

# This Week In PHOTONICS

PHOTONICS MEDIA



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**LightMachinery**  
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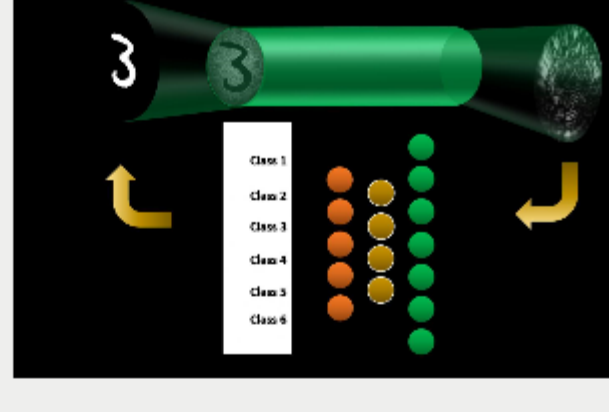
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## Top Stories

### Machine Learning Technique Can Rebuild Images That Go Through Multimode Fibers

Using a deep neural network (DNN), researchers reconstructed images transmitted over multimode optical fibers at distances of up to 1 km. In the same way the human brain learns to recognize and categorize images and symbols, the DNN was trained to recognize certain images (in this case, handwritten digits) until it was able to recognize other images that were from the same category.



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### Blue Light Excites Retinal, Intercepts Cellular Signaling in the Eye

An optical chemistry research study has shown how blue light from digital devices and the sun can cause the death of retinal molecules, increasing potential for age-related macular degeneration. Using live-cell imaging and optogenetic signaling control, researchers showed that blue-light-excited ATR and 11CR can irreversibly change PIP2.



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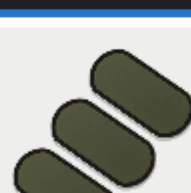
### Capasso Group Designs Metasurface Polarization Optics

LIGHT MATTERS BROADCAST - The Capasso Group is focusing much of its research on metasurfaces and metasurface polarization optics. The metasurfaces are made of titanium dioxide and consist of an array of polarization-sensitive pillars (nanofins) that redirect the incident light.



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## Featured Products



### Dark Mirror Coatings

**Deposition Sciences Inc. (DSI)**  
Dark mirror coatings absorb incident light, rather than reflecting or transmitting it. Thus, they

simultaneously exhibit both the low transmittance of a metal blocking filter and the low reflectance of an antireflection coating. Dark mirrors are typically used to define the aperture of an optical system where control of stray light...

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### Broadband Wire-Grid Polarizers

**Moxtek Inc.**  
Moxtek offers a variety of wire-grid polarizers and polarizing

beamsplitters designed for demanding applications. Our polarizers are made from heat tolerant inorganic materials that enable exposure to temperatures that degrade film based polarizers. Our polarizers are designed for narrow and broadband UV-VIS-IR wavelengths.

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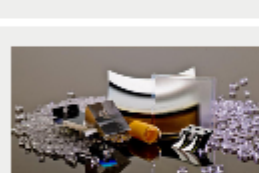
### Remote Sensing

**Photonics Media**

From space and the sky around us to firmly on the ground, remote sensing is providing an important view of our surroundings that can't be seen with our eyes alone. A variety of optical technologies are

having an impact on applications as diverse as agriculture and defense, weather and climate, and are now part of the...

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### Custom Diamond-Turned Optics

**Diverse Optics Inc.**

Diverse Optics Inc. specializes in single-point diamond turning of custom polymer optics. For over 30 years, we've manufactured the most challenging polymer optic components and assemblies for leading defense, medical, and commercial applications with advanced technology and an experienced team of professionals.

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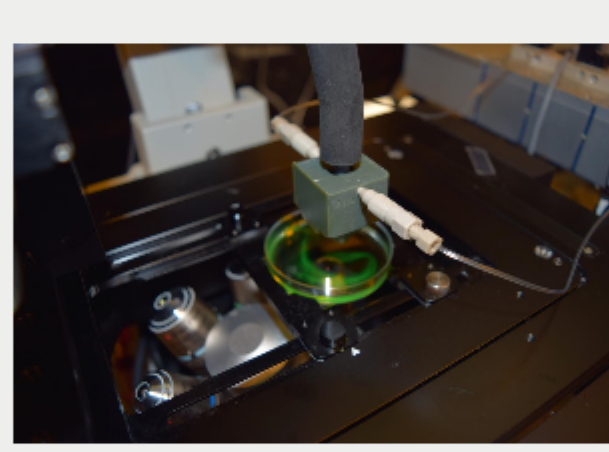
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## More News

