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**LIGHT** EXCHANGE





## Fluorescent Fingerprint Tag IDs 'Hidden' Prints

Lifting latent fingerprints on knives, guns, bullet casings and other metals with higher confidence is now possible using a film of electrochromic polymers, which change colors when subjected to an electrical voltage, researchers from the Science and Technology Facilities Council's ISIS pulsed neutron and muon source, the University of Leicester and the Institute Laue-Langevin have found. "By using the insulating properties of the fingerprints to define their unique patterns and improving the visual resolution through these colorcontrollable films, we can dramatically improve the accuracy of crime scene fingerprint forensics," said professor Robert Hillman of the University of Leicester. "From the images we have produced so far, we are achieving identification with high confidence using commonly accepted standards."

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**Listening to Blood Cells** 



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## Princeton Instruments - IsoPlane SCT Spectrograph

FEATURED VIDEO

Princeton

IsoPlane SCT Spectrograph

DETECTORS, SENSING

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Instruments

Through its use of proprietary optics and a novel optomechanical design, the IsoPlane SCT (Schmidt-Czerny-Turner) improves upon the traditional Czerny-Turner-type spectrograph, which, despite being limited by the age-old design's inherent image aberrations, is still the most commonly used research instrument in dispersive optical spectroscopy. Its novel optical design provides the ability to use the full spatial extent of their detector without loss of spectral or spatial resolution, and it provides the only major innovation to the design of research-grade imaging spectrographs in more than 20 years.

PRISM20

Transistor Works with Light, Not Electricity An electrical charge applied to an ultrathin layer of material can change the polarization of terahertz light beams, creating the optical equivalent of an electrical transistor, its creators at Vienna University of Technology say.

Red blood cells struck with laser light generate high-frequency sound waves that Ryerson University investigators

say could help to differentiate normal blood cells from abnormal ones for the diagnosis of blood-related diseases.

## Products on PhotonicsBuyersGuide.com



### Raman Spectrometer

Ocean Optics Although Raman spectroscopy is an excellent analytical tool, the Raman signal is often weak and traditional slit spectrometers typically have poor optical throughput.

More info >>

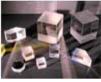


### Telecentric Lenses for Machine Vision

China Daheng Group CDHC designs and manufactures GCO

series telecentric lenses, with its good performance, superior image quality, low distortion and competitive price, fully meet the requirements of machine vision systems in industrial measurement application.

More info >>



### Manufacturing & Coating Services Perkins Precision Developments

At PPD we take pride in meeting exact customer requirements. We understand the importance of delivering the specific optics on schedule. We work closely with our customer partners, seeking long term, mutual successes and relationships that last for years.

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### Optical Liquids Catalog Cargille Laboratories

This Specialty Optical Liquids catalog features high-transmission, safe-handling laser liquids; fused silica matching liquids; and specific refractive index liquids (1.300 to 2.11 nD). Also featured are transparent and light-absorbing gels. More info >>

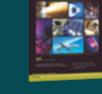
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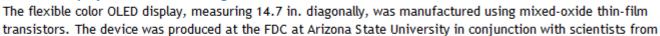
## CZTSe Solar Cells Achieve 9.7% Efficiency

The copper zinc tin selenide-based solar cell developed by a European collaboration could bring the solar industry a step closer to a sustainable alternative to CIGS-based solar cells. Share

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the Army Research Labs.

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Newport, REO Partner on HeNe Lasers

Flexible Display Center Makes Largest OLED TFT

Newport was named exclusive global sales partner for the Boulder, Colo.-based company's range of red, green, yellow, IR and single-frequency stabilized lasers operating at 633 nm.

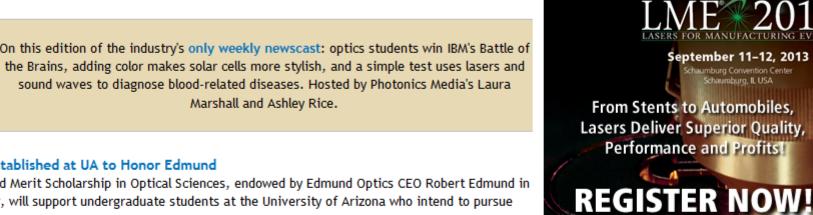














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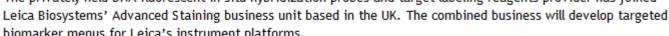
**POLLS** 

the Brains, adding color makes solar cells more stylish, and a simple test uses lasers and sound waves to diagnose blood-related diseases. Hosted by Photonics Media's Laura Marshall and Ashley Rice.

### Optics Scholarship Established at UA to Honor Edmund The Norman W. Edmund Merit Scholarship in Optical Sciences, endowed by Edmund Optics CEO Robert Edmund in

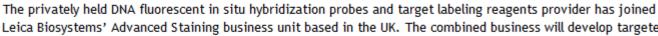
honor of his late father, will support undergraduate students at the University of Arizona who intend to pursue careers in optics. Read Article >> Share

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biomarker menus for Leica's instrument platforms.

Leica Biosystems Acquires Kreatech

Optics Students Win IBM's 'Battle of the Brains' Three students from St. Petersburg National Research University of Information Technologies, Mechanics and Optics were crowned World Champions at the 37th annual Battle of the Brains competition hosted at ITMO and

sponsored by IBM. Read Article >>





# **Industry Events**



WEBINAR

**Expert Briefings** In-depth presentations and interactive Q&As featuring top industry experts

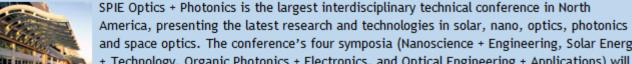
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Topics include: Laser Transmitters for Fiber Optic Communications Techniques in Biophotonic Imaging Enabling Technology for Highly Aspheric Optics Manufacturing Industrial Imaging and Vision Developments in Optics and Optical Components

Raman Spectroscopy for Research and Industry

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### SPIE Optics & Photonics 2013 - August 25 - 29, 2013 · San Diego, CA Visit Photonics Media at Booth 416



and space optics. The conference's four symposia (Nanoscience + Engineering, Solar Energy + Technology, Organic Photonics + Electronics, and Optical Engineering + Applications) will offer more than 3200 presentations, including plenary and featured talks on topics such as

metamaterials for molded optical wavefronts, asteroid-tracking and collision-mitigation, Kepler's search for Earthlike planets and nanoparticle technology to convert solar energy directly into saturated steam for sterilizing tools and waste. The show also will include more than 40 professional development courses, poster sessions, panel discussions and a tribute to H. John Caulfield. MORE INFO >>

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## PHOTONICS SPECTRUM REFERENCE CHART

Presented by Photonics Media The updated Photonics Spectrum Reference Chart reflects the changing technologies in the photonics industry

Light Exchange

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