

# This Week In PHOTONICS

PHOTONICS MEDIA



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## Top Stories

### New Technique for the Additive Manufacturing of Glass

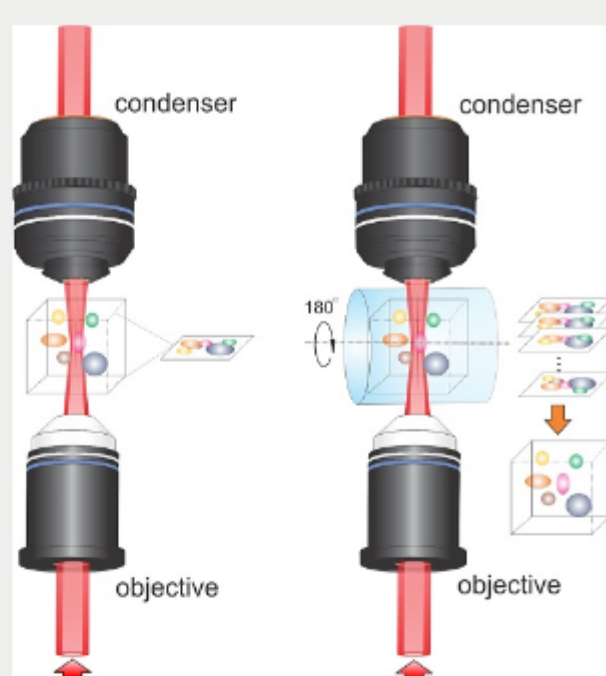
Researchers from the Karlsruhe Institute of Technology (KIT) have developed a process using glass for additive manufacturing techniques. The scientists first mix nanoparticles of high-purity quartz glass with small amounts of liquid polymer; they then cure the mixture with light at specific points through a process called stereolithography.



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### Volumetric Imaging Technique Could Eliminate Needles for Blood Tests

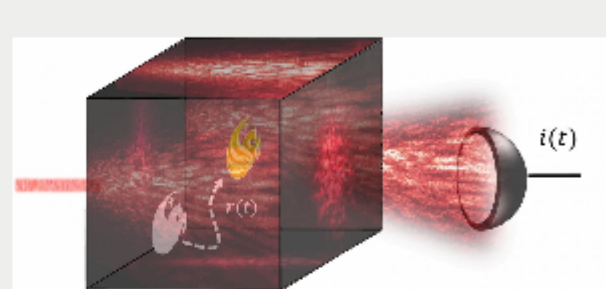
Researchers from Purdue University have developed a chemical imaging system that uses a femtosecond laser to penetrate deep into tissue and that could eliminate conventional blood tests for analyses such as drug testing and early detection of diseases. The laser system has two 100-fs pulses — one at 1040 nm with the other tunable from 680 to 1300 nm — giving the user the ability to tune the laser to excite different vibrational transitions of the specimen.



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### Changes in Optical Noise Lead to Hidden Target Detection

A novel method for tracking hidden objects does so by analyzing the fluctuations in the optical noise created by the object's movement. This approach could help advance real-time remote sensing for military and other applications, and could be useful in areas of research that involve fast-moving particles that cannot be observed directly.



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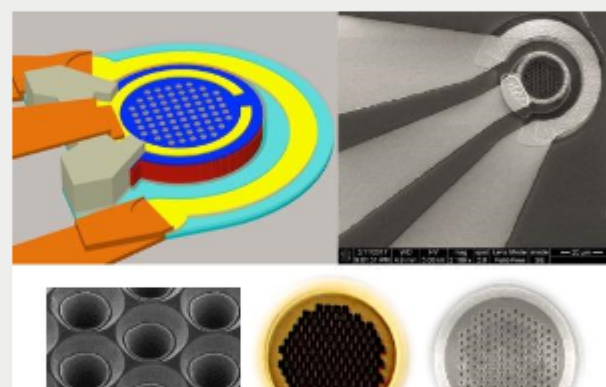
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**CLEO**  
Laser Science to Photonic Applications  
Technical Conference: 14 – 19 May 2017  
CLEO:EXPO: 16 – 18 May 2017  
San Jose, California, USA [REGISTER >](#)

### Photodetector Uses Nanoholes to Move Light Through Silicon Quickly, Efficiently

A photodetector that could move more data at a lower cost has been built by propagating photons through nanoholes in a silicon wafer. The detector uses tapered holes to divert photons sideways, preserving both the speed of thin-layer silicon and the efficiency of a thicker layer.



