

GreenTech
Accelerator



Summer School

07. - 11. October in Darmstadt und Gernsheim

About the program

Biomaterials are materials designed to interact with biological systems. These materials can be derived from nature or synthesized in laboratory and are used in a variety of medical applications, such as medical implants, hydrogels for tissue engineering, drug delivery via polymeric nanoparticles, scaffolds for cell attachment and as biosensors.

Engineered living materials (ELMs) combine biological systems with materials, resulting in unique and versatile functionalities. They are designed to respond to their environment, self-repair, grow, and adapt, making them highly innovative and useful for various applications. They are used in all aspects of human life, from food with bioengineered meat or in regenerative medicine and the applications are growing rapidly.

Biomaterials are part of the University Excellence Cluster Initiative CoM2Life, which focuses on approaches to support biomaterials research with cutting-edge technologies of tomorrow. These advances are expected to drive breakthroughs in medical research and personalized healthcare in the coming decades. Examples include feedback-controlled drug delivery devices for homeostatic regulation, tissue models to replace animal testing, metabolic regulation systems for tumor immunotherapy, tissue repair and artificial organ engineering.

Every participant will learn about the essentials to found a Start-up and will receive a certificate!

The Summer School program will run daily from 9 am till 5 pm – drinks and food will be served during the program including “Get to know Dinner” on Monday evening.



October 7th, 2024

Location: TU Darmstadt – Köhlersaal

Hochschulstraße 1 / S1103 Altes Hauptgebäude, 64289 Darmstadt

Time	
09:00 – 09:30	Welcome
09:30 – 10:15	Idea stimulation workshop I (Georg Fischer)
10:15 – 10:30	Coffee break
10:30 – 12:00	Idea stimulation workshop II (Georg Fischer)
12:00 – 13:00	Lunch (University Mensa)
13:00 – 14:00	Scientific talk 1 (Avi Schröder)
14:00 – 15:00	Scientific talk 2 (Brigitte Staedler)
15:00 – 15:15	Coffee break
15:15 – 16:15	Scientific talk 3 (Jan Mathony)
16:15 – 17:15	Scientific talk 4 (Roman Jerala)

October 8th, 2024

Location: TU Darmstadt – Köhlersaal

Hochschulstraße 1 / S1103 Altes Hauptgebäude, 64289 Darmstadt

Time	
9:00 – 9:45	Scientific talk 5 (Martin Fussenegger)
9:45 – 10:30	Scientific talk 6 (Andrea Belluati)
10:30 – 11:00	Coffee Break
11:00 – 11:45	Scientific talk 7 (Aranzazu del Campo)
11:45 – 12:30	Scientific talk 8 (Fatemeh Mirzapour)
12:30 – 13:30	Lunch
13:30 – 14:00	Industry talk 1 - Akribion Genomics (Lukas Linnig)
14:00 – 14:30	Industry talk 2 - Biovox (Carmen Rommel)
14:30 – 15:00	Industry talk 3 - GUF (Martin Grininger)
15:00 – 15:15	Coffee Break
15:15 – 17:00	Idea stimulation workshop (Georg Fischer)

October 9th, 2024

Location: Merck KGaA Darmstadt, Building C11 I 172 (Pigment Center)
Frankfurter Straße 250, 64293 Darmstadt

Time	
09:00 – 09:15	Welcome (reception Merck)
09:15 – 10:15	Onboarding, „The One Million Dollar Idea?“(Bartosz Kajdas)
10:15 – 10:30	Coffee break
10:30 – 12:00	DNA of a good Idea (Bartosz Kajdas)
12:00 – 13:00	Lunch (Merck Cafeteria)
13:00 – 15:00	Transforming your idea into a startup (Bartosz Kajdas)
15:00 – 15:15	Coffee break
15:15 – 17:00	Transforming your idea into a startup II (Bartosz Kajdas)

10. Oktober 2024

Location: Merck KGaA Darmstadt, Building A16 I 24
Frankfurter Straße 250, 64293 Darmstadt

