

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.

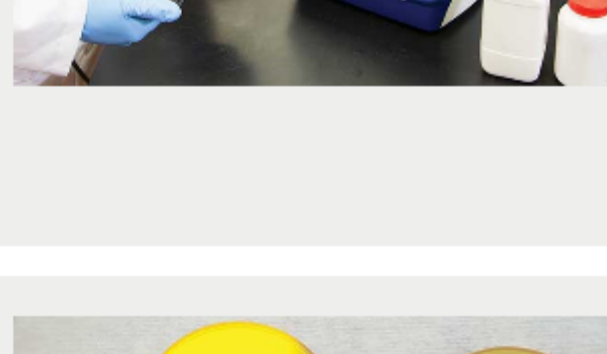
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WIDEBAND OPTICAL MODULATOR AND DETECTOR CHARACTERIZATION

GET WHITE PAPER

Raman Spectroscopy Peers Through Packaging

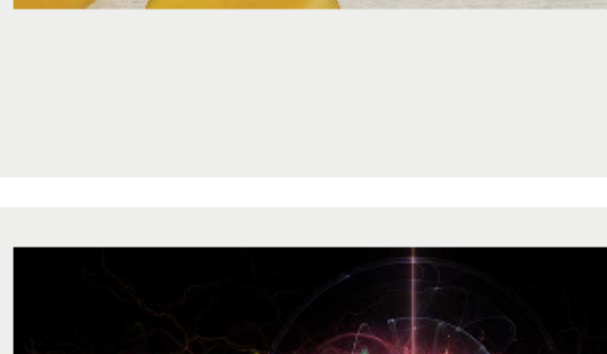
See-through Raman spectroscopy (STRaman), developed in 2016, expands the capability of Raman spectroscopy to measure samples beneath diffusely scattering packaging material. The system is designed to have a much larger sampling area than the confocal approach. This design enhances the relative intensity of the signal from the deeper layers, thereby increasing the effective sampling depth, and allows the measurement of material inside visually opaque containers.



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Diffraction Optical Elements: Minimizing Zero Order

Over the years, diffractive optics have evolved into an effective way of beam shaping and splitting. Their advantages over refractive optics are well known; they're lightweight and compact and can be integrated easily into optical systems. They also can perform several optical functions in a single element. Recent advances in DOEs have made them a standard component in laser material processing, medical and aesthetic lasers, and structured light projection systems.

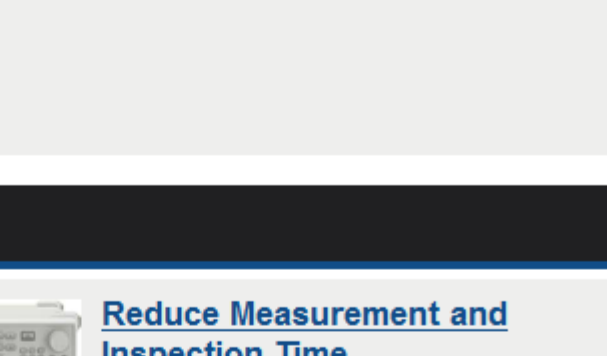


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New Frontier for Quantum Sensing

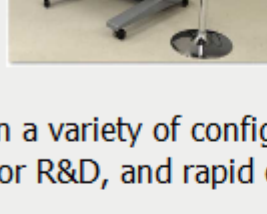
Quantum mechanics — an idea that started with Planck, Einstein and Heisenberg more than 100 years ago — gave us a better understanding of the nature of matter and light.

It resulted in the first quantum revolution, which yielded the laser and the transistor. Today, experts predict that we are on the verge of a second quantum revolution where technologies that rely on quantum superposition and quantum entanglement will emerge. Thanks to smaller components, including lasers, photonics and optics components, new possibilities have been unlocked for quantum sensing.



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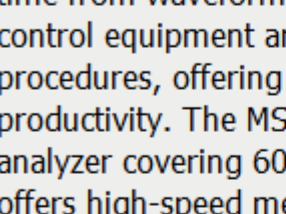
Featured Products



Meridian® FLEX Camera Testing Platform

Optikos Corporation
The Meridian® FLEX Platform is designed around a high-speed, high-precision robot that can place a target at any specified field point in a variety of configurations—making it flexible enough for R&D, and rapid enough for production camera testing.

