



Program guide 03 to 05 July 2016



Sunday, 03 July 2016

17:00 - 19:00	Registration open
17:00 - 19:00	Welcome reception / Laboratory tour

Monday, 04 July 2016

7:30	Registration open		
8:50	Prof. Dr. Fred Lisdat	Welcome	
08:55 - 09:05	Prof. Dr. Ralf Vandenhousten	Opening speech	
09:05 - 09:45	S. Leimkühler	Bacterial molybdenum enzymes, their maturation and future applications	Plenary speech 1
09:45 - 09:50	D. Röhlen	A bienzyme biosensor for the amperometric detection of the metabolic intermediate malate in fermentation samples	A1
09:50 - 09:55	D. Molinnus	A high-sensitive digital adrenaline biosensor	A2
09:55 - 10:00	S. Feifel	Cytochrome c-Calixarene Crystals on Electrodes	A3
10:00 - 10:05	B. Mitrova	Immobilizing formate dehydrogenase from R. capsulatus on electrode surfaces - Towards future applicability in CO ₂ fixation and biofuel production	A4
10:05 - 10:10	M. Lakatos	Synthesis and characterization of functional three-dimensional DNA origami hybrid structures	A5
10:10 - 10:15	C. Schmidt	Thermal influence on the dissociation of biotinylated oligonucleotides from surface-immobilized streptavidin homologs	A6
10:15 - 10:20	J. Fischbach	Screening of natural compounds as alternative dyes for detecting pyrophosphate in biochemical reactions	A7
10:20 - 10:25	D. Vornicescu	Characterization of thrombin-inhibitor modified liposomes by surface plasmon resonance (SPR)	A8
10:25 - 10:30	C. Schipp	Dehalogenase-covered metal surfaces as platform technology for biosensors for halogenated organic compounds	A9
10:30 - 10:35	V. Scherbahn	Microstructured surfaces for advanced surface plasmon resonance sensing	A10
10:35 - 10:40	A. Britz	Tip-enhanced Raman spectroscopy – An advanced tool for bionano-sensorics	A11
10:40 - 10:45	M. Kazmierczak	Functionalized semiconductor surfaces for THz biosensing applications	A12
10:45 - 10:50	A. Kleppisius	Input and Output detection in a chemical microprocessor	A13
10:50 - 10:55	M. Lemmens	Development of a smart patch for a quantitative analysis of bioimpedance in chronic wounds	A14
10:55 - 11:50	Poster Session / Coffee Break		
11:50 - 12:50	Lunch Break		

