

Winners of 2010 Prism Awards Announced

SAN FRANCISCO, Jan. 27, 2011 — A fiber laser that replaces aging flashlamp-pumped solid-state lasers, an analyzer that detects hazardous chemicals in seconds at a distance and spherical and chromatic aberration-free low-cost optical components are among the winners of the 2010 Prism Awards for photonics innovation announced Jan. 26 at a gala ceremony in San Francisco during Photonics West. In a room full of some of the industry's top decision makers and scientific minds, nine companies were honored in nine categories for their outstanding achievements.



The Prism Awards is an international competition sponsored by Photonics Media and SPIE to recognize photonic products that challenge conventional ideas, solve problems and improve life through the generation and harnessing of light. Peter Hallett, director of marketing and industry relations for SPIE, and Thomas Laurin, president of Photonics Media, both talked of the innovations represented by not only the nominees, but by all the companies in attendance at the

ceremony.

A panel of independent industry experts judged dozens of entries, selecting the winners from among 26 finalists (for a complete list of finalists, click [here](#)).

The first award of the night, for Information and Communication, was presented by David Hardwick, IMRA America consultant, to Photonics USA for its optical receiver module. Before the creation of this receiver, one had to choose between optical receivers using solid-state designs with high speeds but very small active areas, or photomultiplier designs with small output currents. Photonics USA's module bridges the gap by having a large collection area - an active input diameter of 12 mm - while also maintaining a data speed of 2 GHz. The reliability of signal current in the blue-green wavelength range improves without significant bit error rates, enabling through-the-air or underwater communications in environmental circumstances that are less than ideal. The receiver's low power requirements mean that it can be used in unmanned locations.

Stuart Schoenmann, CEO of CVI Melles Griot, presented the award in the Detectors, Sensing, Imaging and Cameras category to General Electric for its TrueSense personal water analytics, a stand-alone, field-deployable system that performs eight industrial water quality tests from a single 3-ml sample in minutes, slashing previous sample times by an estimated 80 percent. It minimizes the need to maintain an inventory of reagent chemicals and equipment for testing and considerably cuts testing costs, and its simplified testing procedures require only simple steps that anyone can perform.

"It's a real honor to be recognized by such great minds at the heart of innovation in this industry," said Kevin T. Milici, global product

manager, enabling solutions, for GE Water and Process Technologies, who accepted the award.

Presenting the Defense and Security award was Ronald Driggers, superintendent, Optical Sciences Div., of the Naval Research Laboratory. The winner was Block Engineering, for its LaserScan quantum cascade laser (QCL) -based spectrometers. LaserScan is a handheld mid-IR QCL spectrometer that analyzes surfaces from a standoff of inches to feet, and was originally developed for detecting improvised explosive devices (IEDs), said CEO Petros Kotidis, who accepted the award. He added that the company is looking to expand the product into commercial markets.

Robert Edmund, CEO of Edmund Optics, presented the award for Scientific Lasers to EKSPLA, a small Lithuanian company, for its NT200 series nanosecond lasers that offer tunability from the ultraviolet (210 nm) to the infrared (2600 nm) without gaps in the tuning range and operating at a computer-controlled, hands-free pulse repetition rate of 1 kHz.

The EKSPLA representative who accepted the award joked to the crowd that they might not even know where Lithuania is. "It's somewhere between Germany and Finland," he said.

The award for Life Sciences and Biophotonics was presented by Hamamatsu vice president of marketing, Ken Kaufmann, to JenLab GmbH for its MPTflex, a clinical multiphoton tomograph for skin imaging, the MPTflex overcomes the poor resolution of skin imaging methods such as ultrasound, OCT and reflection. By using two-photon technology, the system's in vivo high-resolution skin imaging provides marker-free optical biopsies. The novel tomograph is a compact system with a flexible scan head that includes two detectors for simultaneous measurement of autofluorescence and the second-harmonic generation.

CEO Dr. Karsten Koenig commented that his was also a small company, based in Germany, and that the four or five people on stage with him represented "20 percent of our engineers and physicists."



Paul Blackborow, CEO of Energetiq Technology, accepts his company's Prism Award for photonics innovation in the Other Light Sources category of its EQ-99 laser-driven light source while members of his team look on. (Photonics Media photo by Charley Rose)

Marita Paasch, vice president of advances optics at Schott, presented the next award, for Other Light Sources, to Boston-based Energetiq Technology Inc. for its EQ-99 LDLS laser-driven light source. The LDLS uses a laser beam instead of a traditional lamp to deliver 10 times the brightness, 10 times the lifetime and a broader bandwidth than xenon and deuterium lamps for advanced spectroscopic and imaging applications.

The Optics and Optical Components award was presented by IPG Photonics Vice President Bill Shiner to Edmund Optics for its TechSpec plastic hybrid aspheric lenses, low-cost optical components free of both spherical and chromatic aberration. The product provides optical designers with a unique single-element solution for achieving diffraction-limited focusing performance at high numerical apertures with broadband light sources. While this concept has been well-established for years in the infrared, these are the first hybrid aspheres designed to work in the visible spectrum.

Michael Mertin, CEO of Jenoptik AG, presented the award for Test, Measurement and Metrology to Lumen Dynamics Group, formerly EXFO Life Sciences & Industrial Div., for its X-Cite XP750 sensor. Uniquely shaped like a microscope slide, the X-Cite XP750 fits easily in standard stage clips to hold it in place during use. The sensor is thin enough (9 mm) to fit under the objectives on an upright microscope without the stage or condenser having to be removed.

The final award of the night, Industrial Lasers, was presented by Incubic Managing Director and laser industry veteran Milton Chang to IPG Photonics for its long-pulse high-pulse-energy fiber lasers. The quasi-continuous-wave lasers address the problem of replacing the aging population of inefficient flashlamp-pumped solid-state lasers with much smaller and longer-lasting diode-pumped devices. The proprietary pump diodes used in these lasers can be pulsed at 10 times their average power. In a quasi-continuous regime, they can pump an active fiber to produce 15 J from a 150-W fiber laser.

Posted by Melinda Rose, Senior Editor