August 20, 2025
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About the Cover:

As a beam-steering device, a new type of focus plane array (FPA) is reported. When the advantages of the electro-optic effect of thin-film lithium niobate are leveraged, ultra-fast operating speeds and ultra-low power consumption are achieved, which are at least 2 orders of magnitude smaller than those of previous FPAs. **View the article.**

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- Viewpoints
- Roadmaps
- Reviews
- Articles
- Mastheads

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VIEWPOINTS

Team Science

Wiebke Albrecht*, Esther Alarcón Llado, Bruno Ehrler, Erik Garnett, and Albert Polman

ACS Photonics 2025, 12, 8, 3959-3960 **(Viewpoint)** Open Access
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ROADMAPS

Roadmap for Photonics with 2D Materials

F. Javier García de Abajo*, D. N. Basov*, Frank H. L. Koppens*, Lorenzo Orsini, Matteo Ceccanti, Sebastián Castilla, Lorenzo Cavicchi, Marco Polini*, P. A. D. Gonçalves*, A. T. Costa, N. M. R. Peres, N. Asger Mortensen, Sathwik Bharadwaj, Zubin Jacob*, P. J. Schuck*, A. N. Pasupathy, Milan Delor, M. K. Liu, Aitor Mugarza*, Pablo Merino, Marc G. Cuxart, Emigdio Chávez-Angel, Martin Švec, Luiz H. G. Tizei*, Florian Dirnberger, Hui Deng, Christian Schneider, Vinod Menon*, Thorsten Deilmann*, Alexey Chernikov, Kristian S. Thygesen, Yohannes Abate*, Mauricio Terrones, Vinod K. Sangwan, Mark C. Hersam, Leo Yu, Xueqi Chen, Tony F. Heinz, Puneet Murthy, Martin Kroner, Tomasz Smolenski, Deepankur Thureja, Thibault Chervy*, Armando Genco, Chiara Trovatello, Giulio Cerullo, Stefano Dal Conte*, Daniel Timmer, Antonietta De Sio, Christoph Lienau*, Nianze Shang, Hao Hong, Kaihui Liu, Zhipei Sun*, Lee A. Rozema*, Philip Walther, Andrea Alù*, Andrea Marini, Michele Cotrufo, Raquel Queiroz, X.-Y. Zhu, Joel D. Cox*, Eduardo J. C. Dias, Álvaro Rodríguez Echarri, Fadil Iyikanat, Paul Herrmann, Nele Tornow, Sebastian Klimmer, Jan Wilhelm, Giancarlo Soavi*, Zeyuan Sun, Shiwei Wu*, Ying Xiong, Oles Matsyshyn, Roshan Krishna Kumar, Justin C. W. Song*, Tomer Bucher, Alexey Gorlach, Shai Tsesses, Ido Kaminer*, Julian Schwab, Florian Mangold, Harald Giessen*, M. Sánchez Sánchez, D. K. Efetov, T. Low, G. Gómez-Santos, T. Stauber*, Gonzalo Álvarez-Pérez, Jiahua Duan, Luis Martín-Moreno, Alexander Paarmann, Joshua D. Caldwell*, Alexey Y. Nikitin, Pablo Alonso-González*, Niclas S. Mueller, Valentyn Volkov, Deep Jariwala, Timur Shegai, Jorik van de Groep*, Alexandra Boltasseva*, Igor V. Bondarev, Vladimir M. Shalaev*, Jeffrey Simon, Colton Fruhling, Guangzhen Shen, Dino Novko, Shijing Tan, Bing Wang, Hrvoje Petek*, Vahagn Mkhitaryan*, Renwen Yu, Alejandro Manjavacas, J. Enrique Ortega, Xu Cheng, Ruijuan Tian, Dong Mao, Dries Van Thourhout, Xuetao Gan, Qing Dai*, Aaron Sternbach*, You Zhou, Mohammad Hafezi, Dmitrii Litvinov, Magdalena Grzeszczyk, Kostya S. Novoselov, Maciej Koperski*, Sotirios Papadopoulos, Lukas Novotny*, Leonardo Viti, Miriam Serena Vitiello*, Nathan D. Cottam, Benjamin T. Dewes, Oleg Makarovsky, Amalia Patanè*, Yihao Song, Mingyang Cai, Jiazhen Chen, Doron Naveh, Houk Jang, Suji Park, Fengnian Xia*, Philipp K. Jenke, Josip Bajo, Benjamin Braun, Kenneth S. Burch*, Liyuan Zhao, and Xiaodong Xu

