

CLEO/QELS Returns to Baltimore



The 23rd Conference on Lasers and Electro-Optics (CLEO) and the 11th Quantum Electronics and Laser Science Conference (QELS) will convene during the week of 1–6 June at the Baltimore Convention Center in Baltimore, Maryland.

From fundamental science to application, CLEO/QELS offers members of the laser science, quantum electronics, and optoelectronics communities an opportunity to extensively review the latest innovations in lasers and electro-optics.

The technical programs will be held in 10 parallel sessions scheduled for Monday through Friday. Also on the agenda are joint and special symposia, short courses, tutorials, poster sessions, and hands-on workshops.

More than 100 invited speakers will present talks during the week. On the CLEO side, these invited talks will cover such topics as laser applications and optical instrumentation systems; solid-state lasers; semiconductor lasers and light-emitting diodes; nonlinear optics; holography, wavemixing, photorefractives and storage; optical materials, fabrication, and characterization; high-field lasers and physics and fusion technologies; ultrafast optics, optoelectronics, and applications; optical components; medical and biological applications; fiber and guided-wave lasers, amplifiers, and sensors; light-wave communications and networks; and active optical sensing.

On the QELS side, invited speakers will cover a range of topics that include atom cooling and atom optics; quantum optics; fundamental optics in periodic and random media; ultrafast dynamics; nonlinear optics; and nanooptics, as well as a special symposium on laser control on the nanoscale—atoms to cells.

Attosecond stabilization and metrology will be the focus of a special joint CLEO/QELS symposium.

Tutorials, intended as introductions to important areas in the field, will be held throughout the week and a host of short courses will also be offered.

Poster sessions will be held Tuesday through Thursday in the convention center's exhibit hall.

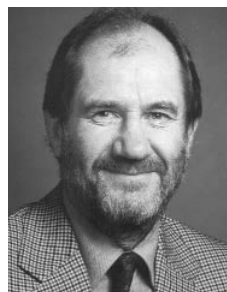
The joint plenary and awards ceremony will take place in the fourth floor ballroom of the convention center Wednesday, 4 June, from 8:00 AM to 10:30 AM. At this session, the Optical Society of America (OSA) will present to **David Hanna** its 2003 Charles Hard Townes Award in recognition of his "outstanding contributions to the field of quantum electronics." Hanna is deputy director of the optoelectronics research center at the University of Southampton, UK. The Institute of Electrical and Electronics Engineers Laser and Electro-Optics Society (IEEE/LEOS) will present its Quan-

tum Electronics Award at the same session. The winner had not yet been announced at press time.

The first plenary speaker will be H. Jeff Kimble, William L. Valentine Professor of Physics at Caltech, who will give a talk entitled "The New Science of Quantum Information."

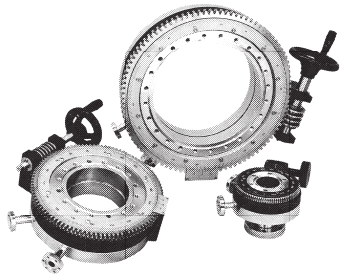
What follows will be a special four-part review in honor of the 40th anniversary of the invention of the semiconductor diode laser. Four pioneers in the development of lasers will speak: Robert Rediker will discuss "Research at Lincoln Laboratory Leading to the Development of the Diode Laser in 1962"; Robert Hall will examine "The Race for the Semiconductor Laser"; Marshall I. Nathan will speak on the "Early Days of the Semiconductor Laser at IBM"; and Nick Holonyak Jr will address the "Visible-Spectrum III–V Alloy Laser and Light-Emitting Diode—1962."

The popular Lasers and Electro-Optics Applications Program (LEAP) will focus this year on four areas at the vanguard of optics: homeland defense, biomedical optics, emerging technologies, and business and management. Duncan Moore, Rudolf and Hilda Kingslake Professor of Optical Engineering at the University of Rochester, will deliver a keynote LEAP address on establishing federal



Hanna

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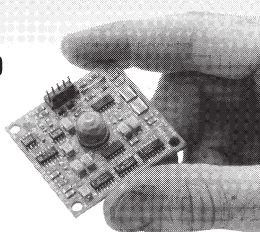
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priorities in science and technology.

The CLEO/QELS exhibition, which features the latest in research instrumentation and services from more than 300 companies, will be open Tuesday through Thursday. To give meeting attendees an opportunity to visit the show, no sessions will

be held on Wednesday from 10:00 AM to noon.

OSA, IEEE/LEOS, and the American Physical Society's division of laser science are cosponsors of this year's CLEO/QELS meetings. More information can be found online at <http://www.cleoconference.org>.

