



The 34th International Conference on Plastic Optical Fibers

CONFERENCE PROGRAM

Venue: Ohm Innovation Center

Local Host: Polymer Optical Fiber Application Center,
Technische Hochschule Nürnberg Georg Simon Ohm

September 29th – October 1st, 2026 • Nuremberg, Germany

<https://pof2026.org/>

Program at a Glance

Scan the QR code on your
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conference proceedings

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Welcome to the 34th International Conference on Plastic Optical Fibers in Franconia

In cooperation with the International Cooperative of Plastic Optical Fibers (ICPOF), the 34th International Conference on Plastic Optical Fibers in 2026 is organized locally by the Polymer Optical Fiber Application Center (POF-AC). At the same time, the 25th anniversary of the POF-AC is celebrated, which was founded in 2001 at Technische Hochschule Nürnberg Georg Simon Ohm.

Experts from all over the world will meet each other to the 34th time in Nuremberg, Franconia, to see and discuss novelties in Polymer Optical Fibers and their applications. 22 Cities had been hosts of the conference so far, but only 3 of them more than twice: Yokohama, Boston and now Nuremberg (see Table 1).

Table 1: Hosts of the International Conferences on Plastic Optical Fibers

1992	1993	1994	1995	1996	1997
Paris	The Hague	Yokohama	Boston	Paris	Kauai
1998	1999	2000	2001	2002	2003
Berlin	Chiba	Boston	Amsterdam	Tokyo	Seattle
2004	2005	2006	2007	2008	2009
Nuremberg	Hong Kong	Seoul	Turin	Santa-Clara	Sydney
2010	2011	2012	2013	2014	2015
Yokohama	Bilbao	Atlanta	Rio de Janeiro	Yokohama	Nuremberg
2016	2017	2018	2019	2020	2021
Birmingham	Aveiro	Seattle	Yokohama	cancelled	China (online)
2022	2023	2024	2025	2026	
Bilbao	Cork	Tokyo	Boston	Nuremberg	

This is a big honor for us, because the Franconian city is one of the smallest towns in this exclusive group. Nevertheless, we hope you will enjoy your stay here in September 2026.

At the moment, the program includes 59 contributions from 12 countries. Counted over the full time, the number of active countries at international POF conferences is 40 (Fig. 1). Among them, Japan and Germany are the most active members. The cumulative number of papers will reach 2260 at this conference.

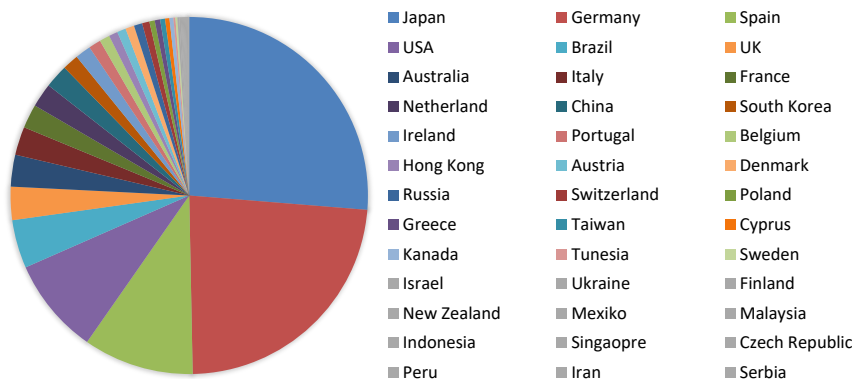


Fig. 1: Number of papers in all 34 international POF conferences (total: 2260)

In Nuremberg we will have:

- 4 plenary talks
- 14 invited talks
- 23 regular talks
- 18 poster presentations

As the proud host, German institutes and companies will present 26 of the papers (see Fig. 2).

