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Inspiring moments. Powerful connections. Workforce promise.

AmeriCOM was energized to take part once again in the largest annual optics and photonics event of the year. SPIE Photonics West 2025 – which ran January 25-30 at San Francisco's Moscone Center — was, as attendees have come to expect, a dazzling labyrinth of invention, illumination, live demos, and camaraderie.

It's an exciting place to connect with peers and learn about the latest breakthroughs from researchers, innovators, engineers, entrepreneurs, and business leaders.

"I enjoy catching up with colleagues and discovering new companies or products that I am unfamiliar with," says attendee Justin Sigley, AmeriCOM Chief Scientist. "It's also great to catch some of the technical talks and get a sneak peek for upcoming technologies."

From its Global Business Forum to its job fair to its prestigious Prism Awards, Photonics West once again showed us all how the growing photonics sector is transforming the world and improving lives.

A high-profile debut for DPOC

This year, AmeriCOM was especially excited to introduce attendees to our member organization, Defense Precision Optics Consortium (DPOC). Created under the direction of Dave Shelton, who joined AmeriCOM in 2024 as president and CEO, DPOC is designed to spark new, mission-critical technologies and help the optics industry respond to the needs of the U.S. military. DPOC members have access to AmeriCOM's COM-Lab, with state-of-the-art equipment to support projects in the precision optics field.

"This is the first Photonics West since AmeriCOM launched DPOC and <u>COM-Lab</u>," says Sigley. "So, this was an ideal setting to spread the word about the resources and tools AmeriCOM is now making available.

Interested in joining DPOC? Click this link for membership information

Read More about Photonics West





In this and upcoming issues of Optics Insider, we're spotlighting DPOC members, highlighting how these partnerships support AmeriCOM's mission to ensure that the optics industrial base is responsive to the needs of the U.S. military.



Polished reputation, bright future

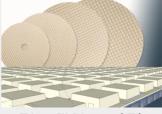
Demand for optics with higher surface quality is growing exponentially. So is the need to meet tight specifications with faster delivery. AmeriCOM DPOC member <u>Universal Photonics Incorporated</u> (UPI) is answering the call. The company specializes in critical surfacing and polishing technology at every step of fabrication.



Hastilite[®] Morphus



Super Smooth Surfactant



Trizact™ Diamond Tile

UPI currently offers more than 9,000 critical surfacing materials, machinery, and equipment in its catalog. The company also offers consultative support through its team of application engineers.

"At the heart of our business are technically advanced, dynamic processing solutions for critical surfacing applications," says Neil Johnson, president of UPI.

A century of innovation

Founded in 1926, UPI built its business on the science of surfacing. The company got its start supplying process equipment for optical glass, mirror, and stone. Today, UPI is a global expert in surfacing and polishing technology in all phases of fabrication. That includes an emphasis on deeply understanding application-specific products, distribution networks, and R&D that drives advancements.

The company is continually engaged in intensive field research and product development, and maintains state-of-art laboratories, manufacturing, and distribution facilities throughout the U.S. and the world.

Learn More

AmeriCOM welcomes its newest DPOC members

<u>Chiral Photonics</u> designs, develops and produces fiber-based components and assemblies since 1999.

<u>603OPTX</u>, a Micro-Lam company, specializes in precision optical components made from metals, IR crystalline materials and polymer substrates.

Soldier Systems D-MIL, a Service-Disabled Veteran-Owned Small Business reclaims and recycles Germanium scrap.

Sydor Optics, processes and delivers high-quality, precision flat-surfaced, parallel and wedged glass optical components for a wide array of industries.

Opticonx manufactures standard and custom, high-quality fiber optic cabling components and solutions.

Physical Sciences Inc. develops and commercializes advanced technologies for the aerospace, energy, environmental, manufacturing, and medical markets.

COM-Lab Expands

Our COM-Lab facility now includes the versatile Nanotech 650FG diamond turning lathe. This ultraprecision 5-axis CNC system is capable of on-axis turning of aspheric and toroidal surfaces, rotary ruling of freeform surfaces, and raster flycutting of freeforms, linear diffractives, and prismatic optical structures. The tool is available for use by DPOC members for training, research, and prototype development on workpieces up to 750 mm in diameter with an achievable surface finish \leq 3 nm. Contact AmeriCOM today to gain access to the COM-Lab and use our state-of-the-art equipment to enhance your precision optics business.