Sessions with Invited Speakers

Monday, 2 June

morning

Mid-infrared semiconductor lasers 1. *Martinelli*.
Special symposium on laser control on the nanoscale: Atoms to cells. *Grangier, Moerner, McClelland, Xie, Sham, Helmerson, Wrachtrup, Awschalom*.

Petawatt laser systems 1. *Zuegel*.
Coherence in atomic and electronic systems. *Van Exter*.

THz generation and sensing. *Bolivar*.
THz generation. *Unterrainer, Citrin*.
Exotic materials and fabrication. *Spillane*.
Optical techniques for medical diagnosis. *Liu*.
Generation and detection of single photons. *Rempe*.

afternoon

Visible-spectrum LEDs and lasers. *Streubel, Holcomb*.

Optical parametric amplifiers and supercontinuum generation. *McKinstrie*.

Nonlinear high-field phenomena 1. *Kim*.
Quantum measurements and quantum imaging. *Dolev*.

Aerosol detection and characterization. *Jeys*.
III-V nitride LEDs. *Iwayama*.

Novel devices. *Liem*.
Innovative approaches to imaging. *Schmitt*.
Optical entanglement and nonlocality. *Santori*.
Molecular nonlinear optics. *Hell*.

Tuesday, 3 June

morning

Nonlinear optics in fibers. *Kazovsky*.
Joint attosecond symposium 1. *Krausz, Walmsley, Paulus*.

Emerging active optical sensing techniques. *Harren*.

Microstructured fiber devices and applications 1. *Benabid*.

Photodetectors and preamplifiers. *Aull*.
Nanoassemblies and nanowires. *Basché*.
Joint attosecond symposium 2. *Ippen, Bartels*.

Long-wavelength lasers on GaAs. *O'Reilly, Lester*.
Fiber grating devices and applications. *Buryak*.
Interconnects and modulators. *Lemoff*.
LIDAR. *Heinrichs*.

Field enhancement from metallic nanostructures. *Novotny*.

Quantum information processing: Implementations. *Blinov*.

afternoon

Joint attosecond symposium 3. *Holzwarth, Ye, Keller*.

Microstructured fiber devices and applications 2. *Lee*.

Trace gas monitoring. *Fried*.
Entanglement and quantum state reconstruction. *Brune*.

Optical signal processing and switching. *Blumenthal*.

Semiconductor nonlinear optics 1. *Smirl*.
Nanophotonics of plasmons and polaritons. *Keilmann*.

High-sensitivity gas detection. *Haas III*.
Semiconductor nonlinear optics 2. *Wegener*.

Second harmonic and sum frequency generation. *Chen*.

Novel light emitters. *Burroughes*.

Quantum dots for nanophotonic applications. *Zrenner*.

Fluorescence in biomedicine. *French*.

Wednesday, 4 June

morning

Awards and plenary session. *Kimble, Rediker, Hall, Nathan, Holonyak Jr.*

afternoon

Wavelength conversion in QPM structures. *Paul*.
Terahertz nonlinear optics. *Nelson*.

Microphotonic bandgap circuits. *Vlasov*.
High-field science 1. *Kodama*.
Guided wave solid-state lasers. *Wadsworth*.
High-field science 2. *Krushelnick*.

Thursday, 5 June

morning

Ultrafast dynamics in metallic systems. *Bigot*.
Photonics in ordered and disordered structures. *Lisyansky, Wiersma*.

Strongly interacting bosons and fermions. *Lukin, Salomon*.

Femtosecond laser atmospheric propagation. *Luo*.
PMD and amplification. *Kumar*.

Nano-optics in II-VI materials and microcavities. *André*.

Optical switching and solitons. *Athale*.
Fusion laser engineering. *Pennington*.

Tunable solid-state lasers. *Sorokina*.
Probing excitons and charge carriers in quantum dots. *Gershoni*.

Random lasers. *Noginov*.
Precision measurements and spectroscopy with cold atoms. *Donley*.

Ultrafast studies of many-body interactions. *Perakis*.

afternoon

Ultrafast dynamics in quantum dots. *Quochi*.
Soliton photonics. *Fleischer*.

Atom transport and cooling. *Bethlem*.
Optical instrumentation and measurement. *Jimenez*.

Advances in organic materials. *Ledoux*.
Left-handed materials. *Pendry*.

χ^2 nonlinear optics. *Shen*.
Microstructured fibers. *Windeler*.

Power scaling 2. *Payne*.
Optically trapped Bose and Fermi gases. *Bloch, Weber*.

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