



**AACHEN POLYMER OPTICS DAYS**  
INTERNATIONAL CONFERENCE  
APRIL 10 - 11, 2018



The conference is supported by:



### Aachen Polymer Optics Days

Digitalization is entering the world of production technologies under the heading "Industry 4.0". Digital applications that enable production processes to be safely and predictably illustrated are also being implemented more frequently in the area of optical polymer processing. The "Aachen Polymer Optics Days" conference is picking up on this trend and setting its sights on the subject block "Digitalization in Optics Production" for the very first time for 2018. The conference will examine five topic areas in 23 specialized lectures:

- Light sources and optical systems
- Continuous production of planar optics and films
- Innovative optical grade polymers and applications
- Injection moulded optics
- Digitalization in optics production

The "Aachen Polymer Optics Days 2018" provide an excellent networking platform for visitors from industry and research who are interested in participating in a lively exchange of ideas and opinions relating to manufacturing options and potential applications for optical plastic products. The papers presented by experts in their respective subject areas will outline the current developments and trends from a production-oriented point of view, highlighting application-related aspects.

Seize the opportunity offered by this conference as a prestigious industry event to swap ideas with other experts!



**9.00 Welcome**

Prof. Peter Loosen, Fraunhofer ILT, Germany

► **Light sources and optical systems**

**9.15 From static to dynamic projection in the automobile**

Christopher Bremer, BMW AG, Germany

**9.40 Production-oriented design of opto-mechanical systems for mass production**

Dr. Kristina Uhlendorf, Jabil Optics, Germany

**10.05 Thin and flexible light guides for led lighting systems with new form factors**

Dr. Anthony Nichol, FLEx Lighting, USA

**10.30 Coffee break****11.00 Polymer optics in luminaires**

Dr. Britta Vogel, ITZ Innovations- und Technologiezentrum GmbH Member of TRILUX Group, Germany

**11.25 Freeform micro-fresnellenses: Performance potential and challenges in fabrication**

Dr. Ulrich Streppel, OSRAM Opto Semiconductors GmbH, Germany

**11.50 Lunch**

► **Continuous production of planar optics and films**

**12.50 From lighting to displays: engineered optical films for efficient, directional control**

Dr. William Edmonds, 3M Company, USA

**13.15 Weather-stable structured surfaces – learning from established coating applications**

Sven Krabbenborg, BASF Coatings GmbH, Germany

**13.40 Coffee break****14.10 The ubiquity of flat optics**

Suleyman Turgut, Luminit, USA

**14.35 Virtual images using plastic-fabric combinations**

Richard Müller, ETTLIN AG, Germany

**14.55 Shop floor visit at Fraunhofer ILT, Fraunhofer IPT and IKV****17:30 End of first conference day****18.00 Get-together at conference venue****19.00 Networking dinner**

### ▶ Innovative optical grade polymers and applications

- 8.30 Polycarbonate and polyetherimide resins for injection molded lenses in high temperature applications**  
Gabrie Hoogland, SABIC Innovative Plastics B.V., Netherlands
- 8.55 Light management with PMMA and PMMI – limitations and opportunities**  
Frank Gabriel, Evonik Performance Materials GmbH, Germany
- 9.20 Development and production of secondary optics in LSR**  
Christian Todaro, Khatod Optoelectronic, Italy

### ▶ Injection molded Optics

- 9.45 UV-based in-mold coating for optical surface qualities**  
Larissa Kutscha, Robert Bosch GmbH, Germany
- 10.10 Coffee break**
- 10.40 Scalable fabrication of nanoscale structures**  
Teck Lee CHEE, Moveon Technologies Pte Ltd, Singapore
- 11.05 Variotherm / dynamic mold temperature control**  
Ulrich Rosenberg, gwk Gesellschaft Wärme Kältetechnik mbH, Germany
- 11.30 The key technology challenge – injection molding of aspherical mirrors for head-up displays**  
Sebastian Werner, Continental Automotive GmbH, Germany
- 11.55 Precision meets dynamics – innovative concepts for injection molded optical components**  
Dr. Rainer Kleeschulte, Krallmann Holding u. Verwaltungs GmbH, Germany
- 12.20 Lunch**

### ▶ Digitalization for optics production

- 13.20 Optics manufacturing in a digitalized production environment**  
Prof. Dr. Robert Schmitt, Fraunhofer IPT, Germany
- 13.45 Data streams in complex production chains for opto-mechanical assemblies**  
Silvie Skyvova, Meopta s.r.o., Czech Republic
- 14.10 High-efficient thick wall optics in the stress field between function and design**  
Andreas Stockfisch, HELLA GmbH & Co. KGaA, Germany

### 14.35 Coffee break

- 15.05 Robust design optimization of optical systems**  
Bernd Büttner, Dynardo GmbH, Germany
- 15.30 Wavefront technology for industrial testing of optical components**  
Dr. Christian Brock, Optocraft GmbH, Germany
- 15.55 Consistent data acquisition in production – from cavity mould sensor over machine data up to quality assurance**  
Axel Reißmann, IOS GmbH, Germany

### 16.20 End of the conference





### **Aachen Polymer Optics Days**

International Conference  
April 10 - 11, 2018

### **Conference Languages**

The presentations will be held in German and English and interpreted simultaneously.