Time	
09:00 – 09:15	Welcome (reception Merck)
09:15 – 10:30	Perfect Pitch with the APP – Pitch Program Method (Bartosz Kajdas)
10:30 – 10:45	Coffee break
10:45 – 12:00	Setting up your Storyline (Bartosz Kajdas)
12:00 – 13:00	Lunch (Merck Cafeteria)
13:00 – 15:00	Preparing your Pitch-Deck (Bartosz Kajdas)
15:00 – 15:15	Coffee break
15:15 – 17:00	Rehearsal in front of the group (Bartosz Kajdas)

October 11th, 2024

Location: GreenTech Park FLUXUM, Building 14A | 205

Mainzer Straße 41, 64579 Gernsheim

Time	
09:00 – 09:15	Welcome (Merck “Tor West”)
09:15 – 12:00	Pitches Training Recording 3-Min. Pitches. Final preparation
12:00 – 13:00	Lunch (Merck Cafeteria)
13:00 – 15:00	Pitch and ryon-founders Award Ceremony (Prof. Dr. Walther)
15:00 – 16:00	Farewell

Georg Fischer

SAP

Personal Information: • Chief Product Manager, SAP SE • Coach, Lecturer, and Speaker for Entrepreneurship, Design Thinking and Business Model Innovation Experience Highlights: • Intercultural competencies from 14 years managing global teams • Establishing and managing global partner and customer networks • Leading the delivery of global projects and programs for all phases from inspiration to market scale Projects and Roles: • Lead Coach Summer School @ University Heidelberg • Lecturer MARS Entrepreneurship Bootcamp @ University of applied sciences Mannheim • Tutor Entrepreneurial and Intrapreneurial Project Management program @ 4EU+ Alliance • Coach for EXIST funded Business Start-ups • Speaker, coach, jury member @ HIGHEST incubator TU Darmstadt



Bartosz Kajdas

STARTUPS From Science

Bartosz Kajdas is an experienced expert in supporting academic startups. Since 2014, he has accompanied over 200 academic startups in their early stages at TU Darmstadt and the University of Heidelberg and conducted over 1,000 consultation sessions with founders from various scientific disciplines. His passion lies in promoting and nurturing the growth of innovative companies. In 2019, Bartosz launched the podcast "Working With Startups From Science," where he interviews numerous experts, founders, and entrepreneurs from the academic world. Through these conversations, he sheds light on the motivations and inspirations behind science-tech startups, offering valuable insights into the world of entrepreneurship. As an author, Kajdas wrote and developed the APP-Pitch-Program method, which helps scientists prepare optimally for pitching situations. The publication will be released in August 2023 by Springer Gabler Verlag.



Avi Schroeder

Technion Israel

Avi Schroeder is a tenured Professor of Chemical Engineering at the Technion-Israel Institute of Technology, where he heads the Laboratory for Targeted Drug Delivery and Personalized Medicine Technologies. The group focus on targeted drug delivery systems to treat brain neurodegenerative diseases. Our nanotechnology is designed according to the loaded drug (proteins, gene delivery, and small molecules) and to the brain-targeting region. We also utilize our technology to treat various metastatic cancer types and inflammations and combine it with synthetic biology to develop artificial cells for therapeutic applications.



Brigitte Staedler

Aarhus University

Brigitte Städler has been a Professor at Aarhus University since April 2023, concurrently leading the Laboratory for Cell Mimicry, an interdisciplinary group working in the area of bottom-up synthetic biology focusing on nature inspired solutions to address medical challenges. Her research efforts combine organic and polymer chemistry with colloidal science and cell biology to assemble life-like units that can interact and support mammalian cells and tissues.

