Thursday, May 30, 2019

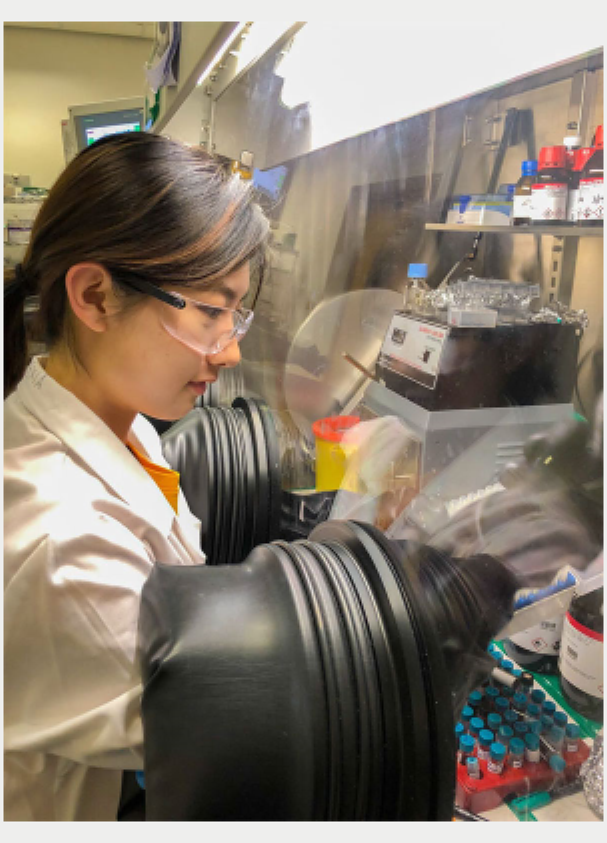
This Week In PHOTONICS

PHOTONICS MEDIA

Top Stories

Quantum Dots Enhance Stability of Perovskites for Solar Power

A team from the University of Toronto is researching materials that could enhance the solar-harvesting potential of silicon by absorbing wavelengths of light that silicon does not absorb. The researchers have demonstrated that perovskite crystals and quantum dots, working together, could increase the stability of solar materials.



Read Article

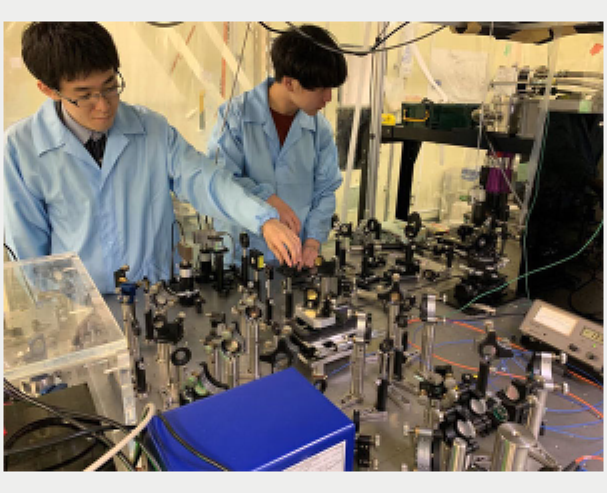
Laser Beam Helps Protect Signal Proteins Used for Tissue Engineering

A University of Washington research group has used laser light to tether and untether signal proteins to the scaffolds used in tissue engineering. Traditional methods used to keep proteins on scaffolds can kill more than 90% of the proteins’ functionality.

Read Article

Quantum Interferometry Reveals How Coherent Phonons Are Generated

Scientists at Tokyo Institute of Technology and Keio University wanted to investigate ways to store, move, and process information at exponential speeds using heat and noise (also known as waste vibrations). To do so, they studied the excitation and detection of photogenerated coherent phonons in gallium arsenide (GaAs) semiconductors using an ultrafast dual pump-probe laser.



