MACROMOLECULAR COLLOQUIUM FREIBURG
15 – 17 FEBRUARY 2017

WEDNESDAY, 15 FEBRUARY 2017

Registration desk opens at 11 a.m.

14:00 **Opening Remarks**

GÜNTER REITER

SPECIAL SESSION
Engineering Functional Macromolecular Interfaces

Chair: Günter Reiter

14:10 HARM-ANTON KLOK (EPFL, Switzerland)
Engineering Interfaces Using Controlled Radical Polymerization

14:30 AHMED MOURRAN (DWI Leibniz Institute for Interactive Materials, Germany)
A Morphing Microgel Swimmer

14:50 MARCUS MÜLLER (Georg-August-Universität Göttingen, Germany)
Process-Directed Self-Assembly of Copolymer Materials

15:10 JÜRGEN RÜHE (University of Freiburg, Germany)
Tailormade Polymer Networks for the Generation of Novel Microsystems and Engineered Biointerfaces

15:30 COFFEE BREAK

Chair: Andreas Walther

16:30 THOMAS SCHEIBEL (University of Bayreuth, Germany)
Engineered Functional Interfaces Based on Spider Silk Proteins

17:00 MATTHIAS BALLAUFF (Helmholtz Zentrum Berlin and Humboldt University of Berlin, Germany)
Interaction of Proteins with Charged Polymeric Interfaces

17:20 ANDREAS VALET (BASF Switzerland AG)
Functional Surfaces

17:40 ANDREAS FERY (Technische Universität Dresden, Germany)
Mechanics of Polymeric Coatings and Particles: From Characterization to Design

18:00 - 20:00 GET TOGETHER (Foyer Poster Session)

THURSDAY, 16 FEBRUARY 2017

Chair: Rolf Mülhaupt

9:00 JEAN-FRANCOIS GERARD (INSA Lyon, France)
Combined Supramolecular and Covalent Crosslinking in Polymer Networks

9:30 STEPHAN FÖRSTER (University of Bayreuth, Germany)
Soft Quasicrystals

10:00 INTRODUCTION OF POSTERS

Chair: Sabine Ludwigs

1 J. GISIN (University of Freiburg), S. Herbstritt , E. Bartsch
A Simple Route for Photochemical Crosslinking at the Interface of Polystyrene Microgels

2 E. SCHÖNEMANN (University of Potsdam), N. M. Nizardo, V. Hildebrand, A. Laschewsky
Complex Structural Effects on the Hydrophilicity of Polysulfobetaines

3 M. J. TAUBLAENDER (TU Wien), M. M. Unterlass
Towards Hydrothermal Polymerization of Poly(perinone)s: A Detailed Model Study

4 B. TARTSCH (Malvern Instruments), S. Olivier, J. Stenson, M. Pothecary
Analysis of Low Molecular Weight Polymers Using Latest Advanced Multi-detector GPC Systems

5 D. M. OPRIS (Swiss Federal Laboratories for Materials Science and Technology), Y. S. Ko, F. A. Nüesch, D. Damjanovic
Elastomeric Electret Composites for Self-Sensing and Energy Harvesting Applications

6 T. BREUER (RWTH Aachen / Covestro), M. T. Keßler, C. Koopmans, Ch. Gürtler, W. Leitner
Selective Catalysts for the Synthesis of New Oxazolidinone-Based Thermoplastics

7 J. WILLERSINN (Max Planck Institute of Colloids and Interfaces), M. Antonietti, B. V. K. J. Schmidt
Organized Polymeric Submicron Particles via Self-Assembly and Cross-Linking of Double Hydrophilic Poly(ethylene oxide)-b-poly(*N*-vinylpyrrolidone) in Aqueous Solution

8 B. KOPERA (University of Bayreuth), M. Retsch, M. Chau, V.R. Machado, S. M. Tehrani, M. A. Winnik, E. Kumacheva
Reversible Transition between Anisotropic and Isotropic Thermal Transport in Polyurethane Foams

9 B. PASZTOI & T. TRÖTSCHLER (Research Centre for Natural Sciences, Hungarian Academy of Sciences), A. Szabo, B. Kerscher, B. Ivan, R.Mülhaupt
Endfunctional Polyisobutylenes as Building Blocks of Multicomponent Macromolecular Assembles

