# **Exhibition Guide**

# **Optics**East

Photonics for Applications in Industry, Life Sciences, and Communications

## Exhibition: 3-4 October 2006

Conference: 1–4 October 2006 Hynes Convention Center Boston, Massachusetts USA



The International Society for Optical Engineering

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## SPIE would like to thank the following companies for their generous support of Optics East 2006

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Tuesday Afternoon Dessert/Coffee Break



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Wednesday Afternoon Dessert/Coffee Break

# First in Photonic

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Women in Optics Lunch

# Scientific

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Welcome Reception and Poster Session



Booth #509 • www.picoquant.com • www.microphotondevices.com

Exhibitor Lounge SPIE Newsroom Booth #223 • newsroom.spie.org

General Refreshment Sponsor RMI Rocky Mountain Instrument, Booth #322 SPIE OpticsEast Welcome to the Exhibition!

## Contents

Exhibitor Booth Index 2
Exhibition Floor Plan3
Advertisers Index2
Special Events4
Industry Forum 5
Course Daily Schedule7
Exhibitor Directory 8-18
Product Categories 18-20
General Information 20-21
Corporate Members . 22-23

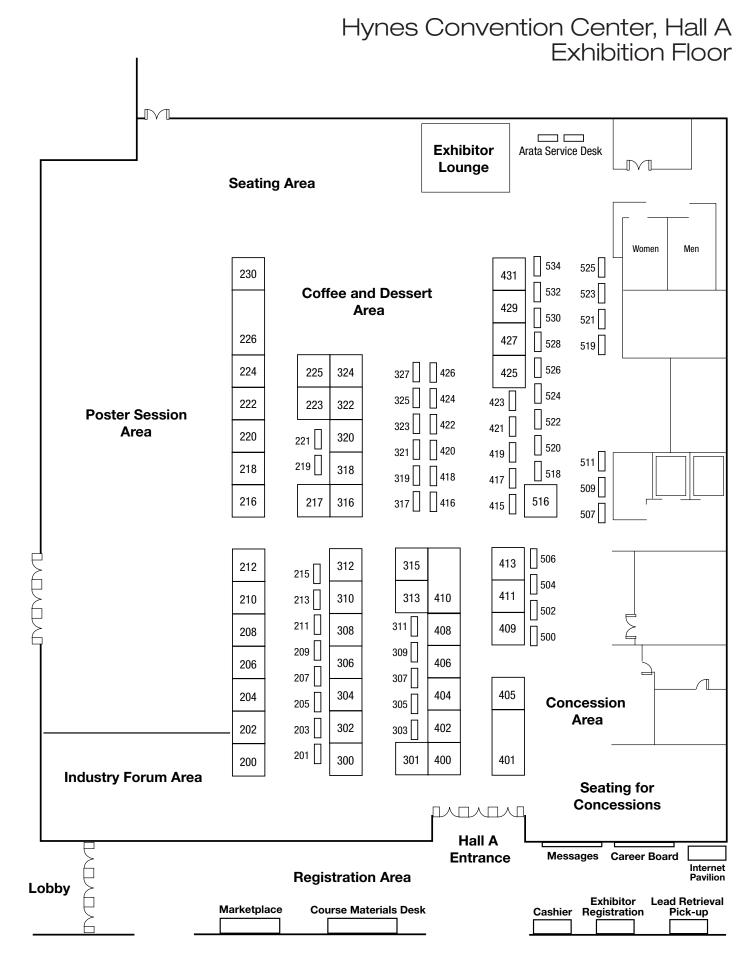
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# Exhibitor Booth List

106 Companies as of September 6, 2006	5
ADE Phase Shift	#219
AFL Telecommunications	#521
Ahura Corporation	#618
AIM	#415
Alpes Lasers	#401
Angstrom Sun Technologies Inc	#507
Apollo Optical Systems	#224
Applied Surface Technologies	#418
Ariel Optics, Inc.	#420
ASML Optics LLC	#315
Becker & Hickl GmbH	#401
Blue Hill Optical Technologies	#226
Boston Electronics Corp	#401
Boston Scientific Corp	#320
Cergence, Inc	#530
ChemImage	#402
Cobolt AB	#226
Colibrys SA	#217
Dataray, Inc.	#226
Daylight Solutions	#225
Dynasil Corp.	#312
Edinburgh Instruments Ltd	#401
Electron Tubes	#408
Epitaxial Technologies, LLC	#222
Epner Technology, Inc.	#416
EXALOS AG	#221
Fairfield Crystal Technology, LLC	#309
Fiber Optic Center, Inc.	#519
Fiberguide Industries, Inc	#321
Galvoline	#226
GEOMATEC Co. Ltd.	#226
Hamamatsu Corp	#431
Headwall Photonics, Inc.	#423
Hellma International, Inc.	#325
Hinds Instruments, Inc.	#311
id Quantique SA	#401
IMT Masken und Teilungen AG	#306
Intelligent Optical Systems, Inc	#511
International Light Technologies Inc	#425
IntlVac	#427
Krell Technologies	#532
Lambda Research Corp	#327
Laser Compliance, Inc	#226
LASER COMPONENTS IG, Inc.	#305

Laser Focus World	#409
LEISTER Technologies, LLC	#324
Logitech Product Group	#419
Lumics GmbH	#226
Luminit Corp	#302
Luna Technologies	#534
Matrix, Inc.	#304
Max Levy Autograph, Inc	#400
Meadowlark Optics, Inc	#506
MEMS Optical Inc.	#528
Micro Photon Devices	#509
Moulded Optics GmbH	#413
MPA Crystal Corp	#220
National Reconnaissance Office	#404
NEOARK Corp	#226
New England Fiberoptic Council	#502
O/E Land Inc.	#421
Ocean Optics, Inc.	#405
OFS - Specialty Photonics Div	#424
Olympus Micro Imaging	#301
ONTAR Corp	#520
Optical Society of America	#504
Optics for Hire	#525
OptoElectronic Components	#509
OptoHub Co., Ltd.	#303
Optometrics Corp	#312
PerkinElmer Life & Analytical Sciences .	#426
Photon Engineering, LLC	#500
Photonics Online	#526
Photonics Spectra - Laurin Publishing .	#316
PI (Physik Instrumente) LP	#411
PicoQuant GmbH	#509
Polymicro Technologies LLC	#317
Power Technology, Inc.	#318
Precision Optics Corp	
Rainbow Research Optics, Inc	
Raylase AG	

#### **Advertisers Index**



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## Special Events

#### Welcome Reception

Boston Marriott Copley Place, 3rd Floor Atrium

Sponsored by



Sunday 1 October ..... 5:30 to 6:30 pm All attendees are invited to the Welcome Reception. Relax, socialize, and enjoy refreshments. Please remember to wear your conference registration badges. Dress is casual.

#### Interactive Poster Session

Exhibition Hall A

Sponsored by Booth #509

#### Poster Set-Up

Poster authors will be able to set up starting at Noon on Monday and will be asked to leave their posters up until 7:30 pm on Tuesday. Poster Presenters who have not set up by 5:00 pm on Tuesday will be considered a "no show" and their manuscript will not be published.

Presenters will be at their poster papers to answer questions from 6:00 pm to 7:30 pm on Tuesday.

It is the author's responsibility to remove their posters at the end of the session. Papers not removed will be considered unwanted and will be discarded. SPIE assumes no responsibility for posters left up after the end of the poster session.

### SPIE Women in Optics Lunch

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Scientific

Booth #320

#### Delivering what's next."

#### Speaker: Judy Largesse

Sr. Manager, Electro-Optics Systems Endovations Division, Boston Scientific Corporation

Join us for an opportunity to network with other optics professionals,

4

generate new contacts, and expand your resources and referrals. This SPIE hosted luncheon at Optics East is the perfect way to meet and develop relationships with others in your field. Register for this lunch at the SPIE Cashier by 3:00 Sunday; location information provided upon sign-up.

### Student Lunch with the Experts

See ticket for location.

Combine fun, food and networking at this engaging, free event open to all students. Hosted by SPIE Student Services, this event will feature experts willing to share their accumulated wisdom on career paths within the optics and photonics industry. Lunch is open to all student attendees. Please come early as space is limited; tickets will be collected at the door.

## **Special Session** Smart Medical Home

Hynes Convention Center, Room 100

Wednesday 4 October ..... 2:00 to 4:00 pm

Chair: Israel Gannot, Tel-Aviv Univ. (Israel) and George Washington Univ.

#### Panel Participants:

Alice Pentland, Chair of the Center of Future Health, Rochester Univ. Kent Larson, Chair of the House\_n project, Massachusetts Institute of Technology

Majd Alwan, Eldercare Technologies Program Director, Univ. of Virginia

Diane Cook, Director of the MavHome Project, Univ. of Texas/ Arlinaton

Tom Rose, SmartHouse Program Director, Duke Univ.

As people grow older they find it more difficult to remain in their houses and they move into retirement homes, nursery homes, assisted living projects, or other special housing for the elderly. This transition surely has an affect on their state of mind. A move from their natural surroundings may also impact their health condition for the worse.

With the advance of medicine, technologies of sensing, monitoring, and health informatics there is a big potential in creating a smart medical home where elderly people can continue to live their normal lives in their natural and recognized surroundings.

This special session will deal with different aspects of the smart medical home idea. The panelists come from different disciplines: medicine, biomedical sciences, architecture, and engineering, and they will present the projects that they are heading in their universities.

After the presentations there will be a panel discussion with active participation from the audience on the presented issues, as well as psychological and philosophical aspects of the smart medical home concept.

## **Jumpstart Your** Job Search.

Regardless of your statusrecent graduate, newly unemployed, or considering a career move-find the job that's right for you.

spieworks.com



OR

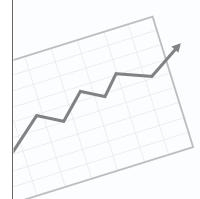
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APPLY YOUR MIND.

KS



9/7/06, 1:37 PM



# Industry Perspectives

Market analysis, technology review and ideas for business



Location: Exhibition Hall A

Wednesday 4 October .....8:30 to 11:30 am

FREE SESSION open to all exhibition visitors, exhibitors and technical conference attendees. Hear industry experts share their views on the opportunities, innovations and applications that impact strategy, planning and implementation.



