

Conference program

Sunday 27th – Wednesday 30th, August

Sunday, 27th August

17:00 - 21:00	Registration / Get together
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PL: plenary lecture

KN: keynote lecture

OC: oral contribution

Monday, 28th August

08:00 - 09:00	Registration			
09:00 - 09:30	Opening Ceremony (Room C103)			
	Room C101		Room C103	
Session	Potentiometric sensors		Optical biosensors – SERS	
09:30 - 10:00	KN1	Prof. Dr. Sabine Szunerits (University of Lille, France) <i>Refining cardiovascular risk stratification in patients using graphene-based bioFETs</i>	KN2	Prof. Dr. Ilko Bald (University of Potsdam, Germany) <i>The lab-on-DNA origami approach to optical sensing</i>
10:00 - 10:15	OC1	G. García-Molina, P. Natale, L. Valenzuela, J. Alvarez-Malmagro, C. Gutiérrez-Sánchez, A. Iglesias, I. López-Montero, M. Vélez, M. Pita, A.L. De Lacey <i>Development of a potentiometric ATP biosensor based on E. coli F1Fo ATPase activity reconstituted on gold electrodes</i>	OC2	N. Bellassai, R. D'Agata, A. Marti, A. Rozzi, S. Volpi, M. Allegretti, R. Corradini, P. Giacomini, J. Huskens, G. Spoto <i>Detection of circulating tumor DNA in real samples with dual-functional polymer on plasmonic biosensor</i>
10:15 - 10:30	OC3	S. Papp, J. Kozma, R.E. Gyurcsányi <i>Solid-contact ion-selective electrodes based on redox-functionalized hydrophobic polymers for calibration-free sensing</i>	OC4	M. Majdinasab, A. Azziz, Q. Liu, M. Edely, M. Lamy de la Chapelle <i>Label-free surface-enhanced Raman scattering for interleukin 6 detection</i>
10:30 - 10:45	OC5	T. Karschuck, J. Ser, S. Achtsnicht, S. Schmidt, A. Poghossian, P. Wagner, M.J. Schöning <i>Impact of enzyme coverage on performance of a capacitive field-effect biosensor</i>	OC6	G. Klös, L.S. Peña, V. Pavlov, A.L. Cortajarena <i>Multi-functional ssDNA for DNA origami biosensor application</i>
10:45 - 11:00	OC7	N. Dau, V.T. Thu, G. Mattana, B. Piro <i>A flexible multi-sensing platform for chronic wound monitoring</i>	OC8	M. Toma, S. Namihara, Y. Itakura, K. Kajikawa <i>Sensitive label-free biosensing by colors of plasmonic metal nanostructure arrays</i>
11:00 - 11:25	Coffee Break			
11:25 - 12:50	Short Poster Presentations (Room C103)			
12:50 - 15:10	Lunch, Exhibition and Poster Market A			
15:10 - 15:55	PL1	Prof. Dr. Evgeny Katz (Clarkson University Potsdam, USA) <i>Integration of biosensing and bioactuation using signal-responsive materials – general concept and experimental examples</i>		
15:55 - 16:15	Coffee Break			
Session	Impedance biosensors		Optics and materials	
16:15 - 16:45	KN3	Prof. Dr. Jan Vacek (Palacky University Olomouc, Czech Republic) <i>Electrochemistry and chiral surface-supported films</i>	KN4	Prof. Dr. Patricia Losada-Pérez (Université libre de Bruxelles, Belgium) <i>How do solid surface properties affect the formation and stability of supported lipid membranes?</i>
16:45 - 17:00	OC9	M. Khorshid, S.B. Sichani, I. Wilhelm, A. Clement, J. Hürttlen, M. Menger, G. Pohlmann, P. Wagner <i>An impedimetric-based biosensor for monitoring COPD and CF biomarkers in patients' exhaled breath condensate (EBC)</i>	OC10	S. Vasudevan, A.-I. Bunea, J. Kaitez, H. Gürbüz, B. Rezaei, M. Perreira, A. Martínez-Serrano, A. Heiskanen, S.S. Keller, J. Emnéus <i>Optoelectrical carbon devices as enabling tools for neuroscience</i>
17:00 - 17:15	OC11	H. Schulze, A. Arnott, A. Libori, E.A. Obaje, T.T. Bachmann <i>Temperature-enhanced mcr 1 colistin resistance gene detection with electrochemical impedance spectroscopy biosensors</i>	OC12	E. Schmäzlin, K. Madhav, G. Dähne, M. Olszyna, L. Dähne <i>Miniaturized, label-free surface nanosensing, based on whispering gallery modes emerging from fluorescent microbeads</i>
17:15 - 17:30	OC13	M. Liu, N. Jiang, J. Wu, C. Chen, L. Zhuang, P. Wang <i>Dual-functional biomimetic organoid chip of real-time imaging and synchronous electrical impedance monitoring</i>	OC14	M. Eickhoff, S. Hölzel, G. Steingelb, M. Kumar, P. Hille, J. Schörmann, R. Hötzel, S. Figge <i>InGaN/GaN nanowires as selective biosensors with dual optical readout</i>
17:30 - 17:45	OC15	J. Li, Y. Ding, Y. Shi, Z. Liu, R. Cao, Y. Chen, S. Liu, C. Wu <i>A zinc oxide nanorod-based biosensor for the detection of tumor markers in saliva</i>	OC16	H. Yılmaz, A. Ramoji, A. Pistiki, A. Silge, U. Neugebauer, I. Schie, O. Ryabchykov, K. Weber, J. Popp <i>Raman spectroscopic sensing of the host response</i>
18:30 - 20:00	Guided City Tour Aachen			