ACS Photonics 2025, 12, 8, 3961-4095 **(Roadmap)** Open Access
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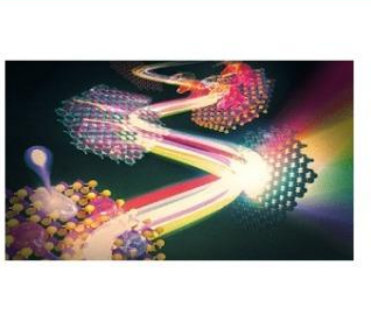

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REVIEWS

Metasurface-Based Photodetectors: Pursuing Superior Performance and Multifunctionality

Xiangrui Zhao, Taiming Lou, Yang Peng, Feiying Sun, and Xingzhan Wei*

ACS Photonics 2025, 12, 8, 4096-4118 **(Review)** Subscribed
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ABSTRACT

ARTICLES

Resonant Cavity Effect for Spectrally Tunable and Efficient Narrowband Perovskite Photodetectors

Zher Ying Ooi, Shenyu Nie, Guadalupe Vega, May Ching Lai, Alberto Jiménez-Solano, Chieh-Szu Huang, Hao Wang, Tianjun Liu, Krzysztof Galkowski, Michał P. Nowak, Piotr Nyga, Qixiang Cheng, Caterina Ducati, Sol Carretero-Palacios, Simon Kahmann, Samuel D. Stranks*, and Miguel Anaya*

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ABSTRACT

Visualizing Ultrafast Spectral and Spatial Heterogeneity in Photoexcited Nanomaterials via Broadband Transient Absorption Microscopy

Maha Sharif, Xiao Ma, Melody Moossavi, Dany Doughan, and Elham Ghadiri*

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ABSTRACT

Tuning Polariton Interactions in Plasmonic Lattices Strongly Coupled to CdSe Nanoplatelets

Shreya K. Patel, Zhaoyun Tiffany Zheng, Sang-Min Park, Gregor Dairaghi, Chuchuan Hong, Max J. H. Tan, Richard D. Schaller, and Teri W. Odom*

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Quasinormal Coupled-Mode Analysis of Dynamic Gain in Exceptional-Point Lasers

Hao He*, Xingwei Gao, Alexander Cerjan*, and Chia Wei Hsu

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ABSTRACT

Electron-Energy Dependent Excitation and Directional Far-Field Radiation of Resonant Mie Modes in Single Si Nanospheres

Théo Soler, Evelijn Akerboom*, P. Elli Stamatopoulou, Hiroshi Sugimoto, Minoru Fujii, Saskia Fiedler, and Albert Polman*

ACS Photonics 2025, 12, 8, 4161-4170 **(Article)** Open Access
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ABSTRACT

Focal Plane Array Based on Thin-Film Lithium Niobate for Fast-Speed and Low-Power-Consumption Beam Steering

Jinze Liu, Binbin Wang*, Yan Gong, Jianguo Wang, Yongqian Li*, Xuetao Gan, and Dayong Qiao

ACS Photonics 2025, 12, 8, 4171-4181 **(Article)** Subscribed
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ABSTRACT

Carrier Dynamics in Multiple Quantum Wells in InGaN/GaN Nanowire Heterostructures

Yakshita Malhotra, Zidong Li, Yuchen Kan, Yixin Xiao, Yifu Guo, Jiangnan Liu, Tao Ma, Parag Deotare*, and Zetian Mi*

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ABSTRACT

Infrared Photodetectors Based on SnS_2 for Silicon Photonic Integrated Circuits

Jinyi Du, Lianqing Zhu*, Lidan Lu*, Guanghui Ren, Jianzhen Ou, and Xiaoping Lou

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ABSTRACT

Deep-Blue Organic Single-Crystal Emitter Enabling a Low-Threshold Laser and Light-Emitting Transistor

Yuan Li, Han Huang, Pingyang Wang, Yong Yang, Chunling Gu, Furong Qu*, Yang Xia*, Qing Liao*, and Hongbing Fu*

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ACS Photonics 2025, 12, 8, 4204-4213 **(Article)** Subscribed
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Two-Photon Scanning Structured Illumination Super-Resolution Volume Microscopy Utilizing a Synthetic Beam by Superposing a Nondiffracting Airy Beam and a Gaussian Beam