Special session topics:

- Imaging for Industrial Applications
- Visual Data Analysis in the Life Sciences
- Sensor Technology Alert: breakthroughs that matter
- The Back-end of Optical R&D: process for delivery
- Optoelectronics Industry Trends and Forecasts
- Tech Commercialization: Tips, Traps and Tricks

#### Courses

# **Design Your Future**

# It's your career—take charge of shaping it.

# Professional development options with SPIE will help you:

- Improve your job performance
- Meet changing job demands
- Increase your value to your organization

#### Students save 50% on Course Registration

Proof of student status is required; please include your student ID number or proof of student status with your registration. Offer applies to undergraduate/graduate students who are not also full-time employees in the industry, government, or academia.

SPIE reserves the right to cancel a course due to insufficient advance registration.

#### Money-back Guarantee

We are confident that once you experience an SPIE course for yourself you will look to SPIE for your future education needs. However, if for any reason you are dissatisfied, SPIE will gladly refund your money. We just ask that you tell us what you did not like; suggestions for improvement are always welcome.

#### **Continuing Education Units**



SPIE is an authorized provider of Continuing Education Units (CEUs) though ICAET—The International Association of Continuing Education and Training. SPIE awards CEUs to participants who successfully attend courses, and complete and return the evaluation form within 30 days of the course presentation. SPIE maintains a record of all CEUs earned for each participant for seven years.

Professional Development from SPIE spie.org/education

#### Courses

Workshops

**In-Company Training** 

**DVDs/CD-ROMs/Videos** 

# Course Daily Schedule

Sunday October 1	Monday October 2	Tuesday October 3	Wednesday October 4
Option 8 Opt	omochonico		
oplics a Opl	omechanics		_
SC156 <b>Basic Optics for Engineers</b> <i>(Ducharme)</i> 8:30 am to 5:30 pm, \$425 / \$515	SC003 Practical Optical System Design (Fischer) 8:30 am to 5:30 pm, \$465 / \$545	SC192 Introduction to Optics for Non-Optical Personnel (Kahan) 8:30 am to 5:30 pm, \$390 / \$470	
SC220 <b>Optical Alignment</b> <b>Mechanisms</b> <i>(Guyer)</i> 1:30 to 5:30 pm, \$220 / \$260		SC447 Principles for Mounting Optical pm, \$905 / \$1055	Components (Yoder, Jr.) 8:30 am to 5:3
SC700 <b>Understanding Scratch and</b> <b>Dig Specifications</b> ( <i>Aikens</i> ) 1:30 to 5:30 pm, \$255 / \$295			
Biomedical Te	echnologies		
	SC673 Optical Fiber Sensing Technology: Principles, Components & Applications (Méndez) 1:30 to 5:30 pm, \$220 / \$260		SC309 Fluorescent Markers: Usage and Optical System Optimization (Levi) 8:30 am to 12:30 pm, \$220 / \$260
			SC461 <b>Bio-Optical Detection</b> <b>Systems</b> ( <i>Levi</i> ) 1:30 to 5:30 pm, \$220 \$260
Spectroscop	У	_	
	SC802 Practical Near Infrared and Raman Spectroscopy Applications (McDermott, Botonjic) 8:30 am to 12:30 pm \$220 / \$260		
	SC800 Instruments for Light Spectroscopy (Saptari) 1:30 to 5:30 pm, \$220 / \$260		
Sensors			
	SC194 Multispectral and Hyperspectral Image Sensors (Lomheim) 8:30 am to 12:30 pm, \$220 / \$260		
	SC673 Optical Fiber Sensing Technology: Principles, Components & Applications (Méndez) 1:30 to 5:30 pm, \$220 / \$260		
Optoelectror	ics & Photoni	CS	
		SC801 Optoelectronic Devices: Introduction to Physics and Simulation (Piprek) 8:30 am to 12:30 pm, \$310 / \$350	SC747 Semiconductor Optoelectronic Device Fundamenta (Linden) 8:30 am to 5:30 pm, \$390 / \$470
mage & Sigr	al Processing		
	SC189 Image Recognition Using Statistical Filtering Techniques, Wavelets and Neural Networks ( <i>Javidi</i> ) 8:30 am to 5:30 pm, \$445 / \$525		or courses at the jistration Desk!

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## **ADE Phase Shift**

SPIE Corporate Member

accessories.

3470 E Universal Way, Tucson , AZ, 85706-5042 520/573-9250; fax 520/573-9355 info1@phase-shift.com; www.phase-shift.com

#### **AFL Telecommunications**

**#521** 

#219

PO Box 3127, Spartanburg, SC, 29304 864/433-0333; fax 864/433-5560 sales@afitele.com: www.afitele.com

New Product: Large Diameter Fiber (LDF) fusion splicers and

AFL Telecommunications is an industry leader providing fiber optic products, fusion splicing and test equipment, engineering expertise and integrated services to the telecommunications industry. AFL's product line consists of optical connectivity, fusion splicers and test equipment as well as fiber management systems, closures, fiber optic cable and accessories. Contact: Micahel Hetrick, National Sales Manager, michael.hetrick@afltele.com.

## Ahura Corporation

#### **#618**

46 Jonspin Rd, Wilmington , MA, 01887 978/657-5555; fax 978/657-5921

sales@ahuracorp.com; www.ahuracorp.com

New Product: FlexProbe Extension provides FirstDefender functionality with flexibility of a one-meter cable.

Ahura Corporation develops rugged, innovative, ultra-compact, fieldenabled optical systems for the detection, identification and authentication of unknown and suspect substances. Customers include the homeland security, life sciences, industrial and medical markets. Manufactured in the USA in an ISO 9001 certified operation, Ahura's products offer superior performance at competitive prices.

### AIM

#### #415

25 Kenney Dr, Cranston, RI, 02920 401/463-5605; fax 401/463-0203

info@aimsolder.com; www.aimsolder.com

AIM is a leading global manufacturer of solder assembly materials to the electronics industry. Our full-line of assembly materials includes solder paste, liquid flux, bar, wire, preforms, adhesives, cleaners, chemicals, plating anodes and indium- and gold-based specialty alloys. AIM is ISO 9001:2000 certified with manufacturing, distribution and support facilities located throughout the Americas, Asia-Pacific and Europe.

## **Alpes Lasers**

#401

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Champreveyres 2, Neuchatel, Switzerland, CH-2008 41 878 803 041; fax 41 878 803 042

info@alpeslasers.ch

## New Product: CW room temp Quantum Cascade Lasers devices now available on special order.

Manufacturer of Quantum Cascade Lasers - tunable infrared lasers in the 3.5 to 17 micon region operating on thermoelectric coolers (pulsed) or LN2 cooled (CW). Contact: Antoine Muller, Sales Engineer, antoine.muller@alpslasers.ch.

## Angstrom Sun Technologies Inc. #507

33 Nagog Park, Acton , MA, 01720 978/263-6678; fax 978/263-6675

flin@angstec.com; www.angstec.com

# New Product: TFProbe Software 2.2 for Vision, Spectra acquisition, coating thickness measurement.

We provide advanced but affordable TFProbe series optical instruments for thin film applications (1) Desktop Film Thickness Mapping System (2) Microspectrophotometer (3)Thin film thickness measurement station (4) Photoluminescence Mapping system, (5) Spectroscopic ellipsometer (6) Digital cameras eyepiece for various microscopes (7) Software for thin film and digital imaging (8) Analytical service for thin films (9) In line multiple Channel Thickness Monitoring System. Contact: Richard Sun, RSun@angstec.com; Flora Lynn, FLynn@angstec.com.

Apollo Optical Systems #224

#### SPIE Corporate Member

330 Clay Rd, Rochester, NY, 14623 585/272-6170; fax 585/272-6177 info@apollooptics.com; www.apollooptical.com

## Applied Surface Technologies #418

#### SPIE Corporate Member

15 Hawthorne Dr, New Providence, NJ, 07974 908/464-6675; fax 908/464-7475

roberts@co2clean.com; www.co2clean.com

We demonstrate precision cleaning using the CO2 Snow Jet, a safe and nondestructive process for removing contamination. This surface cleaning process is a simple, yet novel, process that can remove particles of all sizes, (from visible to 0.03 micron) and organic residues. CO2 Snow cleans wafers, metals, ceramics, polymers, optical and laser parts and many other applications. We will demonstrate manual and semi-automated units for R&D or manufacturing cleaning applications. Bring samples. Contact: Dr. Robert Sherman, President.

## Ariel Optics, Inc.

#### SPIE Corporate Member

6935 N Slocum Rd, Ontario, NY, 14519 315/524-8211; fax 315/524-9662 info@arieloptics.com; www.arieloptics.com

## ASML Optics LLC

#315

#420

3900 Lakeside Dr, Richmond, CA, 92867 510/222-2310; fax 510/222-2357

information@asml.com; www.asml.com

ASML Optics is a manufacturer of extreme precision optical components and systems for a broad range of commercial applications, serving customers worldwide. Provides Design-to-Image<sup>™</sup> solutions including optical and mechanical design, optical fabrication and coating, assembly and system qualification and distinct customer benefits with Asphere Advantage<sup>™</sup> technology and PerfectWave<sup>™</sup> metrology. Contact: Mark Bigelow, mark.bigelow@asml.com; Dan Bajuk, dan.bajuk@asml.com.

#226

#217

#226

#225

## **Becker & Hickl GmbH**

Nahmitzer Damm 30. Berlin, Germany, D-12277 49 30 787 5632: fax 49 30 787 5734 b and h@boselec.com; www.becker-hickl.de

New Product: Simple-Tau, complete TCSPC and detector control, cooled fast PMT, compatible with PC laptops.

Time correlated Single Photon Counting (TCSPC) electronic modules providing PC based measurement solutions. Applications include Fluorescence Lifetime Imaging Microscopy (FLIM), Fluorescence Resonance Energy Transfer (FRET), Fluorescence Correlation Spectroscopy (FCS). Single photon counting detectors (MCP's, PMT's), Pulsed Diode Lasers, multichannel detector heads, routing devices for multichannel measurements, preamps, gated photon counters and multiscalers. Contact: John Devaney, Applications Engineer, jjd@boselec.com.