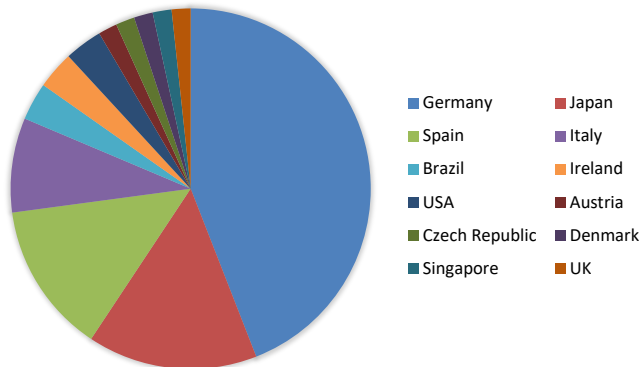


Fig. 2: Number of papers at the 34th international POF conference (total: 59)

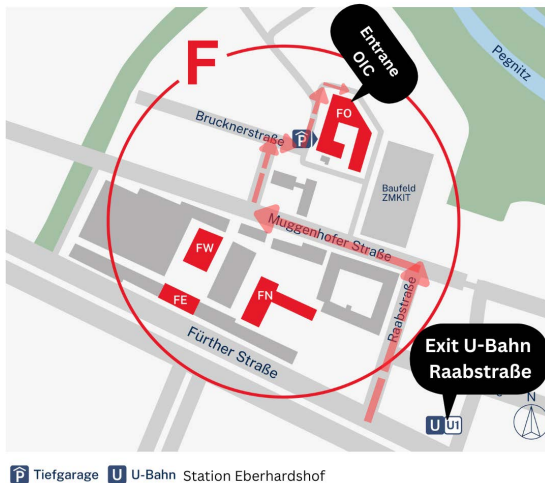
Sensors will be the largest topic at the Nuremberg POF conference, with a total of 24 presentations by several authors in this field. Visitors will have the opportunity to explore novel technologies, products and services on the parallel exhibition by the following institutes, manufacturers and vendors: Asahi Kasei Corporation, Hamamatsu Photonics Deutschland GmbH, Keio Photonics Research Institute (KPRI), SHUTE Sensing Solutions A/S, Tosoh Corporation, WEINERT Fiber Optics GmbH, and the Polymer Optical Fiber Application Center (POF-AC).

In the name of the International Cooperative of Plastic Optical Fibers (ICPOF), the staff of the POF-AC, the Technische Hochschule Nürnberg, and of our generous sponsors WEINERT Fiber Optics GmbH, Keio Photonics Research Institute (KPRI), Asahi Kasei Corporation, Broadcom Inc., Hamamatsu Photonics Deutschland GmbH, Mitsubishi Chemical Group Corporation, SHUTE Sensing Solutions A/S, Siemens AG, Industrial Fiber Optics Inc., Plastic Optical Fiber Trade Organization (POFTO) we wish all visitors a successful conference and a pleasant trip and stay in Nuremberg, the city in the heart of Franconia.

Rainer Engelbrecht, Olaf Ziemann
Conference Chairs

General Information

Conference Venue



The **Ohm Innovation Center** (OIC) is located at Brucknerstraße 11, 90429 Nürnberg. It is the building labeled "FO" at the F campus of the Ohm University. The entrance to the OIC building is located on the north side. The campus is also called "Auf AEG", after the former German industry giant AEG.

We recommend traveling to the OIC by public transport. The nearest stop is **Eberhardshof** (Subway "U-Bahn" line U1), which is only a few minutes walking distance away from the OIC building. Please take exit "Raabstraße" from the Eberhardshof station (see map above). A single trip from Central Station ("Hauptbahnhof") to Eberhardshof takes 10 min. During day times, trains on the line U1 run every 5 to 10 min. If required at all, timetables are available at the public transportation operator VGN www.vgn.de/en/.

Directions: From Nuremberg city center region, for example Central Station ("Hauptbahnhof"), to the OIC venue ("Eberhardshof" station), take U1 with destination "Fürth Hardhöhe". This would also be the direction to go from the OIC venue to the city of Fürth, if you would stay there.

From the OIC venue ("Eberhardshof" station) to the Nuremberg city center region, take U1 with destination "Langwasser Süd". This would also be the direction to go from the city of Fürth, if you would stay there, to the OIC venue ("Eberhardshof" station).



