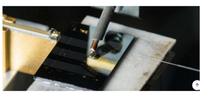
Thursday, June 6, 2024

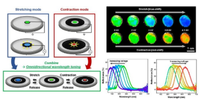
PHOTONICS spectra

Weekly News



On-Chip Microcomb Laser Provides Greater Control

A method developed by researchers at the University of Rochester could provide a path to applying microcomb lasers to fields including telecommunications and optical computing. The lasers developed by Rochester professor Qiang Lin and his team benefit from a simple design and resolve longstanding challenges that have prevented the commercial adoption of microcombs. **Read Article**



Flexible, Stretchable Device Addresses Tuning Limitations in Structural Color

A research team at Pohang University of Science and Technology has developed a stretchable photonic device capable of controlling light wavelengths in all directions. According to the researchers, the work establishes a foundational technology for advanced photonic devices with potential in various industrial applications. **Read Article**

Fraunhofer CO_2 Laser Welds Carbon Fiber Fuselage

Researchers from the Fraunhofer Institute for Material and Beam Technology IWS (Fraunhofer IWS) have demonstrated chipless joining of carbon fiber-reinforced thermoplastic (CFRTP) component structures using a CO_2 laser. According to Fraunhofer IWS, the automated process joined the upper and lower halves of the world's largest CFRTP fuselage segment, measuring 8 × 4 m. **Read Article**

Featured Products & Services

Precision Polished Substrates

Ohara Corporation

Ohara is a leading manufacturer of double-side polished substrates with extremely low surface roughness (RMS ~2 Angstroms) and flatness (~1 µm) values. Sizes 25- to 360-mm diameter, thin (down to 50 µm) and ultra-clean. Fused silica, optical glass, etc.

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IR Filters for Thermal Imaging

Spectrogon US Inc.

Spectrogon manufactures infrared filters and windows with high transmission, high rejection outside the passband, while maintaining excellent coating uniformity for thermal imaging and gas detection applications such as cryogenically cooled IR detectors and uncooled microbolometers.

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More News

CEA-Leti Reports Progress on AI-Embedded CMOS Image Sensors

GATEPOST Achieves Graphene Photonic Integrated Circuit

LOPS 2024 Conference to Showcase Latest Innovations

Hamamatsu Completes Acquisition of NKT Photonics

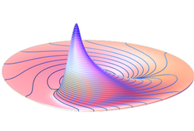
Latest Webinars

Advanced Thermoelectric Technology for Thermal Management of Optoelectronics Applications

Tue, Jun 11, 2024 1:00 PM - 2:00 PM EDT

For too long, thermoelectric technology has lagged behind the advancing needs of optoelectronic devices and systems. While the optoelectronics field has seen significant improvements in transmission rates, operating temperatures, and miniaturization, thermoelectrics have remained stagnant. Sheetak is revolutionizing this landscape by developing and commercializing advanced thermoelectric architectures that enhance efficiency, cooling density, and reliability, tailored to the scale and form factors required for modern temperature-controlled devices. Based in Austin, Texas, Sheetak boasts more than 100 years of combined experience in thermoelectric and thermal management technologies. Join this presentation for an introduction to Sheetak, a showcase of their current thermoelectric products, and a preview of their groundbreaking silicon-based QOOL CHIP thermoelectric architecture. Presented by Sheetak, Inc.

Register Now



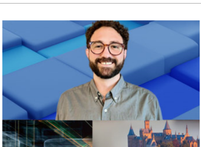
Thermal Modeling of Lasers in Manufacturing Processes

Thu, Jun 13, 2024 2:00 PM - 3:00 PM EDT

For the modeling of lasers in manufacturing processes, it is common to treat the laser as a spatially, or volumetrically, distributed heat source that moves and reorients over time. COMSOL Multiphysics® provides a computational modeling platform that can be used to easily model such heat sources. Beyond just the modeling of heating profiles over time, it is also possible to model phase change, ablation, and irreversible transformations. Applications of these modeling techniques include precision fabrication processes, medical treatments, and additive manufacturing. This webinar presents an overview of laser thermal modeling and a demonstration of the software in action. Presented by COMSOL.

Register Now

All Things Photonics



Durable Quantum Cascade Lasers: Applications and Deployments

The episode begins with on-site interviews from EPIC's Technology Meeting for Photonics in XR, held in Helsinki, Finland. Guests include **Stefan Steiner**, CEO of LightTrans International; **Erhan Ercan**, head of global business development at Morphotonics; and **Bharath Rajagopalan**, director of strategic marketing at STMicroelectronics. EPIC's **Jérémy Picot-Clémente** leads these chats. In our feature interview, news editor Joel Williams speaks with **Jason Sorger**, senior field service and applications engineer at DRS Daylight Solutions, about market opportunities for durable quantum cascade laser technology in sectors including optical communications, quantum, and infrared spectroscopy.

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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.