### **Conference Venue**

Pullman Aachen Quellenhof  
Monheimsallee 66, 52062 Aachen, Germany

### **Contact**

Helen Sophie Kolb, M.A.  
Fraunhofer Institute for Production Technology IPT  
Steinbachstraße 17, 52074 Aachen, Germany  
Phone +49 241 8904-287  
helen.sophie.kolb@ipt.fraunhofer.de

### **Organizer**

- Fraunhofer Institute for Production Technology IPT
- Fraunhofer Institute for Laser Technology ILT
- Institute of Plastics Processing (IKV) in Industry and the Skilled Crafts at RWTH Aachen University

### **Fraunhofer Institute for Production Technology IPT**

The Fraunhofer IPT combines long time knowledge and experience in all areas of production technology. Located in Aachen we offer clients and project partners special and immediately practical solutions for a connected, adaptive production. We understand production not only in individual operations, but consider all production processes and the links between all the elements of the overall process in their entirety – from pre- and product development via production preparation and assembly to the manufacturing.

### **Fraunhofer Institute for Laser Technology ILT**

With around 440 employees the Fraunhofer Institute for Laser Technology ILT is worldwide one of the most important development and contract research institutes of its specific field. Since over 30 years our experts develop and optimize laser beam sources and processes for production, medicine and measurement technology as well as energy and environment.

### **Institute of Plastics Processing (IKV) in Industry and the Skilled Crafts at RWTH Aachen University**

The Institute of Plastics Processing (IKV) is one of the biggest institutes engaged in this field of research. In organisational terms, IKV is divided up into the four specialist departments of Injection Moulding, Extrusion and Rubber Technology, Part Design and Materials Technology, and Composites and Polyurethane Technology.





### Participation Fee

The participation fee for the conference "Aachen Polymer Optics Days 2018" amounted to a total of € 850. This includes € 750 for participation in the conference (free of tax under § 4 UStG) as well as € 100 (incl. 19 % VAT) for participation in the evening event. Please note that the conference participation must be booked together with the evening event.

### Registration

If you register by February 16, 2018 you will receive an early booking discount of € 100. If you cancel your registration before February 28, 2018 you will only be charged an administrative fee of € 100. After this date you will be charged the full participation fee. For non-participation you can designate a representative person without any additional costs. Please note that the form needs to be signed.

### Conference Contact

Helen Sophie Kolb, M.A.

Fraunhofer Institute for Production Technology IPT

Steinbachstraße 17, 52074 Aachen, Germany

Phone +49 241 8904-287

helen.sophie.kolb@ipt.fraunhofer.de

**Aachen Polymer Optics Days**

International Conference from April 10 - 11, 2018

- I hereby register for the conference "Aachen Polymer Optics Days" from April 10 - 11, 2018 at a participation fee of € 850 (Early Bird: € 750).

Please fill out and send via fax to +49 241 8904-198 or via e-mail to [helen.sophie.kolb@ipt.fraunhofer.de](mailto:helen.sophie.kolb@ipt.fraunhofer.de). In case of several registrations please copy this card.

Name\* \_\_\_\_\_

First name\* \_\_\_\_\_

Title \_\_\_\_\_

Company\* \_\_\_\_\_

Department \_\_\_\_\_

Street/ P.O. box\* \_\_\_\_\_

Post code/

Town/Country\* \_\_\_\_\_

Phone\* \_\_\_\_\_

E-Mail\* \_\_\_\_\_

Signature\* \_\_\_\_\_

Date\* \_\_\_\_\_

*\*Compulsary data*

I hereby consent to the storage and processing of my personal details by the organisers of the conference (Fraunhofer IPT, Fraunhofer ILT, Institute of Plastics Processing IKV) in accordance with the German Federal Data Protection Act (BDSG).

- I agree on receiving information about further events and research topics of the organisers Fraunhofer IPT, Fraunhofer ILT and Institute of Plastics Processing (IKV) occasionally.