

# This Week in PHOTONICS



## ALL THINGS PHOTONICS

A podcast from Photonics Media

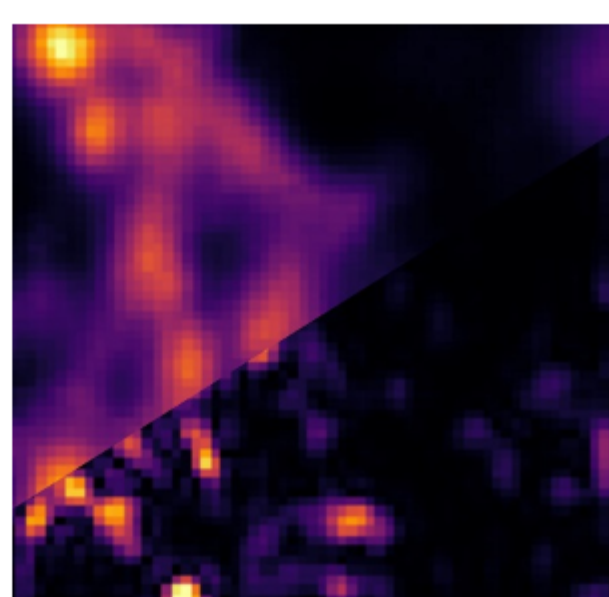


## .: Top Stories

### Image Scanning Microscopy Technique Extends Beyond Limits

A collaboration between researchers at the University of Warsaw and the Weizmann Institute of Science yielded a method of fluorescence microscopy that, in theory, has no resolution limit. In practice, the team demonstrated a fourfold improvement over the diffraction limit.

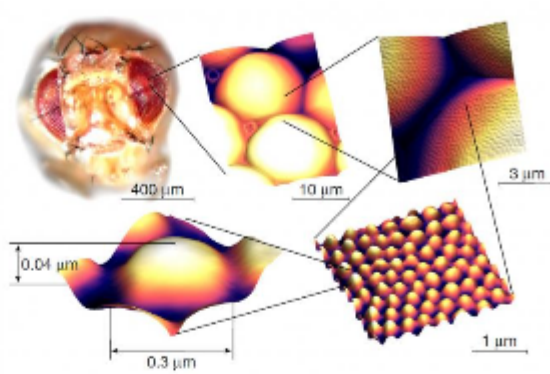
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### Fruit Fly Corneas Inspire Antireflective Nanocoating

A joint team of researchers from European institutions has produced a biodegradable nanocoating, using antimicrobial, self-cleaning, and antireflective properties. The team turned to artificial manufacturing methods to reproduce the nanocoating of the corneas of fruit flies, which are naturally designed to shield the insects' eyes from the reflection of light.

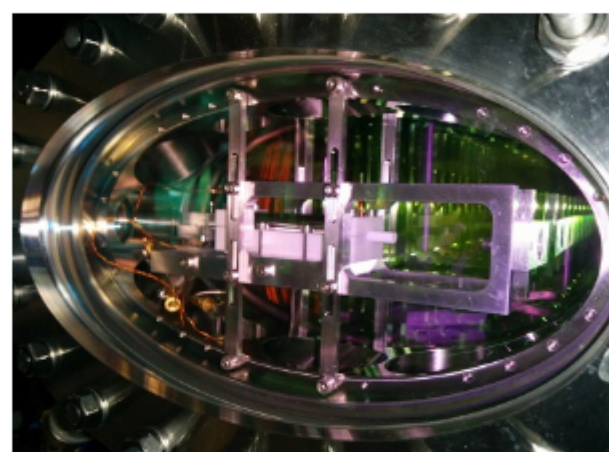
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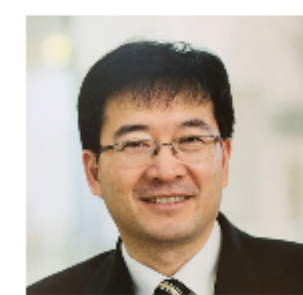
### Light Stored and Transported in a Cloud of Atoms

Researchers at Johannes Gutenberg University Mainz (JGU) successfully transported light stored in a quantum memory over a distance of 1.2 mm. The technology, once refined, could have implications for quantum memory storage.

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## .: Photonics Spectra Conference



### Industry and Academia Combine in Spectroscopy track

**KEYNOTE: Seeing Life at the Molecule Level via Advanced Chemical Microscopy**  
Presented by: Ji-Xin Cheng, Boston University

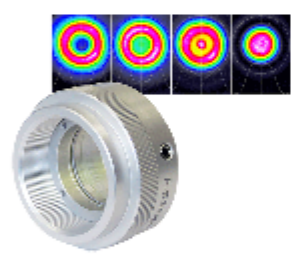
Winner of the 2019 Ellis R. Lippincott Award from the Optical Society (OSA) Ji-Xin Cheng (pictured), keynotes the spectroscopy track of the inaugural Photonics Spectra Conference (PSC) with a presentation on spectroscopic-enabled visualization of molecules and biological structures inside living systems. The expanding role of molecular spectroscopy, in discovering the molecular signatures of diseases, will be a focus of this presentation.

The Spectroscopy track of the conference is curated in partnership with the executive board of the Society for Applied Spectroscopy (SAS). Additional presentations will include talks on the spectroscopic-enabled characterization of microplastics, as well as the use of spectroscopy in on-scene forensic investigation. Companies schedule to present include HORIBA, PerkinElmer, IRsweep, and Applied Spectra.

The Photonics Spectra Conference starts on Tuesday, Jan. 19, and runs through Friday, Jan. 22. Registration is free for the event, which is offered exclusively online. For more information and to register, [www.photonics.com/pscinfo](http://www.photonics.com/pscinfo).

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## .: Featured Products



### Focal-nShaper\_1070\_Q\_HP - Beam Shapers for kW Lasers

#### AdlOptica GmbH

A series of refractive beam shapers Focal-nShaper\_1070\_Q\_HP, intended to control intensity distribution of a focused spot, is optimized for operation with modern high power TEM<sub>00</sub> CW and pulse lasers with average power of kW range.

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### IDS Cameras with 20.35 MP Sensor

#### IDS Imaging Development Systems GmbH

Grab – label – train – run AI. IDS NXT ocean is an all-in-one system which allows to create individual neural networks and realize AI-based vision tasks. There is no need for deep learning or programming skills!

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Next generation sensor IMX541 now available in the versatile uEye SE!



IDS

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[Convergent Photonics Awarded \\$2.5M for Manufacturing Center](#) [Read Article](#)

[3D Ultrafast Camera Captures Light Traveling Through Air](#) [Read Article](#)

## .: Upcoming Webinars



### Launching a Machine Vision Project

Wed, Nov 4, 2020 1:00 PM - 2:00 PM EST

By reviewing the basics of machine vision, including hardware, software and design services, this webinar with Paul Scardino and Greg Matherly of Baumer will help end users and designers alike to evaluate the available technology options for machine vision applications. Learn how to choose the most cost-effective approach and determine when the project can be solved with in-house resources, or when it requires special design knowledge and support. This webinar is sponsored by Teledyne DALSA, Specim Spectral Imaging Ltd., FOCtek Photonics Inc., and Omega Optical LLC.

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