Tuesday, 29th August

09:00 - 9:45	PL2	Prof. Dr. Tatsuo Yoshinobu (Tohoku University Sendai, Japan) <i>Light-addressable potentiometric sensors and related technologies for biological and electrochemical systems</i>	
		Room C101	Room C103
Session		Electrochemical biosensors	Optical biosensors – SPR
9:45 - 10:15	KN5	Prof. Dr. Filip Meysman (University of Antwerp, Belgium) <i>How microbes discovered electricity way before Alessandro Volta</i>	KN6 Dr. Thomas Hirsch (University of Regensburg, Germany) <i>A bright match: high lanthanide content meets surface protection via bilayer strategy – small, efficient, NIR-excitable upconversion probes for bioapplications</i>
10:15 - 10:30	OC17	S. Hoffmann, T. Dotan, Y. Shacham-Diamand <i>Flexible electrochemical biosensors for direct monitoring of heat stress in <i>Nicotiana tabacum</i> plants</i>	OC18 F. Battaglia, F. Torrini, P. Palladino, S. Scarano, M. Minunni <i>Polyserotonin as new functional monomer for molecular imprinting: an applicative study for TNF-α detection by surface plasmon resonance</i>
10:30 - 10:45	OC19	E.V. Daboss, A.A. Karyakin <i>Simultaneous noninvasive monitoring of diabetes and hypoxia using 'artificial peroxidase' nanozyme – enzyme based biosensors</i>	OC20 A. Dillen, C. Scarpellini, A. Mohrbacher, W. Daenen, S. Driesen, W. Vandezande, D. Daems, P. Zijlstra, D. Spasic, J. Lammertyn <i>FO-SPR sensors and duplexed aptamers: an innovative approach for continuous biosensing</i>
10:45 - 11:00	OC21	A. Tricase, V. Marchianò, N. Ditaranto, E. Macchi, C. Di Franco, R. Kidayaveettil, D. Leech, M. Piscitelli, G. Scamarcio, G. Perchiazzi, L. Torsia, P. Bollella <i>Printing enzymes on electrodes: a new frontier to fabricate enzyme-based amperometric biosensors</i>	OC22 K. Toma, Y. Satomura, K. Iitani, T. Arakawa, K. Mitsubayashi <i>Real-time and label-free monitoring of vancomycin concentration using a long-range surface plasmon resonance aptasensor</i>
11:00 - 11:15	OC23	G. Göbel, F. Müller, A. Talke, U. Ahnert, F. Lisdat <i>Determination of protease activities at different protein modified 3D structures</i>	OC24 J. Bednár, V. Maybeck, A. Offenhäusser <i>Measuring cell-substrate separation with surface plasmon resonance microscopy to assess biosensor performance</i>
11:15 - 11:45	Coffee Break and Group Photo		
Session		Aptamer-type biosensors	Particles and biosensing
11:45 - 12:15	KN7	Dr. Marcus Menger (Fraunhofer Institute for Cell Therapy and Immunology, Postdam, Germany) <i>Aptamers and aptasensors for highly specific recognition</i>	KN8 Prof. Dr. Hans-Joachim Krause (Forschungszentrum Jülich, Germany) <i>Immunoassays based on frequency mixing magnetic detection</i>
12:15 - 12:30	OC25	N. Bagheri, A. Idili, F. Ricci, A. Porchetta <i>PAM-engineered toehold switch DNA as target-responsive activators of CRISPR/Cas12a for sensing applications</i>	OC26 S. Streif, A.J. Baeumner <i>Liposome-based high-throughput and point-of-care neutralization tests for SARS-CoV-2</i>
12:30 - 12:45	OC27	C.A. Schrage, P. Dippner, N. Labetzki, S. Kruss <i>Fluorescent nanosensors for allergy diagnostics</i>	OC28 I. Tavernaro, P. Srivastava, L. Scholtz, N. Nirmalanathan-Budau, U. Resch-Genger <i>Multicolored sensors based on silica and polymeric particles for ratiometric monitoring of pH, oxygen and saccharides</i>
12:45 - 13:00	OC29	P. Ivaskovic, A. Florent, H. Debreyne, J.-J. Toulmé <i>Engineering optical aptasensors for the detection of fungicides</i>	OC30 X. Liu, F. Schulz, W.J. Parak <i>An intriguing polymeric modification strategy for solid particles to investigate endosomal escape of cargos from polyelectrolyte microcapsule</i>
13:00 - 13:15	OC31	S. Ranallo, S. Bracaglia, F. Ricci <i>DNA nanotechnology meets synthetic biology: new perspective of cell-free biosensors for antibody detection</i>	OC32 L. Zeininger <i>Ratiometric determination of morphology-dependent emulsion droplet luminescence for in-situ tracking of exoenzyme activity</i>
13:15 - 15:45	Lunch, Exhibition and Poster Market B		