Meiting Wang, Luwei Wang, Yong Guo, Yuye Wang, Jiajie Chen, Xiaoyu Weng*, Xinran Li, Peng Du, Junle Qu, Bruce Zhi Gao, Wei Yan*, and Yonghong Shao*

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ABSTRACT

The Retarded Hot Carrier Relaxation and Augmented Photoconductivity in Eu^{3+}-Doped $CsPbBr_3$ Nanocrystals

Ayushi Shukla, Gurpreet Kaur, Kaliyamoorthy Justice Babu, Himanshu Bhatt, Vikas Kumar, and Hirendra N. Ghosh*

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ABSTRACT

Investigating the Recombination Mechanism of V-Pits in InGaN/GaN Multiple Quantum Wells LEDs Combining Hyperspectral Electroluminescence and Cathodoluminescence

Yaqi Cai, Honglin Gong, Weijie Guo, Huanting Chen, Zhong Chen, Yijun Lu*, and Lihong Zhu*

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Localized Surface Plasmon Resonances of Size-Selected Gold and Copper Nanoclusters Soft-Landed on a C_{60} Organic Substrate

Miwa Tokita, Tomoya Inoue, and Atsushi Nakajima*

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Spatially Resolved Enantiomeric Excess Measurement Leveraged by Complex Vector Light Beams

Cai-Xia Liu, Xiao-Bo Hu*, Qi-Yao Yuan, Hao He, Rui-Pin Chen, Feng-Min Wu, and Carmelo Rosales-Guzmán*

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Bayesian Optimized Design for O-Band Bottom-Up Grown Microring Lasers

Mihir R. Athavale, Ruqaiya Al-Abri, Stephen Church, Wei Wen Wong, Andre K. Y. Low, Hark Hoe Tan, Kedar Hippalgaonkar, and Patrick Parkinson*

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ABSTRACT

Assembly of Photonic Crystal Nanolasers with High-Aspect-Ratio Nanoslots via Mechanically Guided Transfer Printing

Tsan-Wen Lu*, Chang-Chi Jung, Hsi-Wen Huang, and Po-Tsung Lee

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Physics-Guided Hierarchical Neural Networks for Maxwell's Equations in Plasmonic Metamaterials

Sean Lynch, Jacob LaMountain*, Bo Fan, Jie Bu, Amogh Raju, Daniel Wasserman, Anuj Karpatne, and Viktor A. Podolskiy

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Polarization-Independent BIC-Based Electromagnetically Induced Transparency

Aleksandra A. Kutuzova, Sergei Li, Binze Ma, Qiang Li*, and Mikhail V. Rybin*

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ABSTRACT

PD-TNN: Physics-Driven Tandem Neural Network for Color Prediction in Laser-Induced Thin Films

Yun-Jie Jhang, Tsung-Ming Tai, Chia-Hung Chou, Wisarud Yongbanjerd, Pin-Han Huang, and Hung-Wen Chen*

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Backward Time-Correlated W-State Triphoton Generation via Atomic Coherence

Zhou Feng, Siqiang Zhang, Rui Zhuang, Guobin Liu, Feng Li, Kangkang Li*, and Yanpeng Zhang*

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ABSTRACT

Electro-Mechanically Tunable, Waveguide-Coupled Photonic-Crystal Cavities with Embedded Quantum Dots

L. A. F. Brunswick*, L. Hallacy, R. Dost, E. Clarke, M. S. Skolnick, and L. R. Wilson

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ABSTRACT

The Hybrid Metasurface Lights a Fire in Silicon: The Role of Plasmonic Nanogap Cavities in Multiphoton-Induced Broadband Photoluminescence

Artem Larin, Egor Kurganov, Yali Sun*, Marco Esposito, Mariachiara Manoccio, Massimo Cuscunà, Adriana Passaseo, Fabio Quaranta, Alessanndro Pecora, Sergey Makarov*, Vittorianna Tasco*, and Dmitry Zuev*

ACS Photonics 2025, 12, 8, 4323-4330 **(Article)** Subscribed
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ABSTRACT

Ultracompact and Low Crosstalk Multicore Fiber Fan-in/out Device Fabricated via 3D Nanoprinting

Jinpei Li, Shecheng Gao*, Jiajing Tu, Zhaojian Chen, XiFa Liang, QiSui, and Zhaohui Li*

