

REVIEW

LASER World of Photonics CHINA 2010

March 16th-18th, 2010, Shanghai, China

(cb) LASER World of Photonics CHINA, was held again in parallel to the electronica & Pro-ductronica China and the SEMICON China under the umbrella of the Shanghai International IT and Electronics Fair (SIIEF). This years LASER China showed remarkable growth figures: With 275 exhibitors from 17 countries the show set a new record (+25%). The trade fair also expanded its exhibition space by 27% to a total of 11,500 sqm. 25,243 visitors participated in this event (+15%). It is cer-

tainly a good idea to combine the related trade fairs on one place to achieve such a visibility for the LASER exhibitors.

The trade show was divided into five exhibition areas dedicated to the various sectors of the industry: lasers and optronics, laser systems for production engineering, manufacturing of optics, sensors, testing and measurement, and accessories and services.

Beside the trade show visitors had the chance to attend several scientific meet-

ings, such as the Conference on Laser Processes and Components (LPC 2010) with a focus on industrial applications and the Optics Frontier 2010, a meeting that looked at cutting-edge laser technologies in China.

The next LASER China will be held at Shanghai New International Expo Center, Shanghai, P.R. China, from 15–17 March 2011.

www.messe-muenchen.de

REVIEW

Photonics Europe 2010 in Brussels

April 12th–16th, 2010, Brussels, Belgium

(at) From April 12 to 16 the photonics community met at the SPIE Photonics Europe in Brussels. The program of the event was extensive; more than 2000 attendees were busy with intense networking and with visiting the various conferences, workshops and luncheons. Beside the congress the exhibition offered contact to more than 130 companies, institutes and initiatives from all sections of photonics.

The congress included no less than 19 conferences, featuring almost all fields of photonics. Some examples are biophotonics, metamaterials and photonics for solar energy systems. Furthermore, European funding policy and European initiatives such as Photonics21 were big issues at the meeting.

“Networking creates opportunity,” opening speaker Giorgio Anania of Cube Optics told the overflow crowd. Anania gave an overview of the accomplishments of Photonics21 since its founding in 2004, and credited the organization with helping photonics gain the status of “key enabling technology” with the European Commission.

The plenary speakers Stefan Hell of Max-Planck Institute for Biophysical Chemistry and Kishan Dholakia of the University of St. Andrews, reported on two specific areas where light is applied in ground-breaking research. They share the fascination that their results were seen as almost impossible



◀ **FIGURE:** Plenary speaker Stefan Hell presented new microscopic methods with subwavelength resolution. (Courtesy of SPIE)

just a few years ago. Hell described work with focused light in nanoscopy that overcomes the diffraction barrier and enables localization and pictures of individual molecules to be obtained. Dholakia talked about advances in micromanipulation that would enable such applications as drug delivery with light.

During the congress a number of prizes were awarded. For instance, the Photonics21 Student Innovation Awards were given to Natalie Vermeulen (Vrije Universiteit Brussels) and Sedat Nizamoglu (Bilkent Universität). The awards were sponsored by

Thales, SPIE Europe, and the European project ACCORD.

In the course of the conference “Biophotonics: Photonic Solutions for Better Health Care”, the award for the best poster presentation was given to R. Nika Razansky (TU München). The topic of her poster was: “High Resolution Single-Mode-Fiber-Based Sensor for Intravascular Detection of Fluorescent Molecular Probes”. The award was presented by Jürgen Popp (IPHT Jena, Universität Jena). It comes with a 500 Euro book voucher, sponsored by the Journal of Biophotonics and Wiley-VCH.

Last, but not least, the exhibition completed the congress. With some special areas such as Photonics Innovation Village and European Networks several smaller and larger partners from research and industry were given an excellent platform to present themselves and to make new contacts.

<http://spie.org/x12290.xml>

REVIEW

Laser Optics Berlin Celebrates 50 years of Lasers

March 22nd-24th, 2010, Berlin, Germany

(kp) A positive mood is returning to the photonics sector. That was the predominant view among exhibitors and visitors at Laser Optics Berlin 2010 – Trade Fair and Convention for Optical and Laser Technology. Many of the 135 exhibitors from 14 countries reported successful negotiations and expressed their optimism regarding follow-up business. There was also a positive reaction among those who took part in the congress and the forums. With 2,850 visitors the attendance was some ten percent higher than in 2008.

The increased international dimension of Laser Optics this year was due in particular to the presence of companies from Denmark, Finland, Norway and Sweden as well as from the Baltic states of Estonia, Lithuania

and Latvia. There were 35 exhibitors from the Baltic region on the combined stand of the “Baltic Sea Innovation Network Centres” (BaSIC), an EU-backed project. There were also 14 exhibitors from Russia.