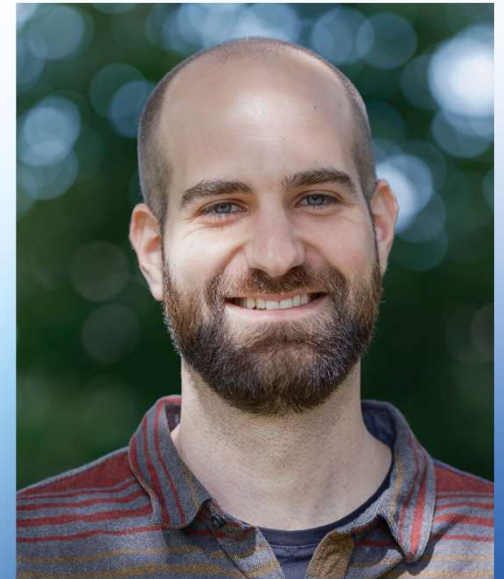


Jan Mathony

Heidelberg University

The goal of Jan Mathony's group at the University in Heidelberg is to develop methods for the control of proteins by various exogenous stimuli. This addresses one of the main challenges Synthetic Biology and Biotechnology are facing, the persisting lack of precise methods for the flexible and reversible control of protein activity in living cells.

PhD award of the Centre for Synthetic Biology



Roman Jerala

University of Ljubljana

Roman Jerala is Head of the Department of Synthetic Biology and Immunology at the National Institute of Chemistry in Ljubljana, Slovenia, and Professor at the University of Ljubljana. His group deals with molecular immunology and synthetic biology of mammalian cells, focussing on protein design.



Martin Fussenegger

ETH Zürich

Martin Fussenegger is Professor of Biotechnology and Bioengineering at the Department of Biosystems Science and Engineering (D-BSSE) of the ETH Zurich in Basel as well as at the University of Basel. His research focuses on mammalian cell engineering, in particular on the assembly of synthetic gene circuits that process complex control and closed-loop expression logic as well as on the production of theranostic designer cell implants that interface with host metabolism to correct prominent metabolic disorders.



Andrea Belluati

TU Darmstadt

Andrea Belluati is Junior Group Leader in the Department of Chemistry, where he leads the lab of Biohybrid Systems for Cellular Engineering. His research focuses on enzyme-mediated polymerization for synthetic cells, polymer interfaces with cells, and the development of hybrid living materials, blurring the lines between synthetic and natural macromolecules.



Aranzazu del Campo

INM Saarbrücken

Prof. Dr. Aránzazu del Campo is the Scientific Director and CEO of the INM – Leibniz Institute for New Materials in Saarbrücken, Germany, and a Professor of Materials Chemistry at Saarland University since 2015. Her research group develops materials to instruct cell behavior and applies them to solve therapeutic needs. She completed her Chemistry degree at the Universidad Complutense in Madrid and her Ph.D. research at the Instituto de Ciencia y Tecnología de Polímeros in Madrid in 2000. After postdoctoral stays in Germany and Italy, she developed her independent career at the Max Planck Institute for Polymer Research in Mainz, Germany.



Fatemeh Mirzapour-Shafiyi

TU München

Fatemeh Mirzapour will lead her own research group, Integrative Tissue Biology, at the Faculty of Biology, TU Darmstadt from October 2024. Her research interests lie in the integration of theoretical and experimental studies of vascular network formation and the development of advanced in vitro platforms for on-chip vascularisation of human 3D normal tissue and tumour constructs.



Lukas Linning

Akribion Genomics

Lukas Linnig is the former CFO of BRAIN Biotech and Executive Board Sponsor for Akribion Genomics. He embarked on the Akribion adventure because he firmly believes that Akribion's technology can make a real difference in addressing major global challenges, such as the treatment of currently incurable diseases and global warming.