ACS Photonics 2025, 12, 8, 4331-4341 **(Article)** Subscribed
Publication Date (Web): June 17, 2025

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ABSTRACT

Chiral High-Harmonic Generation in Metasurfaces

Piyush Jangid, Maria Antonietta Vincenti, Luca Carletti*, Anton Rudenko, Yuri Kivshar, and Sergey Kruk*

ACS Photonics 2025, 12, 8, 4342-4348 **(Article)** Subscribed
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ABSTRACT

Tailoring and Encoding GHz Peregrine-like Solitons via External Programming

Yaoyao Qi, Qixing Yu, Zhongan Zhao, Yaqing Gao, Chaojian He, Song Yang*, Xuechun Lin*, and Zhiwei Lu*

ACS Photonics 2025, 12, 8, 4349-4357 **(Article)** Subscribed
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ABSTRACT

Electromagnetic Duality Symmetry-Protected Dirac-Like Cones

Muxuan Yang, Dongyang Yan, Lei Gao*, Wei Liu*, Yun Lai, Yadong Xu, Zhi Hong Hang, and Jie Luo*

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ABSTRACT

Polarization- and Wavelength-Multiplexed Multichannel Optical Differentiators for Edge Detection

Meixue Zong, Shubin Zhang, Yiqing Liu, Ye Fan, Jinwen Lv, Xuehe Wang, and Zhengji Xu*

ACS Photonics 2025, 12, 8, 4366-4375 **(Article)** Subscribed
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ABSTRACT

Leveraging Partial Coherence to Enhance Nanoparticle Detection Sensitivity and Throughput in Interferometric Scattering Microscopy

Chiara Lombardo, Andrea Sottini, Sarina Seiter, Gérard Colas des Francs, Jaime Ortega Arroyo*, and Romain Quidant

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ABSTRACT

Plasmonic Quasi-Bound States in Continuum Facilitated Bulk Photovoltaic Effect for Spectrally Selective and Polarization-Sensitive Bipolar Photodetection

Kai Wu, Chao Zhang, Kai Zhang, Shaojun Wang, Shaojuan Li, Zefeng Chen, Changxu Liu, Yu Luo, Stefan A. Maier, Xiaoyi Liu*, Xiaofeng Li*, and Cheng Zhang*

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ABSTRACT

Third-Order Spontaneous Parametric Down Conversion in Dielectric Nonlinear Resonant Metasurfaces

Miguel Y. Bacaoco, Kirill Koshelev*, and Alexander S. Solntsev*

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ABSTRACT

Cryptographic Metasurface Enabled High-Security Information Authentication Using Dual-Beam Off-Axis Illumination

Zhenfei Li, Yuhang Zhang, Shaojie Liu, Jiaru Lin, Xianfeng Wu, Shuo Du, Xudong Bai, Kun Song*, Yahong Liu, Ruonan Ji, Weiren Zhu, Guangzhou Geng*, and Xiaopeng Zhao

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ABSTRACT

Stimulated Emission Tomography of Spontaneous Four-Wave Mixing in Plasmonic Nanoantennas

John Yang, Xiaofei Xiao*, Jefferson Flórez, Nathan Gemmell, Paul Dichtl, Sylvain D. Gennaro, Stefan A. Maier, Chris C. Phillips, Alex S. Clark, and Rupert F. Oulton*

ACS Photonics 2025, 12, 8, 4415-4422 **(Article)** Open Access
Publication Date (Web): July 18, 2025

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ABSTRACT

Orbital Angular Momentum Communications in Commercial Multimode Fiber with Strong Mode Coupling

Fengchao Ni, Zhengyang Mao, Haigang Liu*, and Xianfeng Chen*

ACS Photonics 2025, 12, 8, 4423-4431 **(Article)** Subscribed
Publication Date (Web): July 25, 2025

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ABSTRACT

Compact Polarization-Multiplexed Optical Transmitters through the Monolithic Integration of Metasurface and Photonic Crystal Surface-Emitting Lasers

Wen-Chien Miao, Fu-He Hsiao, Yun-Han Chang, You-Huei Jhang, Chih-Hsien Cheng, Hsin-Chieh Yu, Gong-Ru Lin, Chun-Liang Lin, Chi-Wai Chow, Yu-Heng Hong*, and Hao-Chung Kuo*