A special highlight of the three-day event was certainly the session to commemorate the 50th anniversary of the invention of the laser. It was attended by such pioneers of laser research as Wolfgang Kaiser and Dieter Röss, who met with some of today’s leading researchers and with numerous participants in the Students’ Day at LOB.

Thomas Elsässer, Congress Chairman and Director of the Max Born Institute for Non-linear Optics and Short Pulse Spectroscopy: “The congress was a success and there was a positive response. I was particularly pleased

to see so many young people at the special plenary session to mark the 50th anniversary of the laser. The wide combination of subjects offered by the supporting programme was very effective, enabling us to reach entirely new groups of people at Laser Optics. For example the Terahertz Workshop attracted a great deal of interest.”

Beside fair and congress the organizers introduced attractive technical forums. A total of 10 such events included a focus workshop on microsystems technology, several technology forums, industry meetings and advanced training events.

The next Laser Optics Berlin will take place from 19 to 21 March 2012.

www.laser-optics-berlin.com

PREVIEW

OPTATEC – Optics Meets Solutions

June 15th–18th, 2010, Frankfurt, Germany

(ph) The Optatec – international trade fair for optical technologies, components, systems and manufacturing – comes up with a broad offering of products, information and communication for its 10th birthday. The organizers of this bi-annual event are confident to break the 500 exhibitors mark again, as already accomplished in 2008. Last Optatec saw 524 exhibitors from 24 countries and more than 5,500 visitors. As markets recover worldwide, a small growth is expected this year.

Optatec integrates current and future developments in the field of optical technologies such as fibre-optics, medical technology, safety technology, LED technology and photovoltaics.

Particularly, photovoltaics are in the focus right now, as Germany is at the risk of losing its rank on the global market to competing nations. In order to defend a leading role in the photovoltaic market it is necessary to both preserve a high innovative strength and cope with the economical challenge. And Optatec wants to make its contribution. Its aim is to depict the whole process chain of the optical industry – from research and development over production and installation to application and service.



FIGURE: Beside the trade show, the 10th Optatec offers again an attractive program of workshops, discussions and presentations. (Courtesy of P.E. Schall)

To achieve this aim, the Optatec includes extensive supporting events. Apart from the newly created theme park “Bildung + Wissenschaft” (education + science) and the Optatec exhibitor forum, the international EOS Symposium on Trends in Optical Technologies (ESTO 2010) of the European Optical Society takes place for the first time. In sessions of 90 to 120 minutes each, national and international experts from industry and academia will talk about research and application of

- Fiber Optic Technology in Astro Photonics

- LED Technology
- Materials for High-Precision Applications
- Medical Technology
- Photonics Research Funding
- Photovoltaics
- Safety Technology
- Standardization

Last but not least, SPECTARIS (the German industrial association for optical, medical and mechatronical technologies) organized again an analyst conference and a “CEO-Round-Table”.

www.optatec-messe.de



PREVIEW

Semicon West 2010 **SEMICON[®]**
West2010July 13th–15th, 2010, San Francisco, USA

(ph) Founded 1971, Semicon West is one of the leading events for the display of new products and technologies for microelectronics design and manufacturing. Last year, 17,801 qualified visitors came in to see 683 exhibiting companies. Semicon West features technologies from electronic design automation, to device fabrication (wafer processing), and to final manufacturing (assembly, packaging, and test). Semicon West is also a showcase for emerging markets and new technologies including micro-electromechanical systems (MEMS), photovoltaics (PV), flexible electronics and displays, nano-electronics, solid state lighting (LEDs), and related technologies.

Consequently, the exhibition is accompanied by a number of partner events fea-

turing these technologies. One of these events is the Intersolar North America. Consisting of a conference and an exhibition, it is considered to be the world-leading happening for solar energy/photovoltaics and will be held from July 12 through 15.

One of this year's novelties is the conjunct meeting with the IEEE/SEMI Advanced Semiconductor Manufacturing Conference (ASMC) from July 11 through 13. During the 20 years of its existence it has gained the top position on the list of international conferences on semiconductor production.

www.semiconwest.org

PREVIEW

International Conference on Ultrafast Phenomena **OSA[®]**July 18th–23th, 2010, Snowmass Village, USA

(ph) The 2010 International Conference on Ultrafast Phenomena will be the 17th in a series on advances in research on ultrafast science and technology. This year's conference will bring together a multi-disciplinary group sharing a common interest in the generation of ultrashort pulses in the picosecond, femtosecond, and attosecond regimes and their applications to studies of ultrafast phenomena in physics, chemistry, material science, electronics, biology, engineering, and medical applications. In addition, submissions involving "real world" applications of ultrafast technology are encouraged.