Session A

12:50 - 13:30	U.	Resch-Genger	Applications and Challenges of Luminescence-based Detection Methods in the Life and Material Sciences	Plenary speech 2	
13:30 - 13:35	V.	Pachauri	A microarray based on-chip sensor platform for label-free optical detection	B1	Session B
13:35 - 13:40	V.	Liauchuk	Fully integrated DLP-based LAPS measurement setup for the long-term cell cultivation under physiological conditions	B2	
13:40 - 13:45	R.	Welden	A light-addressable electrode with TiO ₂ as semiconductor material for the integration in lab-on-chip systems	B3	
13:45 - 13:50	D.	Zhang	The image detection of yeast <i>Saccharomyces cerevisiae</i> by Light Addressable Potentiometric Sensors (LAPS)	B4	
13:50 - 13:55	F.	Vreys	Optimisation and miniaturisation of the HTM sensors by using the transient plane source technique	B5	
13:55 - 14:00	H.-C.	Schwarz	Micro-Structured Coatings of Zinc Oxide Nanocrystals for Application in Sensor Devices	B6	
14:00 - 14:05	W.	Munief	Silanization and thin-films fabrication of MoS ₂ on wafer surfaces	B7	
14:05 - 14:10	J.	Yao	New composite materials for electrochemical energy storage	B8	
14:10 - 14:15	L.	Breuer	In-situ fabrication of light-controllable hydrogels as actuators for lab-on-chip devices	B9	
14:15 - 14:20	A.	Grebinyk	Fullerene C ₆₀ -Doxorubicin Conjugate for Effective Drug Delivery in vitro	B10	
14:20 - 14:25	S.	Roozitalab	Simulation of 3D-printed microfluidic devices for real-time blood plasma separation	B11	
14:25 - 14:30	D.	Yongabi	Cell detection by Surface-Imprinted Polymers - A study to unravel the recognition mechanisms	B12	
14:30 - 14:35	G.	Wackers	Towards a catheter based sensor for the electronic detection of histamine in the intestinal tract.	B13	
14:35 - 15:40			Poster Session / Coffee Break		
15:40 - 16:20	R.	Haag	Bioinspired Universal Monolayer Coatings by Combining Concepts from Blood Protein Adsorption and Mussel Adhesion	Plenary speech 3	
16:20 - 16:25	N.	Burbliès	Functional Nanoporous Carbon Coatings for Neural Interface Electrodes	C1	Session C
16:25 - 16:30	A.	Winter	Biocompatibility of carbon nanotube silicone rubber in animal model (mouse)	C2	
16:30 - 16:35	C.	Schlaich	Construction of Stable and Flexible Hierarchical Coatings for Superamphiphobic Surfaces on Various Substrates	C3	
16:35 - 16:40	K.	Uhlig	Noninvasive Local Control of Cell Adhesion	C4	
16:40 - 16:45	W.	Kossow	Investigation of Silicone Rubber Interfaces for Medical Rapid Prototyping	C5	
16:45 - 16:50	Z.	Aminipour	In situ capacitance study on the formation of lipid bilayers	C6	
16:50 - 16:55	M.	Khorshid	Influence of cholesterol on the phase behaviour of lipid vesicles: a QCM-D study	C7	
16:55 - 17:00	P.	Glogener	Biostability investigations of a silicone-encapsulated biosensor implant after 17 months of in vivo exposure	C8	
17:00 - 17:05	T.	Dang	Microwire array device for investigation of temperature-dependent neurite outgrowth in microchannels	C9	
17:05 - 17:10	D.	Rani	Integration of a microfluidic system with newly designed SiNW ISFET arrays for reproducible biosensors	C10	
17:10 - 17:15	J.	Oberländer	Customized impedance analyzer to evaluate sensors for sterilization processes	C11	
17:15 - 17:20	A.	Schnettelker	Getting the micro pattern into the polymer: a self-organisation driven process	C12	
17:20 - 17:25	M.	Moser	Quantification of PEG-Maleimide Ligands and Coupling Efficiencies on Nanoparticles with Ellman's Reagent	C13	
17:25 - 17:30	F.	Wu	Copper contamination of self-assembled organic monolayer modified silicon surfaces following a 'click' reaction characterized with LAPS and SPIM	C14	
17:30 - 18:25			Poster Session / Coffee Break		
18:30			Bus Shuttle		
19:00 - 23:00			Conference Dinner		

