

This Week In PHOTONICS

PHOTONICS MEDIA

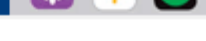


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ALL THINGS PHOTONICS

A podcast from Photonics Media



Top Stories

2020 Prism Awards Celebrate Innovation

The 12th annual Prism Awards ceremony showcased a plethora of innovation: hand-held spectrometry, plug-and-play inspection, multispectral imaging, and more. The event, sponsored by SPIE and Photonics Media, honors the most innovative and groundbreaking products on the market. This year's winners come from 105 applications spanning 18 countries.

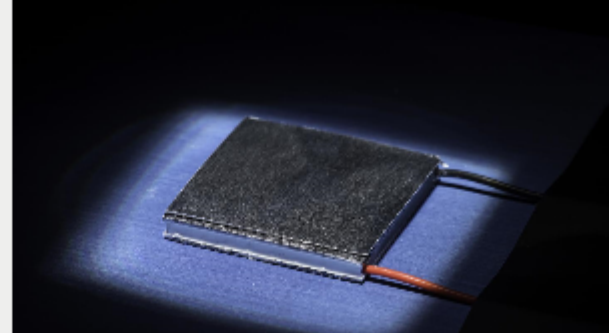


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FS-Laser-Based Technology Creates Solar Power Generators

A University of Rochester research team has demonstrated that the laser-based technology it used to create unsinkable metallic structures can also be used to create highly efficient solar power generators. The researchers used femtosecond (fs) laser pulses to etch metal surfaces with nanoscale structures that selectively absorb light only at the solar wavelengths.



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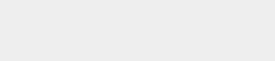


VR Classroom Immerses Students in Nanotechnology

In a custom-developed virtual reality (VR) classroom at the University of Arizona, students can pick up and examine scaled-up versions of nanosize objects. The classroom is part of Nano 2020, a University of Arizona-led initiative to develop curriculum and technology focused on educating students in the rapidly expanding role of nanotechnology within the fields of agriculture and the life sciences.



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Featured Products



The New Collar Workforce

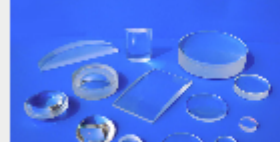
The New Collar Workforce

Photonics Media

U.S. manufacturing companies are expected to face a shortage of two million skilled workers by the year 2020, according to reports. As a result, manufacturers and educators are looking for real, actionable ideas to train workers, reduce the shortfall and realize the potential of the new age of manufacturing.

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High Quality Customized and Standard Optical Lenses

CeNing Optics Co. Ltd.

CeNing Optics has been producing high-quality optical lenses since 2004. With a variety of manufacturing facilities, and an experienced and skillful team, we can produce lenses from 3.0 mm to 300 mm diameter range. The lenses can be with common and special curvatures like plano-convex, plano-concave, Bi-concave, Bi-convex, and meniscus.

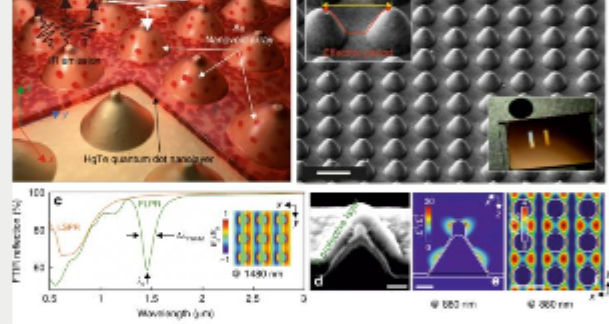
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More News

Laser-Printed Plasmonic Arrays Boost IR Emission of Colloidal Quantum Dots

Semiconductor quantum dots (QDs) that emit light in the near- and mid-infrared (IR) spectral ranges have the potential to power a range of optical devices. However, fundamental physical limitations decrease the intensity of IR-emitting QDs. At longer wavelengths, the quantum yield of such QDs decreases as the radiative emission rate drops following Fermi's golden rule, while nonradiative recombination channels compete with light emission.

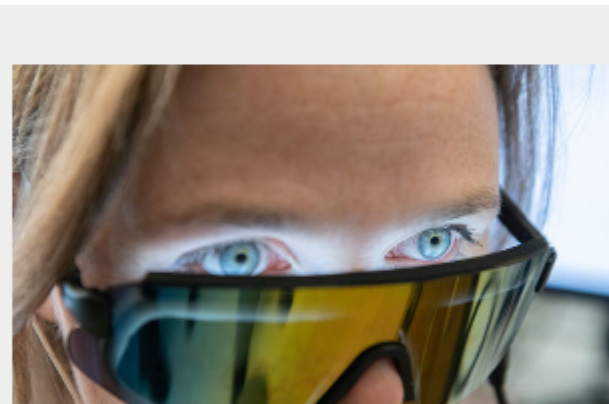


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Flickering Light Mobilizes Brain Chemistry That May Fight Alzheimer's

Previous experiments using flickering light to treat neurodegenerative disease have shown promise, and now, researchers at the Georgia Institute of Technology (Georgia Tech) may have discovered how the flicker works. They found that exposure to light pulsing at 40 hertz (Hz) — 40 beats per second — caused the brains of healthy mice to release a surge of signaling chemicals that could help fight Alzheimer's disease.