Directions

Tickets: The tickets and fares of the public transportation operator VGN are not in favour of occasional trips for visitors. The red ticket vending machines ("Fahrkarten") can be found on every station, and in the main level of Nuremberg Central Station. For a single trip, please select the English menu, and enter starting point and destination (e.g. Eberhardshof for OIC venue). Then select a "Single ticket" for one trip. Alternatively, we

recommend to buy an "All day ticket solo" at price level A, for hassle-free travelling for one day in the city region Nuremberg - Fürth - Stein. All Tickets can also be purchased online at <https://shop.vgn.de> without registration and paid with PayPal.

Parking spaces can be found in the underground car park ("Tiefgarage"). Visitors are kindly requested to apply for an access permit in good time by email to pof2026-secretary@th-nuernberg.de.

Attendee Instructions

Attendees can pick up their conference badges, program brochure and other materials at the registration desk on all conference days from 8:00. Please be prepared to show photo ID (passport or driver's license).

Invited oral talks are scheduled with 20 minutes for presentation plus 5 minutes for discussion. Regular oral presenters will be allocated 15 minutes for the presentation and 5 minutes for discussion. Please bring the presentations in PPT or PDF format to the conference staff in advance. Presenters are not permitted to use their own laptops.

The Poster Session is scheduled on Tuesday, September 29 allowing authors to present and discuss their work in detail. The posters should be set up in the morning of the first conference day. Authors will be required to be present during the poster sessions to provide additional information to the visitors. Posters should be available for all conference days for viewing without presenter.

ICPOF Committee Meeting

The ICPOF Committee Meeting will be held on Thursday, October 1 during lunch time.

Social Events

September 29, 19:00 Guided City Walk
(Tourist Information Hauptmarkt (i-sign),
Hauptmarkt 18, 90403 Nürnberg).



Directions

September 30, 19:00 Conference Dinner
(Tucher Mautkeller Nürnberg Hallplatz 2,
90402 Nürnberg).



Directions

Conference secretariat

Polymer Optical Fiber Application Center (POF-AC),
Technische Hochschule Nürnberg Georg Simon Ohm,
Wassertorstr. 10, 90489 Nuremberg, Germany

In case of any questions regarding the conference, please contact:

pof2026-secretary@th-nuernberg.de

Program at a Glance

	Tuesday, September 29	Wednesday, September 30	Thursday, October 1	
08:00	Registration 08:00 - 09:00	Registration 08:00 - 09:00	Registration 08:00 - 09:00	08:00
09:00	Opening ceremony 09:00 - 09:40	Plenary talk 09:00 - 09:30	Industrial 09:00 - 11:00	09:00
	Plenary talk 09:40 - 10:10	Datacom 09:30 - 10:35		
	Sensors 10:10 - 10:55	Sensors 10:35 - 10:55		
11:00	Coffee and Exhibition 10:55 - 11:20	Coffee and Exhibition 10:55 - 11:25	Coffee and Exhibition 11:00 - 11:25	11:00
	Sensors 11:20 - 13:00	Sensors 11:25 - 13:00	Sensors 11:25 - 13:00	
13:00	Lunch (on-site available) 13:00 - 14:15	Lunch (on-site available) 13:00 - 14:15	Lunch (on-site available) ICPOF Meeting Coffee and Exhibition 13:00 - 14:30	13:00
	Datacom 14:15 - 15:20	Plenary talk 14:15 - 14:45	Novel fibers 14:30 - 15:50	
15:00	Coffee and Exhibition 15:20 - 15:35	Sensors 14:45 - 15:30		15:00
	Plenary talk 15:35 - 16:05	Coffee and Exhibition 15:30 - 15:50		
	Poster Session Welcome Reception 25 th Anniversary POF-AC 16:05 - 17:30	Planar Waveguides 15:50 - 17:10	Closing Remarks 15:50 - 16:20	
17:00				17:00
19:00	Guided City Walk 19:00 - 20:45	Conference Dinner 19:00 - 21:30		19:00

Exhibition on all conference days during coffee breaks and available time after lunch.

