

Advances in Industrial Biotechnology:

From metabolic design to biomanufacturing: Bridging scales and data

Center for Interdisciplinary Research (ZiF)
Bielefeld University, Germany

September 28 – 30, 2026

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MONDAY September 28, 2026	
11:00 – 13:00	Registration
13:00	Welcome
13:15 – 14:45	SESSION 1 (Chair Katrin Rosenthal): Invited speaker John Woodley (Technical University of Denmark): Towards continuous biocatalytic processes for the future Christian Schnepel (Durham University): Harnessing Acyl Transfer Biocatalysis for Amide Synthesis and CO₂ Conversion Pathways Jonas Lange (Karlsruhe Institute of Technology): Transcriptional evaluation of the volumetric oxygen transfer coefficient (k_{La}) in chemostat processes with <i>Corynebacterium glutamicum</i>
14:45 – 15:15	Coffee break
15:15 – 16:45	SESSION 1 (Chair Robert Heyer): Invited speaker Anna-Lena Heins (Hamburg University of Technology): How much do we need to know about our cells for development of scalable, high-yielding and robust bioprocesses? Julia Zaraza (University of Ulm): Monitoring intracellular pH and population heterogeneity in <i>Corynebacterium glutamicum</i> and <i>Escherichia coli</i> using the ratiometric biosensors Jialan Cao (Osnabrück University of Applied Sciences): Microfluidic pick-and-place sorting for image-guided screening workflows in bioprocess development
17:00 – 19:00	Poster Session

TUESDAY September 29, 2026	
9:00 – 10:30	SESSION 2 (Chair Daniel Merkle): Invited speaker Zvezdana Findrik Blažević (University of Zagreb): Experimental and computational approaches in the development of biocatalytic reactions Emanuel Lange (Leibniz Institute of Analytical Science - ISAS - e.V.): PATATOS: A web application for democratizing proteomics-supported metabolic modeling and analysis Felix Moorhoff (Leibniz Institute of Plant Biochemistry – Halle): SelectZyme: AI-Based Interactive Protein Space Visualization for Enzyme Discovery, Selection, and Mining
10:30 – 11:15	<i>Coffee break</i>
11:15 – 12:35	SESSION 2 (Chair Johann Kufs): Nadja A. Henke (Karlsruhe Institute of Technology): Beyond expression levels: Integrating transcriptional robustness and ATP-cost estimations for RNA-seq data interpretation Alina Grankin (Research Center Jülich): Turning Toxicity into Productivity: Growth-Coupled Production of Hydrophobic Aromatics in <i>Pseudomonas taiwanensis</i> Invited ECFS Session (Chair Marie Dientheis-Frenken): Laura Helleckes (Imperial College London): Closing the Loop: Combining Lab Automation and AI for Self-Driving Bioprocesses
12:40 – 14:00	<i>Group picture</i> <i>Lunch in the Cafeteria</i> <i>Special break in fellow room for early career scientists – meet Laura Helleckes</i>
14:00 – 15:30	SESSION 3 (Chair Volker F. Wendisch): Invited speaker Charles Moore (Novartis): Application of computational approaches to the stabilization and increased promiscuity of imine reductases and an α-ketoglutarate-dependent dioxygenase Norbert Sewald (Bielefeld University): Enzymatic Halogenation as a Key Step in Reaction Cascades for Medicinal Chemistry and Materials Chemistry Richard Gerstmann (Otto-von Guericke University Magdeburg): Continuous Biocatalysis and ex situ-Crystallization of Homophenylalanine using Spatial Membrane Separation
15:30 – 16:00	<i>Coffee break</i>
16:00 – 17:30	SESSION 3 (Chair Till Tiso): Invited speaker David Bauwens (AGAIN): Thermophilic Acetogenesis: Building a Platform for Carbon-to-Chemicals Invited speaker Timo May (Evonik): Translating Biotech Innovation into Real-World Impact
19:00	Conference Dinner

WEDNESDAY September 30, 2026	
9:15 – 10:45	SESSION 4 (Chair Johann Kufs): Invited speaker Pierre Stallforth (Leibniz Institute for Natural Product Research and Infection Biology – Leibniz-HKI, and Friedrich Schiller University): Exploring Natural Products in Space and Time: from Ancient Molecules to Microbial Arms Races Thomas Baier (Bielefeld University): Metabolic Engineering of <i>Chlamydomonas reinhardtii</i> for High-Value Astaxanthin Production: From Carotenoid Pathway Design to Process Daniel Merkle (Bielefeld University): Bridging Tandem-MS Data and Fragment Structure through Chemically Constrained Mechanistic Inference
10:45 – 11:15	<i>Coffee break</i>
11:15 – 12:45	SESSION 4 (Chair Olaf Kruse): Invited speaker Christian Riedel (University of Ulm): tbd Jasmin Schorling (Bielefeld University): Valorisation of bacterial biomass using recombinant amoebae Katharina Wolff (University Bonn): Brewing colour in the lab: Engineering the anthocyanin biosynthesis pathway in <i>Saccharomyces cerevisiae</i>
12:45	<i>Closing remarks</i>
13:00	<i>End of Conference</i>