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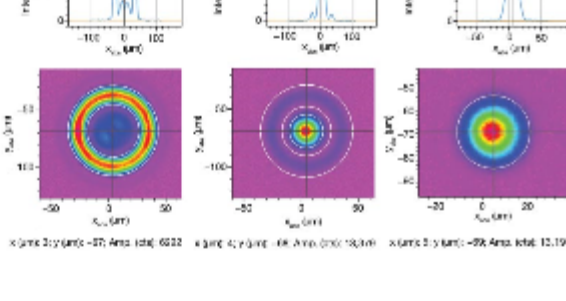
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meadowlark optics LIQUID CRYSTAL POLARIZATION GRATINGS *Get the Details*

New Ideas Reshape Beam Shaping

When Theodore Maiman described the laser as a solution seeking a problem, beam shaping was not a big deal. A lens or two were enough to project the beam profile onto a screen. The main challenge was operating the laser itself.

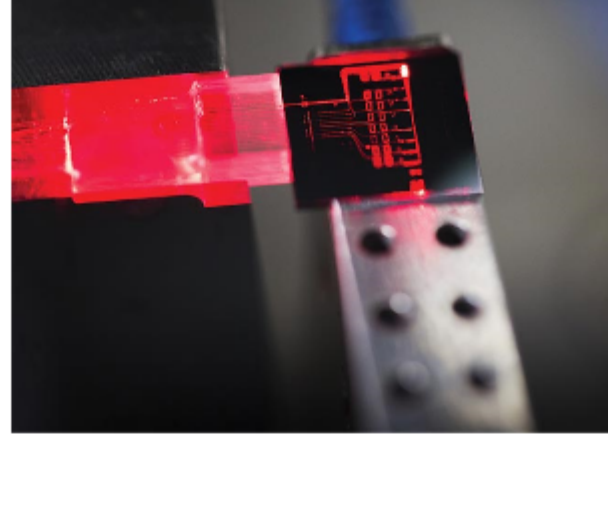
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As Biosensors Shrink, Their Potential Applications Grow

Early in his career, Benjamin Miller was focused on drug discovery and strategies for studying how potential medicines bind to their target proteins. There was only one problem: "All of the technology that was available for doing that was terrible," said Miller, a biochemist and engineer at the University of Rochester. "So, we decided to start working to fix the problem."

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Photonics Paves a Path to the Emerging New Space Sector

New Space, a vibrant and rapidly growing domain that encapsulates private space exploration, satellite deployment, and cutting-edge space technologies, is in the midst of a breathtaking wave of advancements. Photonics has stepped into the spotlight of this fascinating epoch as a pivotal catalyst, where it is fueling new capabilities and prospects for New Space applications as diverse as communication, navigation, sensing, and even propulsion. Photonics technology enables the miniaturization of space instruments, more precise navigation systems, high-speed free-space data transfer, and advanced imaging and sensing technologies for Earth observation.

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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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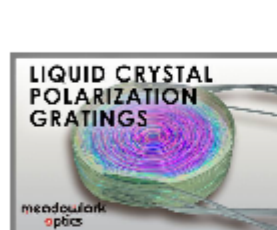


Custom Fiber Optic Solutions

Armadillo SIA
Armadillo SIA offers a comprehensive line of optical fibers, cables, bifurcated assemblies, patch cords, bundles, and more — all custom designed to your specifications. Assemblies can be made from any of our high-quality fibers and your choice of sheathing, cabling, and jacketing. In addition, we offer all standard connectors or custom-designed ferrules to suit applications from deep UV to MIR.

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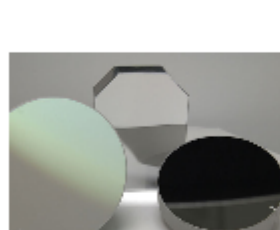


Liquid Crystal Polarization Gratings

Meadowlark Optics Inc.
These transmissive gratings efficiently (>99.5%) diffract circularly polarized light to the first positive or negative order, based on the handedness of the incident light. By incorporating fast electro-optic half-wave polarization retarders to control the handedness of polarization, we can develop custom LCPG devices and systems with a range of leading capabilities for Coherent Doppler Lidar, High-Definition Time-of-Flight Imaging, Non-mechanical Refocusing in Microscopy, and more.

