

NOV

15

2017

Workshop

Tailored Optical Fibers 2017

*Harsh environment fiber,
fiber sensors & fiber light sources
for new photonic applications*



**TAILORED
OPTICAL FIBERS**

Leading companies and research institutions have teamed up in the regional TOF alliance to develop and market tailored optical fibers for future applications.

The shared vision, the objectives and first results of their cooperation will be presented in the first public workshop of TOF in Jena.

Furthermore, the alliance is proud to welcome international experts from industry and research for a high-level exchange on the latest developments, techniques and products.

TARGET GROUP

The workshop will gather experts from industry and science to introduce the community to the TOF alliance, to explore synergies with existing projects, within and beyond TOF and to discuss future challenges on the topic.

Active Fiber Systems
F.J. RAMMER • FBGS Technologies
Fibotec Fiberoptics • Fraunhofer IOF
Otto Schott Institute of Materials Research
GRINTECH • heracle
intros Medical Laser • ITP
j-fiber • JSJ Jodeit
LASOS Lasertechnik
Leibniz IPHT
LEJ Lighting & Electronics Jena
Peterseim Strickwaren
piezosystem jena • QSII
Saveway
Spengler & Fürst
VACOM

NOVEMBER 14, 2017 | 19:00

Welcome Reception

Meet the members of the TOF alliance, the speakers and guests and make new contacts at our Welcome Reception. Enjoy food and drinks on the top of the Jentower.

Venue: SCALA Panoramabankett Jena

REGISTER NOW



TAILORED-OPTICAL-FIBERS.NET

WORKSHOP PROGRAM · NOVEMBER 15, 2017

8:30 **Registration**

9:00 **Welcome**

Hartmut Bartelt & Eric Lindner › TOF Alliance

9:15 **Opening Address**

Hans-Peter Hiepe

› German Federal Ministry of Education & Research (solicited)

9:30 **Session 1** ▶ **Robust Optical Fibers**

As part of the TOF activities the project 1 develops new materials and technologies needed for the industrial manufacturing of fibers suitable for extreme environments and highly demanding applications. An overview and first results of the project will be presented.

Chair: Jürgen Rosenkranz › j-fiber Jena, Germany

Rugged optical fibers for distributed temperature sensing under rough conditions

André Hertwig › Saveway Langewiesen, Germany

Chemical and physical properties of non-oxide fibers

Johann Troles › University of Rennes, France

Optical Fibers for harsh environments

Devinder Saini › Fiberguide Industries, USA

10:30 **Exhibition & Coffee Break**

11:00 **Session 2** ▶ **Fiber-Based Light Sources**

Within the TOF activities, project 2 develops innovative light sources based on novel micro- and nanostructured optical fibers. This session provides further details on the project targets and presents related information on currently used novel light sources in industry and research.

Chair: Thomas Gabler › LASOS GmbH Jena, Germany

Optimized power supplies for fiber-based light sources

Simon Schwinger › LEJ Lighting & Electronics JENA, Germany

Whitelight Laser in Modern Microscopy

Hilmar Gugel › Leica Microsystems CMS Mannheim, Germany

Ultrabroad spectral broadening using nonlinear microstructure fibre

Nicolas Joly

› Max Planck Institute for the Science of Light Erlangen, Germany

12:00 **Guided Exhibition Tour & Lunch**

13:30 **Session 3 › Fiber-Based Sensor Systems**

TOF activities in project 3 work on new sensor concepts based on micro structured fibers and hollow core fibers to enable multi-sensor applications. An overview and first results of the project will be presented. The session discusses fiber requirements required for different applications such as DTS, spectroscopy and shape sensing.

Chair: Christian Voigtländer › FBGS Technologies Jena, Germany

Multicore Draw Tower Grating (DTG®) sensors for the measurement of deflection and shape

Eric Lindner › FBGS Technologies Jena, Germany

Innovative Fiber Optical Sensor Solutions – Data Source for Digitalization in Electrical Power Generation

Michael Willsch › SIEMENS Erlangen, Germany

The ›Butterfly Fibre Effect‹ in Composite Materials

Francis Berghmans › Vrije Universiteit Brussels, Belgium

14:30 **Exhibition & Coffee Break**

15:00 **Session 4 › Luminous Fiber-Based Textile Fabrics**

The final session provides an overview of project 4 of the TOF activities: Processability and use of glass-based optical fibers in textile products for illumination purposes provide a complete new approach and requirement for optical fiber manufacturing. Both, potential applications such as in automotive or industrial textiles as well as the challenges of industrial integration of light sources in fabrics are discussed in this session.

Chair: Klaus Richter › ITP Weimar, Germany

Introduction of modern invasive and non-invasive medical therapies with laser technology

Rainer Sauerbier › intros Medical Laser, Germany

User perspectives: Technological demands & future challenges

Exchange & discussion

16:00 **Closing**

Hartmut Bartelt & Eric Lindner › TOF Alliance

Event Data

November 14, 2017 | 19:00

November 15, 2017 | 8:30–17:00

Venue

Abbe Zentrum Beutenberg

Hans-Knöll-Straße 1

07745 Jena | Germany

Attendance Fee

The fee includes welcome reception, entry to the venue and conference programme as digital copy. No registration fee is required for speakers and session leaders.

- › 290 € regular
- › 190 € for members of the German Networks for Optical Technologies
- › 39 € for students (student ID required)

(no VAT included according to §4 Nr. 22a UStG)

Online Registration

until November 5, 2017

Exhibition

Take the chance and present your latest technologies and products to the workshop audience. The exhibition will be held in the foyer of the Abbe Zentrum, right next to the dining area and the entrance to the auditorium. The exhibition fee is 300 EUR. Exhibition space will be limited.

TOF

[Tailored Optical Fibers]

c/o OptoNet e.V.

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GEFÖRDERT VOM



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für Bildung
und Forschung

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Neue Länder REGION