Session	Materials and fabrication		Cantilever sensors and QCM	
15:45 - 16:15	KN9	Prof. Dr. Bernhard Wolfrum (Technical University Munich, Germany) <i>Sensing and stimulation at small peripheral nerves using 4D-printed cuff electrodes</i>	KN10	Prof. Dr. Alberto Escarpa (University of Alcala, Spain) <i>Catalytic micromotors in action for (bio)sensing applications</i>
16:15 - 16:30	OC33	H. Gliemann, M. Franzreb, C. Wöll <i>Surface-anchored metal-organic frameworks as highly potential material platform for biosensing application</i>	OC34	C. Kranz, A. Hellmann, S. Daboss, E. Daboss <i>From microbiosensors to AFM probe-integrated (bio)sensors: towards single cell measurements</i>
16:30 - 16:45	OC35	D. Murugan, H. Jiang, R.R.G. Soares, N. Madaboosi, S. Ingebrandt, V. Pachauri <i>Studying the metal-organic framework bio-interface for novel biosensing applications</i>	OC36	C.F. Werner, Y. Takahashi, K. Miyaoka, R. Mitobe, M. Sohgawa, M. Noda <i>Liposome-immobilized microcantilever array sensor for the simultaneous detection of alpha-synuclein in multiple analytes</i>
16:45 - 17:00	OC37	A. Scroccarello, F.D. Pelle, S. Fiori, D. Compagnone <i>Laser-induced metal nanostructures on cellulosic substrates for colorimetric devices development</i>	OC38	D. Özsoylu, F. Aliazizi, P. Wagner, M.J. Schöning <i>First step towards "template cell-free" fabrication of a surface imprinted polymer-based biosensor for pathogenic bacteria detection</i>
17:00 - 17:15	OC39	F.P. Angelov, L.N. Quang, G.G. Zavaleta, J.Y. Pan, S.I. Bisgaard, K.L. Bøgh, A. Heiskanen, J. Emnéus, Y. Sun, S.S. Keller <i>Microfabrication of pyrolytic carbon microneedles for electrochemical biosensing in the skin</i>	OC40	S. Spagnolo, K. Davoudian, S. Ahmadi, E. Chan, J. Süle, R. Kocsis, T. Hianik, M. Thompson <i>A novel thiol-based linker with antifouling properties for detection of P. aeruginosa by QCM-D aptasensor in milk</i>
17:15 - 18:15	(Scientific Committee Meeting)			
20:00 - 22:30	Conference Dinner			