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ABSTRACT

Harmonic-Assisted Direction-Sensitive Infrared Rotational Sensing

Junge Gao, Ling Hong, Zikuan Zhuang, Yu Zhang, Jianing Xie, Fei Lin*, and Li Zhang*

ACS Photonics 2025, 12, 8, 4440-4444 **(Article)** Subscribed
Publication Date (Web): August 8, 2025

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ABSTRACT

Built-In Electric Field for Efficient Charge Separation and Prolonged Carrier Lifetime at the Doped GaN Surface

Shengli Zhao, Jing Leng*, Xianchang Yan, Fengke Sun, Peng Xu, Shengye Jin*, and Wenming Tian*

ACS Photonics 2025, 12, 8, 4445-4451 **(Article)** Subscribed
Publication Date (Web): July 7, 2025

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ABSTRACT

Ultrafast 4D Scanning Transmission Electron Microscopy for Imaging of Localized Optical Fields

Petr Koutenský*, Neli Laštovičková Streshkova, Kamila Moriová, Marius Constantin Chirita Mihaila, Alexandr Knápek, Daniel Burda, and Martin Kozák*

ACS Photonics 2025, 12, 8, 4452-4459 **(Article)** Open Access
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ABSTRACT

Janus-Faced Carrier Localization with Defect States: A Case Study in InGaN-Based Photodetectors

Zesheng Lv, Zhuoya Peng, Mian Wu, Yv Yin, Mengyao Song, and Hao Jiang*

ACS Photonics 2025, 12, 8, 4460-4469 **(Article)** Subscribed
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ABSTRACT

Ultrabroadband Spectral Filter on Lithium-Niobate-on-Insulator

Zhenwu Mo, Chijun Li, Geng Chen, Cheng Zeng*, and Jinsong Xia*

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ABSTRACT

Picowatt-Sensitive and Air-Stable Heterojunction UV Photodetectors Enabled by Large-Grained $CsCu_2I_3$ Film via Microgap Thermal Sublimation

Weidong Song*, Junxing Lv, Jiaquan Li, Xiaopeng Huang, Huimin Duan, Hainan Qin, Sheng Ma, Jun Wei, Xin He, and Ziqing Li*

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ABSTRACT

Wide-Field Optical Imaging of Microwave Fields with Boron Vacancy Centers in Hexagonal Boron Nitride

Peiyan Ma, Feifei Zhou*, Xue Lin, Ying Dong, Dawei Lu*, and Weibo Gao*

ACS Photonics 2025, 12, 8, 4489-4493 **(Article)** Subscribed
Publication Date (Web): August 6, 2025

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ABSTRACT

Photonic Chiral Bulk Transports Manipulated by Boundary Freedom in Three-Dimensional Meta-Crystals

Yingxin Qi, Hanyu Wang, Qinghua Guo*, Zhihong Zhu*, and Biao Yang*

ACS Photonics 2025, 12, 8, 4494-4502 **(Article)** Subscribed
Publication Date (Web): August 6, 2025

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ABSTRACT

Dynamic spectral control: Incident Angle-Responsive Tuning of High-Purity Structural Colors with Dielectric Nanovoid Arrays

Hrudya Radhakrishnan, Tummaluru Khadar Basha, Junaid Masud Laskar*, Gopi Krishnan, Sandip Dhara, and Ramanathaswamy Pandian*

ACS Photonics 2025, 12, 8, 4503-4511 **(Article)** Subscribed
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ABSTRACT

Topological Contact-Optimized Te/GaAs van der Waals Heterostructure Array Enabling High-Performance Self-Powered Broadband Photodetectors

Lijian Li, Peng Guo, WenJie Li, Yun Wei, QinZhi Zhao, Peng Wan, Caixia Kan, Da Ning Shi*, and Mingming Jiang*

ACS Photonics 2025, 12, 8, 4512-4523 **(Article)** Subscribed
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ABSTRACT

Silicon Microring Resonator Integrated Hafnium Zirconium Oxide Ferrophotonic Non-Volatile Memory

Asela Perera, Tristan Quach, Jianhao Shen, Sheilah M. Njoka, Angelica Drees, and Swapnajit Chakravarty*

ACS Photonics 2025, 12, 8, 4524-4533 **(Article)** Subscribed
Publication Date (Web): July 22, 2025

