

18th International Conference on Electronic and Optical Sensors COE'2026 Conference programme

Sunday, 20 September 2026	
16:00 – 21:00	Conference registration
18:30	Dinner

Monday, 21 September 2026	
7:30 – 9:00	Breakfast
9:00 – 9:30	Conference Opening – Katarzyna Zakrzewska, Piotr Jasiński
	Oral session I – Chair: Janusz Smulko
9:30 – 10:10	Plenary Lecture: Federica Rigoni, Dario Zappa, Stefano Botticini, Ibn Abbas, Matteo Borsi, Massimo Ponzoni, Hakimeh Pakdel, Sembukutti A.B. Thejasiri, <u>Elisabetta Comini</u> <i>Metal Oxide Nanostructures: Bridging Optical and Electronic Sensing, Energy and Medicine</i>
10:10 – 10:40	Invited presentation: <u>Anna Kusior</u> <i>Enhanced charge transfer in 3D flower-like TiO₂ heterojunctions for high-sensitivity photoelectrochemical diagnostics</i>
10:40 – 11:00	<u>Paulina Kapuściak</u> , Damian Wojcieszak <i>Influence of Deposition Parameters and Post-Processing on the Gas Sensing Properties of CeO₂ Thin Films</i>
11:00 – 11:30	Coffee break
	Oral session II – Chair: Katarzyna Zakrzewska
11:30 – 12:10	Plenary Lecture: <u>Artur Rydosz</u> <i>More than a century of exhaled acetone analysis and still nothing</i>
12:10 – 12:40	Invited Presentation: <u>Dorota G. Pijanowska</u> <i>Engineering DNA-based bioreceptor layers for biosensing</i>
12:40 – 13:00	<u>Vu Bao Chau Nguyen</u> , Kamila Sadowska <i>Molecularly Imprinted Polymer-based RuO₂ Electrochemical Sensor for Detection of Pseudomonas Quinolone Signal</i>
13:00 – 14:00	Lunch
14:00 – 15:30	Poster session
15:30 – 16:00	Coffee Break
	Oral session III – Chair: Dorota Pijanowska
16:00 – 16:40	Plenary Lecture: Jyayasi Sharma, Mubdiul Islam Rizu, Dalal Fadil, <u>Eduard Llobet</u> <i>New advances in chemoresistive sensing with transition metal dichalcogenides</i>
16:40 – 17:10	Invited Presentation: <u>Janusz Smulko</u> <i>Light-enhanced sensing by resistive gas sensors</i>
17:10 – 17:40	Invited Presentation: <u>Joanna Banaś-Gac</u> , Marta Radecka, Eduard Llobet, Katarzyna Zakrzewska <i>Dual-functionality of CuO-based bilayers under light activation</i>
17:40 – 18:00	<u>Tomasz Grzebyk</u> , Jakub Jendryka, Piotr Szyszka <i>Miniaturization limits of quadrupole mass spectrometers</i>
18:00 – 18:20	<u>Piotr Szyszka</u> , Aleksandra Buchta, Mateusz Soszyński. Aleksander Kassner, Folke Dencker, Marc Christopher Wurz, Tomasz Grzebyk <i>MEMS ion thruster</i>
18:30	Grill

Tuesday, 22 September 2026	
	Oral session IV – Chair: Rafał Walczak
7:30 – 9:00	Breakfast
9:00 – 9:40	Plenary Lecture: <u>Stella Vallejos</u> <i>Heterostructured Metal Oxide Microsensors for Environmental Gas Sensing</i>
9:40 – 10:10	Invited presentation: <u>Mateusz Ficek</u> , Adrian Olejnik, Maria Babińska, Mattia Pierpaoli, Mateusz Śmietana, Alexander Kromka, Robert Bogdanowicz <i>Integrated Fabrication of CVD Diamond-on-Glass Optrodes for Sensor Applications</i>
10:10 – 10:30	<u>Wojciech Kubicki</u> , Justyna Kornicka, Rafał Walczak <i>3D-Printed Multichannel RT-LAMP Microdevice for Fluorometric Detection of Feline Calicivirus</i>
10:30 – 10:50	<u>Agnieszka Krakos</u> <i>Space-Based Lab-on-Chip Instruments: A Research Group Overview</i>
10:50 – 11:10	Coffee break
	Oral session V – Chair: Michał Mazur
11:10 – 11:40	Invited presentation: <u>Tadeusz Martynkien</u> , Paweł Mergo <i>D-type optical fibers for evanescent field application</i>
11:40 – 12:10	Invited presentation: <u>Tomasz Osuch</u> <i>Fabrication Techniques of Fiber Bragg Gratings: UV vs. Femtosecond Laser Approaches and Their Sensor Implications</i>
12:10 – 12:30	<u>Michał Nikodem</u> , Julia Puchalska, Piotr Perehiniec, Ryszard Buczynski <i>Mid-infrared trace-gas sensing inside anti-resonant hollow-core fibers: from fundamental concepts to real-world environmental monitoring</i>
12:30 – 12:50	<u>Des Gibson</u> , Lewis Fleming, Emma Keel, Michał Mazur <i>Ultralow Power Consumption Non-Dispersive Infrared Sensor for Methane Gas Detection</i>
13:00 – 14:00	Lunch
14:00 – 18:00	Social programme
19:30	Gala dinner