Wednesday, 30th August

9:00 - 9:45	PL3	Prof. Dr. Fabiana Arduini (Universita di Roma Tor Vergata, Italy) <i>Paper as smart material to deliver ecodesigned lab on a chip with improved analytical features and unprecedented applications</i>	
		Room C101	Room C103
Session		Lap-on-Chip systems	Immunosensors
9:45 - 10:15	KN11	Prof. Dr. Christina Wege (University of Stuttgart, Germany) <i>Plant virus-based enzyme nanocarriers for robust biosensor layouts</i>	Prof. Dr. Fabio Biscarini (University of Modena and Reggio Emilia, Italy) <i>Electrolyte-gated transistors based on ambipolar reduced graphene oxide: the mechanism of transduction of biorecognition events</i>
10:15 - 10:30	OC41	D. Vloemans, H. Ordurowski, J. Qu, L. Van Hileghem, W. Verbist, S. Santos, C. Van Tricht, D. Spasic, F. Dal Dosso, J. Lammertyn <i>(i)SIMPLE: next-generation self-powered microfluidic platform for point-of-care diagnostic applications</i>	J. Raya, N. Pascual, M.-T. Martin-Gómez, E. Padilla, J.P. Horcajada, M.-P. Marco <i>Quorum sensing profiling for P. aeruginosa infection samples from clinical patients</i>
10:30 - 10:45	OC43	C. Warmt <i>Loop-mediated isothermal amplification in the field of biosensors and point of care: can isothermal amplification outperform PCR?</i>	S. Paßreiter, J. Klüpfel, H.-P. Holthoff, M. Ungerer, M. Lohse, P. Knolle, U. Protzer, M. Elsner, M. Seidel <i>A competitive chemiluminescence immunoassay for the automated detection of surrogate neutralizing SARS-CoV-2 antibodies</i>
10:45 - 11:00	OC45	S. Agarwal, C. Warmt, M. Hamidizadeh, J. Henkel, F.F. Bier <i>Lateral flow assay based POCT for Loop mediated isothermally amplified nucleic acid with enzymatic incorporation of biotin labelled dUTP and hybridization of DNA probes to detect N-gene of SARS-CoV-2</i>	M. García-Cortés, F. Pradanas-González, B. Glahn-Martínez, A. Luque-Uría, M. del Barrio, T.K. Nevanen, R. Barderas, C.M. Maragos, G. Orellana, E. Benito-Peña, M.C. Moreno-Bondi <i>Epitope-mimicking peptides as versatile biological tools for the development of mycotoxin immunosensing</i>
11:00 - 11:15	OC47	C. Qin, Q. Yuan, M. Liu, L. Xu, P. Wang <i>Biohybrid tongue for real-time glucose-sensing based on hypothalamic neuronal network</i>	V. Serafín, M. Blázquez-García, V. Ruiz-Valdepeñas Montiel, S. Benedé, E. Molina, M. Gamella, B. Arévalo, L. Mata, P. Galán-Malo, I. Segura-Gil, J.M. Pingarrón, S. Campuzano <i>Advancing food allergy with multiomics molecular-level electrochemical biosensing</i>
11:15 - 13:15	Lunch, Exhibition and Poster Market B		
Session		Biosensors & IoT	MIP-based biosensors
13:15 - 13:45	KN13	Dr. Ulrich Rant (CEO Dynamic Biosensors, Germany) <i>Taking novel challenges in molecular interaction analysis – from small molecules to cells</i>	Dr. Ljiljana Fruk (University of Cambridge, England) <i>Nanostructured probes for early detection of cancer</i>
13:45 - 14:00	OC49	M. Birkholz, M. Kögler <i>Sustainable design of online biosensors</i>	P.A. Lieberzeit, S.S. Alzahrani, K. Sirivibulkovit, C.L. Onorat <i>Can polymers replace proteins in assays? Chances and challenges</i>
14:00 - 14:15	OC51	F. Kleiser, A. Weltin, S.J. Rupitsch, J. Kieninger <i>Biosensors in the cloud – Freiburg’s embedded potentiostat (FreiStat) provides the missing link for IoT and AI applications</i>	N. Cennamo, D. Maniglio, L. Zeni, A.M. Bossi <i>Soft molecularly imprinted nanoparticles for the optical sensing of protein biomarkers</i>
14:15 - 14:30	OC53	E. Macchia, C. Sarcina, M. Scandurra, M. Caputo, M. Catacchio, C. Di Franco, P. Bollella, M. Chironna, F. Torricelli, I. Esposito, R. Österbacka, G. Scamarcio, L. Torsi <i>Single-molecule bioelectronic sensor: improving reliability with machine learning approaches</i>	F.A. Tabar, J.W. Lowdon, M. Caldara, T.J. Cleij, P. Wagner, K. Eersels, H. Dilien, B. van Grinsven <i>Thermal determination of PFOA in environmental samples</i>
14:30 - 15:00	Poster Awards, Closing Ceremony		