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ABSTRACT

Carrier-Envelope Phase Control in Terahertz Pulse Generation Using InAs Ribbon Metasurfaces

Sarah Norman*, Hyunseung Jung, James Seddon, Samuel Prescott, C. Thomas Harris, Sadhvikas Addamane, Igal Brener, and Oleg Mitrofanov*

ACS Photonics 2025, 12, 8, 4534-4539 **(Article)** Open Access
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ABSTRACT

Self-Assembled Carbazole-Phosphonate Hole-Injection Layer with a Dual-Modification Mechanism Enables High Efficient and Stable Blue Quantum-Dot Light-Emitting Diode

Yuyu Liu, Minming Yan*, Kai Zhang, Ye Chen, Yaowu He, Hong Meng, Yong Huang, and Yong Zhang*

ACS Photonics 2025, 12, 8, 4540-4552 **(Article)** Subscribed
Publication Date (Web): July 14, 2025

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ABSTRACT

Ultrahigh-Sensitivity 3D-Printed Hollow Fabry-Pérot Fiber Ultrasound Sensor for Photoacoustic Imaging

Anqi Wang, Xuhao Fan, Geng Chen, Yueqi Liu, Zongjing Li, Zexu Zhang, Xinger Wang, Fujun Zhang, Zhi Zhang, Haiyang Qiu, Hui Gao, Wei Xiong*, Hao Li*, and Qizhen Sun*

ACS Photonics 2025, 12, 8, 4553-4562 **(Article)** Subscribed
Publication Date (Web): July 14, 2025

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ABSTRACT

Photoelectrochemical Probing of Hot Carrier Generation and Transfer in Gold Nanospheres

Seokheon Kim and Sangwoon Yoon*

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Publication Date (Web): July 9, 2025

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ABSTRACT

Pixelated Nonvolatile Programmable Photonic Integrated Circuits Based on an Inverse Design

Yajie Chen, Feifan Qiang, Ruitao Wu, Chao Zhao, Rongyi Lin, Ying Li, Ting Lei*, Ting Mei*, and Xiaocong Yuan*

ACS Photonics 2025, 12, 8, 4571-4578 **(Article)** Subscribed
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ABSTRACT

Orbital Angular Momentum Transmission in Complex Environments Using a Single-Pixel Detector

Wenxi Wang, Yining Hao, Jiaqi Wang, Yin Xiao, and Wen Chen*

ACS Photonics 2025, 12, 8, 4579-4587 **(Article)** Subscribed
Publication Date (Web): July 31, 2025

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ABSTRACT

Highly Sensitive Narrowband Near-Infrared Photodetectors with Detectivity Exceeding 10^{13} Jones

Donggang Li, Nan Ding*, Mingyu Yao, Yanqi Liu, Hailong Liu, Zewen Wang, Ge Zhu, Long Shao, and Wen Xu*

ACS Photonics 2025, 12, 8, 4588-4597 **(Article)** Subscribed
Publication Date (Web): July 22, 2025

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ABSTRACT

Comb-Shaped Emitter Engineered p-NiO/n-$ZnGa_2O_4$/p-Si Heterojunction Bipolar Transistor for High-Performance Solar-Blind Ultraviolet Photodetection

Dongyang Han, Shujun Zhu, Jiayi Liu, Kaisen Liu, Yuxia Yang, Shulin Hu, Ningtao Liu, Jichun Ye*, and Wenrui Zhang*

ACS Photonics 2025, 12, 8, 4598-4607 **(Article)** Subscribed
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ABSTRACT

Alignment-Free Bilayer Moiré Metasurfaces with Tunable Twist Angles

J. He, S. Murai*, T. Y. Lo, and K. Tanaka

ACS Photonics 2025, 12, 8, 4608-4615 **(Article)** Subscribed
Publication Date (Web): July 21, 2025

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ABSTRACT

High-Order Multiphoton Emission and Lasing Enabled by Alloy Crown Passivation in CdSe/CdSeS Core/Crown Nanoplatelets

Huan Liu, Yuting Wu, Puning Wang, Xuanyu Zhang, Yue Wang*, Tingchao He*, Rui Chen*, and Handong Sun*

ACS Photonics 2025, 12, 8, 4616-4622 **(Article)** Subscribed
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ABSTRACT

Efficient Second-Harmonic Emission with Strong Modal Overlap in a Single-Resonant Lithium Niobate Nanocavity