### 3D Printing Provides Way to Fabricate Probes Used in Cancer Research

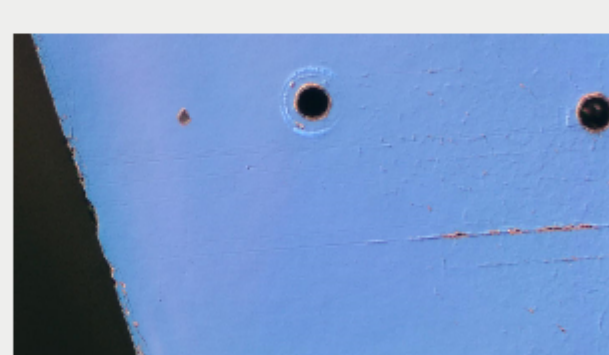
Researchers have used a 3D printer to create a functional, integrated and inexpensive microfluidic probe (MFP). Typically made of glass or silicon, MFPs are tiny scientific tools used to study, process, and manipulate live cell cultures in a controlled environment.



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### Glass Doped with Erbium Could Be Used for Optical Circuits

A material created by doping glass made from zinc, sodium, and tellurium with the rare-earth element erbium could be used for broadband planar waveguide amplifiers. Scientists have started testing planar waveguides for use in signal transmission in place of long optical fibers, as waveguides make miniaturization easier.



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## More Headlines

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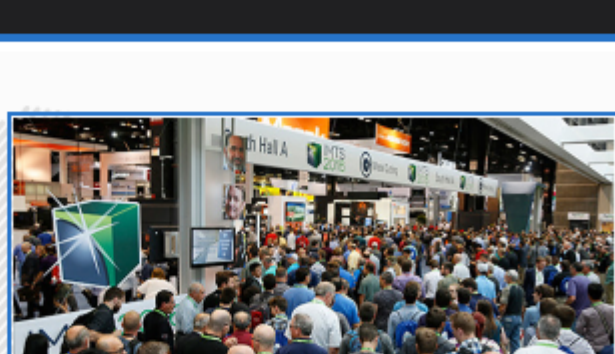
[Basler, Beijing Sanbao Xingye Image Tech Establish Joint Venture in China](#) [Read Article](#)

## Industry Events

### IMTS 2018

September 10-15, 2018 - McCormick Place - Chicago United States  
Photonics Media Booth: 236466

At IMTS, the International Manufacturing Technology Show, you will experience first-hand the manufacturing technologies that will help keep you on the cutting edge of your industry. It's the largest display and demonstration of global manufacturing technology in the western hemisphere, with more than 115,000 industrial decision-makers in attendance. The IMTS Conference program will focus on six topics: Process Innovations, Alternative Manufacturing, Plant Operations, Automation, Quality, and Industry 4.0/IIoT.



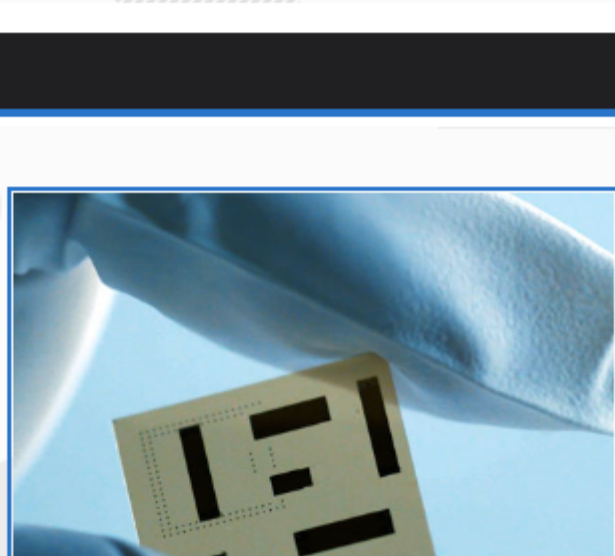
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## Webinars

### How to Accelerate Your Optics, Photonics, and Imaging Startup with Luminat

Thu, Sep 6, 2018 3:00 PM - 4:00 PM EDT

In this webinar you will learn about Luminat, the only international startup accelerator focused solely on next-generation optics, photonics, and imaging (OPI). If you're an entrepreneur who is working on solving problems in these fields, you may be eligible to participate in Luminat. The webinar will cover the criteria for participation and the selection process, as well as the technical, engineering, and support services that Luminat offers to help you successfully launch a business.



[Register Now](#)



### CALL FOR ARTICLES!

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazines (*Photonics Spectra*, *Industrial Photonics*, *BioPhotonics* and *EuroPhotonics*). Please submit an informal 100-word abstract to Managing Editor Michael Wheeler at [Michael.Wheeler@Photonics.com](mailto:Michael.Wheeler@Photonics.com), or use our [online submission form](#).