09:00	Opening Ceremony
09:40	Plenary High Performance POF toward Next Generation AI Society Yasuhiro Koike (Keio University, Japan)

Sensors (Chair: Prof. Dr. Olaf Ziemann)

10:10	Invited Measuring the World with Light: Polymer Optical Fiber Sensors and Devices <u>Joseba Zubia</u> ^{1,2} , María Asunción Illarramendi ¹ , Igor Ayesta ¹ , Jon Arrue ¹ , Gorka Zubia ¹ (1: Bilbao School of Engineering, University of the Basque Country (UPV/EHU), Spain; 2: EHU Quantum Center, University of the Basque Country (UPV/EHU), Spain)
10:35	Influence of Temperature and Humidity on Polymer Optical Fibers in Structural Health Monitoring Applications Rainer Engelbrecht ¹ , Paul Hölzer ¹ , Michael Luber ¹ , Moritz Hemmerlein ² , Mathias Pick ² (1: POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany; 2: eolotec GmbH, Germany)
10:55	Coffee break and exhibition (25 min.)

Sensors (Chair: Prof. Dr. Joseba Zubia)

11:20	Investigation of Zero-Birefringence and Zero-Photoelasticity Composition in Terpolymer Plastic Optical Fibers <u>Rei Furukawa</u> , Yurika Kuga, Hikaru Sato, Shohei Ogawa, Shun Ueda, Eito Shino (University of Electro-Communications, Japan)
11:40	Novel Sunlight-Angle Sensors Based on Organic Dye-Doped POFs <u>Jon Arrue</u> , Jagoba Barata, Begoña García-Ramiro, Felipe Jiménez, Joseba Zubia, María Asunción Illarramendi (Bilbao School of Engineering, University of the Basque Country (UPV/EHU), Spain)
12:00	Influencing Factors on the Spectral Backscattering of SI-POF <u>Simon Dengler</u> ^{1,2,3} , Rainer Zenglein ² , Bernhard Schmauss ³ , Olaf Ziemann ² , Rainer Engelbrecht ² (1: Optocraft GmbH, Germany; 2: POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany; 3: Friedrich-Alexander University Erlangen-Nürnberg, Germany)
12:20	Numerical Analysis of Custom Microstructured Polymer Optical Fiber <u>Eduardo Urrutia</u> ¹ , Igor Ayesta ¹ , Mikel Azkune ¹ , Oskar Arrizabalaga ¹ , Carmen Vazquez ² , Joseba Zubia ¹ (1: University of the Basque Country (UPV/EHU), Spain; 2: Carlos III University of Madrid, Spain)

Program at a Glance

12:40	Effect of Gold Coating on Reflection-Mode Refractive Index Sensors Using Polymer Optical Fibre <u>Abdul Rasheed Mohamed Asif</u> , Alireza Rahimi, Jose Rajendran, Patricia Scully (University of Galway, Ireland)
13:00	Lunch (1 h 15 min., on-site available)
Data transmission (Chair: Prof. Dr. Yasuhiro Koike)	
14:15	Invited Recent Progress in Technological Relationship Analysis: Conventional Internet Networks and Data Center Interconnection Networks <u>Shingo Kawai</u> (Tokyo Information Design Professional University, Japan)
14:40	Graded-Index Plastic Optical Fiber for Improved Bandwidth and TDECQ Performance in Multimode VCSEL Links <u>Kenta Muramoto</u> , Yasuhiro Koike (Keio University, Japan)
15:00	High-Speed Data Transmission Using Melt-Spun PFAS-Free Polymer Optical Fibres Safwen Rekik, Fabian Köntges, Mark Pätzelt, Thomas Gries (Institut für Textiltechnik, RWTH Aachen University, Germany)
15:20	Coffee break and exhibition (15 min.)
15:35	Plenary Polymer Optical Fiber Application Center: 25 Years of Research, Achievements, and Future Perspectives Rainer Engelbrecht, Olaf Ziemann (POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany)
16:05	Poster Session and Welcome Reception (drinks and snacks available)
P1	Machine Learning-Based Modeling of Nonlinear Broadband Communication Transmitters in Radio-over-POF <u>Marcos Mustieles Pérez</u> , Paloma García, María Ángeles Losada, Alicia López, Jesus De Mingo, Antonio Valdovinos, Pedro Luis Carro (University of Zaragoza, Spain)
P2	Wavelength Dependence of Optical Propagation Loss in Perfluorinated POF under Twist Kota Eto ¹ , <u>Kun Wang</u> ^{1,2} , Taiki Kumagai ¹ , Ryo Takano ³ , and Yosuke Mizuno ¹ (1: Yokohama National University, Japan; 2: Bundesanstalt für Materialforschung und -prüfung (BAM), Germany)

