INDUSTRY EVENTS
Explore the business side of Photonics Europe
Explore the business side of Photonics Europe. These important sessions provide valuable information and networking opportunities needed to succeed in business.
### Daily Schedule of Events

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<th>Monday 14 April 2014</th>
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| 08:30 to 12:30 | INTERDISCIPLINARY WORKSHOP OF Biophotonics 2014  
Organized by the European Network of Biophotonics Photonics4Life | | |
| 09:00 to 17:00 | | Photonics Europe Industry Programme  
Chair: **Stephen G. Anderson**, SPIE (USA); **Peter Hartmann**, SCHOTT AG (Germany) | |
| 10:00 to 17:00 | | Photonics Europe Exhibition | Photonics Europe Exhibition |
| 14:00 to 17:30 | SCHOTT WORKSHOP ON  
The properties of optical glass and special optical materials  
Lecturers: **Peter Hartmann**, SCHOTT AG, (Germany); **Steffen Reichel**, SCHOTT AG, (Germany) | | |
| 13:30 to 17:30 | **FP7-STREP-SMARTFIBER WORKSHOP**  
**Recent Advancements in Fiber Bragg Grating Sensors and Interrogators**  
Chairs: **Dries van Thourhout**, Ghent Univ. and IMEC (Belgium); **Eli Voet**, Com&sens (Belgium) | | |
| 15:15 to 18:00 | **Finding Partners for Horizon 2020**  
Chair: **Anke Lohmann**, ESPKTN (United Kingdom) | | |
| 15:30 to 16:30 | | | DISCUSSION  
Getting Hired in 2014 and Beyond |

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Hear the latest technology and funding developments during the Industry Programme.

**MON. 14 APRIL 2014**

Free to all technical conference attendees; preregistration required.

SCHOTT WORKSHOP ON

The properties of optical glass and special optical materials

Lecturers: Peter Hartmann, SCHOTT AG, (Germany)
Steffen Reichel, SCHOTT AG, (Germany)

Optical glass is a key material for general technology. It is the material providing the essential function of imaging in precision optics, a ubiquitous discipline in scientific research, development, diagnosis and metrology in production processes.

SCHOTT offers an introduction to optical materials such as optical glass, special optical glass, filters from colored glasses or made by coating and the zero-expansion glass ceramic Zerodur.

The first part of the workshop concentrates on optical glass. An overview will be given of the glass types programme including eco-, classical-, low Tg and high transmittance glass types as well as development trends for new glass types. Some information will be presented underlining the highly strategic relevance of these optical materials. The production process of optical glass, its melting and the tempering process called fine annealing, will be presented in the view of their influence on glass properties. These properties especially refractive index, dispersion, homogeneity, transmittance, bubbles and inclusions, striae and stress birefringence will be discussed in detail including their measurement methods.

The second part provides an overview over glass types optimized for special requirements with their main properties and applications:

- glasses resistant to ionizing radiation for use in space orbits
- low fluorescent glasses for microscopy
- infrared transmitting glasses extending the transmittance range to ca. 4 µm
- glass blanks for large optical elements up to 1 meter
- colored glass filters
- coated glass filters
- the zero-expansion glass ceramic ZERODUR for applications where extreme length or shape accuracy and stability is crucial, its very low coefficient of thermal expansion CTE and the high CTE homogeneity.
SmartFiber

FP7-STREP-SMARTFIBER WORKSHOP
Recent Advancements in Fiber Bragg Grating Sensors and Interrogators
Chairs: Dries van Thourhout, Ghent Univ. and IMEC (Belgium); Eli Voet, Com&sens (Belgium)

13:30 to 17:30 · Location: Room 215

OPENING REMARKS AND INTRODUCTION
Dries van Thourhout, Ghent Univ. and IMEC (Belgium)

13:45 to 15:35
SESSION 1: FBG SENSORS APPLICATIONS
Dries van Thourhout, Ghent Univ. and IMEC (Belgium)
13:45: Current trends in Fiber Bragg Grating sensing, G. Luyckx, Com&sens (Belgium)
14:10: A practical example of application of FBG sensors

14:35 to 15:20
SESSION 2: NOVEL FBG INTERROGATORS
Dries van Thourhout, Ghent Univ. and IMEC (Belgium)
14:35: Simultaneous interrogation of multiple Fiber Bragg Grating sensors using an arrayed waveguide grating filter fabricated in SOI platform, A. Trita, Ghent Univ. and IMEC (Belgium)
14:55: On-chip FBG interrogator fabricated in InP platform, Rolf Evenblij, Technobis (The Netherlands)

15:20 to 16:00
COFFEE BREAK

16:00 to 16:50
SESSION 3: NOVEL FBG SENSORS
Eli Voet, Com&sens (Belgium)
16:00: Highly birefringent butterfly photonic crystal fibre, Thomas Geernaert, Vrije Univ. (Belgium)
16:25: Draw tower gratings: from discrete point measurements to continuous monitoring, Johan Vlekken, FBGS (Belgium)

