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Top Stories

2020 Prism Award Finalists Showcase Industry Innovations

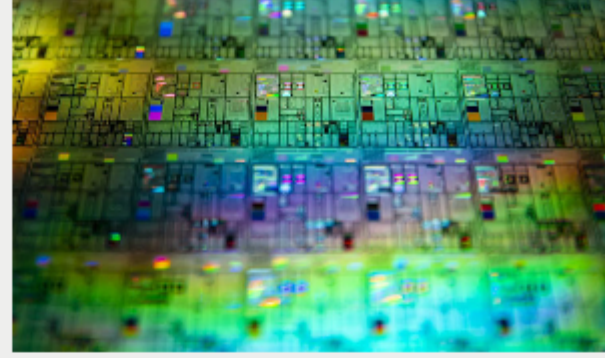
A light that generates 10x the number of entangled photon pairs than any known photon source. A hand-held Raman spectrometer with MEMS scanning mirrors. A semiconductor laser for treating glaucoma. These technologies are among the 27 finalists for the 2020 Prism Awards which recognize groundbreaking technology in the industry. The Prism Awards ceremony and banquet, co-sponsored by SPIE and Photonics Media, will be held during SPIE Photonics West on Feb. 5.



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ORNL Researchers Summarize Results from Quantum Experiments

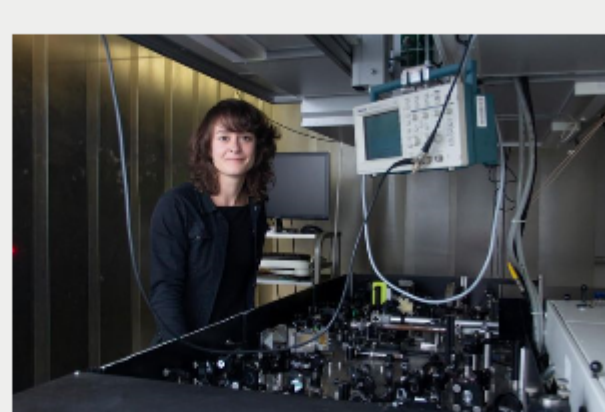
Oak Ridge National Laboratory (ORNL) researchers Joseph Lukens, Pavel Lougovski, Brian Williams, and Nicholas Peters, with collaborators from Purdue University and the Technological University of Pereira in Colombia, summarized results from several of their recent academic papers in Optics & Photonics News, a publication of The Optical Society (OSA).



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Record-Breaking Terahertz Laser Beam Developed at TU Wien in Vienna

A research group at TU Wien has developed a terahertz radiation source that is both efficient and creates a broad spectrum, generating different wavelengths from the entire terahertz range. Both aspects are said to have broken previously held records. The research group believes the new radiation source will allow short radiation pulses to be generated with high radiation intensity.



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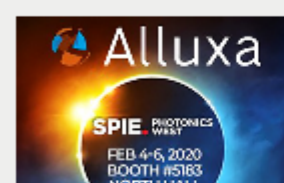
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Northrop Grumman Synoptics
Quasi-Rugate thin film designs are optimized for high-power laser applications for ultra-fast through CW applications across the wavelength range of 355 nm to 2200 nm. Each design has a unique refractive index profile specifically tuned to give optimal performance for our customer's applications.

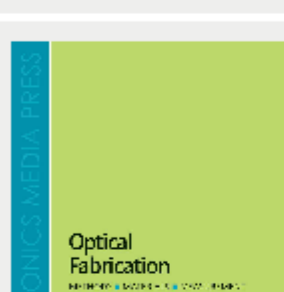
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Alluxa Ultra Series Filters

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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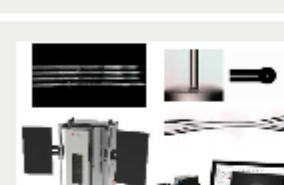


Optical Fabrication

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.

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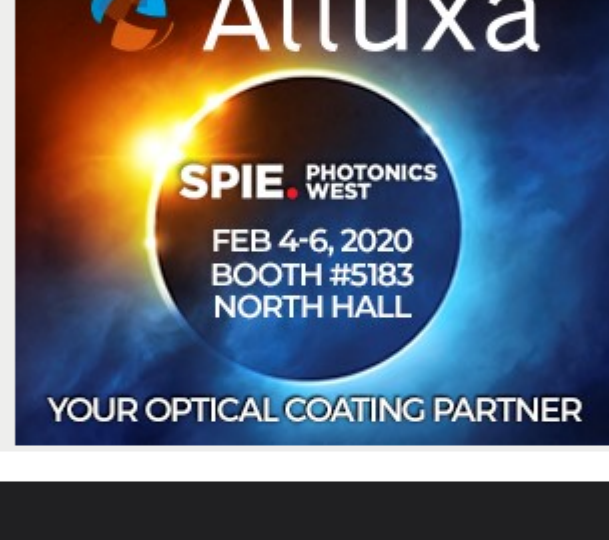
Glass Processing and Automation

NYFORS Teknologi AB

The NYFORS SMARTSPLICER is a CO2 laser glass processing system designed for the production of high-power and sensitive photonics components. It offers contamination-free splicing and tapering, bundling, and many other glass shaping processes. NYFORS provides automated high precision solutions for fiber preparation such as stripping, cleaving, recoating, cleave quality inspection, proof testing, and analyzing. We also offer custom work cell automation solutions for quality splicing and preparation tasks.