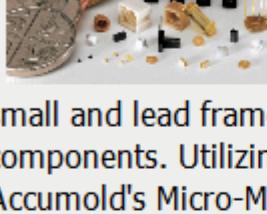
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Reduce Measurement and Inspection Time

Anritsu Co.
The Optical Spectrum Analyzer MS9740A reduces the total time from waveform sweeping to data transfer to external control equipment and supports simple analysis procedures, offering excellent cost performance and better productivity. The MS9740A is a benchtop optical spectrum analyzer covering 600 nm to 1750 nm. The MS9740A offers high-speed measurements to support the needs of device and component manufacturers.

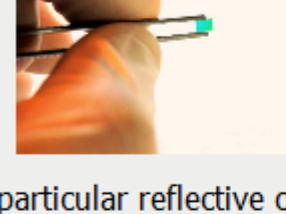
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Micro Injection Molding

Accumold
Accumold® is a high-tech manufacturer of precision micro, small and lead frame injection molded plastic components. Utilizing processes developed from Accumold's Micro-Mold® technology, the company designs, builds and produces unique molds and parts.

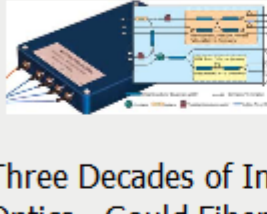
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Diffraction Grating Solutions

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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Broadband Fiber Optic Components and Modules

Gould Fiber Optics
Three Decades of Innovative Components for Fiber Optics.. Gould Fiber Optics, a leading manufacturer of passive fiber optic products, with over 30 years of proven reliability as a leader in the research, development and manufacturing of fiber optic components and integrated assembly solutions has expanded its component lines.

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ContrastMax It's All About the Contrast

Chroma Technology Corp.
ContrastMax filters from Chroma feature sputtered interference coatings engineered for automated vision applications like machine vision and robotic guidance. These optical filters offer superior levels of contrast and blocking of unwanted light, while also performing well at wide viewing angles.

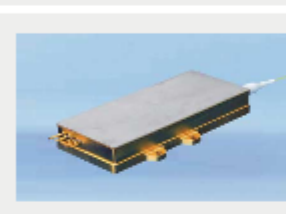
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Next Generation of Trilinear Line-Scan Cameras

Teledyne e2v (UK) Ltd.
Teledyne e2v announces its next generation of line-scan cameras - the high-resolution ELiXA+ trilinear color range. These new 8k pixel cameras are ideal for industrial applications that require high color resolution and image sharpness such as print, label, textile, electronic and PCB inspection.

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High Brightness Fiber-coupled Diode Laser

PhotonTec Berlin GmbH
New high power and brightness fiber-coupled diode lasers at 915nm and 976nm provide more power up to 150W from a single 105µm/0.22NA fiber and up to 210W from a single 200µm/0.22NA fiber. With the same package the power of wavelength stabilized diode laser at 976nm reaches max.

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Cobolt Skyra™: The New Multi-Line Laser

Cobolt AB
Cobolt AB, a part of HÜBNER Photonics, proudly market releases the Cobolt Skyra™, a revolutionary multi-line laser platform. With up to 4 wavelengths permanently aligned in a single compact package (70 x 134 x 38 mm) and requiring no external electronics, the Cobolt Skyra™ will enable the next generation of compact and easy-to-use analytical instrumentation for the life science market.

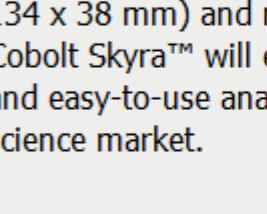
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The Aries Spectroradiometer

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.

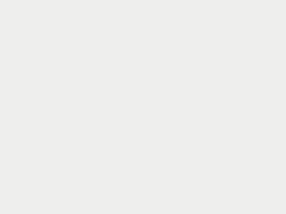
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Optical Fabrication

Photonics Media
Optical Fabrication is a new book for anyone working on or interested in the methods, materials and measurement techniques used in modern lens and optical component manufacturing. The book will serve as an introduction or update, moving beyond methods and materials to design and complex modern applications. Also included are a handy list of useful tables and a dictionary of terms used in the book.

