

# PHOTONICS spectra



Monthly newsletter from the editors of Photonics Spectra, with features, popular topics, new products, and what's coming in the next issue. Manage your Photonics Media membership at [Photonics.com/subscribe](http://Photonics.com/subscribe).

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## STABILIZING THE LINE OF SIGHT

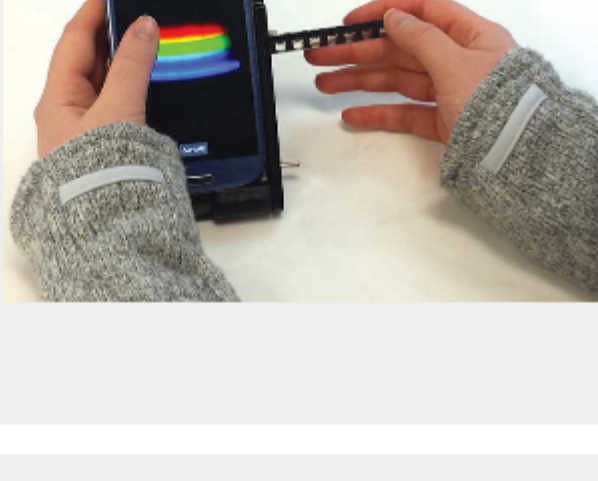
By Peter J. Kennedy and Rhonda L. Kennedy  
A methodology and an example for executing a successful end-to-end line-of-sight pointing design.

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## Smartphone Spectroscopy Promises a Data-Rich Future

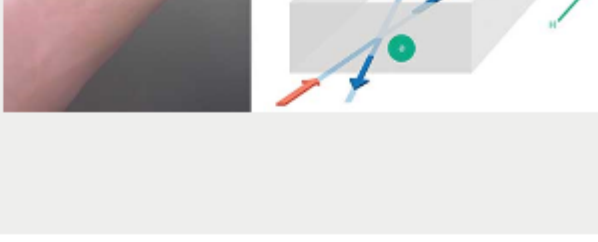
An upsurge of portable, consumer-facing devices at the intersection of smartphone computing and spectroscopy is now leveraging integration. The TRI Analyzer is a 3D-printed cradle that physically attaches to a smartphone and uses the phone's internal camera as a visible-light spectrometer.



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## Quiet Lasers, Cool Science

Trapping and cooling of atoms and nanoparticles is a growing area of laser-assisted research, with implications for quantum computing and ultraprecise sensing. Depending on the specifics of the atomic species being trapped and the target temperature range, several different laser cooling and trapping methods are now used.



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## Better Filters Yield Better Sensor Performance

From weather satellites to lidar for self-driving cars, precision optical filters play a vital role in making sensors work. Today, the ability to interrogate more and more sections of spectrum promises enhanced capabilities for these and other applications. On the horizon are materials and techniques that could make precision optical filters tunable. However, performance, cost, and other issues must be addressed.



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## Featured Products

### MPX Encircled Flux Meter

**Arden Photonics Ltd.**  
The MPX Modal Explorer provides real-time measurement of Encircled Flux.

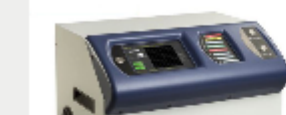


Simply connect your source and patchcord to the MPX, and it will measure their Modal Launch Conditions in real-time. Encircled Flux is now widely accepted as the preferred way to specify modal filling by IEEE, TIA and IEC.

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### Pulsed UV Light System

**Xenon Corporation**  
Since its introduction in January 2017, XENON's X-1100 High-Intensity, Pulsed Light system has

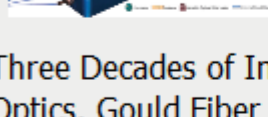


been sold to 50+ research laboratories worldwide! Researchers and scientists spanning The Americas, Europe, Asia, are using this system for numerous markets and in Printed Electronics, Food Safety and semiconductor applications.

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### Broadband Fiber Optic Components and Modules

**Gould Fiber Optics**  
Three Decades of Innovative Components for Fiber Optics. Gould Fiber Optics, a leading manufacturer of passive fiber optic products, with over 30 years of proven reliability as a leader in the research, development and manufacturing of fiber optic components and integrated assembly solutions has expanded its component lines.