Program at a Glance

- P3 Strain and Temperature Dependences of Brillouin Frequency Shift in Copolymer-Based Perfluorinated POF**
Gentaro Joe¹, Kun Wang^{1,2}, Yuki Sugiyama¹, Yoshikazu Kobayashi³, Osakazu Kimoto³, Ikufumi Katayama¹, and Yosuke Mizuno¹ (1: Yokohama National University, Japan; 2: Bundesanstalt für Materialforschung und -prüfung (BAM), Germany; 3: AGC Inc., Japan)
- P4 Fiber-Coupled Light Source with dB Control (FCLS)**
František Veličkov (VELIČKOV Engineering, Czech Republic)
- P5 200 m Bidirectional Gigabit POF Link Based on KD Technology**
Juri Vinogradov¹, Ulrich Wetzel², Óscar Ciordia³, Olaf Ziemann¹, Rainer Engelbrecht¹
(1: POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany;
2: Siemens AG, Germany; 3: Knowledge Development for POF S.L., Spain)
- P6 Optotrain – A POF Based Optical Communication Tool for Moved Platforms**
Olaf Ziemann, Alexander Bachmann, Juri Vinogradov
(POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany)
- P7 Assessing Polymer Optical Fibers as Entrance Apertures for Compact Spectrometer Systems**
Sebastian Smarzyk, Katharina Strathmann, Jan Tietze, Matthias Haupt
(Jade University of Applied Sciences, Germany)
- P8 AM0 Radiation Tolerance of POFs Doped with Fluorescent Silica-Based Nanoparticles**
Jagoba Barata¹, A. Lopez¹, J. Grandes¹, M. Guadaño-Sanchez², N. Guarrotxena², Joseba Zubia^{1,3}, María Asunción Illarramendi¹, C. Vázquez⁴ (1: Bilbao School of Engineering, University of the Basque Country (UPV/EHU), Spain; 2: Instituto de Ciencia y Tecnología de Polímeros, Consejo Superior de Investigaciones Científicas (ICTP-CSIC), Spain; 3: EHU Quantum Center, University of the Basque Country (UPV/EHU), Spain; 4: Universidad Carlos III de Madrid, Spain)
- P9 Advanced Extrinsic Plastic Optical Fiber Sensor Schemes for Bio/Chemical Applications**
Chiara Marzano¹, Francesco Arcadio¹, Giancarla Alberti², Rosalba Pitruzzella¹, Laura Pasquardini¹, Gianluca Cicala³, Maria Pesavento⁴, Luigi Zeni¹, Nunzio Cennamo¹ (1: University of Campania Luigi Vanvitelli, Italy; 2: University of Pavia, Italy; 3: University of Catania, Catania, Italy; 4: Optosensing Srl, Italy)
- P10 Boundary-Consistent Performance Reporting and First-Order Screening for POF Daylighting Systems**
Raheel Tariq, Simon P. Philbin, Nadia Touileb Djaid, Kevin J. Munisami (1: School of Engineering, Kingston University London, UK)
- P11 Pretreatment of Polymer Optical Fibers for Structural Health Monitoring of Adhesive Bonds**
Sophia Wieland¹, Michael Lubert², Alexander Schiebahn¹, Rainer Engelbrecht², Uwe Reisgen¹
(1: Welding and Joining Institute, RWTH Aachen University, Germany; 2: POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany)