Zhi Jiang, Danyang Yao*, Yu Gao, Xu Ran, Duomao Li, Erqi Zhang, Jianguo Wang, Xuetao Gan*, Jinchuan Zhang*, Fengqi Liu, and Yue Hao

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ABSTRACT

OAM Broadband Spectrum Generation via the Vortex Photon Excitation of Bound Electrons in an Active Fiber

Yinghui Lu, Jianxiang Wen*, Fengzai Tang, Yanhua Luo, Hairun Guo, Fufei Pang, Gang-ding Peng, and Tingyun Wang

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ABSTRACT

Sensitization-Engineered Uncooled Mid-infrared PbSe Photodetectors

Xingchen Zhang, Jun Ouyang, Xi Ran, and Xinzheng Lan*

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ABSTRACT

Dynamic Vortex Fiber Laser Enabled by an Active Meta-optics Platform

Hao Chen, Lili Gui*, Yiyuan Xu, Chuanshuo Wang, Xianglong Mei, and Kun Xu*

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ABSTRACT

Achieving Stable Perovskite X-ray Imaging Consistency via Constructing Heterojunction Architecture

Yuanbo Ma, Zihan Wang, Changmao Wan, Hui Zhang, Zhenyu Wang, Tianle Ling, Jiajiu Ye*, and Xu Pan

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ABSTRACT

Photophysics of Direct and Indirect Interlayer Excitons in MoS_2/WS_2 Moiré Superlattices

Nicholas Schottle, Noah Kapchinske, C. Abinash Bhuyan, Ryan Palmares, Eli Janzen, Carlos M. Torres, James H. Edgar, and Sanjay K. Behura*

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ABSTRACT

Coherent Manipulation of Optomechanical Modes in Mechanically Coupled Microbubble Resonators

Zhuoran Liu, Zhenmin Chen, Xiancheng Ye, Tianye Huang, Xin Tu*, and Perry Ping Shum

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ABSTRACT

Signal Amplification of Surface-Enhanced Infrared Absorption Spectroscopy Using Virtual Complex Frequency Excitation

Seongjin Lee, Mingyun Kim, Joo-Yun Jung, and Jongwon Lee*

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ABSTRACT

Properties of the Hilbert–Nonlinear Schrödinger Solitons and Related Nonlocal Systems

Van Thuy Hoang, Milo Langker, Carlo Silvestri*, Y. Long Qiang, Justin Widjaja, Antoine F. J. Runge, and C. Martijn de Sterke

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ABSTRACT

Octave Soliton Microcombs in *Z*-Cut Lithium Tantalate Microrings

Huizong Zhu, Simin Yu, Jingchun Qian, Mingyue Qi, Ruixin Zhou, Baile Chen, and Juanjuan Lu*

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ABSTRACT

In Situ Oxidized MXene-Based Flexible Ultraviolet Optoelectronic Synapse for Neuromorphic Computing and Multimodal Perception

Shulin Sha, Tong Xu, Kai Tang, Wenjie Li, Yun Wei, Peng Wan, Zeng Liu, Caixia Kan*, Da Ning Shi, and Mingming Jiang*

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ABSTRACT

Application-Specific Optimization of Integrated Spectral Sensors

D. M. J. van Elst*, A. van Klinken, M. S. Cano-Velázquez, F. Ou, C. Li, K. D. Hakkel, M. Petruzzella, F. Pagliano, R. P. J. van Veldhoven, and A. Fiore

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ABSTRACT

Giant Resonance Raman Scattering via Anisotropic Excitons in ReS_2

Pritam Das, Devarshi Chakrabarty, Neha Gill, and Sajal Dhara*

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ABSTRACT

Temperature Measurement in Transmission Electron Microscope Using Cathodoluminescence of Whispering Gallery Mode

Yoshikazu Adachi, Izzah Machfuudzoh, Tetsuya Kubota, Sotatsu Yanagimoto, Hiroshi Sugimoto, Minoru Fujii, and Takumi Sannomiya*

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ABSTRACT

Ferrocene Derivatives as Redox-Active Antisolvent Additives Enabling Defect Elimination and Residual Stress Mitigation in Perovskite Solar Cells

Ruowei He, Jiexi Pan, Xuanheng Chen, Qingshui Zheng, Yu Zou, Shuhong Lv, Zhihang Jin, Yuhong Wang, Weihai Sun*, and Jihuai Wu*

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