

Wednesday 17th May 2023

SESSION I
BIOSENSING PLATFORMS

CHAIR: *Dr Mario Caironi*

09:30 – 10:00	Controlling CNT-Biomolecule Interfaces towards optimized Biosensing Devices: from Aptamer-Biomarker sensing to Protein-Protein recognition <i>Prof Matteo Palma, Queen Mary University of London</i>
10:00 – 10:30	Hydrogel-enabled label free biosensing in complex biofluids <i>Prof Bergoi Ibarlucea, TU Dresden</i>
10:30 – 11:00	Sensing of Pyrophosphates with sp³-functionalized (6,5)-SWNTs <i>Simon Settele, Heidelberg University</i>
11:00 – 11:15	COFFEE & TEA BREAK

SESSION II
FLEXIBLE & STRETCHABLE BIOELECTRONICS

CHAIR: *Prof Matteo Palma*

11:15 – 11:45	Printed Organic Optoelectronic Devices: Processability, Performance and Biofriendliness <i>Dr Gerardo Hernandez-Sosa, Karlsruhe Institute of Technology</i>
11:45 – 12:15	Printed Carbon-based Biosensors for Diagnostic and Cell Cultures Probing <i>Dr Mario Caironi, Italian Institute of Technology</i>
12:30	SUMMARY / CLOSING REMARKS
12:30	LUNCH AT IWH & DEPARTURE

CREDITS AND THANKS: Three Klaus-Georg and Sigrid Hengstberger Awards are bestowed annually on young scientists and scholars at Heidelberg University. The awards are intended to enable the recipients to present an interdisciplinary symposium at Internationales Wissenschaftsforum Heidelberg (IWH). The next deadline for applications is 1st April 2024. **Dr Yan Huang and Dr Elisa Fresta received this award in 2022**

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Health + Life Science Alliance
Heidelberg Mannheim

HENGSTBERGER SYMPOSIUM

Bioelectronics: Interfacing & Mimicking Biological Systems

15th – 17th May 2023

ORGANISATION:
Dr Yan Huang and Dr Elisa Fresta, University of Heidelberg

Monday 15th May 2023

13:30 – 13:50	REGISTRATION AND WELCOME RECEPTION
13:50 – 14:00	WELCOME REMARKS BY THE ORGANIZERS
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SESSION I BIOCOMPATIBLE MATERIALS AND SYSTEMS CHAIR: Prof Sven Ingebrandt	
14:00 – 14:30	Biomaterials and Bioprinting for Tissue Engineering Prof Daniela Duarte Campos, Heidelberg University
14:30 – 15:00	Designing functional materials for 3D/4D Printing Prof Eva Blasco, Heidelberg University
15:00 – 15:30	3D hydrogel composites for biohybrid systems Prof Christine Selhuber-Unkel, Heidelberg University
15:30 – 16:00	COFFEE & TEA BREAK
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SESSION II APPLICATIONS IN TRANSISTORS CHAIR: Dr Paschalis Gkoupidenis	
16:00 – 16:30	Organic electrochemical transistors for protein detection Dr Ulrike Kraft, Max Planck Institute for Polymer Research, Mainz
16.30 – 17:00	Biodetection platforms based on the extended gate FETs Dr Larysa Baraban, Helmholtz Center Dresden, Rossendorf
17:00 – 17:30	Organic electrochemical transistor arrays for in vitro monitoring of cells Prof Sven Ingebrandt, RWTH, Aachen University
17:30 – 18:00	Functional neurohybrid interfaces with light-sensitive dynamic polymers for bioelectronic applications Prof Francesca Santoro, Forschungszentrum Jülich
18:30	DINNER AT IWH

Tuesday 16th May 2023

SESSION I INTERFACING APPLICATIONS OF BIOELECTRONICS CHAIR: Dr Miryam Criado-Gonzalez	
09:30 – 10:00	Organic LEDs as technology platform for high density all-optical neural interfaces Prof Malte Gather, University of Cologne

10:00 – 10:30	3D Printing of transformable small peripheral nerve interfaces Prof Bernhard Wolfrum, Technical University of Munich
10:30 – 11:00	Bioelectronic tools to study the gut-brain axis Prof Roisin M. Owens, University of Cambridge
11:00 – 11:15	Selective vagus nerve stimulatoin in combination with Remote Patient Monitoring Dr Robert Spoelgen & Dr Armin Schneider, Merck Healthcare KGaA
11:15 – 11:45	COFFEE & TEA BREAK
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SESSION II APPLICATIONS IN NEUROMORPHIC DEVICES CHAIR: Dr Gerado Hernandez-Sosa	
11:45 – 12:15	Organic neuromorphic electronics for processing, learning and biointerfacing Dr Paschalis Gkoupidenis, Max Planck Institute for Polymer Research, Mainz
12:15 – 12:30	Neuromorphic organic electrochemical transistors, neurons and robotics in hybrid self-learning platforms Ugo Bruno, Italian Institute of Technology
12:45	LUNCH AT IWH
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SESSION III BIOINSPIRED AND BIO-MIMICKING MATERIALS CHAIR: Dr Ulrike Kraft	
14:15 – 14:45	Mimicking biological cells with DNA nanotechnology Prof Kerstin Göpfrich, Heidelberg University
14:45 – 15:15	Designing functional miniproteins from β-sheet protein folding motifs Truc Lam Pham/Prof Franziska Thomas, Heidelberg University
15:15 – 15:45	3D Printing of PEDOT-based electroactive materials for bioelectronics Dr Miryam Criado-Gonzales, POLYMAT (UPV/EHU)
15:45 – 16:15	COFFEE & TEA BREAK
16:15 – 16:30	Mesh-electronics as a new paradigm for interfacing human brain organoids Dr Csaba Forro, Stanford University/Forschungszentrum Jülich
16:30 – 17:00	Superhydrophobic surfaces and materials: design and biological applications Prof Pavel Levkin, Karlsruhe Institute of Technology
17:00 – 18:30	POSTER SESSION AND GROUP DISCUSSION
18:30	DINNER AT IWH