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Nobel Prize Winner Highlights BiOS Plenary [Read Article](#)

50th Anniversary of Supercontinuum Laser Marked at SPIE's BiOS/Photonics West [Read Article](#)

HORIBA Scientific to Sponsor Upcoming RamanFest [Read Article](#)

Pseudo-Random Speckle Illumination Patterns Allow for High-Resolution Imaging [Read Article](#)

1D Analogs of 2D Heterostructures Could Find Multiple Applications [Read Article](#)

Industry Events

PITTCON 2020

March 1-5, 2020 - McCormick Place - Chicago

Pittcon is a leading annual conference and exposition on laboratory science, with 16,000 attendees from industry, academia, and government from over 90 countries worldwide. Join the Pittcon Community of thousands of attendees and exhibitors from around the world, including industry experts, renowned scientists, and leading researchers from the academic, government, private, and start-up sectors. Discover and take part in the over 2000 Pittcon Technical Sessions. Connect with the latest research and developments presented by world-renowned scientific leaders from over 32 countries.

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March 1 - 5, 2020
McCormick Place
Chicago, Illinois, USA

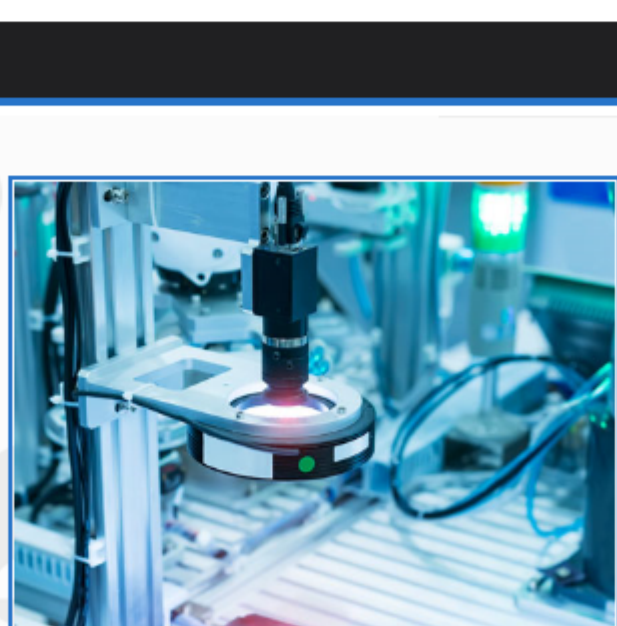
Webinars

Machine Vision System Design and Integration: Challenges and Trends

Wed, Feb 19, 2020 12:00 PM - 1:00 PM EST

This webinar will help you develop a plan for your machine vision system that will ensure reliability, repeatability, standardization, and quality on the factory floor. It will review various deep learning systems, and when to use deep learning techniques. You will learn what to focus on when you have limited time to evaluate a system; how and when to choose a system integrator; how to quantify performance during testing; and how to build flexibility and adaptability into your system so it will serve you well for years to come. Sponsored by Teledyne DALSA, Euresys SA, Allied Vision Technologies GmbH, and IDS Imaging Development Systems GmbH.

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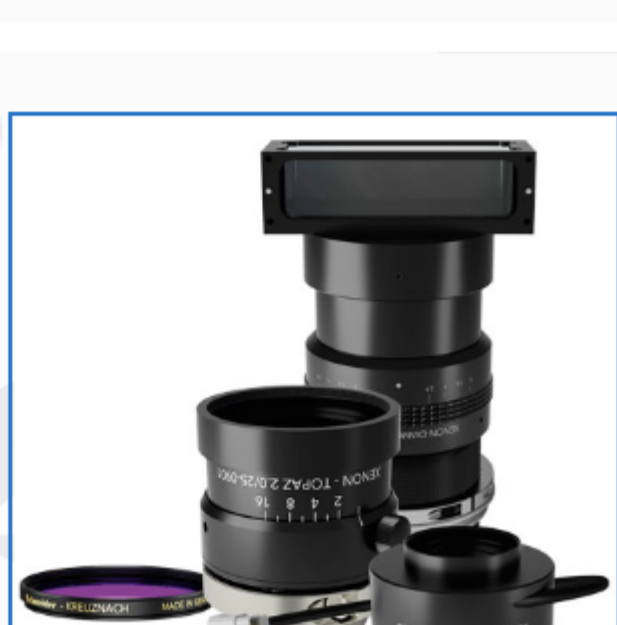


Optical Design and Fabrication: Considerations for Going Custom

Tue, Feb 25, 2020 1:00 PM - 2:00 PM EST

This webinar will address the items to consider when designing and fabricating a custom lens for any given system. Presenter Stuart Singer, chief executive officer at Schneider Optics, Inc., will review the basic parameters and specifications required to analyze a possible commercial off-the-shelf (COTS) lens solution, a modified COTS lens solution, or lens solutions that are fully modified to meet your requirements. He will review basic optics principles and provide practical guidance on optical specification, and will address custom lens design fabrication tolerances with regard to cost and feasibility for single application as well as serial mass production. You will learn how to convey your requirements to an optical design/fabrication company to obtain meaningful quotes and a full understanding of your options. Sponsored by LaCroix Precision Optics, Applied Optics Center, ZYGO, and Precision Glass & Optics.

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