#### **Blue Hill Optical Technologies** #226

## SPIE Corporate Member

480 Washington St #7, Norwood, MA, 02062 781/255-1064; fax 781/255-1065 info@bluehilloptical.com; www.bluehilloptical.com

## **Boston Electronics Corp.**

SPIE Corporate Member

91 Boylston St, Brookline, MA, 02445 617/566-3821; fax 617/731-0935 boselec@boselec.com; www.boselec.com

#### New Product: New from id Quantique: 280-900nm Si APD Photon Counter for TCSPC.

Products for optical signal detection and signal processing-Time Correlated Single Photon Counting electronics. Fluorescence Lifetime and Steady State Spectrometers, Quantum Cascade Lasers, Lock in amplifiers & optical choppers. UV and IR detectors. APD modules. Laser safety shutters. IR sources. Laser radar (LIDAR) receiver electronics. Contact: Fred Perry, President, fsp@boselec.com. K K K X

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## **Boston Scientific Corp.**

One Boston Scientific PI, Natick, MA, 01760 508/650-8000 www.bostonscientific.com

### Cergence, Inc.

PO Box 2526, West Chester, PA, 19380 484/841-1199; fax 302/288-3902 info@cergence.com; www.cergence.com

## ChemImage

#402

7301 Penn Ave, Pittsburgh, PA, 15208 412/241-7335; fax 412/241-7311 info@chemimage.com; www.chemimage.com

New Product: Multi-Conjugate Filter (MCF).

ChemImage is a revolutionary imaging company bringing modern imaging technology to pharmaceutical, forensic, biomedical and biothreat applications. Our focus is on solutions that enable our customers to gain competitive advantage, by speeding products to market and seamlessly enabling projects to flow from the lab through scale-up and into production. Call or visit us to see how modern imaging can benefit you. www.chemimage.com. Contact: Tracey Vogt, Sales Administrator, vogtt@chemimage.com.

## **Cobolt AB**

#401

#### SPIE Corporate

Kräftriket 8, Stockholm, Sweden, S-104 05 46 8 5459 1233; fax 46 8 5459 1231 info@cobolt.se; www.cobolt.se

### Colibrys SA

Maladiere 83, Neuchatel, Switzerland, CH-2007 41 32 720 5811; fax 41 32 720 5784 sales.us@colibrys.com; www.colibrys.com

Dataray, Inc.

605 Stapp Rd, Boulder Creek, CA, 95006 203/210-5065; fax 203/762-0551 sales@datarav.com: www.datarav.com

#### New Product: USB 2.0 Laser Profiling Cameras; WinCamD-HR High Resolution 5.2 µm, and WinCamD-HS High Speed.

USB 2.0, WinCamD-UCM-HR High Resolution 5.2 µm2 and the HS High Speed camera for single pulse capture from lasers with PRR up to 40 kHz, port-powered, auto-exposure, synchronous shutter. DataRay's innovative and unique beam intensity profiling and imaging solutions simplify beam measurement, from microns to tens of mm, BeamMap series scanning slit systems measure X, Y and Z profiles, focus, divergence, pointing and M2 in real-time. Beam'R and BeamScope for economical X, Y profiling. Contact: John Wilson, Sales and Marketing Manager, jwilson@dataray.com.

## **Daylight Solutions**

13029 Danielson St Ste 130, Poway, CA, 92064 858/391-1010: fax 858/679-9470

mmolina@daylightsolutions.net; www.daylightsolutions.net

New Product: Tunable Mid IR Lasers, Compact, Room Temperature Operation covering 4-12 um.

New Mid-IR, Tunable, Room Temperature Compact Lasers. Center wavelengths at 4.5um, 5.5um, 8.5um, 9.5um, 10.5um, Pulsed or CW. Custom laser wavelengths and OEM configurations are available, tunable to +/- 5% of the center wavelength. Average power 1-10mW, peak pulsed power 250mW. Applications in gas detection, illumination, heavy and light molecule spectroscopic detection, explosives, biomarker and glucose detection. Talk to us about specific wavelength ranges and applications. Contact: Kevin Liddane, Director of Sales, kliddane@daylightsolutions.net.

## Dynasil Corp.

#312

385 Cooper Rd, West Berlin, NJ, 08091-9145 856/767-4600; fax 856/767-6813

bleonetti@dynasil.com; www.dynasil.com

Distributor of Corning 7980 high purity synthetic fused silica. Supplier of precision machined blanks to customer specifications. Contact: Bruce Leonetti, Vice President Sales & Marketing, sales@dynasil.com; Michael Orlando, Inside Sales, sales@dynasil.com.

#### Edinburgh Instruments Ltd #401

2 Bain Sq, Kirkton Campus, Livingston, United Kingdom, EH54 7DQ 44 1506 425 300; fax 44 1506 425 320

sales@edinst.com; www.edinst.com

Picosecond fluorescence lifetime spectrometers based on Time Correllated Single Photon Counting (TCSPC). Nanosecond Laser Flash Photolysis in kinetic and spectral modes, steady state fluorimeters with anisotropy measurement, modular fluorescence and phosphorescence lifetime spectrometers, advanced deconvolution software and analysis tools. Contact: Elaine Blackwood, Sales Manager, 9 eblackwood@edinst.com

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#530

#320

#### **Electron Tubes**

100 Forge Way Unit F, Rockaway, NJ, 07866 973/586-9594; fax 973/586-9771 sales@electrontubes.com; www.electrontubes.com

New Product: HVSys is a multi-channel high voltage supply, control & monitoring system for photomultiplier tubes.

Electron Tubes manufactures photomultiplier tubes, light detector assemblies and x-ray data acquisition systems. Photomultiplier tubes include versions for use at cryogenic temperatures and in rugged environments. Detector assemblies include photon counting types with RS232 interface. The XDAS linear x-ray data acquisition system is available for security and industrial process control applications. Contact: Paul Davison, Sales Manager, paul@electrontubes.com; Jules Green, Sales & Marketing Engineer, jules@electrontubes.com.

### Epitaxial Technologies, LLC #222

1450 S Rolling Rd, Baltimore, MD, 21227 410/455-5594; fax 410/455-5595 oaina@epitaxialtechnologies.com; www.erols.com/epiwafers

#### **Epner Technology, Inc.**

SPIE Corporate Member

78 Kingsland Ave, Brooklyn, NY, 11222-5603 718/782-5948; fax 718/963-2930 epner78@aol.com; www.epner.com

## **EXALOS AG Booth**

SPIE Corporate Member

Wagistr 21, Schlieren, Switzerland, 8952 41 43 444 60 90; fax 41 43 444 60 99 info@exalos.com: www.exalos.com

## New Product: Gaussian 1300 nm, Ultra high power 1300, 1580 nm, TOSA 800, 830, 1300 & 1550 nm SLEDs.

EXALOS, an ISO 9001:2000 certified company, is developing and selling advanced Superluminescent Light Emitting Diodes (SLEDs) to the fiber optic gyroscope, medical imaging (OCT), fiber optic test equipment and sensor markets. EXALOS SLEDs operate with wavelengths ranging from 700 to 1700 nm, with optical bandwidths up to 190 nm and with output powers up to 50 mW. EXALOS's portfolio of SLEDs provides customers with the optimum balance of price, time to market, performance and size. Contact: Gene Covell, Director of Sales, covell@exalos.com.

## Fairfield Crystal Technology, LLC #309

8 S End Plz, New Milford, CT, 06776

860/354-2111; fax 860/354-3093

atimmerman@fairfieldcrystal.com; www.fairfieldcrystal.com

Fairfield Crystal Technology specializes in growing and manufacturing high-purity single-crystal material for the optical and semiconductor industries. For the optical community we are currently producing single crystal CaF2, MgF2 and BaF2 crystals used in laser optics, microlithography and HDTV-zoom lenses. We also are producing high-purity (99.999%) vacuum-melted MgF2 and BaF2 deposition material for your coating needs. Contact: Andy Timmerman, Manager.

### Fiber Optic Center, Inc.

28 Centre St, New Bedford, MA, 02740-6322 508/992-6464; fax 508/991-8876 sales@focenter.com; www.focenter.com

10

## Fiberguide Industries, Inc.

SPIE Corporate Member

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1 Bay St, Stirling, NJ, 07980 908/647-6601; fax 908/647-8464 info@fiberguide.com; www.fiberguide.com

New Product: Optical Fiber Patch Cords and Fiber Optic Cables.

Fiber Optic Solutions company to OEM with line of standard and custom multi mode (including Hard Clad), single mode and graded index optical fibers from UV to NIR; temperatures from -269°C to +700°C. Design, prototype and manufacture custom assemblies from single fibers through multi-furcated input/outputs containing thousands of fibers arranged randomly or distinctively mapped. Design and manufacture 2D arrays and linear arrays. FDA registered as Contract and Custom Device Manufacturer. Contact: Konrad A. Lisi, Director Marketing and Sales, klisi@fiberguide.com; Ron Atanesian, Eastern Regional Sales Manager, ratanesian@fiberguide.com.

### Galvoline

#### **#226**

#226

#431

#423

#321

Clivo De Cinna 196, Rome, Italy, 00136 39 0 635402933; fax 39 0 635402879 galvoline@bluehilloptical.com; www.galvoline.it

## GEOMATEC Co. Ltd.

9F The Landmark Tower Yokohama, 2-2-1 Minatomirai Nishi-ku, Yokohama, Japan, 220-8109

81 45 222 5721; fax 81 45 222 5731

geomatec@bluehilloptical.com; www.bluehilloptical.com/geomatec.htm GEOMATEC designs and produces high quality scan lenses and beam expanders for 1064nm, 532nm and 355nm applications. Beam expanders are available in fixed and variable ratio models with focus control. Scan lenses offer exceptional quality and uniformity at attractive prices. Please visit for more information. Contact: Phil Barrows.