10 Y. DU (TU Dresden), E. S. Dehghani, T. Zhang, S. Ramakrishna, D. Gieseler, R. Jordan, N. D. Spencer, E. M. Benetti
Preparation of Polymer Grafting Density and Chain Length Gradients by Surface-Initiated Controlled Radical Polymerization

11 T. MOSS (University of Bayreuth), A. Greiner
Porous Structures as Templates for PPX Foams

12 I. TABUJEW (University of Jena), Ch. Freidel, M. Helm, L. Tebbe, U. Wolfrum, K. Nagel-Wolfrum, M. Heidari, R. Postetio, K. Müllen, K. Peneva
Influence of the Polymer Architecture on its Viability as A siRNA Delivery Agent

13 Th. WOLF (Max Planck Institute for Polymer Research), K. Bauer, G. Becker, J. C. Markwart, F. R. Wurm
Binding Matters: Binding-Patterns Control the Properties of Poly(phosphoester / -amide)s

14 M. BIRKNER (TU Chemnitz), M. Göring, K. Schreiter, K. Trommler, C. Mende, A. Schuberth, Th. Lampke, L. Kroll, St. Spange
Combination of Twin- and Epoxy Resin Polymerization as A Modular Approach for Metal-Plastic Interface Design

15 H. SHARIFI DEHSARI (Max Planck Institute for Polymer Research), D. M. de Leeuw, P. W. M. Blom, J. J. Michels, K. Asadi
Microstructure Development in Solution Processed Thin Films of P(VDF-TrFE): Phase Diagram Study

16 F. SCHELIGA (University of Hamburg), D. Szopinski, G. A. Luinstra
Synthesis of Ultra-High Molecular Weight Biodegradable Polyesters Including Polylactide and Controlled Immortal-Ring-Opening Polymerization Using Simple Catalytic Systems

17 B. N. BALZER (University of Freiburg), S. Brander, Th. Hugel
Single Polymer Friction and Adhesion by AFM

18 E. KHODABAKHSHI (Max Planck Institute for Polymer Research), G. A. H. Wetzelaer, P. W. M. Blom, J. J. Michels
Suppression of Green Emission in Polyfluorene Light-Emitting Diodes by Polymer Blending

19 M. HARTLIEB (University of Warwick), S. Catrouillet, A. Kuroki, C. S. Cano, S. Perrier
Polymer Conjugates of Cyclic Peptide Nanotubes as Smart Antibiotics

20 J. C. BRENDEL (University of Jena), S. Catrouillet, S. Perrier
Supramolecular Polymer Brushes in Aqueous Solutions

21 D. VEHLOW (Leibniz Institute of Polymer Research Dresden), M. Müller, M. L. Möller, B. Urban, D. Appelhans, U. Hempel, A. Gebert, K. S. Lips, V. Alt, A. L. Grab, A. E. Cavalcanti-Adam, A. Seckinger
Polyelectrolyte Complex Nanoparticle Coatings for Local Bone Healing

22 D. STÖBENER (FU Berlin), A. Hoppensack, M. Uckert, L. Cuellar, M. Weinhart
Thermoresponsive Poly Glycidylether Coatings for Cell Sheet Fabrication

23 St. SYDOW (TU Braunschweig), H. Menzel
Multilayers of Nanoparticles and Polyelectrolytes with Photochemical Crosslinking for Graded Implants

24 D. REMMLER (Humboldt University of Berlin), A. Grafl, T. Schwaar, M. G. Weller, H. G. Börner
High Throughput Screening of Large Peptide Libraries to Identify Drug Specific Formulation-Additives or Transporters

25 M. BEAUMONT (University of Natural Resources and Life Sciences (BOKU) Vienna), H. Hettegger, T. Nypelö, M. Opietnik, A. Potthast, Th. Rosenau
Functional Cellulose Particles: Tailoring Size and Surface Functionality in Aqueous Conditions

11:30 COFFEE AND POSTERS

Chair: Michael Sommer

12:15 SABINE LUDWIGS (University of Stuttgart, Germany)
Doping of Conjugated Polymer Films for Flexible Electronics

12:35 JOCHEN NORWIG (Covestro AG, Germany)
CroCO2PETs – Cross-Linkable Polyethercarbonate Polyols

12:55 FELIX SCHACHER (Friedrich Schiller University Jena , Germany)
Opportunities for Block Copolymers in Interface Design

13:15 LUNCH BREAK

Chair: Wolfgang Binder

14:30 MICHAEL BUCHMEISER (University of Stuttgart, Germany)
Fiber-Based Sulfur/Poly(acrylonitrile) Cathode Materials: Cycle-Stable High-Performance Lithium-Sulfur Batteries