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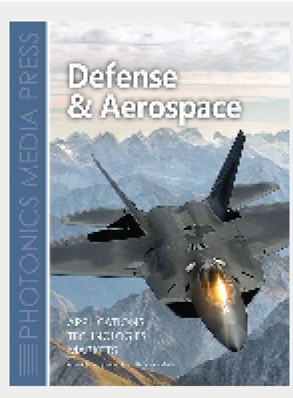
Featured Products



Defense & Aerospace

Photonics Media

Drawing mainly from the pages of Photonics Spectra and focusing on the last decade or so of developments, Defense & Aerospace offers an overview of these industries as only Photonics Media can present it — from laser paint removal and laser bonding in aerospace, to breakthroughs in quantum sensing. It is a resource for designers, engineers, researchers, marketers, and students looking for a broad survey of advancements in optic and photonics technologies and their applications in defense and aerospace.

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Canon Surface Reflectance Analyzer

Canon U.S.A. Inc., Industrial Products Div.

Canon RA-532H, Surface Reflectance Analyzer (goniophotometer), is a compact, portable device capable of measuring 4 surface appearance conditions in a single pass: gloss, haze, image clarity (IC), and BRDF (Bidirectional Reflectance Distribution Function). Additionally, Canon has recently released its own new parameter, “Scattering” parameter, overcoming the shortage of both IC and DOI (Distinctiveness of Image) when evaluating matte and textured surfaces as well as orange peel surface.

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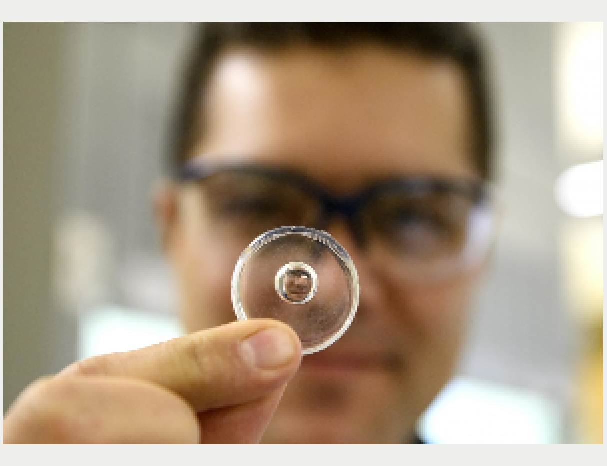
More News

New Lens Fabrication Technique Uses Magnetic Liquid Molds

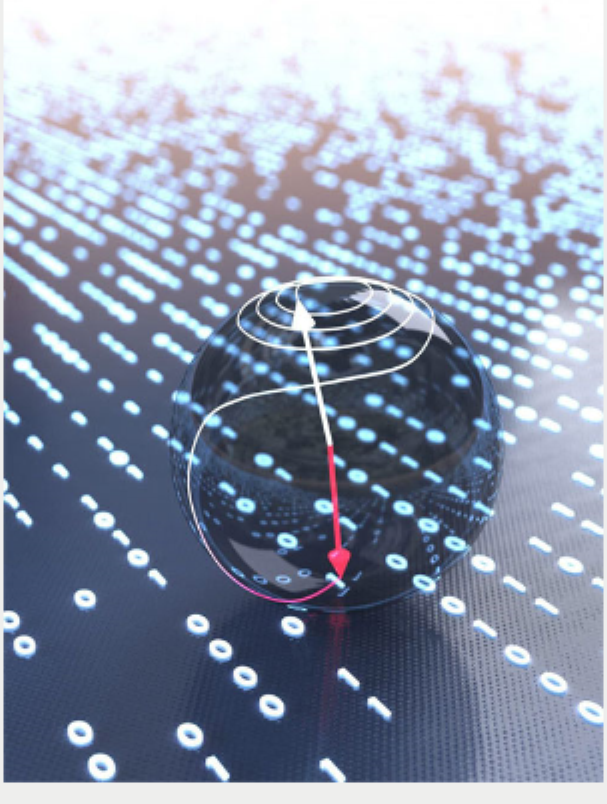
Researchers from Washington State University and Ohio State University have developed an inexpensive way to make custom lenses. They developed soft, deformable molds from droplets that can be manipulated with magnets to create lenses in a variety of shapes and sizes.



Read Article

Superfast Computing Method Uses Terahertz Light Pulses

An international team has discovered how to perform superfast data processing using light pulses instead of electricity. The team used magnets to create faster data processing speeds without incurring high energy costs.