Nanotech 650FG diamond turning lathe

Contact AmeriCOM for COM-Lab information.

DPOC Launch Featured in Laser Focus World



AmeriCOM's Chief Scientist, Justin Sigley, met with Sally Cole Johnson of *Laser Focus World* to discuss our Defense Precision Optics Consortium (DPOC) and its three areas of focus: optics fabrication automation, addressing critical materials supply chain challenges, and improving development of challenging optics for directed energy or hypersonic applications. See the <u>article online</u> and in the January print edition.

Conference explores how higher-ed can match the speed of business



Although community colleges were originally established to be transfer institutions to prepare students to enter universities, they're now adapting their programs and structures to train tomorrow's workforce. It's a vital role, as technology and competition shift faster every year. Today, the 1,026 community colleges across the U.S. are leaders in workforce development, especially in the trades and in the growing Industry 4.0 space.



How community colleges are adapting to this important role was the core theme of the Workforce Development Institute of the American Association of Community Colleges (AACC), held January 28-31, 2025 in Coronado, California. This year's theme was aptly titled Uncharted Courses.

Compared to other institutions of higher learning, community colleges are lauded for being nimbler and more responsive to regional needs when developing new programs and courses. Still, community college leaders recognize that they evolve at a slower pace than the business world. Or, as one conference attendee put it: "Business looks at a watch to track program implementation while colleges look at a calendar."

Businesses need skilled workers now, and people looking to enter careers cannot afford to wait until the next academic year to enroll in training. So, the pace of program development at community colleges must accelerate. The big question: How can colleges fast-track new programs without sacrificing instructional quality?

Learn more about the synergy between industry and academia.

Diamond-Turning Intensive Workshop



This spring, AmeriCOM's partner, Keene State College in Keene, NH, is offering a series of one-week workshops to Optics Technicians looking to upskill.

Taught in its newly established Kingsbury Center for Diamond Turning Excellence, participants will come away with a comprehensive understanding of diamondturning technology, covering topics like optical-mechanical design, fixture design, and the manufacturing of metal, infrared, and plastic optics.

In the heart of the U.S. diamond-turning industry, this workshop features technology from local suppliers Precitech and Moore Nanotechnology.

> A limited number of seats are available. **<u>Click here</u>** for more information and to register.

Wanted: Teachers for Short Courses

The Optics and Electro-Optics Standards Council (OEOSC) is looking for members of the optics industry to develop and/or teach short courses in optical standards.



Once accredited by OEOSC, the short courses will be taught at conferences (hint: Optifab 2025), and at companies and colleges, and will be delivered across a range of modalities including in-person classes, virtual classes, or fully independent asynchronous web courses.

There is funding available for the development of courses and for teaching at conferences and at companies. There is also compensation available for others to support those who develop courses.

If you are interested in developing a course, please contact Brian Monacelli at BMonacelli@Pasadena.edu, and Jennifer Michels at Jennifer@redheadoptical.com.

Instructors will be required to join OEOSC. More information about OEOSC, and the current accredited short courses, can be found at <u>oeosc.org</u>.

Upcoming Event: High Energy Laser (HEL) Optics Metrology Workshop



AmeriCOM is on the agenda for the March 26-27, 2025 Workshop at the University of Alabama in Huntsville. The workshop brings together stakeholders involved in the metrology of optics for HEL systems. The goals of the workshop are to assess the current state of HEL optics metrology, identify issues, and develop a common path across DoD, industry, and academia to move defense HEL systems from prototypes to the field more effectively. AmeriCOM's Chief Scientist, Justin Sigley, will be presenting the findings from a recent study analyzing the repeatability and reproducibility of extreme accuracy optical absorption techniques across the industry and how this informs the need for precision calibration standards. AmeriCOM's Workforce and Higher Education Executive Director, Alexis Vogt, will be presenting a talk on developing the precision optics workforce to meet the growing demand for skilled optics technicians.

UPCOMING EVENTS

SPIE Defense and Commercial Sensing

Orlando, FL April 13-17, 2025

SPIE Optics + Photonics 2025

San Diego, CA Aug. 5-7, 2025

SPIE Optifab 2025

Rochester, NY Oct. 20-23, 2025

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AmeriCOM - American Center for Optics Manufacturing, PO Box 23473, Rochester, NY 14692-3473

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