15:00 ULRICH S. SCHUBERT (Friedrich Schiller University Jena, Germany)
Aqueous Polymer-based Redox-Flow-Batteries

15:30 KATJA LOOS (University of Groningen, The Netherlands)
From Metallic Gyroid Structures to Piezoelectric Nanoporous Networks

15:50 COFFEE BREAK

Chair: Ulrich Schubert

16:50 SEBASTIEN LECOMMANDOUX (University Bordeaux, France)
Biomimetic Polymer Vesicles as Virus and Cell Mimics

17:10 GUILLAUME DELAITTRE (Karlsruhe Institute of Technology, Germany)
Biocatalytic Nanogels with a Single-Enzyme Core

17:30 RUDOLF ZENTEL (Johannes Gutenberg University Mainz, Germany)
Cationic Nanohydrogel Particles as Safe Carriers for Therapeutic Oligonucleotide Delivery

19:30 CONFERENCE DINNER (Mensa Rempartstrasse). Doors open 19:15

FRIDAY, 17 FEBRUARY 2016

Chair: Michael Buchmeiser

9:00 ROLF MÜLHAUPT (University of Freiburg, Germany)
Multifunctional Polyhyroxyurethanes via Carbon Dioxide Fixation

9:30 MICHAEL MEIER (Karlsruhe Institute of Technology, Germany)
Multicomponent Reactions in Polymer Science: From Versatile Tuning of Structure and Properties to Sequence Defined Macromolecules

10:00 INTRODUCTION OF POSTERS

Chair: Michael Buchmeiser

1 M. SCHNITTE (University of Konstanz), A. Godin, Ph. Kenyon, M. Krumova, I. Göttker-Schnetmann, St. Mecking
Single Chain Polyethylene Nanocrystals

2 K.-J. TAN (Massachusetts Institute of Technology), J. Elbert, X. Su, Ch. Rüttiger, M. Gallei, T. A. Hatton
Electrochemically-Mediated Separations by Metallopolymer/CNT Hybrid Materials

3 R. MERINDOL (University of Freiburg), S. Loescher, A. Walther
Temperature Driven Self-Assembly of Addressable DNA Microstructures

4 D. MESSMER (ETH Zürich), S. Tacke; Ch. Böttcher; M. Kröger; A. Halperin; A. D. Schlüter
High-Generation Dendronized Polymers: Synthesis and Electron Microscopic Investigations of Molecular Colloids

5 A. ASADUJJAMAN (Federal Institute for Materials Research and Testing), S. Wagner, K. Rurack, A. Bertin
Temperature Switches “On” and “Off” Nanoparticle Fluorescence in a Core/Shell/Shell Architecture

6 N. ten BRUMMELHUIS (Humboldt University of Berlin), M. Yalcin, F. Kubatzki, M. T. Heilmann
Controlling Monomer Sequence Using (Supramolecular) Cyclopolymerization

7 S. STÖSSLEIN (Fraunhofer IFAM / University of Bremen), J. SteltenI, Grunwald, A. Hartwig
Reversible Hydrogels - Biocompatible Adhesives for Medical Purposes

8 F. NÜBLING (University of Freiburg), H. Komber, M. Sommer
Electron Cascading in Block Junction-Modified All-Conjugated, All-Crystalline Donor Acceptor Block Copolymers for Photovoltaics

9 T. F. BESKERS (PSS Polymer Standards Service GmbH), J. Kübel, M. Wilhelm, P. Montag
Comparison of Different Coupling Techniques for SEC and FTIR Spectroscopy

10 Ch. STEINLEIN (University of Bayreuth), J. Heigl, F. Richter, H.-W. Schmidt
Anti-Nucleation of Semi-Crystalline Polyamides

11 (Cancelled) R. GUTERMAN (Max Planck Institute for Colloids and Interfaces), J. Yuan
Making Materials from Chocolate and Tea

12 W. A. GOEDEL (TU Chemnitz), D. Mitra, P. Ueberfuhr, R. Thalheim, J. Hammerschmidt, R. Baumann, K. Gläser
Ink-Jet Printing onto a Water Surface

13 E. GAU (RWTH Aachen University), D. Maté, Z. Zou, F. Jakob, U. Schwaneberg, A. Pich
Enzyme-Mediated Surface Functionalization of Stimuli-Responsive Microgels

