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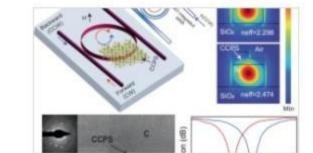
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09 Apr 2025

Non-reciprocal response in silicon photonic resonators integrated with 2D CuCrP₂S₆ at short-wave infrared

A hybrid CCPS/Si microring enables non-reciprocal TE-mode operation with 28 dB isolation, 50 GHz bandwidth, and 0.4 nm resonance splitting in the C-band.

Ghada Dushaq, Solomon Serunjogi ... Mahmoud Rasras



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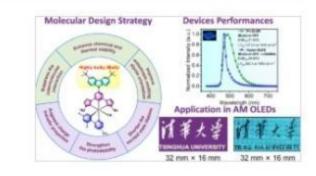
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09 Apr 2025

Exceptionally high brightness and long lifetime of efficient blue OLEDs for programmable active-matrix display

High-brightness, long-lifetime blue Ph-OLEDs were achieved by novel tBuCz-based asymmetric Ir(III) emitters.

Chengcheng Wu, Kai-Ning Tong ... Guodan Wei



Light People

Prof Miles Padgett (OBE, FRS) from blue-sky research to real-world applications and challenges Open Access 07 Apr 2025

Ruidong Xia & Ying Hu

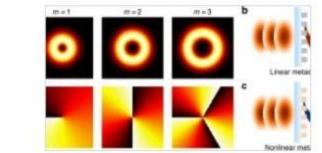


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Jinyong Ma, Kenneth B. Crozier & Andrey A. Sukhorukov



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Quantum imaging with ultra-thin metasurfaces

Jongwon Lee



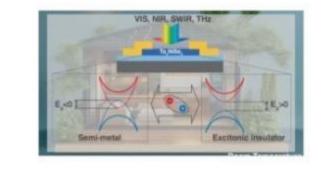
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Excitonic insulator powers room-temperature ultra-sensitive visible to terahertz detection

Yi Wu, Wenjie Deng & Yongzhe Zhang

Jiayue Han & Jun Wang



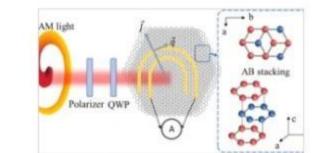
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Topologically trivial graphene enables mid-infrared orbital angular momentum detection toward on-chip integration A mid-infrared orbital angular momentum detector based on multilayer graphene has been successfully developed,

overcoming the previous reliance on C_{2V} point group topological Weyl semimetals via the orbital photogalvanic effect.



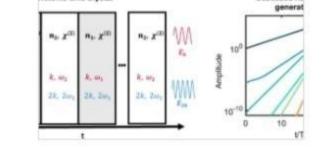
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Second harmonic generation and nonlinear frequency conversion in photonic time-crystals

We study second harmonic generation in photonic time-crystals, and find conditions for which the process is highly enhanced, leading to efficient generation of higher-order harmonics.



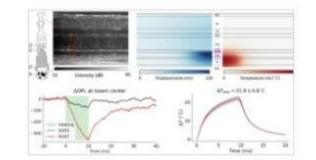
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02 Apr 2025

Article

Retinal thermal deformations measured with phase-sensitive optical coherence tomography in vivo

Phase-sensitive Optical Coherence Tomography detects thermal deformation of photoreceptors induced by a laser pulse. Sub-degree precision of this method enables accurate dosimetry for retinal laser therapy.



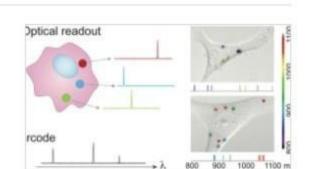
Yueming Zhuo, Mohajeet Bhuckory ... Daniel Palanker

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01 Apr 2025

Large-scale combinatorial optical barcoding of cells with laser particles

A combinatorial approach using laser particles for optical barcoding enables distinguishing thousands to millions of cells. Theoretical framework and enhanced tagging pave the way for scalable single-cell tracking and analysis.



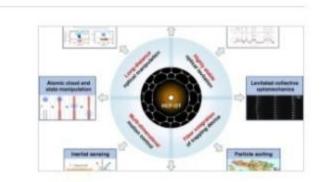
Nicola Martino, Hao Yan ... Seok-Hyun Yun

Noa Konforty, Moshe-Ishay Cohen ... Mordechai Segev

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Optical trapping of mesoscale particles and atoms in hollow-core optical fibers: principle and applications

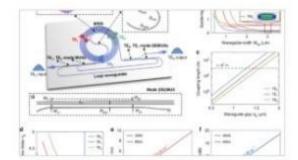


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Multimode-enabled silicon photonic delay lines: break the delay-density limit



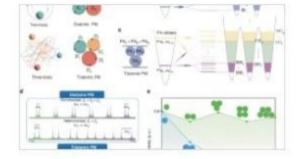
Shihan Hong, Long Zhang ... Daoxin Dai

Rui Wang, Wei Li ... Shangran Xie

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Miniaturized disordered photonic molecule spectrometer



Yujia Zhang, Tom Albrow-Owen ... Xuhan Guo