

PEPTIDE SELF ASSEMBLY CONFERENCE 2026



Monday 10th August 2026				
Time		Session		
12:00-12:45	Welcome Reception			
12:45-13:00	Welcome by the organizers			
13:00-14:00	MPGC	Structure to Function in Phase-Separating Peptides (session I)	Prof. Dr. Matthew Tirrell	Liquid-Liquid Phase Separation in Polyelectrolyte Mixtures Proceeds via an Oligomerization Process
14:00-14:40			Prof. Dr. Katharina Landfester	From Liquid Coacervates to Structure-Defined Fibers: Sequence Control over Peptide Self-Assembly
14:40-15:10	Coffee Break			
15:10-15:50	GRK 2516	Out of equilibrium assembly	Prof. Dr. Dibyendu Das	Non-equilibrium self-assembly for living matter-like properties
15:50-16:30			Prof. Dr. Job Boekhoven	Chemically fueled peptide assembly—from dynamic structure towards de novo life
16:30-17:10			Prof. Dr. Sijbren Otto	Steps in Building a Peptide-Based Minimal Form of Life
17:10-17:50		Theory of Peptide Assembly (session I)	Prof. Dr. Lukas Stelzl	ATP-Driven Control of Disordered Protein Condensation by Enzymatic Phosphorylation
17:50-18:30			Dr. Mathijs Mabesoone	Data-driven Understanding of the Multifunctional Property Space of Peptide Amphiphiles
18:30	Dinner and poster session			



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Tuesday 11th August 2026				
Time		Session		
09:00-09:40	Bristol center for minimal biology	Protein assembly	Prof. Dr. Dek Woolfson	From peptide assemblies to functional proteins by design
09:40-10:20		Protein assembly	Prof. Dr. Frauke Gräter	Mimicking collagen’s mechanochemical function in self-assembled peptides
10:20-10:45		Contributing Lectures	Prof. Dr. Ian Hamley	Cationic Lipopeptide Self-Assembly and Bioactivity
10:45-11:00			Dr. Hamish Swanson	Molecular conformation as a determinant of tripeptide self-assembly
11:00-11:15			Dr. Marko Mihajlovic	Heterochiral Tripeptide Self-Assembly for Biomedical Applications
11:15-11:40	Coffee Break			
11:40-12:20	MPGC	Structure to Function in Phase-Separating Peptides (session II)	Dr. David Ng	Emergence of Function in Living Systems by Supramolecular Design
12:20-13:00			Prof. Dr. Jian Lu	Unravelling how biointerfacial structures and interactions underpin the antimicrobial efficacy of antimicrobial peptides using neutron reflection and SANS
13:00-14:00	Lunch			
14:00-14:40	GRK 2516	Theory of Peptide Assembly (session II)	Prof. Dr. Ayşenur İşcen Akatay	Bridging the Scales: Multiscale Modeling of Supramolecular Peptide Scaffolds
14:40-15:20			Prof. Dr. Tell Tuttle	Sequence, Structure, Assembly, Function: Towards Predictive Peptide Materials
15:20-16:00	SFB 1551	Structure to Function in Phase-Separating Peptides (session III)	Dr. Charalampos Pappas	Why Nature Chose Acyl Phosphates: From Biology to Systems Chemistry
16:00-16:40			Prof. Dr. Ayala Lampel	Programming peptide phase separation and function through molecular design
16:40-17:00	Coffee Break			
17:00-17:25		Contributing Lectures	Dr. Valeria Castelletto	Chiral Glass Formation by Dipeptide Salts
17:25-17:40			Ms. Narjess abu amara	Macroscopic membranes of Carrageenan and self-assembling peptides
17:40-17:55			Dr. Ross Urquhart	Simulating Ice–Water Interfaces: Foundations for Antifreeze Peptide Design
17:55-18:10			Ms. Nitzan Eliraz	Activating physical crosslinking in synthetic extracellular matrices by switch peptides
18:10-18:25			Ms. Peleg Ragonis-Bachar	Towards the Design of Targeted Therapeutics based on Antimicrobial Amyloids
18:30	Dinner and poster session			



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Wednesday 12th August 2026				
Hour		Session		
09:00-09:40	SFB 1552	Peptides- Based Materials	Prof. Dr. Hans Börner	CysteinylnDopa Connectivity: Key for Synthesizing Artificial Mussel-Glue Proteins and Blueprint for Electrochemically Debondable Adhesives
09:40-10:20			Prof. Dr. Darrin Pochan	Biomolecules For Non-Biological Things: Peptide ‘Bundlemer’ Design For Model Nanoparticle Creation And Hierarchical Solution Assembly
10:20-11:00			Prof.Dr. Andreas Herrmann	Genetically encoded supercharged polypeptides: From self-assembly to function
11:00-11:20	Coffee Break			
11:20-11:45		Contributing Lectures	Prof. Dr. Kai Tao	Peptides Self-Assembling Piezoelectricity
11:45-12:10			Prof. Dr. Goutam Ghosh	Peptide-Based Functional Nanomaterials: Tailoring Piezoelectric Properties through Nanostructural and Chiroptical Modulation
12:10-12:35			Prof. Dr. Marcus Fandrich	Self-Assembly of Proteins Into Pathogenic and non- Pathogenic Amyloid Fibrils
12:35-12:50			Mr. Mahdi Samapour	Self-Assembly of Fatty Acid–Diphenylalanine Amphiphiles into 2D-Sheets
12:50-13:05			Mr. Sagar	Development of Dipeptide-Based Liquid Droplets and Fibrils as Enzyme-Mimics
13:00-14:00	Lunch			
14:00-14:25		Peptide Self Assembly in Germany	Prof. Dr. Meytal Landau	The many lives of antimicrobial and virulence peptide amyloids
14:25-14:50			Prof. Dr. Jan Münch	Peptide Nanofibrils as Transduction Enhancers in CAR- T and NK Cell Production
14:50-15:15			Prof. Dr. Torsten John	Peptide Self-Assembly at Interfaces: From Molecular Mechanisms to Functional Nanomaterials
15:15-15:30			Prof. Dr. Andreas Blaeser	
15:30-15:45			Dr. Jasper Michels	A Unifying Thermodynamic Model for Phase Separation and Aging of Biopolymers
15:45-16:10	Closing remarks and announcement on best oral and poster presentations			
16:10-16:40	Coffee Break			



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16:40-17:05		Peptide Self Assembly in Germany	Prof. Dr. Bart-Jan Ravoo	From atomic-precision pi-driven peptide nanofibers to photoresponsive hydrogels
17:05-17:20			Dr. Xiaowen Wu	Cholesteric polypeptide self-assembly and application in structural colored materials
17:20-17:35			Dr. Francesca Mazzotta	Programmable structural plasticity in peptide nanofibrils via interfacial energy balance
17:35-17:50			Dr. Huachuan Du	When Chirality Collides: Pathway Complexity to Emergent Supramolecular Asymmetry in Peptide Assemblies
17:50-18:05			Prof. Dr. Elsa Sánchez García	Computational Tools For Peptide Engineering and Their Potential For Peptide Self-Assembly Applications
18:05-18:20			Dr. Matthias Schmidt	Cryo-electron microscopy of fibrillar biotechnological protein assemblies
18:20-18:35			Mr. Jesse Gayk	A structural chameleon in cryo-EM: cross-a/cross-b amyloids & nanotubes
18:35-18:50			Mr. Sandipan Roy	Chirality Transfer in 310-Poly(Aib)-Helices for Light-Responsive CISS Switching



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