## Hamamatsu Corp.

#### SPIE Corporate Member

360 Foothill Rd, Bridgewater, NJ, 08807-2932 908/231-0960; fax 908/231-0405

sales@hamamatsu.com; www.hamamatsu.com

Hamamatsu is the proven leader in the photonics industry. For more than 50 years, we have been unsurpassed in our number of innovations and dedication to ongoing research and development. We offer a vast range of products that are known around the world for quality and reliability as well as their ability to be customized to meet the exact specifications for all industries that use photonics components and systems to meet their goals.

Headwall Photonics, Inc.

#### SPIE Corporate Member

601 River St, Fitchburg, MA, 01420 978/353-4100; fax 978/348-1864

#### information@headwallphotonics.com; www.headwallphotonics.com New Product: Hyperspec SWIR Imaging Sensor with spectral range of 1000nm to 2500nm.

Design, manufacture of optical instruments for OEM customers in analytical, defense and telecommunications industries. Products integrated spectral sensors, spectrometer modules & original holographic diffraction gratings. Specialization-integration of detectors and spectral engines for application-specific performance. Multichannel Raman, hyperspectral imaging systems, micro-spectrometers, Low PDL gratings. Highest optical performance, low stray light, small form factor & rapid prototyping. Contact: Jay Zakrzewski, Business Development; Kirk Grim, Sales.

spie.org/events/oe • Tel: +1 360 676 3290 • spie@spie.org

#519

#### oe06 ex ad v7



## Hellma International, Inc.

#### SPIE Corporate Member

80 Skyline Dr, Plainview, NY, 11803 516/653-2000; fax 516/939-0555

info@hellmausa.com; www.hellmausa.com

#### New Product: MCS CCD Spectrometer.

Manufacturer of Hellma Optics, Photometer Cells and Accessories, Fiber Optic Immersion Probes, Calibration Standards, Cylindrical and Flat Optics, Beam Splitters and Mirrors for Laser and other applications. Unmatched selection of stock and custom Cells. Supplier of Heraeus Light Sources including Deuterium, Hollow Cathode, Photoionization, Spectral Line; Zeiss MMS/MCS Monolithic Miniature Spectrometer modules covering 190-2200nm in combination with 16 bit S/N Tec5 Interface electronics. Contact: Ed Roth, Sales Engineer, eroth@hellmausa.com.

## Hinds Instruments, Inc.

3175 NW Aloclek Dr , Hillsboro, OR, 97124 503/690-2000; fax 503/690-3000

sales@hindsinstruments.com; www.hindsinstruments.com

Hinds Instruments manufactures instrumentation for Stokes polarimetry, high speed optical chopping and other polarization modulation applications. Our core technology, the photoelastic modulator (PEM), is an integral part of each instrument. The PEM operates in the deep UV to far-IR spectral regions and is the ideal polarization modulation device for high performance applications in ellipsometry, linear & circular dichroism, rheology, spectroscopy and MOKE. Contact: Amanda Bryan, Product Manager.

#### id Quantique SA

Chemin de la Marbrerie 3, Carouge, Switzerland, CH-1227

41 22 301 83 71; fax 41 22 301 83 79

sales@idquantique.com; www.idquantique.com

New Product: id201: A NIR (900 - 1700 nm) Single Photon Detection Module with adjustable quantum efficiency!

id Quantique is a Swiss company specialized in photon counting. Its product lines include the id200: A NIR (900 - 1700 nm) Single Photon Detection Module with single- or multimode fiber input; and the id100: A VIS (350 - 900 nm) Single Photon Detection Module available both with multimode fiber as well as free space input. Other products are: Short Pulse Laser Source at telecom wavelength, Quantum Key Distribution (QKD) systems and Quantum Random Number Generator (QRNG).

## IMT Masken und Teilungen AG #306

Im Langacher, Greifensee, Switzerland, CH-8606 41 1 943 1900; fax 41 1 943 1901 www.imtag.ch

## Intelligent Optical Systems, Inc. #511

2520 W 237th St, Torrance, CA, 90505 310/530-7130; fax 310/530-7417 tcastro@intopsys.com; www.intopsys.com

## International Light Technologies Inc.

## #425

10 Technology Dr, Peabody, MA, 01960 978/818-6180: fax 978/818-6181

sales@intl-lighttech.com; www.intl-light.com

#### New Product: ILT400 profiling belt radiometer, ultra-stable all soldstate, rechargeable and only \$795.

International Light and Gilway Technical Lamp have merged their operations in Peabody, MA. Since 1965 International Light has been solving the inherent difficulties in light measurement through the design and manufacture of a wide range of light measuring instruments. Formed in 1969 Gilway has provided customers with off the shelf and customized solutions across a full spectrum of light sources, including UV, Visible, IR lamps, high power LEDs, modules and power supplies. Contact: Jill Fowler, Sales Manager, ilsales@intl-lighttech.com.

#### **IntlVac**

#325

#311

#401

#427

6-247 Armstrong Ave, Georgetown, ON, Canada, L7G 4X6 905/873-0166; fax 905/873-0168

sales@intlvac.com; www.intlvac.com

Intlvac manufactures a variety of systems for Physical Vapor Deposition. The Nanochrome<sup>®</sup> and Nanoquest, suitable for R&D and production coating of optical components, sensors and plastics. Nanochrome<sup>®</sup> are Electron Beam or Magnetron Sputter Thin Film Deposition Systems. Nanoquest are Ion Beam Sputtering and Etch systems. Intlvac also provides process development support for Sputtering, Ion Beam etch and ion assisted evaporation from our inhouse development laboratory. Contact: Dino Deligiannis, President; Greg Dawn, Sales.

## Krell Technologies

**#532** 

1126 Campus Dr W, Morganville, NJ, 07751 732/617-7091; fax 732/617-7092 sales@krelltech.com; www.krelltech.com

## Lambda Research Corp. #327

SPIE Corporate

25 Porter Rd, Littleton, MA, 01460-1434 978/486-0766; fax 978/486-0755

sales@lambdares.com; www.lambdares.com

## New Product: Demo TracePro 4.0, optical software that includes photo-realistic rendering and fluorescence.

Lambda Research provides optical engineering solutions by developing world-class optical software programs and providing expert optical engineering consulting. Our software programs include: OSLO, for optical design and analysis of image-forming systems, TracePro, for stray-light analysis and illumination design and TracePro Bridge™ for SolidWorks, for 3D MCAD interoperability with optical software.

## Laser Compliance, Inc.

4666 Oxford Way, Bountiful, UT, 84010 801/292-2309; fax 801/292-2415

casey@lasercompliance.com; www.lasercompliance.com Laser Compliance helps US and International laser product manufacturers make their products legal for sale and import into the United States. We can handle all of the regulatory issues and paperwork to make your product legal for sale and/or importation into the US. You can focus on your work and we make your product legal for you! Contact: Casey Stack, President; Phil Barrows, Sales, phil@lasercompliance.com.

spie.org/events/oe • Tel: +1 360 676 3290 • spie@spie.org

## LASER COMPONENTS IG, Inc.

SPIE Corporate Member

9 River Rd, Hudson, NH, 03051 603/821-7040; fax 603/821-7041 info@laser-components.com; www.lasercomponents.com

## New Product: SI APD's are a "Perfect Match" to our Pulsed Laser Diodes at 850 nm & 905 nm.

Provides high power laser optics from 193nm to 10.6um. IR lead salt diode lasers (3-25 um) and SPECDILAS selected diode lasers in the range of 750 to 2050nm, including VCSEL's and DFB's. Quantum Cascade Lasers and Flexpoint miniature laser modules. Glass polarizing filters, laser safety eyewear, fiberoptic assemblies and color sensors. Spectroscopic instrumentation including NIR SPECTROMETERS and Echelle spectrum analyzers. Avalanche Photo Diodes and Pulsed Laser Diodes. Contact: Gary Hayes, General Manager/Chief Executive Officer, hayes@laser-components.com; Valerie King, Sales/Marketing, king@laser-components.com.

## **Laser Focus World**

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#324

#305

SPIE Corporate Member

PennWell Publishing, 98 Spit Brook Rd, Nashua, NH, 03062-2810 603/891-0123; fax 603/891-0574

www.laserfocusworldcom

LASER FOCUS WORLD is a monthly magazine for engineers, researchers, scientists, and technical managers, providing comprehensive global coverage of optoelectronic and photonic technologies, applications and markets.

## LEISTER Technologies, LLC

#### SPIE Corporate Member

1253 Hamilton Pkwy, Itasca, IL, 60143 630/760-1000; fax 630/760-1001 info@leisterusa.com; www.axetris.com

## New Product: Microlens arrays for fiber collimation, optical switching, and laser diode collimation.

LEISTER Technologies develops and manufactures microlens arrays, diffractive optics and infrared sources. Our standard and OEM solutions include optics for Fiber Array Collimation (DWDM, MUX, OADM, OXC), Laser Diode Collimation (SAC, FAC, and Silicon lenses), Shack-Hartmann Sensors and Optical Switching. Optics available in fused silica, silicon, and polymer. In an ISO 9001:2000 certified proccess. Combined with 50 years of manufacturing experience, makes Swiss-based LEISTER a reliable supplier. Contact: John Vrakas, Optical Engineer, Leister - Axetris Microsystems Sales.

### **Logitech Product Group**

#419

24766 Detroit Rd, Westlake, OH, 44145 440/871-0071; fax 440/871-8188

info@logitech-us.com; www.logitech-us.com

Logitech manufacturers high precision sawing, lapping and polishing equipment, as well as tailored research and small scale production systems for substrate back thinning, polishing GaAs, InP, Sapphire, Silicon, other semiconductor wafers, electro-optic crystals, ceramics, waveguides, laser rods and optical components. Logitech also offers a full range of polishing consumables for various applications. Visit our table #419 at Optics East 2006. Contact: Kristen Mallardi, Account Representative, kristen.mallardi@logitech-us.com; Keith Torrance, Executive Account Representative, keith.torrance@logitechus.com.

## **Lumics GmbH**

Carl-Scheele-Str 16, Berlin, Germany, 12489 49 30 678 06 76 20; fax 49 30 678 06 76 26 george.schaefer@lumics.com; www.lumics.com

New Product: 90W fiber bundle laser module at 915nm.

