

# This Week in PHOTONICS



**LightMachinery**  
Excellence in Lasers and Optics

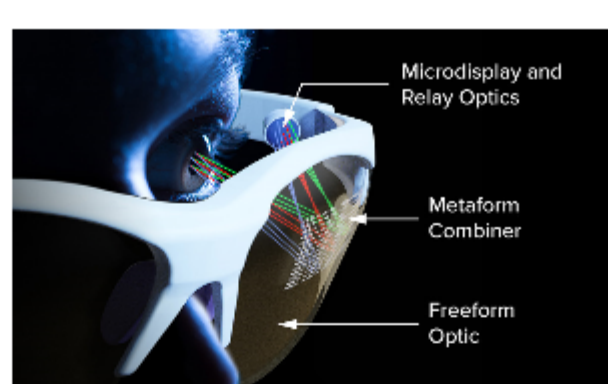


**Hyperfine Spectrometer**  
A sub-picometer resolution spectrometer in a compact package.

## .: Top Stories

### Freeform Optics and Metasurfaces Create Compact AR/VR Eyewear

A team from the University of Rochester's Institute of Optics imprinted freeform optics with a metasurface, in a combination of optical technologies that charts a course for a new fabrication method for AR/VR glasses. The metasurface conformed to the freeform shape of the optics used in the work, which allowed the researchers to develop an optical component that they call a "metaform."



[Read Article](#)

### Ti:Sapphire Laser Sets Mark for Pulse Intensity

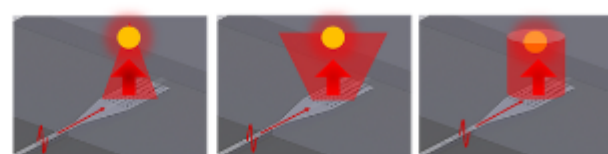
At the Center for Relativistic Laser Science (CoReLS, Institute for Basic Science in the Republic of Korea), researchers report they have achieved high-laser pulse intensity of over 1023 W/cm<sup>2</sup>. The intensity, the researchers said, is a record that is approximately 10x higher than that previously reported by a team at the University of Michigan in 2004.



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### Nanoflashlight Could Turn Mobile Devices into Powerful Biosensors

Researchers at MIT built a device that they describe as a "nanoscale flashlight" on a chip. Much like a spectrometer, the MIT team's nanoflashlight shines a beam of light on a material, analyzes the light after it has passed through the material at several wavelengths, and captures the interactions of light with the material for each color.



[Read Article](#)

## .: Featured Products



**C-WAVE GTR: CW Tunability Meets Power**

**HÜBNER Photonics**

C-WAVE GTR is HÜBNER Photonics' latest addition to the award-winning C-WAVE series of widely tunable continuous-wave lasers. With up to more than 1 W of output power it covers the wavelength range of 500 nm to 750 nm without any gaps – it's an unmatched source of tunable single-frequency laser light for research and development in quantum technology, holography, nanophotonics, and beyond.

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**iXon EMCCD Cameras**

**Andor Technology**

With iXon EMCCD cameras, Andor have delivered a dedicated, truly high-end, yet accessible ultrasensitive scientific camera platform, designed specifically to drive the absolute best from EMCCD technology across all critical performance specs and parameters. Suitable for both physical and life science applications, ranging from single-molecules to quantum imaging to astronomy.

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## .: More News

**Apple's \$410M Award to II-VI Accelerates iPhone, Lidar Developments** [Read Article](#)

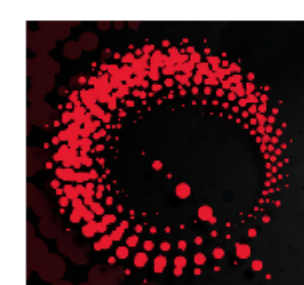
**Trust in Science Shines on International Day of Light 2021** [Read Article](#)

**Consortium Will Roadmap Photovoltaics Semiconductor Technology** [Read Article](#)

**Consortium Uses Infrared Imaging to Detect Brain Damage in Infants** [Read Article](#)

**Material Solution Helps Robots Perceive Surroundings** [Read Article](#)

## .: Upcoming Webinars

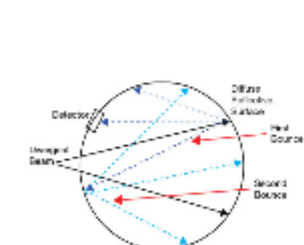


### Quantitative CMOS Imaging – qCMOS: The Dawn of a New Era

Wed, May 19, 2021 11:00 AM - 12:00 PM EDT

Imaging in general and semiconductor imaging in particular has penetrated every aspect of our lives, especially in the sciences. It has empowered many experiments from relying on subjective recording into objectively documentable, repeatable and quantifiable methods. This webinar with Peter Seitz, Ph.D., will provide an overview of semiconductor image sensors and introduce photon-resolving quantitative imaging, or qCMOS. Presented by Hamamatsu Corporation.

[Register Now](#)



### Measuring the Power and Beam Profile of Divergent Laser Sources

Thu, May 20, 2021 1:00 PM - 2:00 PM EDT

Lasers with large beam divergence are used in a number of applications, such as remote sensing, optical communications, and materials processing. In this webinar, Derrick Peterman, Ph.D., will discuss methods for reliably characterizing the beam power and profile of divergent sources, so that users will be able to better understand how their lasers are performing in critical applications.

Presented by Ophir, an MKS Instruments company.

[Register Now](#)

## .: All Things Photonics

Claudio Mazzali, CTO and senior vice president of technology at Corning Optical Communications, is our guest. The 2020 elected fellow of The Optical Society (OSA) guides listeners through an unprecedented 15-month period for optical technology, and shares his thoughts on what to expect from large-scale organizations such as OSA as they reemerge from the pandemic. Trends for a bright future in nanomaterials, hollow- and novel-core fibers, and optical fibers conclude the episode.

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