Carmen Rommel

Biovox

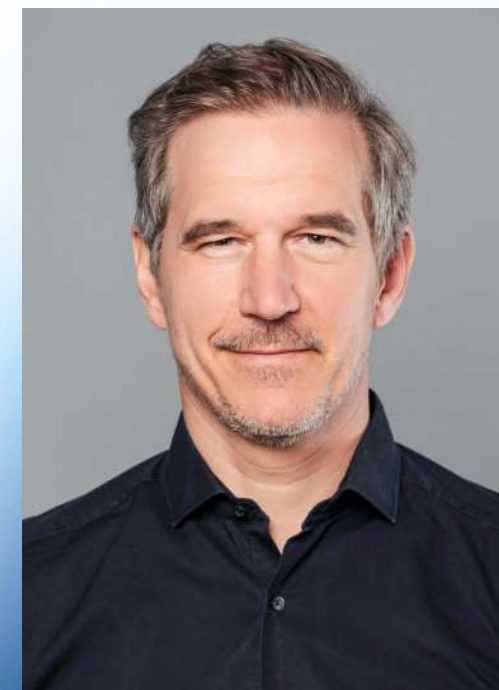
Carmen Rommel studied mechanical engineering at the TU Darmstadt with focus on the product development of sustainable products. After working in the department for sustainable plastics at Daimler, she founded the company BIOVOX together with Julian Lotz and Vinzenz Nienhaus. Today, she is responsible for finance, sustainability and investor relations at BIOVOX and is active in several working groups, such as the DIN committee for chemical recycling



Martin Grininger

Johann Wolfgang Goethe-Universität Frankfurt am Main

Martin Grininger studied Technical Chemistry in at the Technical Universities Linz and Graz (Austria). For his PhD studies, he moved to Munich/Martinsried to the Max-Planck-Institute of Biochemistry, to work with Dieter Oesterhelt on flavin sequestration and storage. His thesis was awarded with the Max-Planck-Institute of Biochemistry Junior Research Award. After graduating in 2006, he became project group leader at the same institution. With his lab, Martin focused on structural characterization of multidomain fatty acid synthases. He held a visiting professorship at the University Vienna in Biological Chemistry (2010/2011). In 2012, he received a Lichtenberg Professorship of the Volkswagen Foundation hosted by the Goethe University Frankfurt, where was appointed permanent Professor of Biomolecular Chemistry in 2019. Research in his lab revolves around the development of compartmentalized multistep biosynthesis for the production of platform chemicals and pharmaceuticals. Martin was speaker of an interdisciplinary collaborative research program to megasynthases (2017-2021). He published work in prestigious journals such as Nature Chemistry, Nature Chemical Biology, Nature Communications, JACS, Angewandte Chemie and PNAS, and acquired substantial third party funding from Volkswagen Foundation, DFG, BMBF and Hessische Ministerium für Wissenschaft und Forschung, Kunst und Kultur (HMWK).



Dorothea Starck

BASF SE

Dorothea Starck (BASF SE) studied Chemistry and Business Administration and holds a PhD in Chemistry from Georg-August-University Gottingen.

She had various responsibilities and leadership roles in BASF in Germany and India, ranging from research, product development, corporate strategic planning, purchasing to new business development in several business divisions. In her current position as Senior Manager Group Research, her focus area is interaction with Startup companies and setting up collaborations with BASF. She is located in Ludwigshafen, Germany.



Andrei Miclea

High-Tech Gründerfonds

Andrei Miclea is an Investment Analyst in the Life Sciences team. Previously, he was a strategy consultant in the Pharma & Life Sciences team of Strategy& (formerly Booz & Co) in Zurich. He holds a doctorate in medicine with several years of medical experience in the neurology department at the University Hospital of Bern and a research focus in the field of neuroimmunology. He completed his postdoctoral fellowship in translational multiple sclerosis research at Harvard Medical School / Brigham and Women's Hospital as a fellow of the Swiss National Science Foundation. He completed his medical studies at the Charité – Universitätsmedizin Berlin.



Silko Grimm

Evonik

Silko Grimm currently manages the political networks for the innovation department of Evonik Operations GmbH. His professional career started at the Business Line Health Care of Evonik; Division Nutrition & Care as innovation project manager in 2011. From 2016 till 2022 he was Director of Strategic Projects and Head of the Project Management Office of the business line Health Care. Silko Grimm received his PhD in engineering science from the Martin Luther University Halle-Wittenberg (Halle, Germany) and the Max Planck Institute of Microstructure Physics (Halle, Germany) and studied physics and computer science at the university of applied science Merseburg (Germany). He is also Co-Speaker of the German Platform of NanoBioMedicine.