Managed by OSA, the well-renowned Optical Society of America, the event will

be packed with oral and poster contributions, featuring a significant number of invited speakers and experts in the field. Ursula Keller from the ETH Zurich, for instance, will talk about "Attosecond Angular Streaking and Tunneling Delay Time in Strong Laser Field Ionization".

The technical conference will be held throughout the entire time period of the event, whereas the accompanying tabletop exhibition is concentrated to July 20 through 23.

www.osa.org/meetings/topicalmeetings/up

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PREVIEW

SPIE Optics + Photonics

August 1st-5th, 2010, San Diego, USA



(ph) In August, the international photonics community meets again at the SPIE Optics + Photonics congress. It features 2,775 papers in optics, photonics, nano and solar.

The conference is divided into four sub-conferences, each of them headlined by one of the aforementioned fields: the SPIE NanoScience and Engineering is where metamaterials, plasmonics, carbon nanotubes, nano-engineering for PVs, solar hydrogen, and nanostructured thin films are

discussed. The Solar Energy and Technology conference is focused on the development of new solar-based energy sources, technologies, and systems. In the Photonic Devices and Applications event, one can hear the latest research in materials for OLEDs, OPVs, OFETs, LEDs, and detector devices. The largest sub-conference is the SPIE Optical Engineering and Applications, aiming at classical optical R&D, design, and engineering, as well as x-ray/EUV optics, re-

mote sensing, information processing, space optical systems, and illumination engineering.

Another main topic is green photonics, as the SPIE Optics + Photonics claims to be a leading conference on green photonics technologies such as energy, sustainability, conservation, and environmental monitoring.

<http://spie.org/optics-photonics.xml>

PREVIEW

Europhoton

August 29th-September 3rd, 2010 Hamburg, Germany

(ph) The EPS-QEOD Europhoton Conference, hosted by the Quantum Electronics and Optics Division of the European Physical Society, features the latest breakthroughs in the fields of solid-state, fiber and waveguided light sources.

In the solid state laser part, some topics are novel laser material concepts, growth, characterisation, and spectroscopic investigations of solid-state laser materials, upconversion, tunable, and ultrafast solid-state

lasers, and optically-pumped semiconductor lasers. In the area of fiber and waveguide devices, the issues of Bragg-grating fiber lasers, amplification in doped fibers, Raman amplifiers, power-scaling concepts for fiber and waveguide lasers, and non-linear materials and optical sources will be discussed.

Conference highlights are a public evening lecture by Robert L. Byer from Stanford University, related to the 50th birthday of the laser (LASERFEST) and a spe-

cial symposium on "High power lasers for materials processing". The accompanying table-top exhibition will be held from August 31st through September 2nd.

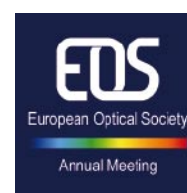
A highlight, especially aiming at participating students, is the Summer School on August 29th-30th.

www.europhoton.org

PREVIEW

EOS Annual Meeting 2010

October 26th-29th, 2010, Paris, France



(ph) For the third time the European Optical Society presents its Scientific Annual Meeting in the French capital alongside with the PRI-OPTO exhibition (October 26th-28th). This event combines the 30th edition of OPTO – a European tradeshow for all optics solutions –, the first annual meeting of the CNOP (French National Council on Optics and Photonics), and a French event series celebrating 50 years of laser, to come together at the EOS Annual Meeting 2010.

The conference consists of seven topical meetings on Biophotonics, Terahertz Science and Technology, Nanophotonics and Meta materials, Micro-Optics, Organic Pho-

tonics, Nonlinear Optics and Photonics, and the ICO/EOS Topical Meeting on Optics and Energy. This last meeting is organized by the EOS in cooperation with the International Commission for Optics ICO and sponsored by the International Union of Pure and Applied Physics (IUPAP) and comprises such diverse issues as plasmonic solar cells and optical properties of biofuels.

For the second time, EOS will dedicate a special session at its Annual Meeting to the "Grand Challenges of Photonics", focusing on the capabilities of photonics and the science of light. On October 27, this session will give participants the opportunity to hear from world-class speakers about tech-

nologies which are revolutionary, uncommon and not realizable to date, but can pave the way to future in optics and photonics.

Moreover, a lab tour on October 25 will bring interested participants to the Laboratoire Charles Fabry de l'Institut d'Optique near Paris, a famous a place for research in the basics of quantum optics.

In previous meetings, which took place in 2008 and 2006, more than 650 participants attended the event and the organizers are confident to reach that number again or maybe to even surpass it.

www.myeos.org/events/eosam2010