

Timetable for Workshop „Life-Inspired Functional Assembly”

Location: Conference Hall - IPF Dresden

1st October 2024

8:50 am	Welcome of the organizers
9 am	Session chaired by Prof. Xin Huang
9 am	Cell and organelle mimics based on biomacromolecular self-assembly Prof. Hongjing Dou / Shanghai Jiao Tong University
9:30 am	Bioinspired clusters of nanoassemblies for complex reactions Prof. Cornelia Palivan / University of Basel
10 am	Novel catalysis-functionalized polymersomes for photocatalytic CO ₂ reduction, toward compartmentalized artificial photosynthesis Dr. Carla Casadevall / Institute of Chemical Research of Catalonia
10:25 am	Coffee Break
11 am	Session chaired by Dr. Andrea Belluati
11 am	Dynamic reconfiguration in multiphase coacervates Prof. Pavan Kumar / Indian Institute of Technology (Roorkee)
11:25 am	When coacervates meet terpolymers: Membranized coacervate protocells with dynamic and diverse architectures Yang Zhou / IPF Dresden
11:50 am	Eukaryote-inspired protocells constructed by spatially segregated bacterial colonies Prof. Can Xu / Shanghai Jiao Tong University
12:15 pm	Lunch
1:45 pm	Session chaired by Dr. Ning Gao
1:45 pm	Nano-scale enzyme membrane reactors: A versatile platform to overcome incompatibilities in multi-enzyme syntheses Prof. Kathrin Castiglione / Friedrich-Alexander Universität
2:10 pm	Tailored bioactive nanocontainers: Fine-tuning membrane permeability for adaptive biological functionality Dr. Silvia Moreno / University of Alcalá
2:35 pm	Composition tunes physical properties and catalytic activity of model multi-component biomolecular condensates Dr. Patrick McCall / IPF Dresden
3 pm	Coffee Break
3:30 pm	Session chaired by Dr. Carla Casadevall
3:30 pm	Life-inspired assembly of biomacromolecules toward multi-compartmentalized hierarchical systems Dr. Xiaoling Wang / Harbin Institute of Technology
3:55 - 4:25 pm	Hydrogel microbeads for 3D tumor microphysiological model CAR T cell immunotherapy trials Dr. Larysa Baraban / Helmholtz-Zentrum Dresden-Rossendorf
4:45-6:45 pm	Sightseeing tour through Dresden (Center of Dresden)

7 pm	Diner in the City of Dresden
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2nd October 2024

9 am	Session chaired by Prof. Cornelia Palivan
9 am	Synthetic cellularity based on self-assembly Prof. Yan Qiao / Chinese Academy of Sciences
9:30 am	Programmed assembly of bio-orthogonally reactive protocells into protocellular materials Prof. Pierangelo Gobbo / University of Trieste
9:55 am	Program emergent behavior in synthetic cell community Prof. Liangfei Tian / Zhejiang University
10:20 am	Coffee Break
11 am	Session chaired by Prof. Brigitte Voit
11 am	Self-synthesizing artificial cells via enzymatic polymerization Dr. Andrea Belluati / TU Darmstadt
11:30 am	Artificial lipid droplets mediated fast lipolysis of adipocyte Dr. Haixu Chen / Harbin Institute of Technology
11:55 am	AF4-LS for the characterization of vesicular and other architectures Dr. Susanne Boye / IPF Dresden
12:20 pm	Lunch
1:45 pm	Session chaired by Prof. Hongjing Dou
1:45 pm	Construction of artificial cell wall towards modulating living cell functionalities Prof. Xin Huang / Harbin Institute of Technology
2:10 pm	Applications of polymer microgels in synthetic biology Dr. Annika Kaufmann / IPF Dresden
2:35 pm	Nanoparticle-caged coacervate microdroplets as functional protocell models Dr. Ning Gao / Beijing Institute of Technology
3 pm	Coffee Break
3:30 pm	Session chaired by Prof. Yan Qiao
3:30 pm	Dynamic coacervates as minimal models of protocells Prof. Nicolas Martin / University Bordeaux
3:55 pm	Digestive and hydrolytic biomimetic cell compartments Dr. Dietmar Appelhans / IPF Dresden
4:45-5:15 pm	Bottom-up design of synthetic protocells for metabolism regulations Prof. Jianbo Liu / Hunan University
5:15 pm	Concluding remarks