

# MAKROMOLEKULARES KOLLOQUIUM FREIBURG

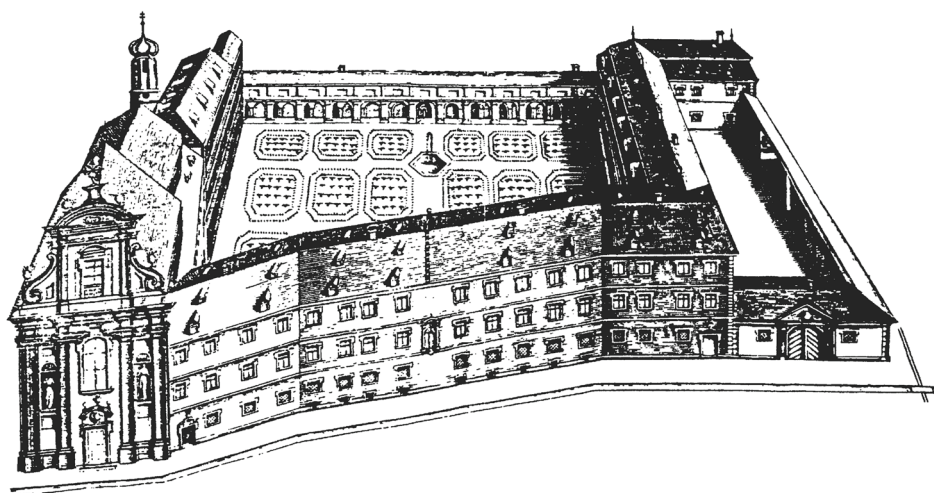
21. – 23. FEBRUAR 2013

AUDIMAX, KOLLEGIENGEBÄUDE II (KG II)

ES LADEN HERZLICH EIN  
H.-J. CANTOW R. MÜLHAUPT  
G. REITER V.P. SHASTRI

TEMPLVM  
SOCIETATIS IESV  
Academia.

COLLEGIUM  
Theresianum  
FRIBURGI BRISGOIAE.



Carl. Ios. Porta Sculp. Friburgi Brisgoiae.



INSTITUT FÜR  
MAKROMOLEKULARE CHEMIE  
HERMANN-STAUDINGER-HAUS

# THURSDAY, FEBRUARY 21<sup>ST</sup>, 2013

9:00 V.P. Shastri OPENING

9:05 L. LEIBLER, Paris/France  
Vitrimers

9:35 W. Zhang, X. Zhang, O. Boyron, P.-Y. Dugas, F. D'Agosto, J. Rieger, B. CHARLEUX, Lyon, Paris/France  
Polymer Nano-Objects via Polymerization-Induced Self-Assembly in Aqueous Medium