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### Corning® ULE® Ultra-Low Expansion Glass

**Corning Incorporated, Advanced Optics**  
Corning ULE® ultra-low expansion glass is an ideal material for applications requiring extreme stability throughout temperature change. This innovative material has been used for decades for space



applications including telescopes and International Space Station windows.

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### IR Filters for Thermal Imaging and Gas Detection

**Spectrogon US**  
Spectrogon manufactures infrared filters and windows with high transmission, high rejection outside the passband, and introducing low cosmetic defects – while maintaining excellent coating uniformity --- for thermal imaging applications such as cryogenically cooled IR detectors and for uncooled microbolometers.

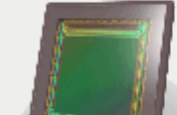


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### Teledyne e2v Launches Emerald 67M CMOS Image Sensor

**Teledyne e2v (UK) Ltd.**  
Teledyne e2v, announces its Emerald 67 megapixel, the newest member of its Emerald CMOS image sensor family. The new sensor features a high resolution with the smallest global shutter pixel (2.5µm) on the market, enabling more objects to be captured in a single high resolution shot, ideal for high end automated...



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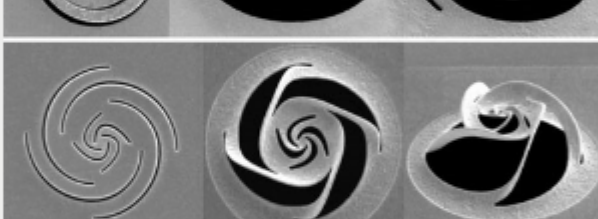


19-23 August 2018 · San Diego, CA, USA

## In Case You Missed It

### Kirigami-Inspired Technique Manipulates Light at Nanoscale

Researchers have applied the principles of kirigami — the traditional art of paper folding and cutting — to the fabrication of advanced 3D nanodevices for manipulating light. The team believes that "nanokirigami" could offer an intelligent 3D nanofabrication method beyond traditional bottom-up, top-down, and self-assembly nanofabrication techniques.



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### Howard Hughes Award Presented to ONR, Aurora Flight Sciences for Autonomous Flight Work

The American Helicopter Society's Howard Hughes Award was presented to the U.S. Navy's Office of Naval Research (ONR) and Aurora Flight Sciences for their joint work on the Autonomous Aerial Cargo/Utility System (AACUS).

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### Liquid-Based White LEDs Achieve High Luminous Efficiency

Quantum dot white LEDs that show a luminous efficiency of 105 lm/W have been developed. The QDs are liquid-based and, according to researchers, could help the LEDs achieve an efficiency double that of LEDs that incorporate quantum dots in solid films.

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## Webinars

### Understanding Camera Resolution

Tue, Sep 18, 2018 1:00 PM - 2:00 PM EDT

In this webinar, you will learn how sensors and lighting affect camera resolution, and how different setups can affect the resulting image.

You will learn a simple formula that will help you calculate the camera resolution you need for your application — and how to use the results of your calculation to achieve the best imaging results under a variety of real-world conditions. This webinar is sponsored by Midwest Optical Systems Inc.

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## Coming in September...

### Features

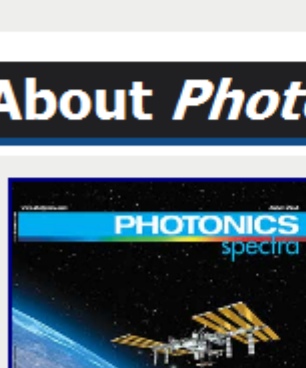
3D Laser Nanolithography, Nonlinear Optics, Test and Measurement, Fiber Optics for Harsh Environments

### Special Section

The Optics Issue

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazine *Photonics Spectra*. Please submit an informal 100-word abstract to Managing Editor Mike Wheeler at [michael.wheeler@photonics.com](mailto:michael.wheeler@photonics.com) or use our online submission form [www.photonics.com/submitfeature.aspx](http://www.photonics.com/submitfeature.aspx).

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