14 S. BHATIA (FU Berlin), B. Ziem, R. Haag
Multivalent 1D, 2D and 3D Polymers as Potent Inhibitors for Pathogens

15 N. F. KÖNIG (University of Strasbourg), A. Al Ouahabi, G. Cavallo, L. Oswald, L. Charles, J.-F. Lutz
Relevance of Phosphoramidite Chemistry for the Synthesis of Non-Natural Sequence-Defined Poly(phosphodiester)s

16 K. ADATIA (University of Stuttgart), A. Southan
Hydrogel Ink Design Principles for Robotic 3D Dispensing

17 J. POLLARD (University of Fribourg), O. Rifaie-Graham, S. Raccio, S. Balog, S. Rusch, H. -P. Beck, N. Bruns
Biocatalytic Radical Polymerization as Diagnostic Assay for the Detection of Malaria

18 Ch. ULBRICHT (Johannes Kepler University), F. Tinti, V. Cimrova, N. Camaioni, D. A. M. Egbe
The Effect of Variations in the Polymer Characteristics (M_n, M_w) of an Anthracene-Containing PPE-PPV on Solid State Properties and Photovoltaic Performance

19 F. OTTENY & M. SPEER (University of Freiburg), M. Kolek, M. Winter, P. M. Bieker, B. Esser
Redox Polymers as Electrode Materials for Organic Batteries

20 J. BADORREK (University of Freiburg), G. Sivasankarapillai, M. Walter, M.-P. Laborie
Designing the Interface in Lignin-based Carbon Nanotube Composites to Enhance Interaction

21 B. MADEJA (University of Konstanz), H. Cölfen
Calcium Silicate Hydrate Mesocrystals

22 E. RIEGER (Max Planck Institute for Polymer Research), T. Gleede, A. Manhart, L. Thomi, M. Wagner, F. R. Wurm
Let's Get Things in Order: Sequence Controlled Anionic Polymerization of Aziridines

23 M. VÖHRINGER (University of Freiburg), M. Vöhringer, J. S. Saar, M. Kurowska, A. Al Ahmad, K. Lienkamp
Simultaneously Antimicrobial and Protein-resistant Polymer Coatings

24 A. KUNZ (Max Planck Institute for Polymer Research), P. W. M. Blom, J. J. Michels
Reduced Charge Carrier Trapping by Controlled Polymer Blend Phase Dynamics

25 V. RÄNTZSCH (Karlsruhe Institute of Technology), M. B. Özen, K. -F. Ratzsch, E. Stellamanns, M. Sprung, G. Guthausen, M. Wilhelm
Flow-Induced Crystallization of i-PP Studied by RheoNMR and RheoSAXS

11:30 COFFEE AND POSTERS

Chair: Holger Frey

12:15 MARKUS GALLEI (Technical University Darmstadt, Germany)
Stimuli-Responsive Block Copolymer and Colloidal Architectures

12:35 NORBERT NIESSNER (INEOS Styrolution Group, Germany)
New High Performance Polymer Applications by Molecular Engineering of Styrenic Polymers

12:55 ZHIKUN ZHENG (Technische Universität Dresden, Germany)
Synthesis of Large-Area, Highly Crystalline Two-Dimensional Polymers

13:15 LUNCH BREAK

Chair: Rolf Mülhaupt

14:30 HOLGER FREY (Johannes Gutenberg University Mainz, Germany)
Linear Gradient-Multiblock Copolymers with up to 10 Blocks: Inspiration From Nature and Fundamental Kinetic Studies Lead to Unusual Materials

15:00 GERHARD WENZ (Saarland University, Germany)
Self-Healing Car Paints from Maize

15:20 COFFEE BREAK

Chair: Prasad Shastri

16:10 SEBASTIAN SEIFFERT (Johannes Gutenberg University Mainz, Germany)
Microfluidics and Macromolecules: Designer Microgels as Micro Capsules and Model Colloids

16:40 HELMUT SCHLAAD (University of Potsdam, Germany)
Hetero-Multifunctional Polymers by Metathesis Polymerization of Cystine-Based Monomers

17:00 MARKUS BIESALSKI (Technische Universität Darmstadt, Germany)
Functional Microfluidic Paper Devices: Novel Applications for an Old Material

17:20 **POSTER AWARDS donated by WILEY**

17:30 Closing remarks

PRASAD SHASTRI
Meeting Chair
Director of the Institute for Macromolecular Chemistry, University of Freiburg