

PHOTONICS spectra



Monthly newsletter from the editors of Photonics Spectra, with features, popular topics, new products, and what's coming in the next issue. Manage your Photonics Media membership at Photonics.com/subscribe.

Packing More Performance Into Smaller Spectrometers

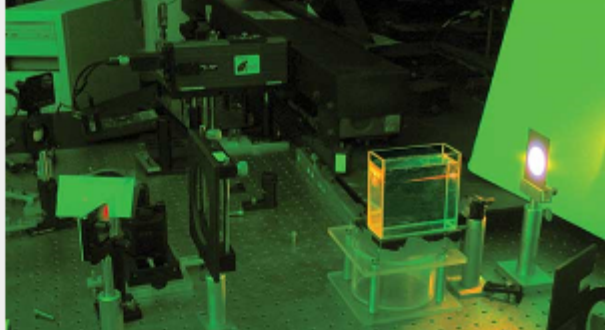
From food safety and manufacturing efficiency, to environmental testing and medical diagnosis, optical spectroscopy is already an indispensable tool across several industries. Today, thanks to miniaturization of instruments and sophisticated advances in technology, spectroscopy is increasingly used to address the demands of a modern world.



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Evolution of the Supercontinuum Light Source

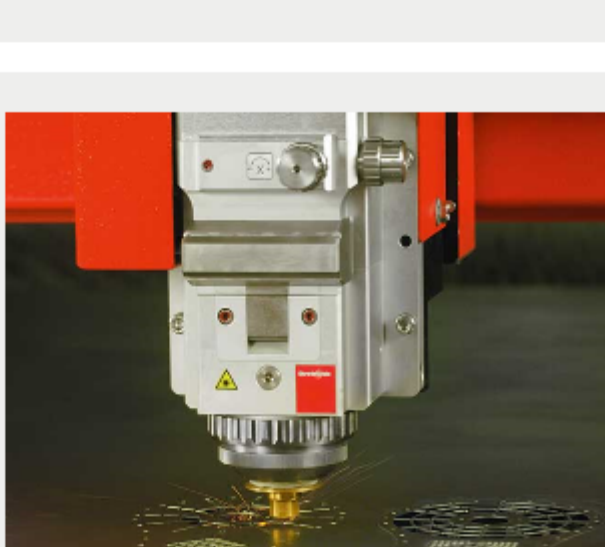
For many applications, coherent light at a single frequency is more than adequate. But having a light source that combines the properties of a laser with the broad bandwidth of an incandescent bulb and a short pulse duration opens up a new realm of possibilities in medical imaging, communications, displays and materials studies.



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New Laser Technologies Displacing Old

High-power fiber and diode lasers are reshaping the materials processing sector, while powerful blue lasers are finding their niche in select welding applications. For some CO2 laser applications, the end is at hand, with fiber lasers having almost totally replaced the older technology. Another shift currently brewing is due to the arrival of high-power diode lasers, which are impacting materials processing and driving down the cost of ultrafast lasers through the advent of direct diode pumping.



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Featured Products

Alluxa Ultra Series Filters and Coatings

Alluxa
Alluxa Ultra Series Filters, including Narrowband, Dichroic, UV, IR, and Notch filters, provide the highest performance optical thin film solutions available today. For example, the Ultra Series Flat Top Narrowband filters offer the narrowest bandwidths and squarest filter profiles in the industry.

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Diffraction Grating Solutions

Optometrics Corporation
Diffraction efficiency and dynamic range are critical parameters in many spectrometric instrument designs. Understanding why a particular reflective or transmission diffraction grating may have small yet necessary performance differentiation for instrument optimization success can be critical.

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The Aries Spectroradiometer

Gooch & Housego Orlando
We are proud to introduce our next generation spectroradiometer, the Aries. Based on the proven design and performance of the OL 770, the Aries offers an array of enhanced capabilities, including WiFi and Ethernet connectivity for easy integration into production environments.