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Combined Spectrometer / Microscope

PicoQuant GmbH
Time-resolved fluorescence spectroscopy is a spectroscopist's most valuable tool for the investigation of excited state dynamics in molecules, complexes, or semi-conductors. With its newly released fiber coupling sample holder, the modular, time-resolved and steady state spectrometer FluTime 300 from PicoQuant can be combined with a microscope.

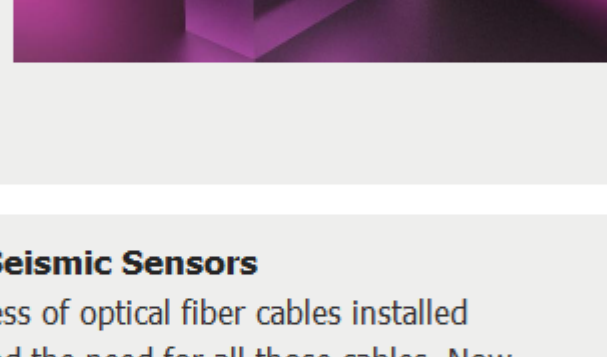
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In Case You Missed It

Researchers Make Transparent Materials Absorb Light

Researchers have demonstrated an optical paradox — they have made a completely transparent material appear perfectly light-absorbing. The results of their research contradict the idea that materials that look transparent, such as glass, appear that way because they have no light-absorbing qualities.



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That Was Then, This Is Now: Fiber Optic Cables Find New Use as Seismic Sensors

The decade that gave us the Sony PlayStation also gave us dark fiber — an excess of optical fiber cables installed underground, mostly in the 1990s, before advances in the use of fiber for all those cables. Now, research teams on the earthquake-prone West Coast of the U.S. are putting dark fiber optic cables to use as sensor arrays for seismic monitoring.

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Discovery Could Lead to Materials with Brighter, Faster Light Emission

Scientists have discovered why a certain class of nanocrystals — caesium lead halide quantum dots — shines in such bright colors. They have also found that these nanocrystals emit light extremely quickly. Experiments showed that caesium lead halide quantum dots emitted light at room temperature after just one nanosecond.

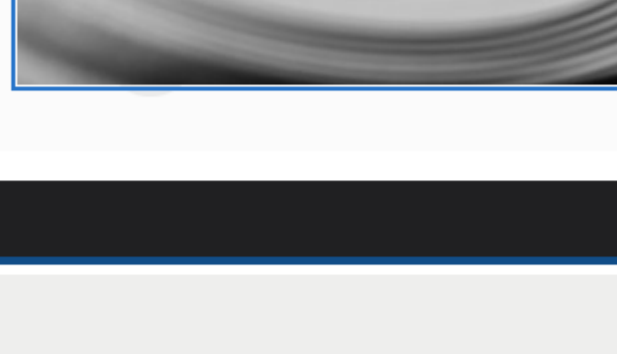
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Webinars

Smart Cameras: Technology and Applications

Tue, Mar 13, 2018 1:00 PM - 2:00 PM EDT
The capabilities of smart cameras have increased dramatically over the past few years. This webinar will explore the characteristics of today's smart cameras, typical applications, and how to ensure that you select the camera that best meets your needs. You will learn how smart cameras can be used to solve unique machine vision requirements and how they can reduce the overall cost of a machine vision application.



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Coming in March...

Features

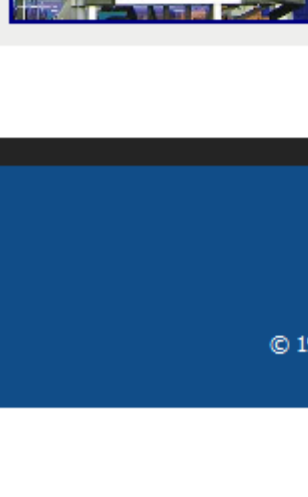
Solid-State Lasers; Mid-IR Spectroscopy; Fiber Optics for Telecom/Data; Hyperspectral Imaging; Lens Measurement

Issue Bonus

The Fiber Optics Issue

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.

About Photonics Spectra



Since 1967, *Photonics Spectra* magazine has defined the science and industry of photonics, providing both technical and practical information for every aspect of the global industry and promoting an international dialogue among the engineers, scientists and end users who develop, commercialize and buy photonics products.

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