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### Drones Record Activity From Volcanic Plume

Unmanned aerial vehicles (UAVs) carrying lightweight sensors were used to collect temperature, humidity and thermal data within the remote volcanic clouds of Guatemala. The UAVs also took images of multiple volcanic eruptions in real time. The research team believes this to be one of the first times that fixed-wing UAVs have been used at a site such as Volcán de Fuego, where the lack of close access to the summit vent has prevented robust gas measurements in the past.



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## More Headlines

**Lite-On, Everlight, Genesis to Expand Into LED Automotive Headlight Market** [Read Article](#)

**Nanoscale Sensor Provides Clear Optical Fingerprint for Identifying Pollutants** [Read Article](#)

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**Leica Camera Announces New Industrial Subsidiary** [Read Article](#)

## Featured Products



### Optical Biomedical Imaging

**Photonics Media**  
At last, a reference work has been compiled that offers in one place a broad survey of technology, applications and markets for optical biomedical imaging, as only Photonics Media could produce it. This collection is a practical resource for those engaged in the research and development of relevant technologies.

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### Custom Polymer Optics

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## Industry Events

### Control Stuttgart

May 9-12, 2017 - New Stuttgart Trade Fair Centre - Stuttgart Germany  
With more than 900 exhibitors from 32 countries, Control is the number-one information source for companies that see first-class quality as the basis for their business success. Control organizers work with pioneering institutions in the industry, including the Fraunhofer Alliance Vision, Fraunhofer IPA, the European Machine Vision Association and the Deutsche Gesellschaft für Qualität (DGQ) to provide special exhibitions, technology parks and lecturers, and an optimal mix of theory and practice on how to continually improve quality and production.

[More Info](#)

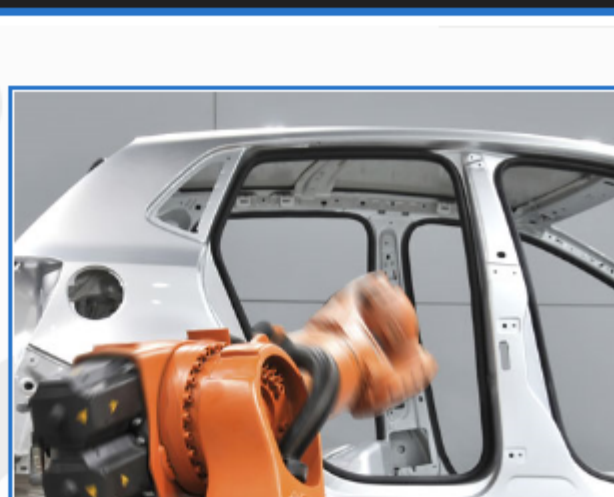


## Webinars

### Introduction to Machine Vision Software

Thu, May 11, 2017 1:00 PM - 2:00 PM EDT  
Learn how to best utilize machine vision software across a variety of industries, including pharmaceuticals, packaging, electronics and manufacturing. Presenter Tom Brennan, an AIA Advanced Level Certified Vision Professional, will cover several machine vision software approaches and algorithms including image representation and color spaces, image processing, parallel programming and artificial intelligence. Brennan will walk attendees through how these algorithms and methods enable new technologies such as vision guided robotics, high-speed imaging, thermal/IR imaging and 3D imaging. This free webinar is sponsored by Euresys s.a.

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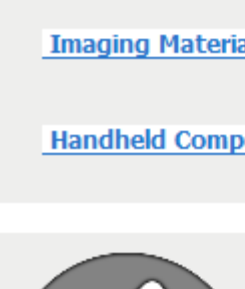
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