

euro PHOTONICS

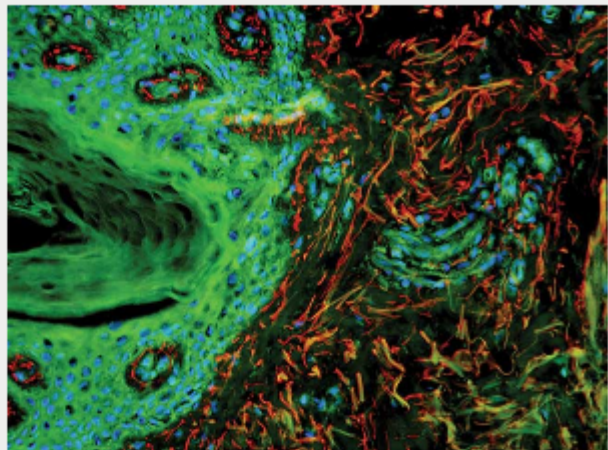


Quarterly newsletter from Photonics Media highlighting the latest photonics news, features and products from Europe.

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LEDs in Microscopy: An Emerging Research Tool

LED technology is playing an increasingly important role in lighting up our lives. Over the past 50 years, the technology has expanded from simple indicators in electronic gadgets to saving our planet terawatts of power by ousting incandescent bulbs in domestic lighting. But some not-so-well-known specialist lighting applications now exist for LEDs because of their high intensity, controllability and spectral output.



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Ultrafast Optics Faces Challenges Outside of Research Labs

Ultrafast optics is currently a scientifically dominated area with a lot of dynamics in both research and development. Often, complex setups make it challenging to create compact devices that can be employed for applications outside of the laboratory or in medical environments. But stepping toward commercial approaches goes hand in hand with the development of industry-proven fiber lasers, as well as multimodal and multimodal microscopy technologies.



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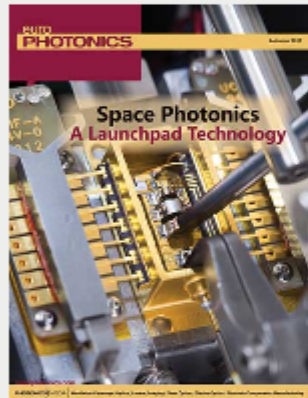
Space Photonics: A Platform Technology for Satellite Systems

Photonics is rapidly transforming into an enabling space technology with potential to cross-fertilize multiple markets in the space domain. Among them: navigation, remote sensing and telecommunications, as well as ground-breaking scientific and planetary exploration missions. Because of advantages related to bandwidth, mass, power consumption, beam size and immunity to electromagnetic interference, photonic subsystems are now being considered in a variety of space communications industries.



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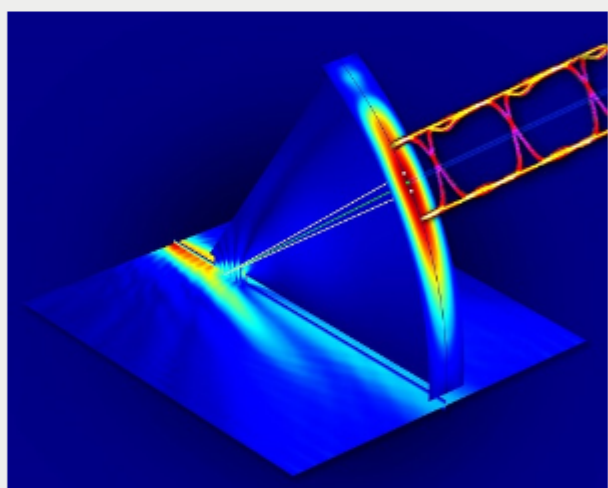
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More News From Europe

Data Transmission via Terahertz Multiplexer

A method for multiplexing data carried on terahertz waves and high-frequency radiation may enable the next generation of ultrahigh-bandwidth wireless networks. Researchers report the transmission of two real-time video signals through a terahertz multiplexer at an aggregate data rate of 50 gigabits per second.



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Raman Amplification in Plasma Leads to Ultra-High-Gain Amplifier

Using plasma, scientists have amplified short laser pulses of picojoule-level energy up to 100 millijoules, a gain of more than eight orders of magnitude over existing capabilities.

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Smartphone App Uses Quantum Technology to Identify Fake Products

An atomic-scale ID based on quantum technology has been demonstrated using a smartphone application and could potentially be used for verifying the authenticity of products from medicines to automotive parts.

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Featured Products



Improved IR at Lower Power Ranges

Laser Quantum Ltd.

Already capable of 10 W output, recent advances in the opus 1064 laser have extended its range to cover lower power levels down to 500 mW. With high-power stability, ultra-low noise and an M-squared approaching unity, the opus 1064 is ideal for applications such as optical tweezing and trapping.

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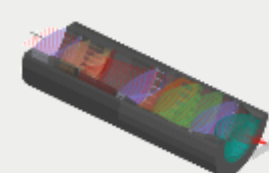


PM Coupler Arrays

Evanescent Optics Inc.

Splice-free cascaded PM couplers can be manufactured as 1 X N and 2 X N coupler arrays with any output ratios and at wavelengths from 0.45um to 2.04um. PER is better than -24dB per coupler, with loss typically less than 0.1dB per coupler. The program "Cascade" models the output characteristics and can be downloaded from the company's website.

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FRED Optical Engineering Software

Photon Engineering LLC

Photon Engineering develops FRED, Optical Engineering Software for imaging, illumination, design and analysis. Provides engineering services for all product development phases including specification, conceptual through detailed optical design, system analysis, tolerancing, customer and vendor interfacing and more.

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OCEAN FX Spectrometers

Ocean Optics EMEA

The Ocean FX is a spectrometer with acquisition speed up to 4,500 scans per second, onboard processing for improved SNR and reduced data transfer time, and robust communications via USB, SPI, Gigabit Ethernet and Wi-Fi. Ocean FX is an excellent choice for high-speed process applications, measurement of fast events, and reaction monitoring.

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Features

Solar Materials; 2D Materials for IR Imaging; Spectroscopy; EPIC Insights Column

Special Report

U.S. Photonics Industry

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazine *EuroPhotonics*. Please submit an informal 100-word abstract to Editor Justine Murphy at Justine.Murphy@photonics.com, or use our online submission form www.photonics.com/submitfeature.aspx.