

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).

**Vision spectra**  
CONFERENCE  
July 19-21, 2022

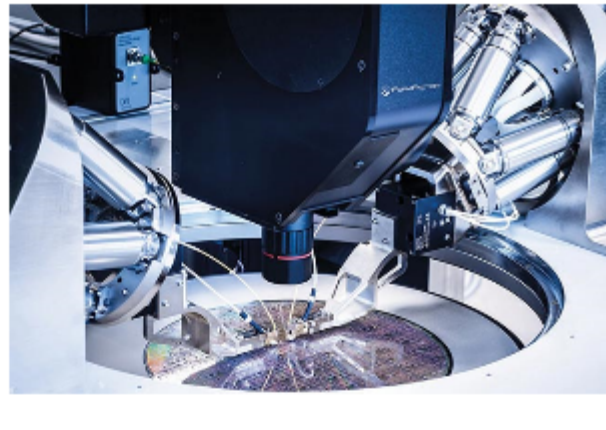
Discover new and evolving trends in machine vision.

More than 30 presenters!

#VSC2022  
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### As PIC Production Ramps Up, Fabricators Eye Alignment Options

Modern silicon photonic integrated circuit (PIC)-based devices offer many advantages compared to standard electronic integrated circuits. PIC devices can be manufactured using many of the same wafer-and-chip fabrication processes, but they consume less power, produce less heat, and can transmit data at higher speeds, without sacrificing signal strength or quality. And it is now clear that these advantages will have a transformative impact on a range of emerging technologies.



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### Industrial Femtosecond Laser Advancements Power Next-Generation Applications

Today, femtosecond lasers find use in a wide range of applications, including eye surgery, fabrication of implantable medical devices, photovoltaics scribing, surface functionalization, glass cutting, and polymer film cutting for the manufacture of displays and microelectronics. In micromachining applications, there is an especially strong demand for higher power and repetition rates to achieve the higher throughputs necessary for high-volume manufacturing.



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### Lighting Advancements Add Muscle to Machine Vision

LED efficiency gains have allowed machine vision lighting suppliers to develop LED-based options with sufficient brightness to replace tungsten incandescent bulbs and halogen-based illumination systems. While some industrial settings use cool white lights for illumination, many machine vision applications rely on colored, infrared, and ultraviolet LEDs to optimize key details in captured images.



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## :: Featured Products & Services



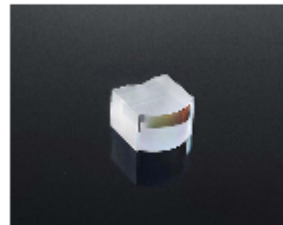
#### [Next-Level Thermal Stability](#)

**Siskiyou Corp.**

Our stainless steel IXF flexure mounts are 30% more thermally stable than their predecessors. Optic size variations from 0.5 to 4.0 in., beamsplitter and top-adjust options. We don't make lasers ... we make them better!

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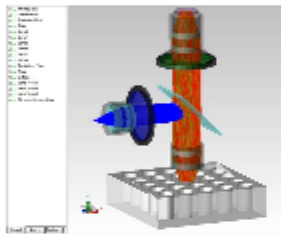
#### [Compact Blue Meniscus SAC](#)

**Focuslight Technologies Inc.**

Focuslight Blue Meniscus SAC with EFL of 9.7 mm has a concave-convex, acylindrical lens design that collimates the slow axis of blue laser diodes. Being much more compact, Focuslight meniscus SAC design brings benefits for modules with limited space.

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#### [TracePro 2022](#)

**Lambda Research Corporation**

Lambda Research Corporation is proud to announce the release of TracePro 2022, the latest release of our award winning TracePro software. TracePro 2022 incorporates many new and improved features.