Michael Rayner

Merck KGaA

Michael Rayner is an industrial expert in synthetic biology with >25 years of experience at Merck and an unusual blend of commercial and academic research experience. From his previous position as the Head of Tech Scouting Network & Technology Platforms at the Science and Technology Office he looks back, for example, at managing technology space initiatives and transforming concepts from ideas into commercially viable biotechnology-based products with triple digit million sales. His previous roles involved the management of biotech production processes, from launching GMO laboratories to running multi-ton fermentation 24/7 processes. Currently, he is working for Corporate Communications.

Educationally, Michael holds a BSc in Microbiology and a PhD in Chemistry, Culture Media Analytics. He has further expanded his knowledge through postdoctoral fellowships at (i) Free University Berlin in the then West Berlin (American Sector) and (ii) the National Institute of Environmental Studies in Tokyo. This work focusing on microbiology, cell culture, trace elements and heavy metal toxicity with research in assessing ecotoxicity testing all of which resulted in multiple products entering global markets.



Nico Bruns

TU Darmstadt

Nico Bruns is Professor of Sustainable Functional Polymers at the Technical University of Darmstadt, Germany. His research interests are bio-inspired polymer nanosystems and materials, biocatalysis in polymer chemistry and sustainable polymer chemistry. He studied chemistry at the Universities of Freiburg (Germany) and Edinburgh (UK) and graduated with a PhD in Macromolecular Chemistry from the University of Freiburg under the supervision of Prof. Rolf Mülhaupt and Prof. Joerg C. Tiller in 2007. After a postdoc in the biotechnology group of Prof. Douglas S. Clark at the University of California, Berkeley, he joined the University of Basel in Switzerland where he received the Venia Docendi (Habilitation) for Chemistry in 2014. From 2013 to 2018 he was Associate Professor of Macromolecular Chemistry at the Adolphe Merkle Institute of the University of Fribourg (Switzerland) funded by a prestigious Swiss National Science Foundation Professorship. He then joined the Department of Pure and Applied Chemistry of the University of Strathclyde in Glasgow (UK) as full Professor of Macromolecular Chemistry from 2018 before relocating once more to TU Darmstadt at the end of 2021.



ryon - The GreenTech Accelerator Gernsheim GmbH

ryon is the place for Start-ups and young companies in the fields of chemistry, biotechnology, materials science or engineering - for the support they need!



Prof. Dr. Jörg von Hagen

is Managing Director at ryon – GreenTech Accelerator Gernsheim GmbH – He is Biotechnologist and Cell Biologist by training.

Centre for Synthetic Biology – TU Darmstadt

The interdisciplinary centre integrates expertise from the faculties of biology, chemistry, physics, material sciences, mechanical engineering, electrical engineering and information technology.



Prof. Dr. Heinz Koeppel

is Director of the Centre for Synthetic Biology – He is head of the Self-Organizing Systems Lab.

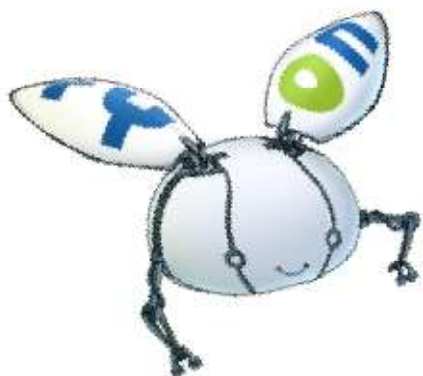
Centre for Synthetic Biology – TU Darmstadt

The interdisciplinary centre integrates expertise from the faculties of biology, chemistry, physics, material sciences, mechanical engineering, electrical engineering and information technology.



Dr. Melanie Mikosch-Wersching

Managing Director of the Centre for Synthetic Biology – She is a Biophysicist and Cell biologist by training.



Registration at application@ryon.de

