



LIGHT EXCHANGE

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Image Sensor is Transparent, Circuit-free

A flat, transparent and circuit-free polymer sheet developed at Johannes Kepler University may provide an entirely new way of capturing images, or may act as a touch-free user interface that could seamlessly overlay a television or other display technology. The sensor is suffused with tiny fluorescent particles that absorb a very specific wavelength and re-emit it at a longer wavelength. "To our knowledge, we are the first to present an image sensor that is fully transparent – no integrated microstructures, such as circuits – and is flexible and scalable at the same time," said professor Oliver Bimber.

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X-ray Laser Observes Photosynthesis in Action

The structure and chemical behaviors of a natural catalyst involved in photosynthesis were observed simultaneously for the first time. The team that conducted the work using the x-ray laser at SLAC National Accelerator Laboratory's Linac Coherent Light Source hope to apply the design principles observed to artificial systems such as those used to create renewable energy sources.

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Photonics West Is the 'Place to Meet'

A record number of international participants at SPIE Photonics West 2013 made the event "the place to meet" for researchers, developers and suppliers of optics and photonics technology. The event featured nearly 21,000 registered attendees – up 2 percent from last year – and featured more technical papers and exhibiting companies than last year.

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Laser Proposed to Vaporize Threatening Asteroids

Two scientists in California have conceived DE-STAR (Directed Energy Solar Targeting of Asteroids and exploRation) as a realistic means of mitigating potential threats posed to the Earth by asteroids and comets.

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Device Creates Multiple 'Ghosts'

An optical device that uses metamaterials and optical scattering to "engineer" multiple ghosts – the holy grail of the fields of optical illusions, electromagnetics and radar detection – offers new possibilities for cognitive deception through the control of light-matter behavior.

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Roman Cup Inspires New Nanoplasmonic Sensor

The famous Lycurgus cup created by the Romans in 400 A.D. has inspired University of Illinois at Urbana-Champaign researchers to develop a nanoplasmonic spectroscopy sensing device that, for the first time, achieves colorimetric sensing.

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On this edition of the industry's premier [weekly newscast](#): Space rocks rock Earth, a probe emits light in living cells, an x-ray laser reveals secrets of photosynthesis, and we learn about a new camera system from the Belgium-based research group imec. Hosted by Photonics Media's Laura Marshall and Melinda Rose.

Materials Processing Drives IPG Sales Growth

Fiber laser maker IPG Photonics ended 2012 with double-digit growth in its primary sales market, materials processing, the company announced last week, while also providing positive guidance for the first quarter of 2013.

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Probe Emits Light in Living, Unharmed Cells

Stanford University engineers are the first to demonstrate that sophisticated engineered light resonators can be inserted inside cells without damaging them.

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Trumpf Names National Sales Manager

Pat Grace will lead North American sales for lasers and systems at the company's Laser Technology Center in Plymouth, Mich.

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Matrox Imaging White Paper

Which library or vision-specific IDE offers the right solution for you?

Abstract

Commercial machine vision software is currently classified along two lines: the conventional vision library and the vision-specific integrated development environment (IDE). Determining which software is right for your vision project depends upon a variety of factors: ease-of-use, productivity, flexibility, performance, completeness, and maintenance. This white paper uses these factors to contrast the two software development approaches and clearly establish the merits and drawbacks of each.

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Matrox Imaging - Vision Library or Vision-Specific IDE: Which is right for you?

Matrox Imaging

Commercial machine vision software is currently classified along two lines: the conventional vision library and the vision-specific integrated development environment (IDE). Determining which software is right for your vision project depends upon a variety of factors: ease-of-use, productivity, flexibility, performance, completeness, and maintenance. This white paper uses these factors to contrast the two software development approaches and clearly establish the merits and drawbacks of each.

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Industry Events

OFC/NFOEC 2013 - March 17 - 21, 2013 · Anaheim, CA

The Optical Fiber Communication Conference and Exposition and the National Fiber Optic Engineers Conference (OFC/NFOEC) is the premier international event for both the science and business of optical communications and networking. It features more than 110 short courses, over 550 exhibitors and 750 technical papers covering technologies and applications in cloud and data center networking, space division multiplexing, 1 TB and beyond optical networking, flexible grid networks, convergence of optical and wireless networks, 100 G/400 G network design and optimization, and more.

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PITTCON 2013 - March 17 - 21, 2013 · Philadelphia, PA

Pittcon is the world's largest annual conference and exposition for laboratory science. It features the latest technology and instrumentation from over 900 exhibitors and more than 2000 technical presentations that cover topics such as life sciences, drug discovery, nanotechnology, biomedical, environmental, homeland security, food science, forensics, agriculture and biomass. The event will also include a keynote lecture by R. Michael Barnett of Lawrence Berkeley National Laboratory, short courses in over 50 topics, poster and networking sessions, and the Waters Symposium, which will recognize the commercialization of chemical imaging. Nobel Laureate Sir Harold Kroto will be the Wallace H. Coulter Plenary Lecture speaker for Pittcon 2013.

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