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#### [Umicore Infrared Optics](#)

**Umicore Electro-Optic Materials**

Umicore is expert in the design and manufacturing of longwave infrared thermal imaging optics. We offer IR materials, coatings (including iDLC™ hard coating on chalcogenide lenses), lenses, wafer-level optics (Tessella™), and assemblies for thermal imaging and sensing applications using germanium and GASIR®...

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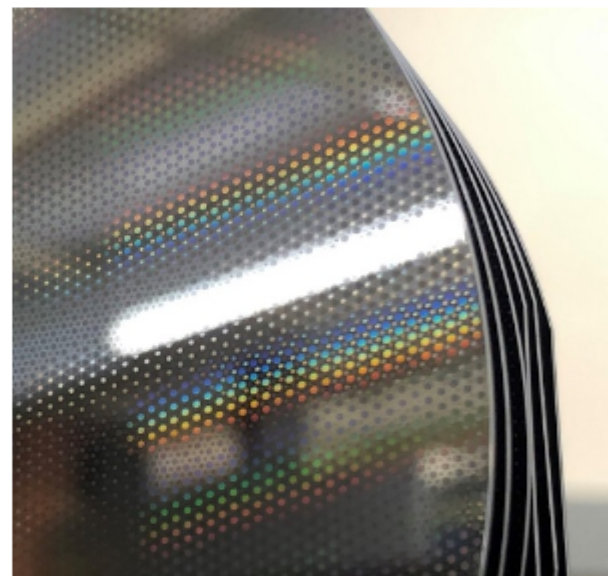
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## :: In Case You Missed It

### Low-Cost, High Precision Technique Enables Thin Mirrors and Silicon Wafers

Researchers from MIT have developed a low-cost optical fabrication method that enables the production high-quality thin mirrors and silicon wafers. The method reshapes thin-plate materials in a way that eliminates distortion and enables researchers to bend surfaces more arbitrarily into the precise and complex shapes needed for high-level complex systems.



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### Dynamic Beam Laser System Offers Real-Time Look into Melt Pool

Laser developer and manufacturer Civan Lasers has delivered an OPA 6 dynamic beam laser to the University of Stuttgart's Institut für Strahlwerkzeuge. The DBL will form a system with IFSW's high-speed x-ray video facility for laser materials-processing diagnostics. The system will enable researchers to view inside the melt pool during the laser welding process.

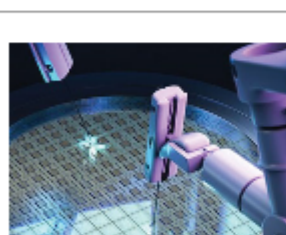
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### Achromatic X-Ray Lens Opens Pathways in Microscopy, Access to Light Sources

Scientists at Paul Scherrer Institute developed an achromatic lens for x-rays that allows x-ray beams to be accurately focused on a single point even if they have different wavelengths. The lens will make it easier to study nanostructures with x-ray light, supporting R&D in materials science, microchips, and batteries.

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## :: Upcoming Webinars



### Laser Measurement Solutions for Materials Microprocessing Applications

Wed, Jun 15, 2022 11:00 AM - 12:00 PM EDT

Mark Slutzki, product manager at Ophir, shares innovative solutions for the challenges that accompany materials microprocessing applications. Those who use lasers in applications, such as drilling via holes in PCBs, organic LED display lift-off, and cutting smartphone cover glass, are faced with these challenges. While the combination of laser parameters enables new and innovative processes, they can also cause unexpected damage to the measurement tools used to keep the process stable. These parameters include ultra-short pulse duration, high repetition rates, short wavelengths, and many others. Sponsored by Ophir, LaserPoint srl, and DataRay Inc.

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### Features

Terahertz Spectroscopy, VCSELS, Fiber Sensors, and more.

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 Daniel McCarthy, Senior Editor, at [Daniel.McCarthy@Photonics.com](mailto:Daniel.McCarthy@Photonics.com), or use our online submission form [www.photonics.com/submitfeature.aspx](http://www.photonics.com/submitfeature.aspx).

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