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FISBA Micro Camera and Microlenses

FISBA AG
FISBA develops and manufactures optical components and optical micro systems with innovative illumination, laser beam shaping and imaging solutions for life science applications. They are designed with the customer, developed to serial production readiness, and are produced in high quantities.

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Mini4096CL: With Unique 4K-CMOS

Avantes BV
Right now we are developing the new generation AvaSpec-Mini spectrometers. This very small spectrometer including the new CMOS detector with 4096 pixels enables you to work with the optimal resolution. New innovative design principles and the latest automated production alignment tools assure a unit-to-unit reproducibility in combination with excellent temperature stability.

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Corning Hyperspectral Imaging

Corning Incorporated, Advanced Optics
Corning's microHSI family of hyperspectral sensors and systems combine the lowest size, weight, and power (SWaP) in the industry with uncompromising performance — enabling deployment for challenging applications in limited payload or size-constrained environments.

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BORA 1.3M Time of Flight Sensor

Teledyne e2v (UK) Ltd.
The 3D Time of Flight (ToF) BORA sensor is a 1.3 million pixel CMOS image sensor, designed with Teledyne e2v's proprietary CMOS imaging technology. It is ideal for systems operating at short or mid distances and ranges. It features an optimized multi-integration mode together with an electronic global shutter.

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IR Filters for Thermal Imaging and Gas Detection

Spectrogon US
Spectrogon manufactures infrared filters and windows with high transmission, high rejection outside the passband, and introducing low cosmetic defects — while maintaining excellent coating uniformity --- for thermal imaging applications such as cryogenically cooled IR detectors and for uncooled microbolometers.

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Husqvarna, Telit, Wireless System Integration Collaborate for Robotic Sensing Mowers in Cities

Outdoor power product developer Husqvarna is using a wireless sensor developer from Internet of Things (IoT) connectivity provider Telit Communications PLC and electronic design company Wireless System Integration AB for its city robotic mower pilot program.

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Bettering the Odds for Quantum Interaction With 4Pi Microscopy

Researchers used a superresolution imaging technique to strengthen photon-atom interaction, revealing a way to boost interaction between photons and a single atom that could be useful in quantum computing and metrology.

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Featured Video

Berliner Glas Group - Precise, Fast and Versatile: High-tech Applications with Light

Light-based technologies enable many advances in production technology, metrology or medical technology. With our optical key components, assemblies and systems we push reliable new systems using the extraordinary properties of light. Our passion for applications using light motivates us to be at the cutting edge of progress. The tailor-made solutions we provide, serve as a key contribution to the competitive strength of innovative customers across the globe. Join us on a journey to a world where it is possible to process light industrially.



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Webinars

(FARe) Nanostructures on Optical Fibers as Replacement for AR Coatings

Thu, Jan 18, 2018 1:00 PM - 2:00 PM EST
As power level and wavelength range requirements increase, anti-reflective coating technology struggles to keep up. In this webinar, Fiberguide will discuss a new technology, called RARe Motheye Fiber, which offers greatly improved wavelength and damage thresholds suitable for the increased demands of 21st century laser systems. Engineers and technical professionals whose work involves application of lasers, optical sensors and/or thermal imaging will benefit from attending this free webinar.



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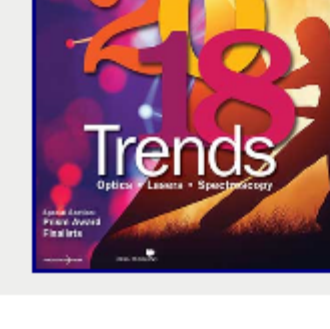
Coming in February...

Features
Raman Spectroscopy; Lidar for Commercial Aircraft; Ultrafast Optics; Quantum Technologies; Measuring Diffractive Gratings

Issue Bonus
Annual Asia-Pacific Report

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

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