Karlsruhe Institute of Technology

With friendly support: DECHEMA Gesellschaft für Chemische Technik und Biotechnologie e.V. | Deutsche Plattform NanoBioMedizin

nanomat

Science-Industry-Symposium

KIT Materials Center

NanoVision 2020

PROGRAM OVERVIEW
THURSDAY, NOVEMBER 12th, 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**

Karlsruhe Institute of Technology

With friendly support: DECHEMA Gesellschaft für Chemische Technik und Biotechnologie e.V. | Deutsche Plattform NanoBioMedizin

nanomat

Science-Industry-Symposium

KIT Materials Center

NanoVision 2020

PROGRAM OVERVIEW

FRIDAY, NOVEMBER 13th, 2020

Functional Surfaces

9:00 **Going functional: Mucoadhesive buccal films as vehicle for API delivery from nano particles**
Dr. Svenja Niese and 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**