16:50 to 17:20
SESSION 4: DEMONSTRATOR SESSION
Eli Voet, Com&sens (Belgium)
16:50: Practical demonstration of the system developed within the SmartFiber Project, A. Trita, Ghent Univ and IMEC (Belgium)
17:20: Final Remarks, Dries van Thourhout, Ghent Univ. and IMEC (Belgium)

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INTERDISCIPLINARY WORKSHOP OF BIOPHOTONICS 2014

The Interdisciplinary Workshop of Biophotonics 2014 organized by the European Network of Biophotonics Photonics4Life is based on the format and a small-scale continuation of the last International Congress on Biophotonics (ICOB 2012). As such its aims are to strengthen interdisciplinary networking and provide key individuals with what is necessary to increase success in the field. It consists of two sessions:

The first session comprises a funding part related to Biophotonics opportunities in Horizon 2020 and showcases best practice in working together on projects from industrial and academic perspectives. Among the confirmed speakers are:

Eddy Corthals, Photonics Unit, EU commission
Dr. Timo Mappes, Carl Zeiss AG
Dr. Norbert Hansen, Karl Storz Endoskope
Prof. Francesco Pavone, LENS, Florence, representing the academic world.

The second session informs about urgent biomedical needs from the view of the clinicians and biologists to inspire a more directed and need-based research. Among others, presentations will be given by:

Prof. Katarina Svanberg, Lund University
Prof. Evangelos Giamarallos-Bourdoulis, University of Athens
Prof. Frank Gunn-Moore, Univ. St. Andrews

PHOTONICS EUROPE EXHIBITION

SPIE Photonics Europe exhibition is the prime opportunity for researchers and engineers to connect with leading companies throughout Europe. Come see the latest equipment featuring optical components, lasers, fiber optics, detectors, sensors, cameras, and other instrumentation for the optics and photonics fields — all under one roof.
15:15 to 18:00 · Location: Panorama Hall

FINDING PARTNERS FOR HORIZON 2020

Sponsored by: SPIE.EUROPE

Supporting Organisations:

Chair: Anke Lohmann, ESPKTN (United Kingdom)

We asked our photonics community in a recent survey what would help them the most in their participation in the Horizon 2020 Programme. The answer was to help them find partners.

This event is designed to provide a platform to meet with the potential new partners for Horizon 2020 calls that will open in 2015. To narrow its focus, we concentrate on two specific calls that will run in 2015; namely:

PHC11-2015
Development of new diagnostic tools and technologies: in vivo medical imaging technologies

ICT 28-2015: Cross-cutting ICT KETs
a. Innovation Actions
ICT-KET integrated platforms for the healthcare and food sectors

The afternoon workshop will be structured into two parts. During the first half of the event presenters will talk about different ways of finding partners. As part of this discussion we will introduce a match-making model developed by the ASPICE EU project.

The second half will concentrate on networking. The participants will have an option to join a group focused on one of the announced Horizon 2020 topics. In this session participants will have an opportunity to introduce their organisation in a short one-minute slot and learn about the other organisations.

We encourage participants to bring relevant material that can be presented to interested partners.

Programme
15:15 to 15:30: doors open, sign-up for interest group identified by the call topic
15:30 to 17:10: presentations by different organisations that can help focus the partner search
17:15 to 18:00: grouping by themes, short one-minute introduction of each organisation within a group.

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Photonics Europe Industry Programme

Wednesday 16 April 2014
09:00 to 17:00 · Location: Hall 100

The Industry Perspectives Programme will provide a series of executive briefings covering the growing markets and consequent business opportunities of photonics technology and applications.

Come and listen to key members of Europe’s photonics industry highlight current trends and opportunities. They will discuss future plans and offer strategic perspectives on ways to maximize market penetration and business development. Learn how developers, industrialists, and investors can create growth centred on the future of photonics manufacturing. Find out how emerging initiatives can open new horizons for business and technology development across Europe.

These sessions will offer executive-level networking and invaluable insight to those seeking to understand and capture photonics-centred business development opportunities: come and engage with the presenters and attendees—they could be potential suppliers, partners, or customers.
09:00 to 09:10

**WELCOME AND INTRODUCTION**

Stephen G. Anderson, SPIE (United States)

Peter Hartmann, SCHOTT AG (Germany)

09:10 to 09:45

**EU REGULATIONS ROHS AND REACH ENDANGER KEY ENABLING OPTICAL MATERIALS**

Peter Hartmann, SCHOTT AG (Germany)

**JOINT ABSTRACT:** Two EU regulations (REACH and RoHS) endanger short and long term availability of optical materials, which are vital for general technology, research and development for example in medicine, life sciences, computer technology, safety and security. Prohibition of the materials themselves or their raw materials will lead to the loss of many special materials impairing the performance of optical systems strongly if not preventing it totally. Because of the extreme leverage effect of optical systems this would be very harmful for the goals set out by the EU in their Horizon 2020 programme: Excellent science, Industrial leadership and Societal challenges.

The first presentation will give the scientific and technological background of the problem, the second one will cover the measures used in the past and the future short and long term goals.

