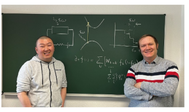
Thursday, May 23, 2024

PHOTONICS spectra

Weekly News

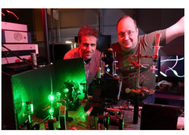


Quantum State Opens Possibility for Advances in Optoelectronics

Scientists from Leipzig University and Nanyang Technological University showed that, contrary to popular scientific belief, light can generate electrical currents in a material even if the material is transparent to the frequency of the light that is shinned on it. The team's discovery could lead to new approaches to manipulating electronic behavior for multiple applications. Read Article

3D Printing High Quality Optics with Blurred Light

Researchers from the National Research Council of Canada have developed a 3D printing method called blurred tomography that can rapidly produce microlenses with commercial-level optical quality. The method may make it quicker and easier to design and fabricate a variety of optical devices. Read Article



Photon Momentum Creates Electron Interaction for Use in Optoelectronics

A research team at the University of California, Irvine, working with researchers at Kazan Federal University, investigated structural photoemission in silicon glass. They found that photons can gain substantial momentum when they are confined to nanometer-scale spaces in silicon, in a process similar to how momentum is obtained by electrons in solid materials. The discovery could make silicon a more effective medium for optoelectronics applications like solar energy and semiconductor lasers. Read Article

Featured Products & Services

ZIVA Light Engine for Yokogawa CSU

Lumencor Inc.

Yokogawa's CSU is extensively used for 3D confocal imaging of live cells, tissues, and microorganisms. Lumencor's ZIVA Light Engine offers seven lasers in support of the CSU-W1 at a price well below that of the scanner. A precision-engineered coupler yields intense, uniform light at the sample plane from the compact, bench-top illuminator.

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Duplex Logic To Fiber Optic Converter

Highland Technology Inc.

The Highland K420 is a bi-directional, electrical-optical/optical-electrical data link with differential logic input and output, capable of transporting single or bi-directional digital data at speeds up to 2 GHz. The included Cisco SFP-10G-SR plugin module can operate at distances up to 400 meters with 50-micron OM4 or better fiber.

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More News

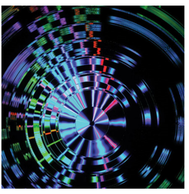
LED Display Guides Surgery with Real-Time Visuals of Brain Activity

Quantum Sensor Could Increase Quality and Speed of MRI Scans

Photonic Tech Lights Up IEEE Electronic Components and Technology Conference

George Mason University Receives Air Force Funding for Imaging, Digital Twins Lab

Latest Webinars



Let's Talk About Metalenses

Wed, May 29, 2024 10:00 AM - 11:00 AM EDT

From the moment of their initial introduction, metalenses have ignited the creative minds of engineers working in the realms of optics and photonics. LightTrans International's team, the creators of the optics software VirtualLab Fusion, are dedicated to offering modeling and design tools that assist their clients in exploring the capabilities of metalenses in their respective applications. During this webinar, Frank Wyrowski shares strategies for the design and simulation of metalenses in common application contests. He is eager to showcase cutting-edge advancements and discuss future plans for expanding these concepts in 2024. He aims to motivate the optics community to share their anticipations regarding the functionalities that an optics software should encompass for the utilization of metalenses. Presented by LightTrans International.

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OLED-on-Silicon for Microdisplays in AR/VR/MR and Embedded Sensing

Thu, May 30, 2024 10:00 AM - 11:00 AM EDT

Microdisplays are essential for wearable AR/VR/MR devices, such as smart glasses. Emissive microdisplays, such as OLEDs or micro-LEDs, provide significant advantages in terms of form factor and power consumption versus their non-emissive counterparts, such as liquid crystal on silicon and digital light processing technology. Uwe Vogel of Fraunhofer IPMS discusses achievements in high-resolution and ultralow power OLED microdisplay and sensing devices, their backplane integrated circuit (IC) design architectures, as well as OLED-on-silicon frontplane process technology. He considers micro-LEDs as upcoming options for very high-brightness applications and compares them to OLEDs in terms of application requirements and performance features.

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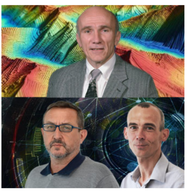
All Things Photonics



Countermeasure Detection and Ranging Technologies — With Paul McManamon

Optics and photonics luminary **Paul McManamon** is our guest for a discussion on advanced ranging and detection capabilities across environments and applications areas. McManamon, a past president of SPIE, is current president and CTO of Exciting Technology, and a fellow of the Directed Energy Professional Society. Also in this episode, a discussion with **Alasdair Pentland** and **Andy Bell** of terahertz solutions firm TeraView.

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Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazines (*Photonics Spectra*, *BioPhotonics*, and *Vision Spectra*). Please submit an informal 100-word abstract to editorial@Photonics.com, or use our online submission form.