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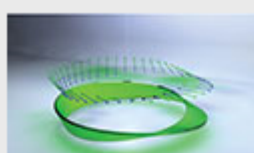
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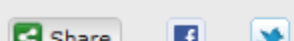
**Thursday, February 5, 2015**

## Mobius Strips Conjured from Beam Polarization



A light beam can be structured so that its polarization twists around like a Möbius strip, an example of the rich structure that light beams can possess at subwavelength distance scales.

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## In Memoriam: Charles Hard Townes

Dr. Charles Hard Townes, whose work on stimulated emission led to the creation of lasers and enabled the photonics industry, died Jan. 27 at age 99.

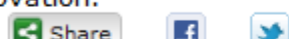
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## 3 Finalists Vie for National Integrated Photonics Institute

Three consortia led by the universities of Central Florida, Southern California and New York have been selected by the U.S. Department of Defense to submit full proposals for creating a \$220 million Integrated Photonics Institute for Manufacturing Innovation.

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### Optical Digital Laser Rotary Encoder

**Canon USA**  
Canon R-1 series Laser Rotary Encoders offer high performance high resolution, accuracy and precision) in a very compact 36mm diameter body.

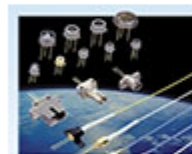
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**Sydor Optics, Inc.**  
Sydor Optics has extensive experience in double-sided grinding and polishing of custom optical windows for IR and UV applications in the industrial, medical, research and defense industries.

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### InGaAs Photodiodes

**Fermionics Opto-Technology**  
Fermionics Opto-Technology manufactures InGaAs photodiodes for data, voice and video communications, and large area photodiodes for instrumentation and sensing applications.

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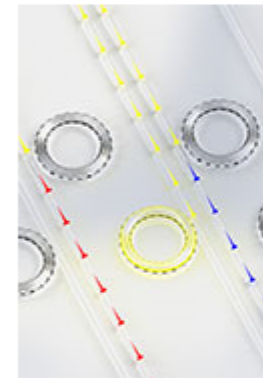
### Short Coherence Laser Interferometer

**4D Technology Corp.**  
The new AccuFiz short coherence laser interferometer includes a second, external, short coherence laser source that lets you isolate and measure plane parallel optical surfaces.

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Brillouin scattering-induced transparency (BSIT) permits light to travel in one direction along the fiber while light traveling in the other direction is strongly absorbed.

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### Strong Fourth Quarter Keeps Jenoptik on Track

The Jenoptik Group said it is looking forward to a jump in revenues in the new year after ending 2014 with sales and earnings down slightly.

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### Expanded Tissues Show Confocal Microscopes More Detail

Researchers at MIT have developed a method for making biological tissue samples physically larger, rendering their nanoscale features visible to conventional confocal microscopes.

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In this edition of the industry's **premier weekly newscast**: A look at a new microscopy technique that makes tissue samples larger, as well as a new paradigm for image sensors. Also, a preview of the Prism Awards and Photonics West, and an appreciation of laser pioneer Charles Hard Townes.

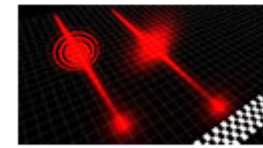
### Digital Imaging Down, But Teledyne Ends the Year Up

Despite lagging sales in its digital imaging department, Teledyne Technologies Inc. reported record profits as it closed the books on 2014.

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### Speed of Light Reduced in Free Space



Passing photons through an optical mask can give them a transverse spatial structure that reduces their speed.

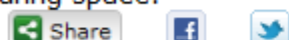
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### JPK Opens Expanded Headquarters in Berlin

Citing growing demand for its nanoanalytics products, JPK Instruments has moved into an expanded suite of offices and laboratories with increased manufacturing space.

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## Industry Events

**Photonics West** - Feb. 10-12, 2015 · The Moscone Center, San Francisco, Calif.  
**SPIE. PHOTONICS WEST BIOS** 21,000 attendees, two exhibitions, 1250 exhibiting companies, and 4700 papers on biomedical optics, biophotonics, translational research, industrial lasers, 3-D printing, optoelectronics, microfabrication, MOEMS-MEMS, displays and more.  
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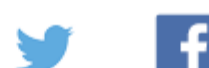
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