- P12** **Portable Smart Glove based on Plastic Optical Fibers**
M. López-Pérez, Alicia Fresno-Hernández, Cármen Vázquez (Universidad Carlos III de Madrid, Spain)
- P13** **Lensless Endoscopy through Tapered and Bent POF using Digital Optical Phase Conjugation**
Miriam Heise¹, C. Murawski¹, R. Kuschmierz¹, K. Zolnacz² (1: Dresden University of Technology, Germany; 2: Wroclaw University of Science and Technology, Poland)
- P14** **Precise Graded-Index Profile Measurements for Plastic Optical Fiber by Optical Path Difference Imaging**
Shizuki Sasaki, Kenta Muramoto, Yasuhiro Koike
(Keio Photonics Research Institute, Keio University, Japan)
- P15** **Microoptics by Two-Photon Nanolithography for Defined Modal Excitation in Plastic Optical Fiber Systems**
Martin Bloos, Alexander Bachmann, Rainer Engelbrecht
(POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany)
- P16** **Integrated Fiber-Optic Sensors for Real-Time Monitoring of Scaling and Biofouling in Reverse Osmosis Membranes**
Felix Kraus¹, Rainer Engelbrecht¹; Amelie Deutsch², Karl Glas², Stephen Schrettel²
(1: POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany; 2: Technical University of Munich, Germany)
- P17** **Integrated Polymer Waveguides for Optical Power Transmission: Electro-Optical Characterisation of Emitters and Converters**
Florian Wilke, Benjamin Rudolf, Juri Vinogradov, Olaf Ziemann
(POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany)
- P18** **Polymer Optical Waveguides for Integrated Photonics: Materials and Manufacturing Technologies**
Florian Scherpf, Benjamin Rudolf, Juri Vinogradov, Olaf Ziemann
(POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany)
- P19** **Low-Cost POFBG Measurement of Water Activity in N-Heptane**
Alexios Psyrri, Kristian Nielsen (SHUTE Sensing Solutions A/S, Denmark)

19:00 **Guided City Walk** (Meeting Point: Tourist Information Hauptmarkt (i-sign), Hauptmarkt 18, 90403 Nürnberg)

09:00	Plenary Towards Manufacturing of 2D-Polarization-Maintaining Fiber Arrays Julian Staniewski, Philipp Will, <u>Andreas Stute</u> (Technische Hochschule Nürnberg Georg Simon Ohm, Germany)
Data transmission (Chair: Dr. Hui Pan)	
09:30	Invited Transmission of Radio Signals over Large-Core PMMA POF: Progress and Challenges <u>María Ángeles Losada</u> , Pedro Luís Carro, Alicia López, Paloma García-Dúcar, Jesús De Mingo, Antonio Valdovinos, Javier Mateo, J. A. Casao (University of Zaragoza, Zaragoza, Spain)
09:55	Overcoming the Physical Constraints of Plastic Optical Fibers through Neural Network Framework <u>Jorge Guerrero</u> ^{1,2} , D. Richards ¹ , María Ángeles Losada ³ , Alicia López ³ , Javier Mateo ³ , N. Antoniadis ¹ , N. Madamopoulos ² , X. Jiang ¹ (1: College of Staten Island, USA; 2: The City College of New York, CUNY, USA; 3: University of Zaragoza, Spain)
10:15	Relaxing Line-of-Sight Constraints in Low-Data-Rate VLC Using Fluorescent Plastic Optical Fibres Bettina F.C.B. Maia ¹ , Ivan L.C. Pinheiro ¹ , Patrick C.F. Vieira ¹ , Alexandre C.T. Santos ¹ , Vinicius N.H. Silva ¹ , Cláudia B. Marcondes ² , <u>Ricardo M. Ribeiro</u> ¹ (1: Universidade Federal Fluminense, Brazil; 2: Centro Federal de Educação Tecnológica-RJ, Brazil)
Sensors (Chair: Dr. Hui Pan)	
10:35	Time Domain and Frequency Domain Reflectometry for Sensing Applications with a Step-Index Polymer Optical Fiber up to 200 m Length <u>Roman Kruglov</u> , Juri Vinogradov, Olaf Ziemann, Rainer Engelbrecht (POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany)
10:55	Coffee break and exhibition (30 min.)
Sensors (Chair: Prof. Dr. Patricia Scully)	
11:25	Invited Unconventional SPR Configurations: A New Paradigm to Develop High-Sensitivity Sensors via POFs <u>Nunzio Cennamo</u> (University of Campania Luigi Vanvitelli, Italy)

