THURSDAY, MAY 19, 2022

10:30 a.m. Registration and Coffee/Tea

11:15 a.m. Welcome
ULRIKE BISCHLER
Volkswagen Foundation

SESSION 1: BIOMEDICAL ENGINEERING
11:20 a.m. Out of the dark into the light: Picking electronegative microorganisms from the human intestinal microbiome
RAINER KRULL
Technische Universität Braunschweig

11:40 a.m. Hitchhiker’s guide to the cell—Employing viral and bacterial targeting sequences for live cell imaging
SEBASTIAN GREISER
Fraunhofer Institute for Cell Therapy and Immunology, Leipzig

12:00 p.m. Low Dose Grating-Free X-Ray Phase Contrast Imaging for Advanced Medical Diagnosis
SVEN SIMON
University of Stuttgart

12:20 p.m. Fill the Priming Volume—Miniaturization of artificial lungs
LEONID GOUBERGITS
Charité – Universitätsmedizin Berlin

12:40 p.m. Learning the Language of the Brain: Adaptive Brain-Machine Interfaces
TIM LANDGRAF
Freie Universität Berlin

1:00 p.m. Lunch

SESSION 2: BIOGEOCHEMISTRY
2:00 p.m. Traces in the dirt—searching for ancient human DNA in sediments and soils in the open landscape
MATTHIAS MEYER
MPI for Evolutionary Anthropology, Leipzig

2:20 p.m. What is the future response of marine calcification to rising CO2?
DAVID EVANS
University of Frankfurt/Main

2:40 p.m. Pyrotraces—Unraveling the Inner Workings of Pyroclastic Flows
KAREN STREHLOW
GEOMAR – Helmholtz Centre for Ocean Research, Kiel

3:00 p.m. Enabling fracking free enhanced geothermics using environmental friendly natural products
TOBIAS LICHA
University of Bochum

3:20 p.m. Coffee Break

SESSION 3: PHYSICAL SCIENCES
3:50 p.m. Simple and rapid imaging of groundwater using magnetic resonance
MIKE MÜLLER-PETKE
Leibniz Institute for Applied Geophysics, Hannover

4:10 p.m. Responsive porous liquids – Activated cooperative gas sorption in liquids
SEBASTIAN HENKE
TU Dortmund University

4:30 p.m. Solid Electricity: Do crystalline electrides exist at room temperature?
GÜNTHER THELE
Freie Universität Berlin

4:50 p.m. Explosion-like ultra-rapid heating without combustion
FABIAN SCHÜTT
University of Kiel

5:10 p.m. Garden Walk
SESSION 4: MATERIALS
6:00 p.m. Towards Solar Paint: Janus Emulsion-based Luminescent Solar Concentrators
Lukas Zeininger
MPI of Colloids and Interfaces, Golm

6:20 p.m. Nonvegan Flame Retardant Biocomposites
Bernhard Schartel
Bundesanstalt für Materialforschung und -prüfung – BAM, Berlin

6:40 p.m. Dust-catching coatings fighting against particulate pollution
Susanne Wintzheimer
University of Erlangen

7:00 p.m. Sentinel Beehive
Katharina Landfester
MPI for Polymer Research, Mainz

7:20 p.m. Aperitif & Dinner

FRIDAY, MAY 20, 2022

SESSION 5: MICROBIOLOGY
9:00 a.m. Against the laws: Horizontal gene transfer via interspecies cell fusion in fungi
André Fleißner
Technische Universität Braunschweig

9:20 a.m. SIRENS – misguiding fungal mating to protect crops
Armin Diame
University of Bonn

9:40 a.m. Green Yeast: Uniting Two Domains of Life to Generate the Next Level Production Microbe
Nina Odermatt
MPI Terrestrial Microbiology, Marburg

10:00 a.m. The cellular vault – an antiviral organelle
Florian Full
University Hospital Erlangen

10:20 a.m. Off-target effects of glyphosate on bacteriophages: mechanisms and implications for environmental health
OlgA Makarova
Univ. of Veterinary Medicine, Vienna

10:40 a.m. Coffee Break

SESSION 6: ALLERGIES, CANCER
11:00 a.m. Are there different IgE antibodies? – Impact of IgE antibody glycosylation on allergic reactions
Marc Ehlers
University of Lübeck

11:30 a.m. R-loops: An early transforming event commonly occurring in cancer?
Sarah Doerdrechter-Kinkley
MPI for Molecular Genetics, Berlin

11:50 a.m. Engineering inducible transcription factors to generate human functional blood cells for cell therapy
Christian Wichmann
University Hospital Munich

12:10 p.m. Macrophages as a Trojan horse for tumor cells
Heiko Bruns
University Hospital Erlangen

12:30 p.m. Lunch

SESSION 7: LIFE SCIENCES
1:30 p.m. The nasal-cycle: A novel path to the brain
Thomas Hummel
University Hospital Dresden

1:50 p.m. Understanding the molecular basis of fingerprint formation
Jacqueline Mermod
University of Marburg

2:10 p.m. Neurodegenerative proteinopathies & genomic vulnerability
Susanne Wegmann
Deutsches Zentrum für Neurodegenerative Erkrankungen – DZNE, Berlin

2:30 p.m. Scheduling ‘Eureka’ moments
Björn Niehaves
University of Siegen

2:50 p.m. Closing
Pavel Dutow
Volkswagen Foundation

3:00 p.m. Departure