Tuesday, 05 July 2016

09:00 - 09:40	G.	Urban	Microanalytical Systems for Personalized Medicine	Plenary speech 4
09:40 - 09:45	R.	Niedl	Hydrogel-driven paper-based microfluidics for rapid on-site testing	D1
09:45 - 09:50	P.	Cornelis	Working towards a novel device for measuring thermal conduction effects at solid-liquid interfaces	D2
09:50 - 09:55	P.	Zhang	Strain Gauges Composed of Nanoparticle Mixtures	D3
09:55 - 10:00	S.	Huber	Change of surface structure and surface potential as a function of Mn-thickness gradient on Zn layer	D4
10:00 - 10:05	M.	Krebsz	In situ monitoring the electrochemical dissolution of tungsten	D5
10:05 - 10:10	H.	Lux	Ultra-fast synthesis of Graphene on poly-crystalline metal foils and insulators	D6
10:10 - 10:15	Z.	Jildeh	FEM-based modelling of a calorimetric gas sensor for hydrogen peroxide monitoring	D8
10:15 - 10:20	C.	Werner	Pulse-based light-addressable potentiometric sensor for bio/chemical probing station	D9
10:20 - 10:25	M.	Riedel	Photoelectrochemical NADH detection based on InGaN/GaN nanowire electrodes	D10
10:25 - 10:30	A.	Müller	pH Sensing with Al ₂ O ₃ Gate on p- and n-Channel Silicon Nanowire Field-Effect Transistors	D11
10:30 - 10:35	K.	Eersels	A biomimetic cell culture quality assay based on thermal transport analysis through surface-imprinted polyurethane layers	D12
10:35 - 10:40	C.	Koch	Biosensors profiting from Tobacco mosaic virus (TMV)-based enzyme nanocarriers	D13
10:40 - 10:45	S.	Dantism	Investigations of cellular metabolism applying a light-addressable potentiometric sensor incorporated with 3D multi-chambers	D14
10:45 - 10:50	G.	Göbel	Influence of human body liquids on the performance of a carbon nanotube-based glucose/oxygen biofuel cell	D15
10:50 - 10:55	L.	Rassaei	Selectivity in a Nanogap Sensor	D16
10:55 - 12:00			Poster Session / Coffee Break	
12:00 - 13:00			Lunch Break	
13:00 - 13:40	V.	Mirsky	Detection, quantification and identification of engineered nanoparticles	Plenary speech 5
13:40 - 13:45	A.	Hermes	Challenges and solutions towards the construction of thermophoretic nanoswimmers	E1
13:45 - 13:50	K.	Mathwig	Nanoscale fluidic mixing devices for high-throughput fluorescence sensing of single biomolecules	E2
13:50 - 13:55	F.	Hempel	Organic Electrochemical Transistors based on PEDOT:PSS for Cell-based Bioassays	E3
13:55 - 14:00	S.	Schusser	Fabrication of all-solid-state pH-glass thin-film electrodes by means of pulsed laser deposition	E4
14:00 - 14:05	A.	Oppermann	Coating structure of zinc-based press-hardening steel	E5
14:05 - 14:10	F.	Kepplinger	Low temperature-induced microstructural changes of metallic thin films	E6
14:10 - 14:15	P.	Abendroth	Electrochemically controlled deposition of nanoporous titanium dioxide in the presence of non-ionic block copolymers	E7
14:15 - 14:20	J.	Kartchemnik	Linear polyglycerolsulfate-functionalized materials: A new approach for anticoagulant surfaces	E8
14:20 - 14:25	K.	Tegtmeier	Cell recording on wet etched carbon nanotube-silicone rubber electrode surfaces	E9
14:25 - 14:30	R.	Randrian-tsilefisoa	Polymer matrix on material surfaces for detection of proteins	E10
14:30 - 14:35	G.	Leuteritz	Analysis of Bonding Strength and Spreading of Multilayer Silicone Rubber Interfaces for Medical Rapid Prototyping	E11

Session D

Session E

14:35 - 14:40	J.	Marcoleta	Distributed multiplexing system for ECoG	E12
14:40 - 14:45	M.	Drozd	Assembly of (bio)molecules on gold via dithiocarbamate linkage	E13
14:45 - 14:50	T.	Bronder	Real-time monitoring of surface potential changes of semiconductor field-effect sensors during polyelectrolyte and DNA adsorption	E14
14:50 - 15:45	Poster Session / Coffee Break			
15:45 - 16:00	Concluding remarks and poster prizes / Prof. Dr. Torsten Wagner and Prof. Dr. Ing. Theodor Doll			
16:00	Closing of the Conference			

Poster Presentation

J.	Arreola	Study of the effect of hydroxylation for surface functionalization on biosensor chips	F1
I.	Campos Sanchez	2-D Rat neuron (B50) imaging using light-addressable potentiometric sensors and scanning photo-induced impedance microscopy	F2
J.	Carolus	Spatial heat distribution of inkjet printed heaters in comparison to planar milled circuit board heaters for biosensing applications	F3
D.	Ciornii	Towards Nanobionic Composites: Fullerene-based Photobiocathode	F4
A. W.	Hassel	Direct SEM visualisation of the Lotus effect on nanowire arrays	F5
A.	Kremers	Evaluation of gas sensor housing effects by applying computational simulation techniques	F6
X.	Lu	Reduced graphene oxide-nanoparticle hybrids (rGO-NPs hybrids) for click-chemistry based, label-free detection of PSA biomarkers	F7
D.	Nettelroth	Manufacturing and evaluation of metal-air battery electrodes containing mesoporous carbon CMK-3	F8
S.	Nizamov	Detection and quantification of single nanoparticles at ppb concentrations in consumer products	F9
J.	Pilas	Enzyme immobilization through avidin-biotin interaction on self-assembled monolayers	F10
D.	Schäfer	Flavin-dependent Fructose Dehydrogenase and Cytochrome c : Electron transfer and sensor architecturs	F11
L.	Guntenhöner	BDNF diffusion through membranes for guided neurite growth	F12