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More Headlines

Integrated Photonics Focus of AIM Summer Academy at MIT Read Article

Tandem Perovskite Solar Cell Demonstrates Efficiency of About 23% Read Article

Three Teledyne Divisions Merge, Open Office in Tokyo Read Article

Light, Nanotechnology Could Prevent Bacterial Infections on Medical Implants Read Article

Laser Components Breaks Ground on Arizona Production Facility Read Article

Industry Events

Machine Vision Conference and Expo 2019

June 6, 2019 - Marshall Arena - Milton Keynes England

The 2019 UKIVA Machine Vision Conference and Exhibition will take place on June 6 at the Marshall Arena in Milton Keynes, England. Now in its third year, the conference has become increasingly popular with attendance figures in 2018 up 17% compared to 2017. The event will follow a similar format to previous years, with a comprehensive program of technical seminars supported by an exhibition featuring vision component manufacturers, vision component and system distributors, and systems integrators from around the world. The 2019 Conference will feature an additional theme, covering vision applications in automation and robotics.

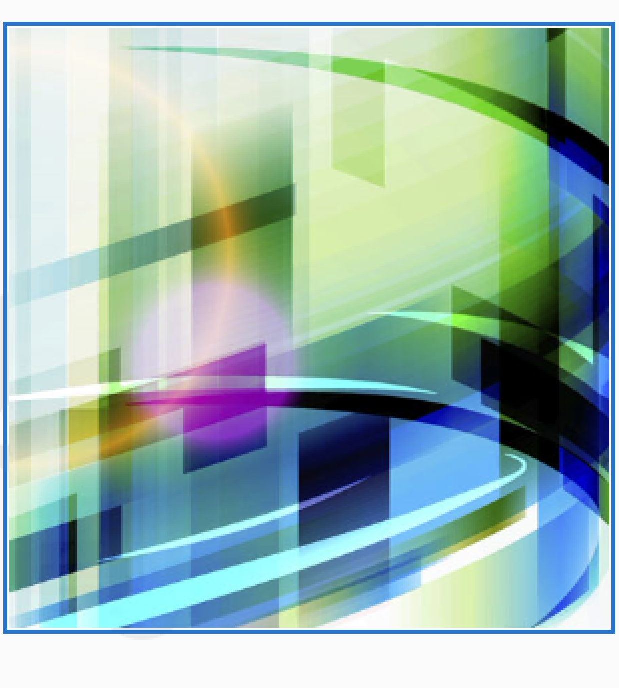
More Info

Webinars

VCSELs and Their Role in the Evolution of Photonic Systems

Wed, Jun 5, 2019 1:00 PM - 2:00 PM EDT

In this webinar, professor Axel Scherer, who with Jack Jewell created the first prototypes for VCSELs while Scherer was at Bellcore in the 1980s, will discuss his role in the development of these miniature lasers and how their use has evolved as the technology has progressed. Scherer will discuss VCSEL design, lasing characteristics, and the capabilities that make VCSELs well suited for use in today's photonic and optics applications, compared with other technologies such as LEDs.



Register Now

Stabilizing the Line of Sight: LOS Dynamics and Control

Thu, Jun 6, 2019 1:00 PM - 2:00 PM EDT

This webinar, presented by the author of Stabilizing the Line of Sight (Photonics Media Press, 2018), will provide an overview of the issues and topics that must be addressed to successfully implement Line of Sight (LOS) control and stabilization design. Presenter Peter Kennedy will cover LOS pointing, tracking, and stabilization, with a focus on LOS definition, performance, architecture, and basic theory. He will provide a general methodology for LOS stabilization system design and identify critical algorithms for analyzing stabilization techniques. The objective of the webinar is to provide attendees with a firm grounding in LOS stabilization, so that they will be able to address the detailed design tasks required to perform an actual design.

Register Now

CALL FOR ARTICLES

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazines *(Photonics Spectra, BioPhotonics, Vision Spectra,* and *EuroPhotonics).* Please submit an informal 100-word abstract to editorial@Photonics.com, or use our online submission form.

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