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Aspheric Imaging Mirrors

Spectrum Scientific Inc. (SSI)
Spectrum Scientific's optical replication process offers high specification aspheric mirrors at a lower cost than traditional volume manufacturing as well as allowing the incorporation of mounting or alignment features onto the mirror itself, improving stability and reducing assembly and alignment costs. It also allows different material choices and optical surface designs including OAPs and freeform mirrors.

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Custom and Stock DC-DC Converters

Pico Electronics Inc.
Optimize your designs with custom and stock DC-DC converters from Pico Electronics. With outputs up to 10,000 VDC and 1 to 300 W, Pico's converters are programmable regulated, proportional isolated, and ruggedized encapsulated for harsh environments. Optional military upgrades are available.

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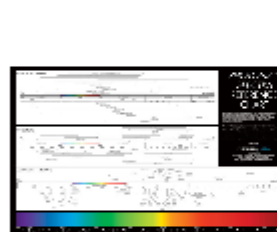


MadAFM™ Sample Scanning AFM

Mad City Labs Inc.
The MadAFM™ is a new multimodal sample scanning AFM. Simple to install with compact tabletop design. Includes Mad City Labs picometer precision nanopositioning systems to give outstanding performance. User-friendly AFMView® software features automated calibration and initialization. MadAFM™ is compatible with MountainsSPIP® and Gwyddion analysis software.

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Photonics Spectra Reference Chart

Photonics Media
This full-color, 30 × 20.5-inch poster of the photonics spectrum displays the major commercial laser lines, detectors and optical materials in the ultraviolet to the far-infrared and beyond. The convenient format makes it easy to quickly find the information you need.

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AFL's LZM-125A+ Series Splicer

AFL
AFL's LAZERMasteR® LZM-125 Series is a splicing and glass processing system that features a CO₂ laser heat source designed for splicing, tapering, lensing, ablation and other glass shaping operations of fibers ranging from 80 μm up to 2.0 mm in diameter.

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.: In Case You Missed It

Researchers Create Terahertz-Permeable Aerogel Material

Researchers at Linköping University have developed an aerogel — one of the world's lightest materials — made of cellulose and a conducting polymer enabling the tuning of terahertz waves. Its absorption of terahertz signals can be switched on and off through a redox reaction.

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Quantum-Inspired Method Reveals Details Hidden in Noise

Researchers at the University of Warsaw's Faculty of Physics with colleagues from Stanford University and Oklahoma State University have introduced a quantum-inspired phase-imaging method based on light intensity correlation measurements that is robust to phase noise. The new imaging method can operate even with extremely dim illumination and can prove useful in emerging applications such as infrared and X-ray interferometric imaging and quantum and matter-wave interferometry.

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Researchers Seek to Minimize Thermal Penalty of PIC-EIC Integration

Researchers at KU Leuven and imec investigated the impact of 3D hybrid integration on the thermal performance of Si ring-based photonic devices in wavelength-division multiplexing photonic integrated circuits. They quantified the thermal impact of 3D photonic-electronic integration and looked at potential approaches to prevent the loss of heater efficiency.

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.: Upcoming Webinars



Laser Application for Display Manufacturing

Tue, Jan 16, 2024 10:00 AM - 11:00 AM EST

Displays are windows into the connected world as nearly every consumer device today has a display and a smartphone without one is impossible to imagine. To produce state-of-the-art displays lasers must be utilized, especially to create high-end and high-resolution designs. Dr. Oliver Haupt from Coherent focuses on OLED displays for smart phones as well as the adoption of OLED displays in the IT sector. He also addresses the incremental market opportunity for MicroLED displays from the very small range in AR to the very large 4K TV market. Finally, he explains how over the last few years more and more UV short wavelengths lasers have been required and implemented in production due to the display material combinations, increase of active display areas, and pixel sizes down to the micron level. Sponsored by LightMachinery Inc.

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Features

Raman Microscopy, Deep-Ultraviolet (DUV) Sources, Optical Computing, and Lasers for Quantum Computing

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