | PDF

MAGNETICS AND SPINTRONICS

Modulation of the Dzyaloshinskii–Moriya interaction in Pt/Co/Pt with electric field induced strain

Shen Li, Sutong Zhao, Dion M. F. Hartmann, Wei Yang, Xiaoyang Lin, Weisheng Zhao, Reinoud Lavrijsen

Appl. Phys. Lett. 126, 162401 (2025) https://doi.org/10.1063/5.0256337

Abstract | View article | PDF

HM-C21: A three-dimensional carbon with abundant p-electron-induced magnetic states for spintronics

Junjie Zhao, Mengqing Liao, Jiayu Zhang, Yuehua Wang, Chenggang Wu, Haixin Jiang, Fei Zhou, Jintong Guan, Dalong Yang, Nan Gu, Fengjiang Wang

Appl. Phys. Lett. 126, 162402 (2025) https://doi.org/10.1063/5.0247553

Abstract | View article | PDF

SUPERCONDUCTIVITY AND SUPERCONDUCTING ELECTRONICS

Superconducting nanowire single-photon detectors based on amorphous tungsten germanide

Shijie Yang, Ying Chen, Limin Sun, Hui Zhou, Yangmu Li, Jia Huang, Xiaoqing Zheng, Runyan Ma, Jiamin Xiong, Zhen Wan, Xiaoyu Liu, Hao Li, Jhong Zheng, Wei Peng, Xiaofu Zhang, Liang You

Appl. Phys. Lett. 126, 162601 (2025) https://doi.org/10.1063/5.0264658

Abstract | View article | PDF

LOW-DIMENSIONAL AND TOPOLOGICAL MATERIALS

Biaxial strain engineering of the band structure in atomically thin InSe

Chenxui Wang, Bowen Huang, Xinpeng Zhang, Guowei Zhang

Appl. Phys. Lett. 126, 162101 (2025) https://doi.org/10.1063/5.0264598

Abstract | View article | PDF

DEVICE PHYSICS AND NANOTECHNOLOGY

Generation of narrow linewidth sidebands by resonant excitation of torsional mode in a microcantilever resonator

Haoran Wang, Zihao Zhao, Xiwei Wang, Duo Liu

Appl. Phys. Lett. 126, 163001 (2025) https://doi.org/10.1063/5.0256735

Abstract | View article | PDF

Breakdown-induced directional cracking in kilovolt-class β-Ga_2O_3 (001) vertical trench Schottky barrier diodes

Sai Charan Vanjari, Aditya K. Bhat, Hairyl Huang, Matthew D. Smith, James W. Pomeroy, Martin Kuball

Appl. Phys. Lett. 126, 163002 (2025) https://doi.org/10.1063/5.0262734

Abstract | View article | PDF

900-V active-passivation p-GaN gate HEMT with suppressed floating Si substrate induced back-gating effect

Hao Chang, Junjie Yang, Jingjing Yu, Jiawei Cui, Yoyo Yin, Xuelin Yang, Xiaowei Liu, Manjun Wang, Bo Shen, Jin Wei

Appl. Phys. Lett. 126, 163003 (2025) https://doi.org/10.1063/5.0253693

Abstract | View article | PDF

ENERGY CONVERSION AND STORAGE

A Chiva-like piezoelectric wind energy harvester using an overlapping multi-sheet structure

Zhenghua Zhang, Lingqi Luo, Mengxiong Zhu, Zhenli Kuang, Weilin Liao, Junwu Kan

Appl. Phys. Lett. 126, 163901 (2025) https://doi.org/10.1063/5.0258890

Abstract | View article | PDF

INTERDISCIPLINARY APPLIED PHYSICS

Research on the motion performance of a magnetic field controlled rice grain microswimmer

Xiao Hu, Run Ouyang, Jianzhong Lin, Zuzhao Zhu, Peifeng Lin

Appl. Phys. Lett. 126, 164101 (2025) https://doi.org/10.1063/5.0271417

Abstract | View article | PDF

HIDEN Mass Spectrometers for Surface Analysis
Knowledge Expertise Experience
Click Here
hidenanalytical.com

Submit your article

Sign up for alerts

RSS
Current Issue RSS Feed
Open Issues RSS Feed

Most Read | Most Cited

Roadmap on photonic metasurfaces
Sebastian A. Schulz, Rupert F. Oulton, et al.

Diamagnetic levitation of water realized with a simple device consisting of ordinary permanent magnets
Tomoya Naito, Tomoaki Suzuki, et al.

Charge localization in optoelectronic and photocatalytic applications: Computational perspective
Francesco Ambrosio, Julia Wiktor

Online ISSN 1077-3118 | Print ISSN 0003-6951

© Copyright 2025 AIP Publishing LLC