Wednesday, November 27, 2019

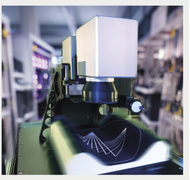
INDUSTRIAL PHOTONICS LASERS

A quarterly newsletter focused on the latest advancements in and applications for industrial lasers - from materials processing to metrology. Manage your Photonics Media membership at Photonics.com/subscribe.

Industrial Laser News

Motion Control Solutions for High-Precision, Large-Field Laser Micromachining

High-precision, high-throughput laser micromachining typically requires galvo scan heads with a short focal length, which in turn produces a small image field, or field of view (FOV). However, a growing number of high-tech manufacturing areas, such as OLED display fabrication, require the processing of workpieces larger than can fit into these reduced image fields, while simultaneously requiring a high level of accuracy and throughput.



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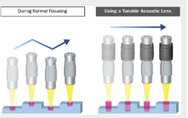
High-Speed 3D Inspection with Liquid Lenses

Liquid lenses can be synchronized with high-power lasers and coupled with high-speed image processing for enhanced materials processing and Industrial IoT responsiveness. Many scientific, industrial, and commercial applications demand fast modulation and control over the focus of the lens to enable high-speed illumination and measurements.



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Featured Products

Industrial Laser Safety at a Glance

Photonics Media

A straightforward guide, offering clear, real world explanations of laser safety elements and the necessary background materials for the industrial laser environment. It raises awareness of the dangers of laser exposure, the proper tools needed to protect oneself from the potential hazards of industrial lasers, and the steps that must be taken to ensure a safe environment for all workers.

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Kentek's Hi Vis Curtain Door

Kentek Corp.

A laser laboratory poses multiple safety hazards that can be harmful to individuals and equipment. Engineering and other control measures must be incorporated into the operation of lasers to maintain a safe environment. Laser safety barriers, either movable or free-standing, are often found surrounding the laser work environment and typically create low light conditions that make it difficult to locate egress points.

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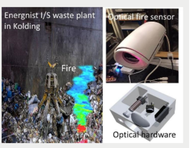
More News

Dynamic Speckle Patterns Detect Fires in Harsh Environments

A multi-institutional group of researchers from Denmark and Norway has developed a laser-based system that can detect fires in challenging environments. The new system does not measure the amount of light or its wavelength, but rather how the refractive index randomly fluctuates due to heat convection from the fire.



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High-Tech Lidar: The Future Looks Fly

Over 50 years ago, light detection and ranging technology (lidar) found its earliest applications in military targeting and meteorology research, and famously, in mapping the surface of the moon in 1971. But the development of lidar for widespread commercial use is relatively new.

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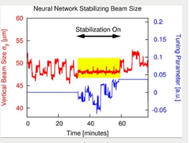
Machine Learning Enhances Synchrotron Performance

A team of researchers from Lawrence Berkeley National Laboratory (Berkeley Lab) and the University of California, Berkeley (UC Berkeley) have demonstrated how machine learning can improve the stability of synchrotron light beam performance.



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3 Questions with Susan Houde-Walter of LaserMaxDefense

Photonics Media recently spoke with Susan Houde-Walter, CEO of LaserMaxDefense (LMD). LMD is a laser manufacturer based in Rochester, N.Y., that specializes in diode and quantum cascade lasers. Houde-Walter serves on the Army Science Board and the National Defense Industrial Association Special Operations/Low-Intensity Conflict division, and has served on the U.S. Air Force Scientific Advisory Board.

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Search and Rescue May See Help from Swarms of Tiny Drones

Researchers from Delft University of Technology demonstrated a swarm of tiny drones equipped with optical sensors that can explore unknown environments completely by themselves. The concept, inspired by insect swarms, relies on numerous inexpensive robots with relatively limited sensing and computational techniques, which together are able to explore large areas with greater speed and efficiency than a single larger drone.

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Webinars

Filters: The Key to Image Quality in Modern Vision Applications

Wed, Dec 4, 2019 1:00 PM - 2:00 PM EST

Optical filters are a simple, cost-effective way to enhance repeatability and to achieve the highest level of performance from your machine vision system. Join technical trainer Georgy Das from Midwest Optical to learn more about how optical filters can be used to solve even the toughest issues in machine vision applications and how filters can help you get ahead of the curve when it comes to next-generation applications.

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