

## PROGRAM OVERVIEW

THURSDAY, NOVEMBER 12<sup>th</sup>, 2020

13:30 Welcome by NanoMat and DECHEMA

### Bioelectronics

13:40 **Engineering the Neuro-electronic Interface with Nanoscale Tools**

*Prof. Dr. Andreas Offenhäusser | Forschungszentrum Jülich GmbH, Germany*

14:00 **CRISPR powered electrochemical nucleic acid diagnostics**

*Dr. Can Dincer | University of Freiburg, FIT & IMTEK, Germany*

14:20 **If the Medicine of the future is Bioelectronic, how does the pill of the future look like? – and what does it take to make it?**

*Dr. Vasiliki Giagka | Fraunhofer Institute for Reliability and Microintegration IZM, Berlin, Germany  
Delft University of Technology, Delft, The Netherlands*

14:40-15:00 **Short break**

### Functional Surfaces

15:00 **Shaping functional organic materials – biomimetic surfaces via hierarchically structuring processes**

*Prof. Dr. Günter Tovar | Fraunhofer Institute for Interfacial Engineering and Biotechnology, Stuttgart, Germany*

15:20 **How hematopoietic stem cells sense biomaterials: A materials approach for guiding stem cell behavior**

*Prof. Dr. Cornelia Lee-Thedieck | Leibniz University Hannover, Hannover, Germany*

15:40 **Design, characterization & use of functional surfaces: from barrier effects over antiadhesive properties to haptic perception**

*Dr. Matthias Kellermeier | BASF SE, Ludwigshafen, Germany*

16:00-16:15 **Short break**

### Smart Nanomedicine

16:15 **Combined Therapeutic Medical Device and Stem Cells for Osteoarticular Regenerative Nanomedicine**

*Dr. Nadia Benkirane-Jessel | INSERM, Strasbourg, France*

16:35 **T Crossing Barriers With Polymers Or How To Get Information Into Cells – Challenges And Pitfalls**

*Dr. Anja Träger | Friedrich Schiller University Jena, Germany*

16:55 **High resolution 3D FIB-SEM analysis of biological-technical interfaces**

*Dr. Claus J. Burkhardt | NMI Natural and Medical Science Institute at the University of Tübingen, Germany*

17:15 **End of the first day**

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FRIDAY, NOVEMBER 13<sup>th</sup>, 2020

### Functional Surfaces

- 9:00**      **Going functional: Mucoadhesive buccal films as vehicle for API delivery from nano particles**  
*Dr. Christian Dubiella | Tesa Labtec GmbH, Langenfeld, Germany and leon-nanodrugs GmbH, Munich, Germany*
- 9:20**      **Programmable Biomaterials for Life Science Applications**  
*Prof. Dr. Christof M. Niemeyer | Karlsruhe Institute of Technology (KIT), Germany*
- 9:40**      **Functional Surfaces Inspired by Nature**  
*Prof. Dr. Hendrik Hölscher | Karlsruhe Institute of Technology (KIT)*

**10:00-10:15**   **Short break**

### Bioelectronics

- 10:15**      **Intelligent Smell Sensing for Various Applications**  
*Dr. Martin Sommer | Karlsruhe Institute of Technology (KIT), Germany*
- 10:35**      **Closed loop bioelectronics: challenges and opportunities**  
*Dr. Paul Galvin | Tyndall National Institute, Cork, Ireland*
- 10:55**      **Ion conducting nanopores in polymer foils: the core of a new generation of (bio)molecular sensors for diagnostic applications**  
*Prof. Dr. Wolfgang Ensinger | Technische Universität Darmstadt, Germany*

**11:15-11:30**   **Short break**

### Smart Nanomedicine

- 11:30**      **Advanced drug delivery systems on their way to industrial scale**  
*Dr. Silko Grimm | Evonik Nutrition & Care GmbH, Darmstadt, Germany*
- 11:50**      **Drug Loaded Bioresorbable Sol Gel Derived Fibers – a Novel Platform Technology in Regenerative Therapies**  
*Dr. Sofia Dembski | Translational Center Regenerative Therapies TLC-RT, Fraunhofer ISC, Würzburg, Germany  
Department Tissue Engineering and Regenerative Medicine (TERM), University Hospital Würzburg, Germany*
- 12:10**      **EnPCs™, a protein-based drug delivery system for the treatment of CNS diseases**  
*Dr. Heiko Manninga | NEUWAY Pharma GmbH, Bonn, Germany*

### Perspectives

- 12:30**      **Technology Driven Vision of Future Healthcare**  
*Dr. Klaus Weltring & Dr. Kathleen Spring | Gesellschaft für Bioanalytik Münster e.V., Germany*
- 12:50**      **Closing remarks**