11:50	Invited Three Key Components to Develop Optical-Chemical Sensors with High Performance: POFs, Plasmonic Nanoparticles, and MIPs <u>Rosalba Pitruzzella</u> ¹ , Dalila Cicatiello ¹ , Chiara Marzano ¹ , Luca Pasquale Renzullo ¹ , Viktor Zabolotnii ² , Roman Viter ² , Luigi Zeni ¹ , Maria Pesavento ³ , Giancarla Alberti ³ , and Nunzio Cennamo ¹ (1: University of Campania Luigi Vanvitelli, Italy; 2: University of Latvia, Latvia; 3: University of Pavia, Italy)
12:15	Invited Multimodal-Interference Optical Fiber Sensors: From General Principles to Plastic-Fiber Applications <u>Kun Wang</u> ^{1,2} , Yosuke Mizuno ² (1: Bundesanstalt für Materialforschung und -prüfung (BAM), Germany; 2: Yokohama National University, Japan)
12:40	Practical Field Application of a POF Sensor for Structural Health Monitoring in Wind Turbines <u>Moritz Hemmerlein</u> ¹ , Mathias Pick ¹ , Rainer Engelbrecht ² , Michael Lubert ² , Juri Vinogradov ² (1: eolotec GmbH, Germany; 2: POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany)
13:00	Lunch (1 h 15 min., on-site available)
14:15	Plenary Additive Manufacturing Processes for Optical Waveguides Beyond Lithography <u>Ludger Overmeyer</u> (Leibniz University Hannover, Germany)

Sensors (Chair: Prof. Dr. Rainer Engelbrecht)

14:45	Invited In Memoriam Katerina Krebber – 20 Years of Research on POF-based Sensing <u>Konstantin Hicke</u> (Bundesanstalt für Materialforschung und -prüfung (BAM), Germany)
15:10	Wearable Side-Polished Plastic Optical Fiber Sensor for Simultaneous Knee Motion and Temperature Monitoring G. Martínez-Lage ¹ , R. Vergaz ¹ , B. García-Cámara ¹ , C. Vázquez ¹ , <u>Alicia Fresno-Hernández</u> ¹ (Universidad Carlos III de Madrid, Spain)

15:30 Coffee break and exhibition (20 min.)

Planar waveguides (Chair: Prof. Dr. Olaf Ziemann)

15:50	Rheological Characterization of Materials for Mosquito Dispensed Waveguides <u>Laura Fütterer</u> , Ludger Overmeyer (Leibniz University Hannover, Germany)
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Program at a Glance

- 16:10** | **Data and Power Transmission via Flexo-Printed Optical Waveguides in PCBs**
Mirko Wiebking^{1,2}, Janka Kirstein², Benjamin Rudolf³, Laura Fütterer², Henning Ahlers¹, Ludger Overmeyer² (1: Hochschule Hannover, Germany; 2: Leibniz University Hannover, Germany; 3: POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany)
- 16:30** | **Simulation-Based Analysis of Corrugation-Induced Attenuation in Flexographically Printed Polymer Optical Waveguides for PCB-Integrated Power Delivery**
Benjamin Rudolf¹, Mirko Wiebking^{2,3}, Rainer Engelbrecht¹, Olaf Ziemann¹
 (1: POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany; 2: Hochschule Hannover, Germany; 3: Leibniz University Hannover, Germany)
- 16:50** | **Universal Test Platform for Investigation of Optical Transmission Systems Based on Planar Waveguides**
Ulrich Wetzel¹, Juri Vinogradov², Olaf Ziemann² (1: Siemens AG, Germany; 2: POF-AC, Technische Hochschule Nürnberg Georg Simon Ohm, Germany)

19:00 | **Conference Dinner** (Tucher Mautkeller Nürnberg, Hallplatz 2, 90402 Nürnberg)

Industrial (Chair: Randy Dahl)