Lumics GmbH, based in Berlin, Germany is specialized in fiber coupled laser devices. The product range includes fiber coupled modules in 14pin BTF, Mini DIL and TO220 designs and laser systems for the use in optical communication networks, analytical/medical instruments and industrial laser applications. The company is specialized in development and production of laser devices in the range from 800nm to 1100nm wavelength. Contact: Madlen Arend, Sales Assistant, Madlen.Arend@lumics.com.

## Luminit Corp.

20600 Gramercy PI #203, Torrance, CA, 90501 310/320-1066; fax 310/320-8067

www.luminitco.com

## New Product: Glass-on-Glass Diffuser for High Power/High Temperature Applications.

Luminit is committed to offering our customers added value lighting design solutions that incorporate high brightness LEDs, innovative secondary optics and custom engineered diffusers. Luminit operates in a 25,000 square foot state-of-the-art facility housing engineering, holography labs and manufacturing floor. Luminit has commercial experience that covers areas including illumination system design, micro-optics, holography, mechanical design, optical process engineering and manufacturing. Contact: Suleyman Turgut, Global Sales Manager, sturgut@luminitco.com.

## Luna Technologies

2020 Kraft Dr Ste 2000, Blacksburg, VA, 24060 540/961-5190; fax 540/961-5191

solutions@lunatechnologies.com; www.lunatechnologies.com

LUNA Technologies specializes in fiber-optic test equipment for component and module characterization and for distributed fiber-optic sensing. Our award-winning optical fiber test and measurement product line includes the Optical Vector Analyzer (OVA) and the Optical Backscatter Reflectometer (OBR): Integrated tools for loss, dispersion, polarization, distributed temperature and strain sensing, high-resolution OTDR analysis and inspection of fiber components, modules and networks. Contact: Jim Mirabile, Director of Sales and Support - Eastern US and Canada, mirabilej@lunatechnologies.com; Brian Soller, Business Unit Director, sollerb@lunatechnologies.com.

### Matrix, Inc.

One Catamore Blvd, East Providence, RI, 02914

401/434-3040; fax 401/434-3822

#### scot@matrixinc.net; www.matrixincorporated.com

## New Product: Micro-molded catheter tip for fiber optic device used for medical imaging.

Matrix Incorporated is a precision injection molder specializing in optics and light pipes, micro molding, insert molding for medical, defense, automotive and electronics applications. Matrix also provides device assembly, FDM rapid prototype service and mold flow analysis of 3D model part design. Contact: Scot MacGillivray, Account Manager; John Medgyesy, Vice President Sales, JSM@matrixinc.net.

12

#### laser-components.com; w Product: SI APD's are a

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## Max Levy Autograph, Inc.

#### SPIE Corporate Member

220 W Roberts Ave, Philadelphia, PA, 19144-4298 215/842-3675; fax 215/842-3637

sales@maxlevy.com; www.maxlevy.com

New Product: Max Levy Autograph introduces a multi-function target to test and characterize large format lenses.

Max Levy Autograph specializes in ultra-precision patterned optical components, NIST traceable metrology standards, metrology scales and calibration grids. Major capabilities provide component or artifacts within these products lines: Small optics and components, electroforming, calibration grid plates and services, photochemical etching, film products and micro-contouring/machining.

### Meadowlark Optics, Inc.

5964 Iris Pky, PO Box 1000, Frederick, CO, 80530 303/833-4333; fax 303/833-4335 sales@meadowlark.com; www.meadowlark.com

#### **MEMS Optical Inc.**

SPIE Corporate Member

205 Import Cir, Huntsville, AL, 35806 256/859-1886; fax 256/858-5890 info@memsoptical.com; www.memsoptical.com

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#509

Via Stradivari 4 , Bolzano, Italy, 39100 514/694-0336; fax 514/694-8535

**Micro Photon Devices** 

sales@optoecomponents.com; www.microphotondevices.com Micro Photon Devices is the manufacturer of photon counting devices based on the technologies developed at Politecnico di Milano. Micro Photon Devices is also available to develop custom designs and specific applications related to photon counting detection technology. Contact: Nick Bertone, , Nick.Bertone@optoecomponents.com.

## **Moulded Optics GmbH**

Steinstr 13-15, Schoeffengrund, Germany, 35641 49 6445 6000 0; fax 49 6445 6000 40 info@mouldedoptics.com; www.mouldedoptics.com

New Product: Precision molded glass micro half-ball lenses in diameter sizes of 3mm, 4mm, 5mm and 6mm.

Moulded Optics GmbH will be displaying many types of precision molded glass optical components from 2mm to 100mm sizes including singlet, aspheric, bubble, cylindrical, fly's eye array, free form, fresnel, half-ball, light pipe, plano, prismatic and spherical lenses; concave first surface, flat, spherical and free form mirrors; dispersing, dove, penta, porro, roof and wedge prisms; ellipsoidal, multi-facetted, parabolic and prismatic reflectors; flat, free form and spherical windows. Contact: Martin Pfeil, Managing Director; Bruce Nielsen, Vice President, Mouldedoptics@aol.com.

## MPA Crystal Corp.

#### SPIE Corporate Member

#400

#506

#528

#413

1032 Irving St #968, San Francisco, CA, 94122 415/681-2185; fax 415/681-0787

pmpa@mpa-crystal.com; www.saifei.com

## New Product: Sapphire optics, Quartz, Optical glass, Silica, Germanium and Coating.

Specializes in processing fine-precision crystal optics mainly made of sapphire and produced to customer's specs. Also provides optics made of Quartz, Optical glass, Fused silica, Single silica and Germanium. Coating is available as well. Products include Windows, Substrates, Lenses, Prisms, Rods, Spheres, Cylinders and more. Contact: Pauline Liang, Chief Executive Officer.

## National Reconnaissance Office #404

14675 Lee Rd, Chantilly, VA, 20151-1715 703/808-2769; fax 703/808-2646 dii@nro.mil; www.dii.westerfields.net

#### New Product: The National Reconnaissance Office's Director's Innovation Initiative.

The National Reconnaissance Office's Director's Innovation Initiative invests in advanced technologies, foster innovation and provides seed funding to push the boundaries of technology to dramatically improve our satellite reconnaissance capabilities. It presents an opportunity for developers not traditionally associated with the NRO to participate in building the National Reconnaissance Office of the 21st Century. Contact: Major Brian Oelrich, USAF, Program Manager.

#### **NEOARK Corp.**

10-6 Chayamachi , Kita-Ku, Osaka, Japan, 530-0013

81 6 6371 3527; fax 81 6 6376 4560

osaka@neoark.co.jp; www.neoark.co.jp

NEOARK Corporation designs and produces high performance lasers and optical instruments for some of the most demanding applications worldwide. NEOARK products include acetylene stabilized diode lasers used as optical frequency reference standards, iodine stabilized helium neon lasers and other varieties of helium-neon lasers. Neoark also produces diode lasers, precision content gas cells and optical instruments. Please visit with questions and applications. Contact: Phil Barrows, neoark@bluehilloptical.com.

## New England Fiberoptic Council #502

PO Box 67228, Chestnut Hill, MA, 02467 617/548-6332; fax 617/507-6397 info@nefc.com; www.nefc.com

O/E Land Inc.

#421

#226

4321 Garand, Saint-Laurent, QC, Canada, H4R 2B4 514/334-4588; fax 514/334-0216 info@o-eland.com; www.o-eland.com

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Tuesday/Wednesday Dessert/Coffee Break Sponsor

**Ocean Optics, Inc.** 

SPIE Corporate Member

830 Douglas Ave, Dunedin, FL, 34698-5761 727/733-2447; fax 727/733-3962

info@oceanoptics.com; www.oceanoptics.com

New Product: The USB4000 spectrometer has enhanced electronics, improved resolution & faster integration times.

Ocean Optics, is the leader in optical sensing and spectroscopy solutions. We are expanding the frontiers of optical sensing, making it an innovative foundation where life-changing ideas are built. With diverse applications in chemistry, biological research, environmental monitoring and education, our extensive line of complementary technologies include spectrometers, sampling accessories, sensors and optics. Visit our website, OceanOptics.com for more information. Contact: Ocean Optics Application Scientists; Ocean Education, Education@OceanOptics.com.

## **OFS**—Specialty Photonics Div.

SPIE Corporate Member

55 Darling Dr, Avon, CT, 06001 860/678-0371; fax 860/674-8818

info@specialtyphotonics.com; www.specialtyphotonics.com OFS Specialty Photonics Division is the global leader in specialty optical fiber and specialty optical fiber based devices development and manufacturing. Its products enable everything from eye surgery to optical networks on military aircraft to ultra long haul DWDM and metro telecom networks. OFS has a proven track record of being first in the industry with application specific fibers, optical connectors, ribbon cables, erbium doped fibers, Raman fiber lasers and more. Contact: Pete Suttmeier, Account Executive, psuttmeier@ofsoptics.com; John Earnhardt, Sales Manager,

jearnhardt@ofsoptics.com.

## Olympus Micro Imaging

One Corporate Dr, Orangeburg, NY, 10962 845/398-9400; fax 845/398-9443 www.olympusmicroimaging.com

### **ONTAR Corp.**

SPIE Corporate Member

9 Village Way, North Andover, MA, 01845-2000 978/689-9622: fax 978/681-4585 sales@ontar.com; www.ontar.com

## Optical Society of America

2010 Massachusetts Ave NW, Washington, DC, 20036 202/223-8130; fax 202/223-1096 custserv@osa.org; www.osa.org

## **Optics for Hire**

SPIE Corporate Member

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nick.bertone@optoecomponents.com; www.optoecomponents.com Specialist in Photon Counting Detection. OEC offers: Photon Counting Detectors with high photon detection effeciencies, low dark counts and less than 50ps timing resolution from Micro-Photon-Devices, EM-CCD and intensified CCD with near Photon Counting capabilities from Phonic-Science and TCSPC electronics from Picoquant. Contact: Nick Bertone, President, nick.bertone@optoecomponents.com; Natalie Raymond, Marketing, atalie.raymond@optoecomponents.com.