10:50 to 11:00

**ISO INTERNATIONAL STANDARDISATION OF OPTICS AND PHOTONICS**

Elisabeth Leitner, DIN Deutsches Institut für Normung e.V. (Germany)

11:00 to 11:25

**FOCUS ON NEW STANDARDS AND PROJECTS**

Detlev Ristau, LZH Laserzentrum Hannover (Germany)

**JOINT ABSTRACT:** Standards generate economic benefits which have been estimated at more than 16 billion euros a year for Germany alone. They facilitate trade, spread knowledge, disseminate innovative advances in technology, and share good management and conformity assessment practices.

The International Organization for Standardization ISO releases standards developed on the basis of a recognized consensus process. Interested parties such as companies, institutes or universities delegate experts, who develop drafts and discuss and improve them. The drafts pass several stages of member countries’ voting until they are released as standards.

Technical Committee ISO/TC 172 Optics and photonics is the pivot platform for the development of International Standards for the optics and photonics sector. ISO/TC 172 will be presented with its subcommittees and several important standards and new projects will be highlighted.

Standardization is a strategic instrument for economic success. Learn more about how standards are made and how to get involved in order to gain a competitive lead through timely access to the relevant information.

11:25 to 12:35

**PHOTONICS 21 PUBLIC-PRIVATE-PARTNERSHIP**

Augustin Grillet, Barco/Photonics21 (Brussels)

The presentation on the Photonics21 Public Private Partnership will provide an overview of the structure, the tasks and the role of this new governance model under the EU Framework Programme Horizon 2020. In addition the presentation will focus on the changes under the Photonics Public Private Partnership in Horizon 2020 in comparison to the role Photonics21 had in the past.
12:00 to 12:35

**A VENTURE CAPITAL PERSPECTIVE ON PHOTONICS**

*Anthony Hillion, Aquiti Gestion (France)*

This presentation will review recent trends in the European Venture Capital industry with a focus on seed and early-stage investment, as well as the current fundraising and investment environment. The expectations and motivations of an early stage venture fund will be discussed, especially with regard to its investment in emerging photonics companies. Examples will be drawn from the photonics ecosystem in the Aquitaine Region of France.

12:35 to 14:00

**HOSTED NETWORKING LUNCH**

An opportunity for attendees with to meet the speakers and learn more about the business side of photonics while building their professional network.

14:00 to 14:35

**PHOTONICS INDUSTRY UPDATE: MEASURING THE MARKET**

*Stephen G. Anderson, SPIE (United States)*

A new look at the global marketplace for core photonics components is based on an in-depth evaluation by a team of SPIE analysts of more than 1800 companies that are active in optics and photonics. This session will showcase the results of this novel approach to assessing the industry, which has yielded a unique ranking of the firms that serve the optics and photonics marketplace.

14:35 to 15:10

**THE KETS OBSERVATORY: A CENTRAL SOURCE FOR KETS MONITORING**

*Els Van de Velde, IDEA Consult (Brussels, Belgium)*

The KETs Observatory Project has been established by the European Commission to provide both policymakers and business stakeholders with information on KETs deployment within EU Member States. Key Enabling Technologies deployment indicators include Patent Data, Production and Demand Data, Trade Data, and Company Data. This session will provide an overview of how these data are being collected and used to track the performance of EU Member States’ deployment of KETs and to enable a comparison with deployment of these technologies in competing economies.

15:10 to 15:45

**COFFEE BREAK**

15:45 to 16:25

**INTEGRATED PHOTONICS FOR THE LIFE SCIENCES: MARKET TODAY AND FUTURE POTENTIAL**

*Peter Peumans, IMEC (Brussels, Belgium)*

Integrated photonics built from both silicon and silicon-oxidinitride waveguides are increasingly finding applications in the life sciences. The disposable chips replace more elaborate optical solutions at a fraction of the cost. In this talk, I will review current products on the market and will highlight the future market potential of integrated photonics in the life sciences.

16:25 to 17:00

**LASER ADDITIVE MANUFACTURING — THE VISION OF 3-D-PRINTING**

*Reinhart Poprawe, Fraunhofer ILT (Aachen, Germany)*

The age of digital photonic production includes on the side of additive manufacturing, Selective Laser Melting SLM, Laser Metal Deposition LMD and controlled deposition of functional layers. Production without tools directly from digital design data are envisioned even in series production applications. Build up rates for complex metal parts up to 3 cm³/min corresponding to approximately 1 kg/h have been demonstrated.

17:00

**ADJOURN**
15:30 to 16:30 · Location: Grand Hall, Demo Area

GETTING HIRED IN 2014 AND BEYOND

Join us for a discussion on careers in optics and photonics outside the academic world. Learn about the process for getting hired at tech-based companies and non-academic jobs directly from professionals in the optics and photonics sector.

10:00 to 16:00 · Location: Grand Hall 1 & 2

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SPIE was founded in 1955 to advance light-based technologies. Serving more than 235,000 constituents from approximately 155 countries, the Society advances emerging technologies through interdisciplinary information exchange, continuing education, publications, patent precedent, and career and professional growth. SPIE annually organizes and sponsors approximately 25 major technical forums, exhibitions, and education programs in North America, Europe, Asia, and the South Pacific. In 2013, the Society provided over $3.2 million in support of education and outreach programs around the world.

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