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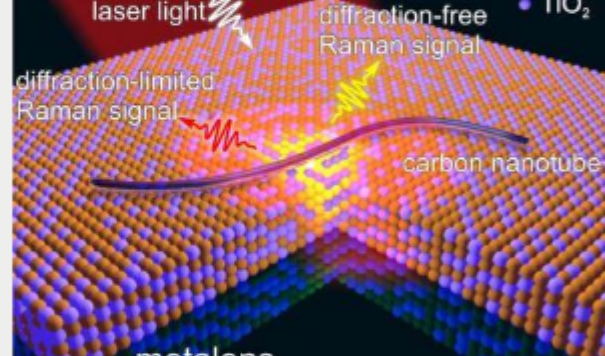
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More News

Color Superlensing Could Break Through Diffraction Barrier

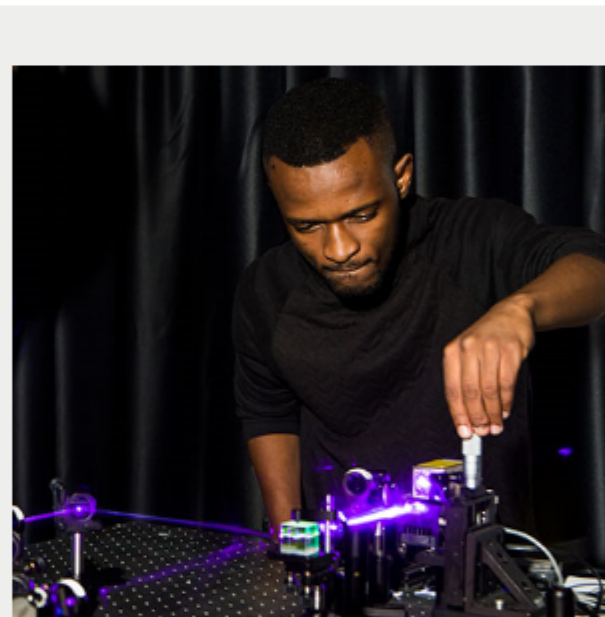
Researcher Sergey Kharinstev and his team at Kazan Federal University recently published a paper in Optics Letters where they detail the design of a new type of metalens capable of imaging beyond the optical diffraction limit. A metalens described in the article is a thin composite metal-dielectric film placed on a dielectric substrate; the width is several dozen nanometers.



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Multidimensional Quantum Communications with Legacy Fibers

In a new "twist" on quantum communication using optical fiber, researchers from the University of Witwatersrand (Wits) and Huazhong University of Science and Technology (HUST) have demonstrated that multiple quantum patterns of twisted light can be transmitted across a conventional fiber link that supports only one light pattern.



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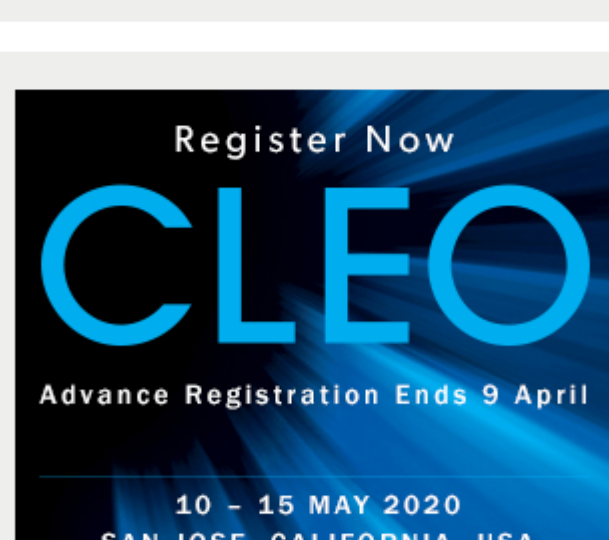
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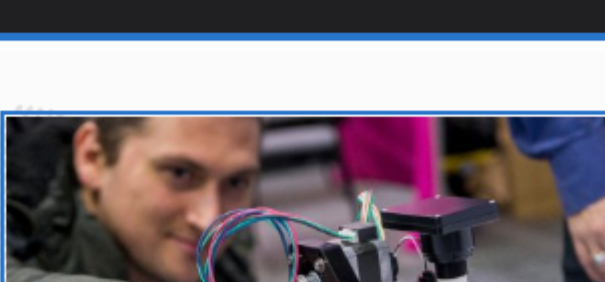
Industry Events

SPIE Photonics West 2020

February 4-6, 2020 - The Moscone Center - San Francisco

Photonics Media Booth: 658,659

At SPIE Photonics West 2020, the leading event for the photonics and laser communities with more than 20,000 attendees, you will have access to the latest research in biophotonics, laser technologies, and optoelectronics materials and devices. This will be a full week with over 5200 technical papers, 65 courses and workshop with notable plenary speakers, including Eric Betzig, 2014 Nobel Prize Winner in Physics. The latest products and devices driving technology markets will be on display at the BioOS Expo and Photonics West Exhibition, which will feature 1400 companies, the Expo Industry Stage, and a Job Fair. 2020 marks the inaugural SPIE AR/VR/MR conference as well as the industry-focused SPIE Venture Summit, part of an expanded entrepreneur program.



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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 discuss traditional versus 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, and Allied Vision Technologies GmbH.



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