## **OptoHub Co., Ltd.**

305 Live Tower Musashi Urawa, 7-6-8 Bessho Minami-Ku Saitama-Shi, Saitama, Japan, 336-0021

81 48 844 8899; fax 81 48 844 8902

info@optohub.com; www.optohub.com

#### New Product: High power 980 nm laser diode pump.

Specialty optical devices and precision packaging for telecom, instrumentation, medical and industrial markets. Capabilities include: precision optical mounting, alignment of filters, collimators and lenses; integration of laser diodes and photodiodes, and optical beam coupling. Standard products include: erbium doped fiber amplifiers, laser diodes and thin film filters for local access, DWDM and CWDM applications Contact: Andy Spector, Consultant, andy@amsphotonics.com.

## **Optometrics Corp.**

8 Nemco Way, Ayer, MA, 01432 978/722-1700; fax 978/772-0017

sales@optometrics.com; www.optometrics.com

Optometrics is a worldwide supplier of high quality components including gratings, filters, laser optics, monochromators and specialized optical systems and software.

## PerkinElmer Life & Analytical Sciences

710 Bridgeport Ave, Shelton, CT, 06484 203/925-4600

productinfo@perkin-elmer.com; www.perkinelmer.com PerkinElmer is a global technology leader providing products and services to customers in health sciences and other advanced technology markets that require innovation, precision and reliability. We provide scientific instruments, consumables and services to the pharmaceutical, biomedical, environmental testing and industrial markets. We have a broad global sales and service network, with approximately 2,500 representatives operating in 45 countries, and marketing its products in 125 countries. Contact: Jennifer Swift, Event Specialist, Territory Marketing, jennifer.swift@perkinelmer.com.

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#312

## Photon Engineering, LLC

## SPIE Corporate Member

440 S Williams Blvd Ste 106, Tucson, AZ, 85711 520/733-9557; fax 520/733-9609 info@photonengr.com; www.photonengr.com

New Product: Our new FRED Turbo edition features multi-threading algorithms to raytrace faster on multiple CPUs.

FRED 5.90 is the premier proven optical engineering software to visualize and solve today's leading edge optical engineering problems. FRED is an easy to use 3D virtual prototyping CAD environment that reduces time and costs to develop and prototype new products and find problems and revise older products. Import or create any CAD model directly in FRED and then propagate incoherent rays or coherent beams reflecting, refracting, scattering, diffracting or absorbing light at any surface. Contact: Donna Hart, Sales Manager, donnah@photonengr.com; Carolyn Johnson, Sales Manager, carolynj@photonengr.com.

## Photonics Online

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erupp@vertmarkets.com; www.photonicsonline.com

New Product: With our FREE newsletter, you'll get the latest news, product offerings and industry updates.

Photonics Online - Where the future of photonics is found. Contact: Ed Rupp, Publisher.

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photonics@laurin.com; www.photonics.com

Photonics Spectra is the leading photonics magazine serving industries that use photonic technology: Lasers, imaging, fiber optics, optics, electro-optics and photonic component manufacturing. It presents the latest news articles and in-depth reports on photonics technology. It is distributed free to those who use or apply photonics.

## PI (Physik Instrumente) LP

SPIE Corporate Member

16 Albert St, Auburn, MA, 01501 508/832-3456; fax 508/832-0506

info@pi-usa.us; www.pi-usa.us

The global leader in ultrahigh-precision motion control, providing the largest selection of high-dynamics nanopositioning & scanning systems and piezoelectric actuators for OEM and research. Superior quality, ISO9001 certified since 1994, 30+ years experience, custom designs. EU-certified electronics, global support. Contact: James Gareau, Director of Sales East Region; David Steinberg, Director of Sales West Region.

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## **PicoQuant GmbH**

Rudower Chaussee 29, Berlin, Germany, 12489 514/694-0336; fax 514/694-8535

sales@optoecomponents.com; www.picoquant.com

PicoQuant is the leading supplier of picosecond pulsed diode lasers and intensity modulated diode lasers up to the GHz range and instrumentation for time-correlated single photon counting. Based on these core technologies, PicoQuant also builds complete systems for fluorescence lifetime measurements in sensitive analysis down to the single molecule. Contact: Nick Bertone,

Nick.Bertone@optoecomponents.com.

#### Polymicro Technologies LLC #317

#### SPIE Corporate Member

18019 N 25th Ave, Phoenix, AZ, 85023-1200 602/375-4100; fax 602/375-4110 sales@polymicro.com; www.polymicro.com

Polymicro manufactures multimode, step-index fused silica optical fibers with polyimide, acrylate and silicone buffers; non-solarization optical fibers; IR hollow silica waveguides; broad spectrum fibers; fiber optic cables and assemblies; high strength, high temperature flexible fused silica capillaries; square capillaries; light guiding capillaries; custom precision silica and quartz rod and tubing pieces; custom shaped rod and tubing; multilumen tubing; telecom ferrules and sleeves.

Power Technology, Inc. #318

#### SPIE Corporate Member

PO Box 191117, Little Rock , AR, 72219-1117 501/407-0712; fax 501/407-0036 sales@powertechnology.com; www.powertechnology.com

#### Precision Optics Corp. #524

## SPIE Corporate Member

22 E Broadway, Gardner, MA, 01440 800/447-2812; fax 978/630-1487 info@poci.com; www.poci.com

New Product: Lenses & prisms to sizes as small as .1mm using our proprietary micro-precision<sup>™</sup> technology.

For 25 years, Precision Optics Corporation has provided cutting edge optics for medical and industrial applications. Only at Precision Optics is there under one roof the ability to design, prototype, and manufacture in house custom micro optical systems & components for imaging of the body's smallest compartments and tissues including lenses, prisms, thin films coatings, optical assemblies, endoscopes, stereoendoscopes, beamsplitters, couplers, camera adapters and fiber optic assemblies. Contact: Chuck Gerlowski, Director of Business Development, cgerlowski@poci.com.

#### **Rainbow Research Optics, Inc.** #516

#### SPIE Corporate Member

4880 Ironton St Unit K. Denver, CO, 80239 303/371-3000; fax 303/371-1333 a.skaggs@rroptics.com; www.rainbowoptics.com

## **Raylase AG**

Argelsrieder Feld 2-4, Wessling, Germany, 82234 49 8153 8898 0; fax 49 8153 8898 10 info@raylase.de; www.raylase.de

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## General Refreshment Sponsor

#### **RMI Rocky Mountain Instrument** #322

#### SPIE Corporate Member

106 Laser Dr, Lafayette, CO, 80026 303/664-5000; fax 303/664-5001 sales@rmico.com; www.rmico.com

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## RoMack, Inc.

#310

SPIE Corporate Member PO Box 615, Lightfoot, VA, 23090 757/258-4805; fax 757/258-4694 contact@romackfiberoptics.com; www.romackfiberoptics.com

#### Conference Bag Insert Sponsor

## **RSoft Design Group**

#216

#319

#### SPIE Corporate Member

400 Executive Blvd Ste 100, Ossining, NY, 10562 914/923-2164; fax 914/923-2169

info@rsoftdesign.com; www.rsoftdesign.com

New Product: RSoft Component Design Suite for communications, optoelectronics and semiconductor manufacturing.

RSoft is the worldwide leader in photonics design automation software and serves several industries including optical communication, optoelectronics and semiconductor manufacturing. Within optical communications, RSoft has a full range of design, optimization and planning tools. RSoft also provides award-winning design tools for passive and active optoelectronics components and subsystems as well as advanced electromagnetic modeling software for optical metrology and lithography. Contact: Zhengyu Huang, Vice President Sales and Business Development, zhengyu@rsoftdesign.com; Enrico Ghillino, Product Manager, Optical Systems, enrico@Rsoftdesign.com.

#### Santec

433 Hackensack Ave, Hackensack, NJ, 07601

201/488-5505; fax 201/488-7702

info@santec.com; www.santec.com

Santec is a leading manufacturer of Optical Components, Tunable Lasers and Optical Light Sources and Optical Test and Measurement Products. Optical Components include Variable Attenuators, Tap Photodetectors, Wavelength Lockers, WDM filters, Mux/Demux products, etc. Test and Measurement Products include Benchtop Tunable Lasers, Tunable Filters, Ultra-Wide Band Sources and more. Contact: Max Chang, Sales Engineer, Eastern USA, max@santec.com; Jonathan Evans, Sales Engineer, Western USA, jonathan@santec.com

### **SensL**

SPIE Corporate

Lee House Riverview Business Park, Bessboro Rd, Blackrock Cork, Ireland, 353 21 4350442 ; fax 353 21 4350447

sales@sensl.com; www.sensl.com

#### Servometer/PMG, LLC

SPIE Corporate Member

501 Little Falls Rd, Cedar Grove, NJ, 07009-1291 973/785-4630; fax 973/785-0756 info@servometer.com; www.servometer.com

### **SML Products Inc.**

#323

#### SPIE Corporate Member

240 Simpson Ave S, Bowmanville, ON, Canada, L1C 2J3 905/697-0504; fax 905/697-2165 info@smlproducts.com; www.smlproducts.com

16

## Spectroscopy Magazine

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Advanstar Communications, Bldg F 1st Fl 485 Route 1 South, Iselin, NJ, 08830 732/596-0276; fax 732/596-0003 www.spectroscopymag.com

## Spectrum Thin Films Corp.

#### SPIE Corporate Member

100 Knickerbocker Ave, Bohemia, NY, 11716 631/589-3502; fax 631/589-3514

info@spectrumthinfilms.com; www.spectrumthinfilms.com

New Product: IBS Sputtering Chamber, IR Spectrophotometer by Perkin Elmer, Thin Film Express, Optics Express.

As a leading manufacturer of high quality optics and optical coatings, we are committed to customer satisfaction. We serve a diverse range of customers from optical manufacturers, research organizations, laser manufacturers, NASA, medical industries and the military. With changing times our philosophy is "Just in Time Optics" featuring Thin Films Express and Optics Express. We can handle your job in a fast cost effective manner to meet your most demanding needs. Contact: Wayne Griffith, Sales & Marketing Manager,

wayne@spectrumthinfilms.com; Harry Sudwischer, Technical Sales, harry@spectrumthinfilms.com.