Wednesday, 23 September 2026	
	Oral session VI – Chair: Artur Rydosz
7:30 – 9:00	Breakfast
9:00 – 9:40	Plenary Lecture: <u>Carsten Schwandt</u> <i>A Novel Hydrogen Sensor – from Invention to Innovation</i>
9:40 – 10:10	Invited presentation: Sherly Novia Sari, <u>Paweł Pasierb</u> <i>Modification of ABO₃ Protonic Conductors for Gas Sensing and Energy Conversion Applications</i>
10:10 – 10:30	<u>Ewa Kowalska</u> , Patrycja Pokora, Agata Obstarczyk, Milena Kiliszkiwicz, Małgorzata Kot, Katarzyna Zakrzewska, Damian Wojcieszak, Michał Mazur <i>Investigation of the parameters influencing gas sensing performance of thin films based on copper and titanium oxides</i>
10:30 – 10:50	<u>Michał Mazur</u> , Wiktoria Kołodzińska, Jarosław Domaradzki, Damian Wojcieszak, Des Gibson <i>Pt/WO₃ thin films for optical and chemiresistive hydrogen sensing</i>
10:50 – 11:10	<u>Bartłomiej Dec</u> , Mattia Pierpaoli, Paweł Jakóbczyk, Robert Bogdanowicz <i>From Defect Type to Analyte Affinity: MD/DFT Predictions in B,N-Co-doped Carbon Nanowalls for Herbicide and Amino Acid Detection</i>
11:30 – 13:00	PTTS general assembly
13:00 – 14:00	Lunch

Poster session: Monday, 21 September 2026, 14:00 – 16:00

1.	Oleksandra Hotra, Svitlana Kovtun, Valentyn Tsapenko, Żaklin Grądz, Oksana Boyko The prospects for the Application of Wavelet Analysis and ARIMA Modelling for Processing Heat Flow Sensor Signals
2.	Joanna Jankowska-Śliwińska, Aleksander Iskra, Uladzislava Yarmosh, Marek Dawgul, Dorota G. Pijanowska Regenerable AMP-based carbon electrochemical sensor for calcium monitoring
3.	Paweł Janus, Jan Prokaryn, Anna Katarzyna Piotrowska Magnetically actuated microcantilever-based sensor for measurements in various environments
4.	Wiktoria Kołodzińska, Michał Mazur, Jarosław Domaradzki Correlation Between WO ₃ Thin Film Thickness and Gasochromic Behaviour
5.	Karolina Kwiecień, Beata Synkiewicz-Musialska, Krzysztof Szostak, Dorota Szwagierczak, Elżbieta Czerwińska Lightweight, low permittivity substrates based on doped LiBO ₂ for ULTCC terahertz applications
6.	Zofia Markiewicz, Paweł Janus, Jerzy Zając, Magdalena Ekwińska Non-destructive point thickness measurement of silicon wafers using a microprobe with an integrated piezoresistive sensor
7.	Tomasz Osuch, Mariusz Zdanowicz, Rohan Soman, Marcin Koba Wavelength-Selective Fiber Optic Sensors Fabricated by Femtosecond Laser Micromachining
8.	Mateusz Plasun, Piotr Szyszka, Tomasz Grzebyk Miniature ion source for ultra-high vacuum applications
9.	Paweł Urbański, Tomasz Grzebyk Fully Integrated Miniature MEMS X-Ray Source: Design, Applications, and Future Perspectives
10.	Urszula Wawrzaszek, Jarosław Domaradzki Gel electrolytes based on natural polymers as components of visual electrochromic sensor modules
11.	Uladzislava Yarmosh, Jan Prokaryn, Elżbieta Remiszewska, Paweł Janus, Joanna Jankowska-Śliwińska Picodispensing in gold surface functionalization for the AFM-based biosensors development
12.	Kamil Kruczek, Jakub Oleksy, Anna Filipowska, Maciej Gawlikowski, Martyna Borak, Wojciech Filipowski Osmotic Fragility Measurement Using Image Segmentation Methods
13.	Grzegorz Jasiński, Piotr Jasiński Transient Response Analysis for Enhanced Gas Discrimination Using Temperature-Modulated Gas Sensors
14.	Kamil Baranowski, Michał Krzysztof, Michał Zychła, Matthias Hausladen, Mathias Bartl, Rupert Schreiner, Alexandr Knápek Characterization of a CMOS Image Sensor as an Electron Detector for the Measurements of Electron Beam Transmission Through Si ₃ N ₄ Membrane
15.	Mattia Pierpaoli, Paweł Jakóbczyk, Mateusz Ficek, Bartłomiej Dec, Jacek Ryl, Robert Bogdanowicz Tailoring Defects in B,N-Codoped Carbon Nanowalls for Direct Electrochemical Sensing of Glyphosate and its Metabolites
16.	Konrad Segelýn, Dominik Grochala, Mateusz Kocoń, Artur Rydosz Highly Effective Soft Start and Power Supply Protection System Based on SiC Semiconductors for Application in Magnetron Sputtering
17.	Damian Harasim, Jacek Klimek, Patryk Panas, Krzysztof Skorupski In-fiber refractometer based on cascade of Tilted Fiber Bragg Gratings
18.	Elżbieta Remiszewska, Małgorzata Ciężkowska, Joanna Motyl, Marcin Grzeczkwicz, Dorota G. Pijanowska Microfluidic systems with optical detection for the diagnosis of urea cycle disorders
19.	Patrycja Lasek, Michał Nikodem, Krzysztof Pałka Microfabrication of Anti-Resonant Hollow-Core Fibers Using Xe-Plasma Focused Ion Beam and UV Femtosecond Laser for Gas Sensing Applications