- 09:00** **Invited** **OPTICALization via FIBERing-up GIPOF, from a Global Market Perspective**
Dexi Weng^{1,2} (1: Dexyan Poly Research Institute, USA; 2: Comeall (Shanghai) Tech. Co., Ltd., China)
- 09:25** **Invited** **Spatially Resolved Characterization of Transmission Properties Across the Cross Section of Multi-Core POF**
 Koichi Ueno, Hiroyuki Sasaki, Yuri Ito, Koshi Okita (Asahi Kasei Corp., Japan)
- 09:50** **Invited** **Development of Plastic Optical Fibers for High-Capacity and Energy-Efficient Short-Reach Communications in Data Centers**
Masahiro Yoshioka (Electronic & Information Materials Technical Dept. 2, Toray Industries, Inc., Japan)
- 10:15** **Invited** **Infrastructures and Strategies at Network Level 5 and the Role of Step-Index Polymer Optical Fibre**
Josef Faller (Homefibre Digital Network GmbH, Austria)
- 10:40** **POF Coupled LED Modules for Applications in Data Communication, Fiber Sensors, Fiber Illumination and Textile Fiber Bundles**
Hans Kragl (DieMount GmbH, Germany)

11:00 Coffee break and exhibition (25 min.)

Sensors (Chair: Prof. Dr. Nunzio Cennamo)

- 11:25** **Invited** **Biodefense Strategies Versus Viruses: POF-Based Bio/Chemical Sensors Combined with Microwave Inactivation Systems**
Luca Pasquale Renzullo¹, F. Passeggio¹, Rosalba Pitruzzella¹, Francesco Arcadio¹, Chiara Marzano¹, Luigi Zeni¹, P. Bia², A. Filisetti², A. Manna², Nunzio Cennamo¹
 (1: University of Campania Luigi Vanvitelli, Italy; 2: Elettronica SpA, Italy)
- 11:50** **Invited** **ML and Weak Interactions Monitored by Plasmonic-Based POF Sensors to Detect and Classify Classes of Substances**
Francesco Arcadio, Luca Pasquale Renzullo, Luigi Zeni, Nunzio Cennamo
 (University of Campania Luigi Vanvitelli, Italy)
- 12:15** **Invited** **Sensing at the Edge: Integrated POF and Telecom Optical Fibre Sensing Network in Remote and Island Locations**
Patricia Scully (University of Galway, Ireland)

Program at a Glance

12:40	On-Site Color Detection for Anaerobic Ammonium Oxidation Biofilm Monitoring via Plastic Optical Fiber in Wastewater Treatment Cunlai Li ¹ , <u>Yishuai Jiang</u> ¹ , Hui Ting Leong ¹ , Hiroshige Shiota ² , Shinichi Akutagawa ³ , Yashuhiro Yokota ¹ (1: Kajima Technical Research Institute Singapore, Kajima Corporation, Singapore; 2: Kajima Technical Research Institute, Kajima Corporation, Japan; 3: The On-Site Visualization Consortium, IPSX 801, Japan)
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13:00	Lunch and exhibition (1 h 30 min., on-site available)
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Novel fibers (Chair: Dr. María Ángeles Losada)

14:30	Unconventional Optoelectronic Oscillators Based on Visible LEDs and Plastic Optical Fibres: Experimental Demonstration and Emerging Applications Vitor T. Ferreira ¹ , Alex B.N. Pefireko ¹ , Maria C.R. Frauche ¹ , José R.M. Andrade ¹ , Alexandre C.T. Santos ¹ , Vanessa P.R. Magri ¹ , Cláudia B. Marcondes ² and <u>Ricardo M. Ribeiro</u> ¹ (1: Universidade Federal Fluminense, Brazil; 2: Centro Federal de Educação Tecnológica, Brazil)
14:50	High Numerical Aperture All-PMMA Microstructured Polymer Optical Fiber Jean Bruland, <u>Kristian Nielsen</u> (SHUTE Sensing Solutions A/S, Denmark)
15:10	Refractive Index Tuning of Cellulose Derivatives-Based Core Materials via Nanoparticle Incorporation <u>Heidi Englberger</u> , C. Zollfrank (Technical University of Munich, Germany)
15:30	Developing New Frontiers: Polymer Optical Fibers in Agricultural Applications <u>Fabian Köntges</u> ¹ , Susanne Demba ² , Sawfen Rekik ¹ , Thomas Gries ¹ (1: Institut für Textiltechnik of RWTH Aachen University, Germany; 2: University of Rostock, Germany)

15:50	Closing Remarks
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Program at a Glance

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