#### **SPIE Industry Resources**

#223

#226

PO Box 10, Bellingham, WA, 98227 360/676-3290; fax 360/647-1445

http://spie.org

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### Steinmeyer, Inc.

#308

217 Middlesex Tpke, Burlington, MA, 01803 781/273-6220; fax 781/273-6602

jskaltsas@steinmeyer.com; www.steinmeyer.com

Steinmeyer manufactures precision ground and rolled ball screws, in diameters from 3mm up to 125mm, with pitches from 0.5mm to 80mm. Our ball screws are available with single nuts, with or without preload and double nuts. All screws are manufactured to ISO/DIN standards or custom design. Steinmeyer also offers an extensive line of precision linear and rotary stages with and without controls.

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## StellarNet, Inc.

#### SPIE Corporate Member

14390 Carlson Cir, Tampa, FL, 33626 813/855-8687; fax 813/855-0394

contactus@stellarnet.us: www.stellarnet.us

New Product: 1. Dual-DSR spectrometer covers super range 200-1700nm,

2. NIRX-SR spectrometer covers 900-2200nm.

StellarNet manufactures extremely rugged UV-VIS and NIR spectroradiometers for measurements in the Lab or Field. Since 1995 we've been shipping portable instrumentation that delivers high S/N performance at a surprisingly low cost. Our flagship EPP2000C concave grating spec provides superb optical imaging with ultra low stray light that is comparable to high end systems costing thousands \$ more. SpectraWiz software enables a variety optical & light measurements. Contact: Ryan Flaherty, Principal Scientist, Instrument Sales, Ryan@StellarNet.us; Will Pierce, Chief Scientist, Instrument Sales. wPierce@StellarNet.us.

## Strasbaugh

#### SPIE Corporate

825 Buckley Rd, San Luis Obispo, CA, 93401 805/541-6424: fax 805/541-6425

csc@strasbaugh.com; www.strasbaugh.com

For over 50 years, STRASBAUGH has manufactured precision polishing systems, curve generators, edging machines and sawing equipment for the optics industry. Headquartered in San Luis Obispo, California with sales and service offices throughout the world, STRASBAUGH is proud to provide solutions for the photonics, aerospace, defense, telecommunications and semiconductor industries. Contact: Scott Riedinger, Sales Account Manager, sriedinger@strasbaugh.com; Gerard Pardeilhan, Optics Product Manager, gpardeilhan@strasbaugh.com.

## **Taylor & Francis**

#422

#325

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#218

325 Chestnut St Ste 800, Philadelphia, PA, 19106 215/625-8900; fax 215/625-2940 www.taylorandfrancis.com Contact: Rachel Zawada, Exhibits Coordinator, rachel.zawada@taylorandfrancis.com.

## tec5USA, Inc.

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#### Tecan Ltd.

Tecan Way, Granby Industrial Estate, Weymouth Dorset, United Kingdom, DT4 9TU 44 1305 765432; fax 44 1305 780194 sales@tecan.co.uk; www.tecan.co.uk

#### #417 **Technical Manufacturing Corp.**

15 Centennial Dr, Peabody, MA, 01960 978/532-6330; fax 978/532-2241 sales@techmfg.com; www.techmfg.com

#### #226 **Teem Photonics**

61 Chemin du Vieux Chene, Meylan, France, 38246 33 476 04 05 06; fax 33 476 04 03 02 sales@teemphotonics.com; www.teemphotonics.com

U.S. Naval Research Lab. #429

Code 1004.1. Washington, DC. 20375 202/404-2307: fax 202/767-1319 exhibits@utopia.nrl.navy.mil; www.nrl.navy.mil NRL established an Institute for Nanoscience at its main site in Washington, DC to conduct multidisciplinary research at the intersections of the fields of materials, chemistry, electronics and biology. The Institute is seen as the venue to bring together expertise from different disciplines in order to identify and exploit those crossdisciplinary opportunities which had not been previously accessible. Highlighted in the NRL booth are the facilities and recent accomplishments of the Institute. Contact: Richard Colton, Director, NRL's Institute for Nanoscience, rich.colton@nrl.navy.mil.

## Varian, Inc.

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## Vigo Systems S.A.

3 Swietlikow Str, Warszawa, Poland, PL-01-389

48 22 666 1410; fax 48 22 666 2155

info@vigo.com.pl; www.vigo.com.pl

Manufacturer of stock and custom MCT IR detectors both TE cooled and uncooled with single and multiple elements. Fast detectors for laser diagnostics. Sensitive detectors for analytical instruments. Contact: Jim Melnyk, Applications Engineer, melnyk@boselec.com.

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## Xi'an Huanic Corp.

#313

#300

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No 67 Jinye Rd Hi-tech Zone, No 25 Gaoxin 1st Rd, Xi'an Shaanxi, China, 710077

86 29 81881001; fax 86 29 81881011 wenhui@huanic.com

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## **ZEMAX** Development Corp.

3001 112th Ave NE Ste 202, Bellevue, WA, 98004-8017

425/822-3406: fax 425/889-4687 sales@zemax.com; www.zemax.com

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## **Product Categories**

#### Astronomy

Applied Surface Technologies Electron Tubes Fairfield Crystal Technology, LLC Hinds Instruments, Inc. O/E Land Inc. OptoElectronic Components Photon Engineering, LLC Photonics Online Polymicro Technologies LLC Santec

#### **Cameras and CCD Components**

Angstrom Sun Technologies Inc. Applied Surface Technologies Edinburgh Instruments Ltd Hamamatsu Corp. Hellma International, Inc. LEISTER Technologies, LLC National Reconnaissance Office Ocean Optics, Inc. Photonics Online tec5USA, Inc.

#### **Chemical & Biological Sensing**

Ahura Corporation Alpes Lasers Angstrom Sun Technologies Inc. **Electron Tubes** Fairfield Crystal Technology, LLC Headwall Photonics, Inc. LASER COMPONENTS IG, Inc. National Reconnaissance Office O/E Land Inc. Ocean Optics, Inc. **OptoElectronic Components** Photon Engineering, LLC Photonics Online Polymicro Technologies LLC Precision Optics Corp. RSoft Design Group Santec

#### **Clinical, Chemical and Biological** Instrumentation

Ahura Corporation Alpes Lasers Becker & Hickl GmbH Boston Electronics Corp. Hellma International, Inc. LASER COMPONENTS IG, Inc. O/E Land Inc. Ocean Optics, Inc. **OptoElectronic Components** Photonics Online Polymicro Technologies LLC Precision Optics Corp. Santec tec5USA, Inc.

#### Communications

Fiberguide Industries, Inc. Headwall Photonics, Inc. LASER COMPONENTS IG, Inc. LEISTER Technologies, LLC National Reconnaissance Office OFS-Specialty Photonics Div. OptoElectronic Components Photon Engineering, LLC Photonics Online Polymicro Technologies LLC RSoft Design Group

#### **Displays**

Angstrom Sun Technologies Inc. LASER COMPONENTS IG, Inc. Luminit Corp. Photon Engineering, LLC Photonics Online

#### **Distributor or Reseller**

Boston Electronics Corp. LASER COMPONENTS IG, Inc. O/E Land Inc. Ocean Optics, Inc. Photonics Online

#### **Electron-Beam Lithography**

Fairfield Crystal Technology, LLC IntlVac LASER COMPONENTS IG, Inc. Max Levy Autograph, Inc. Photonics Online

#### **Electronic Imaging Components,** Equipment, Systems

Angstrom Sun Technologies Inc. ChemImage Headwall Photonics, Inc. Hinds Instruments, Inc. LASER COMPONENTS IG, Inc. Ocean Optics, Inc. Photonics Online

#### **Electronics, Signal Analysis** Equipment

Angstrom Sun Technologies Inc. Becker & Hickl GmbH Edinburgh Instruments Ltd Electron Tubes Hellma International, Inc. Photonics Online tec5USA, Inc.

#### **EUV Lithography**

ASML Optics LLC Luminit Corp. Photonics Online RSoft Design Group

#### Fiber Optic Components, Equipment, Systems

Ahura Corporation Angstrom Sun Technologies Inc. Applied Surface Technologies Headwall Photonics, Inc. Hellma International, Inc. LASER COMPONENTS IG, Inc. LEISTER Technologies, LLC Logitech Product Group Ocean Optics, Inc. OFS - Specialty Photonics Div. Photonics Online Polymicro Technologies LLC Precision Optics Corp. RSoft Design Group Santec Steinmeyer, Inc. tec5USA, Inc.

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## **Product Categories**

#### Finished Optics, Filters, & Coatings, Optical Fabrication Equipment

Angstrom Sun Technologies Inc. Fairfield Crystal Technology, LLC Headwall Photonics, Inc. Hellma International, Inc. LASER COMPONENTS IG, Inc. Logitech Product Group Luminit Corp. Max Levy Autograph, Inc. Moulded Optics GmbH O/E Land Inc. Ocean Optics, Inc. Optometrics Corp. Photonics Online Polymicro Technologies LLC Precision Optics Corp. Santec

## High Speed Imaging and Sensing

Angstrom Sun Technologies Inc. ChemImage Hamamatsu Corp. Headwall Photonics, Inc. Hinds Instruments, Inc. LASER COMPONENTS IG, Inc. O/E Land Inc. Ocean Optics, Inc. OptoElectronic Components Photonics Online Santec tec5USA, Inc.

#### Illumination Engineering

Angstrom Sun Technologies Inc. Lambda Research Corp. LASER COMPONENTS IG, Inc. LEISTER Technologies, LLC Luminit Corp. Ocean Optics, Inc. Photon Engineering, LLC Photonics Online Santec

## Infrared Sources, Detectors, Systems

Alpes Lasers Angstrom Sun Technologies Inc. Boston Electronics Corp. Hamamatsu Corp. id Quantique SA International Light Technologies Inc. LASER COMPONENTS IG, Inc. LEISTER Technologies, LLC O/E Land Inc. Ocean Optics, Inc. OptoElectronic Components Photon Engineering, LLC Photonics Online Santec Vigo Systems S.A. Xi'an Huanic Corp.

