Thursday, May 11, 2017

# This Week In PHOTONICS

PHOTONICS MEDIA



## Top Stories

### 'Makeup Lamp' Alters Appearance in Real-Time

The facial appearance of actors can now be transformed during a live performance using a projector-based illumination system that tracks an actor's facial movements and changing expressions without the need for facial markers. The Makeup Lamp, developed by a team at Disney Research, reduces latency during every step of the process from capture, through processing, to projection.

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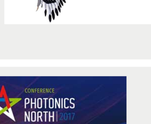
### Lighting up the Lungs to Detect Disease

A novel imaging tool that rapidly diagnoses bacterial lung infections could help physicians customize antibiotic treatment for patients in intensive care units. Currently, diagnosing bacterial infections relies on a slow process of detection followed by biopsy and lab-based culture growth — procedures that are prone to contamination and can result in late treatment. The bedside technology, known as Proteus, uses LEDs and miniaturized optical fibers to enable the clinician to enter, image and sense the distal regions of patients' lungs.



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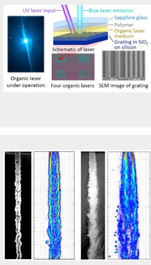
### Lasers Bring Dinosaurs to Life

Most of our collective sense of what dinosaurs looked like stems from blockbuster films like "Jurassic Park." The truth is, for years these depictions relied on artistic renderings based primarily on scant clues and what archaeologists and paleontologists surmised. Now, a group of researchers is going a step further, pointing lasers at fossils to get a better idea of what these "fleshy" creatures might have actually looked like.



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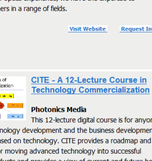
### Longer Duration Time Achieved for Continuous-Wave Organic Lasing

An optically pumped organic thin-film laser has shown the ability to continuously emit light for 30 ms — more than 100 times longer than previous devices. Organic thin-film lasers use a thin layer of organic molecules as the laser medium. By designing and synthesizing molecules with novel structures, they can achieve a wider range of colors than inorganic lasers, making them well-suited for photonics applications.

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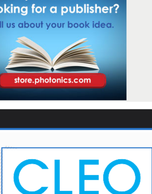
### Planar Laser-Induced Fluorescence Measures Jet Disintegration Quantitatively

Spectroscopic diagnostic techniques were used to analyze the fundamentals of sub- to supercritical jet disintegration and mixing. The research could lead to a better understanding of the precise dynamics of fuel breakup and dispersion, impacting the way rocket engines, gas turbines and diesel engines are built.



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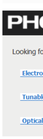
## Featured Products



**ViEW-IT® IR & UV Detectors**

**Kentek Corp.**

Kentek's View-It® Infrared and Ultraviolet detectors feature a high-efficiency, laser-sensitive material that provides an unlimited viewing period for both pulsed and continuous wave lasers. Kentek's View-It® detectors are a convenient method for real-time viewing of beam shape, mode structure, and beam alignment when held in the path of a laser beam.

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**Polarizing Beam Splitter Cubes**

**Perkins Precision Developments LLC**

Adhesive-free, precision beam splitter cubes from Perkins Precision Developments are available for high-power laser applications from 355 to 2000 nm in sizes from 3 × 3 mm to 15 × 15 mm. Our epoxy-free optical assembly process is an alternative to existing epoxy-based techniques for photonics applications.

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**Optical Polishing & Fabrication**

**Angstrom Precision Optics Inc.**

APO is proud to be a leading global manufacturer of high quality precision optical and photonic components. With over 30 years of optics experience, we have the expertise to support customers in a range of fields.

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**CITE - A 12-Lecture Course in Technology Commercialization**

**Photonics Media**

This 12-lecture digital course is for anyone involved in technology development and the business development opportunities based on technology. CITE provides a roadmap and methodology for moving advanced technology into successful commercial products and provides a view of current and future hot areas for investor funding.

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## Industry Events

### CLEO 2017

May 14-19, 2017 - San Jose Convention Center - San Jose United States
Photonics Media Booth: 2335

CLEO is the premier international forum for scientific and technical optics, uniting the fields of lasers and opto-electronics by bringing together all aspects of laser technology, from basic research to industry applications. The technical conference provides attendees with the invaluable combination of peer-reviewed, high-quality technical content, numerous networking opportunities (both formal and informal) and an exposition with leading companies in photonic applications. CLEO brings together a large, global audience — enabling attendees to meet peers and colleagues and expand their professional networks. In 2016, 4,600 attendees came from more than 60 countries.

More Info

## Webinars

### Biophotonic Tools for Diagnosing and Treating Eye Disease

Wed, May 17, 2017 1:00 PM - 2:00 PM EDT

Yannis Paulus, M.D., will discuss novel biophotonics tools and techniques for diagnosing and treating eye diseases, including retinal laser therapies and imaging. He will present significant advances in selective, reproducible retinal laser therapy and discuss Photo-Mediated Ultrasound Therapy (PUT), a novel approach using a low intensity laser concurrently with ultrasound to selectively treat blood vessels. Dr. Paulus will also speak on new imaging modalities in ophthalmology, including optical coherence tomography, photoacoustic imaging, handheld/smartphone based imaging, and molecular imaging. Dr. Paulus is an academic vitreoretinal surgeon, an assistant professor of Ophthalmology and Visual Sciences and an assistant professor of Biomedical Engineering at the University of Michigan Kellogg Eye Center. Through his research, he seeks to help physicians diagnose diseases earlier, improve treatment monitoring, and practice precision medicine tailored to each unique patient.



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