#### Ion-Beam Lithography IntlVac

Photonics Online

#### Lasers and Other Light Sources, Laser Accessories, Laser Systems

Ahura Corporation Becker & Hickl GmbH Boston Electronics Corp. ChemImage Edinburgh Instruments Ltd Fairfield Crystal Technology, LLC Hellma International, Inc. International Light Technologies Inc. LASER COMPONENTS IG, Inc. National Reconnaissance Office O/E Land Inc. Ocean Optics, Inc. Photon Engineering, LLC Photonics Online Polymicro Technologies LLC RSoft Design Group Santec Xi'an Huanic Corp.

#### Law Enforcement Technologies

Ahura Corporation Headwall Photonics, Inc. LASER COMPONENTS IG, Inc. O/E Land Inc. Ocean Optics, Inc. Photonics Online Polymicro Technologies LLC

#### Life Sciences

Angstrom Sun Technologies Inc. Becker & Hickl GmbH Fiberguide Industries, Inc. Headwall Photonics, Inc. Helma International, Inc. LASER COMPONENTS IG, Inc. LEISTER Technologies, LLC O/E Land Inc. Ocean Optics, Inc. OptoElectronic Components PerkinElmer Life & Analytical Sciences Photonics Online Polymicro Technologies LLC Precision Optics Corp. Santec Steinmeyer, Inc.

#### Metrology, Inspection and Process Control

Angstrom Sun Technologies Inc. Electron Tubes Headwall Photonics, Inc. Hinds Instruments, Inc. Luminit Corp. Max Levy Autograph, Inc. O/E Land Inc. Ocean Optics, Inc. Photonics Online Santec tec5USA, Inc.

#### Nanotechnology

Angstrom Sun Technologies Inc. Applied Surface Technologies ChemImage Headwall Photonics, Inc. Logitech Product Group National Reconnaissance Office O/E Land Inc. Ocean Optics, Inc. Photonics Online PI (Physik Instrumente) LP Polymicro Technologies LLC RSoft Design Group Steinmeyer, Inc. U.S. Naval Research Lab.

#### **Non-Optical Lithography**

Luminit Corp. Photonics Online

#### **Optical Components**

Ahura Corporation Angstrom Sun Technologies Inc. ChemImage Fairfield Crystal Technology, LLC Hamamatsu Corp. Headwall Photonics, Inc. Hellma International, Inc. Hinds Instruments, Inc. LASER COMPONENTS IG, Inc. LEISTER Technologies, LLC Luminit Corp. Max Levy Autograph, Inc. Moulded Optics GmbH O/E Land Inc. Ocean Optics, Inc. OFS - Specialty Photonics Div. OptoElectronic Components Optometrics Corp. Photonics Online Polymicro Technologies LLC Precision Optics Corp. **RSoft Design Group** Santec Steinmeyer, Inc.

#### **Optical Detectors**

Ahura Corporation Edinburgh Instruments Ltd **Electron Tubes** Hamamatsu Corp. Headwall Photonics, Inc. Hellma International, Inc. Hinds Instruments, Inc. id Quantique SA LASER COMPONENTS IG, Inc. LEISTER Technologies, LLC National Reconnaissance Office O/E Land Inc. Ocean Optics, Inc. **OptoElectronic Components** Photonics Online **RSoft Design Group** Santec tec5USA, Inc. Vigo Systems S.A.

#### **Optical Fibers**

Angstrom Sun Technologies Inc. Applied Surface Technologies Hellma International, Inc. LASER COMPONENTS IG, Inc. LEISTER Technologies, LLC National Reconnaissance Office O/E Land Inc. Ocean Optics, Inc. OFS - Specialty Photonics Div. Photonics Online Polymicro Technologies LLC Precision Optics Corp. RSoft Design Group tec5USA, Inc.

#### **Optical Materials and Substrates**

Dynasil Corp. Fairfield Crystal Technology, LLC LASER COMPONENTS IG, Inc. Logitech Product Group Luminit Corp. National Reconnaissance Office O/E Land Inc. Ocean Optics, Inc. Optometrics Corp. Photonics Online RSoft Design Group

#### Optical Test and Measurement Equipment, Interferometer

Angstrom Sun Technologies Inc. Applied Surface Technologies ASML Optics LLC Hinds Instruments, Inc. LASER COMPONENTS IG, Inc. Logitech Product Group O/E Land Inc. Ocean Optics, Inc. Photonics Online PI (Physik Instrumente) LP Santec Steinmeyer, Inc. tec5USA, Inc.

#### **Optical/Laser Microlithography**

ASML Optics LLC Fairfield Crystal Technology, LLC Hinds Instruments, Inc. Luminit Corp. Max Levy Autograph, Inc. National Reconnaissance Office Photonics Online RSoft Design Group Steinmeyer, Inc. Xi'an Huanic Corp.

## **Product Categories**

#### **Optics Manufacturing**

Applied Surface Technologies ASML Optics LLC Fairfield Crystal Technology, LLC Headwall Photonics, Inc. Hellma International, Inc. International Light Technologies Inc.

LASER COMPONENTS IG, Inc. LEISTER Technologies, LLC Luminit Corp. Moulded Optics GmbH National Reconnaissance Office O/E Land Inc. Ocean Optics, Inc. Optometrics Corp. Photonics Online Polymicro Technologies LLC Precision Optics Corp. Santec Strasbaugh Xi'an Huanic Corp.

#### Photonics Equipment Manufacturer

Angstrom Sun Technologies Inc. Electron Tubes Headwall Photonics, Inc. Hellma International, Inc. LEISTER Technologies, LLC O/E Land Inc. Ocean Optics, Inc. OptoElectronic Components Photonics Online Strasbaugh Xi'an Huanic Corp.

#### Resist Technology and Processing

Photonics Online

#### Sensor & Sensor Systems

Ahura Corporation Angstrom Sun Technologies Inc. Electron Tubes Headwall Photonics, Inc. Hellma International, Inc. id Quantique SA International Light Technologies Inc. LASER COMPONENTS IG, Inc. LEISTER Technologies, LLC National Reconnaissance Office O/E Land Inc. Ocean Optics, Inc. OptoElectronic Components Photon Engineering, LLC Photonics Online Polymicro Technologies LLC RSoft Design Group tec5USA, Inc.

#### Services and Publications (Including Professional Societies)

Angstrom Sun Technologies Inc. OptoElectronic Components Photonics Online Photonics Spectra - Laurin Publishing Taylor & Francis

#### Software

Angstrom Sun Technologies Inc. ChemImage Lambda Research Corp. O/E Land Inc. Ocean Optics, Inc. Photon Engineering, LLC Photonics Online RSoft Design Group tec5USA, Inc. ZEMAX Development Corp.

#### Vacuum, Cooling, Gas Handling Equipment

LASER COMPONENTS IG, Inc. Photonics Online

#### X-Ray Lithography

Applied Surface Technologies Luminit Corp. Photonics Online RSoft Design Group Steinmeyer, Inc.

## General Information

#### **Exhibition Hours**

Hynes Convention Center,1st Floor, Hall A

 Tuesday, 3 October
 10:00 am to 5:00 pm

 Wednesday, 4 October
 10:00 am to 4:00 pm

#### **Registration and Information Hours**

Hynes Convention Center, 1st Floor, Hall A

Sunday 1 October
Monday 2 October7:30 am to 5:00 pm
Tuesday 3 October
Wednesday 4 October 7:30 am to 4:00 pm

For safety and security reasons, please be prepared to show a picture ID at Registration to receive your event badge.

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In the Meeting Room: For copyright reasons, recordings of any kind are strictly prohibited without prior written consent of the presenter in any conference session, short course or of posters presented. Each presenter being taped must file a signed written consent form. Individuals not complying with this policy will be asked to leave a given session and asked to surrender their film or recording media. Consent forms are available at the SPIE Audiovisual Desk.

In the Exhibition Hall: For security and courtesy reasons, photographing or videotaping individual booths and displays in the exhibit hall is allowed ONLY with explicit permission from on-site company representatives. Individuals not complying with this policy will be asked to surrender their film and to leave the exhibit hall.

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Within a three-block walk of the Hynes Convention Center are numerous parking garages totaling over 4,400 spaces. There is limited meter parking available around the Hynes and adjacent streets. Check the website www.massconvention.com for further parking garages.

The Sheraton Boston Hotel Parking Garage, 39 Dalton Street, operated by Auditorium Parking (617) 247-8006, is located across from the John B. Hynes Convention Center.

Cash or credit cards accepted and a parking attendant is on duty 24 hours/day.

#### Rates: \$4 for each half hour or:

Arrive 3:00 am -8:30 am & leave before 6:00 pm, \$17 Maximum

Arrive after 8:30 am & leave before 6:00 pm, \$22 Maximum

Arrive after 8:30 am & leave after 6:00 pm, \$26 Maximum, (24 hour rate) Arrive after 4:00 pm & leave before 6:00 am, \$10 Maximum

Rates are subject to change.

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#### Guest Parking at the Boston Marriott Copley Place

Valet Parking \$39 per 24-hour period, with unlimited in/out privileges Can be charged to the guest's room. Prices are subject to change without notice, and parking is based on availability.

#### Parking at The Copley Place Mall Complex

Self Parking Only - 3 Hours or less \$7 with validated ticket from any store in complex \$32 per 24-hour period. Cash and credit cards accepted - no checks.

Taxi Service: Taxi service is available 24 hours. Approximate travel time between Logan Airport and the Marriott Copley Place Hotel is 20 - 25 minutes depending on traffic. Taxi fare is approximately \$30.

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Hynes Convention Center and Boston Marriott Copley Place

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#### **Messages for Attendees**

Hynes Convention Center, Pre-function Hall A

Messages for attendees at the Optics East Symposium can be left by calling the Hynes Convention Center at (617) 954-2000 and asking for the SPIE Registration Desk. Messages will be taken during registration hours Sunday through Wednesday. Attendees should check the message board at the message center on a daily basis to receive their messages.

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Tuesday and Wednesday ..... 10:00 to 11:00 am; 3:00 to 4:00 pm

Coffee will be served during the morning and afternoon break. Please check the individual technical conference listings for exact times.

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