## 10:05 INTRODUCTION OF POSTERS

- 1 E.-K. FLEISCHMANN, H.-L. Liang, J. Lagerwall, R. Zentel, Mainz, Seoul/Korea  
Liquid Crystalline Elastomers as Stimuli-Responsive Micro-Actuators
- 2 J.M. HABERL, A. Sánchez-Ferrer, A.M. Mihout, H. Dietsch, A.M. Hirt, R. Mezzenga, Zürich, Marly/Switzerland  
Liquid-Crystalline Elastomer Hybrid Nanocomposites
- 3 D.M. OPRIS, J.E.Q. Quinsaat, F. Nüesch, H. Hofmann, C. Racles, M. Cazacu, Dübendorf, Lausanne/Switzerland, Iasi/Romania  
Dielectric Elastomer Actuators
- 4 K. KOSCHEK, H. Lützen, A. Hartwig, Bremen  
Influence of Fiber Reinforcement of Partially Crystalline Thermosets on Polymer Morphology and Properties
- 5 J. HELFFERICH, F. Ziebert, H. Meyer, A. Blumen, J. Baschnagel, S. Frey, Freiburg, Strasbourg/France  
Aging in Glasses: Single Particle Tracking by Simulations
- 6 S. WÜNSCHER, J. Perelaer, U.S. Schubert, Jena, Eindhoven/The Netherlands  
Printing Metals onto Thermo-Sensitive Polymers: How to Create Highly Conductive Patterns without Damaging the Substrate
- 7 S. FRÜHBEISSER, J. Düring, A. Hölzer, F. Gröhn, Erlangen  
Catalytically Active and Organic-Inorganic Hybrid Nanoparticles through Electrostatic Self-Assembly
- 8 N. HOHLBEIN, T. Pelzer, J. Nothacker, M. v. Tapavicza, H. Datta, A.M. Schmidt, Köln, Oberhausen  
Self-Healing Processes in Ionomeric Elastomers
- 9 L. IONOV, G. Stoychev, S. Zakharchenko, S. Turcaud, J. Dunlop, Dresden, Potsdam  
Soft Microorigami: Shape-Programmed Folding of Stimuli-Responsive Polymer Films
- 10 K.-S. KRANNIG, J.W. Robinson, H. Schlaad, Potsdam  
Smart Biohybrid Polymers: Glycopolypeptides
- 11 D. WELLER, J.R. McDaniel, K. Fischer, A. Chilkoti, M. Schmidt, Mainz, Durham/USA  
Stimuli Responsive Peptide Based Polymers as Nano Carriers for Bioconjugation
- 12 J. ELBERT, M. Mazurowski, M. Gallei, J. Li, B. Stühn, M. Rehahn, Darmstadt  
Redox-Responsive Polymers Grafted on Silica and Polystyrene Nanoparticles by Means of Living and Controlled Polymerization
- 13 I. DEWALD, J. Gensel, E. Bethhausen, A.H.E. Müller, A. Fery, Bayreuth  
Stimuli-Responsive Coatings from Block Copolymer Micelles
- 14 P. HEBBEKER, A. Steinschulte, F.A. Plamper, S. Schneider, Aachen  
Architectural Effects on the Internal Complexation within Star Polymers: Experiment and Simulation
- 15 S. KOWALSKI, S. Allard, K. Zilberberg, T. Riedl, U. Scherf, Wuppertal  
Synthesis of Poly(4,4-dialkyl-cyclopenta[2,1-*b*:3,4-*b'*]dithiophene-*alt*-2,1,3-benzothiadiazole) (PCPDTBT) in a Direct Arylation Scheme
- 16 R. PÖTZSCH, J.M. Spruell, J. Sprafke, B. Stahl, C.J. Hawker, B. Voit, Dresden, Santa Barbara/USA  
Thiol-yne Chemistry Enabling the Preparation of Structurally Perfect Linear and Hyperbranched Polyvinylsulfides
- 17 M.R. LICHTENTHALER, A. Higelin, A. Kraft, I. Krossing, Freiburg  
Applied Gallium(I) Chemistry - Synthesis of Highly Reactive Polyisobutylene
- 18 Z. ABISHEVA, R. Vukicevic, U. Schwadtke, M. Imran-ul-haq, S. Schmücker, D. Kuckling, D. Pospiech, S. Beuermann  
Clausthal, Potsdam, Paderborn, Dresden  
Formation of Block Copolymers and Functionalization of Carbon Nanoobjects Using Azide-Terminated Vinylidene Fluoride Polymers
- 19 A. PEREZ, P. van den Berg, J. Akkerman, Augst/Switzerland, Bergen op Zoom/The Netherlands  
Statistical Investigation of Process Parameters for Polymer Research
- 20 M. SPULBER, A. Najer, K. Winkelbach, O. Gläsel, M. Waser, U. Piesles, N. Bruns, W. Meier, Basel, Muttenz/Switzerland  
Photo-Reactions within a Polymersome Membrane: Versatile Method to Generate Semipermeable Nanoreactors
- 21 J.O. MÜLLER, K.K. Öhlenschläger, N.B. Heine, M. Glassner, N.K. Guimard, G. Delaitre, F.G. Schmidt, C. Barner-Kowollik, Karlsruhe, Marl  
Light-Induced Modular Ligation of Conventional RAFT Polymers
- 22 S. NAUMANN, F.-G. Schmidt, M.R. Buchmeiser, Stuttgart, Denkendorf, Marl  
Latent and Metal-Free Polymerization of Methyl Methacrylate by Protected N-Heterocyclic Carbenes
- 23 C. HERFURTH, A. Miasnikova, S. Dippel, C. Wieland, A. Laschewsky, Potsdam  
Synthesis of Block, Star and Star Block Copolymers by RAFT Polymerization: New Pathways to Associative Thickeners

## 11:20 COFFEE BREAK

- 12:15 C. STAUDT, Ludwigshafen  
Polysulfone as Membrane Material
- 12:45 V. ABETZ, J. Clodt, V. Filiz, J. Hahn, A. Jung, C. Abetz, K. Buhr, S. Rangou, Geesthacht  
Integral Asymmetric Block Copolymer Membranes: Formation, Functionalization, and Stimuli-Responsiveness

## 13:15 LUNCH BREAK

- 15:00 W. Hartleb, F. Dörner, P. Zou, R. Erath, K. LIENKAMP, Freiburg  
Antimicrobial and Antibiofouling Polymers – From Simple Surface Coatings to Micro- and Nanostructured Applications
- 15:30 A. WALTHER, P. Das, B. Zhu, M. Noack, J. Quest, Aachen  
Water-Borne Self-Assembled Biomimetic Materials
- 16:00 D. Ponader, D. Pussak, F. Wojcik, S. Mosca, M. Behra, L. HARTMANN, Potsdam  
A Sweet Toolbox: Solid Phase Synthesis of Precision Glycopolymers and Evaluation of their Multivalent Binding

## 16:30 COFFEE BREAK

- 17:00 **EVONIK Staudinger Lecture:** R.A. GROSS, New York/USA  
Expanding Opportunities for Enzyme-Catalysis in Polymer Science
- 17:45 **Microsymposium in Honor of Prof. Dr. Dr. h.c. H.-J. Cantow**  
B. SCHMITT, Ludwigshafen  
H.-J. Cantow  
S. MAGONOV, Tempe/USA  
Inspired Trip to the Nano-Scale  
V. PERCEC, Philadelphia/USA  
Bioinspired Complex Systems and Synthetic Methods  
M. MÖLLER, Aachen  
Selforganisation for New Functional Properties in Polymer Systems

## 20:00 MENSA I DINNER

# FRIDAY, FEBRUARY 22<sup>ND</sup>, 2013

- 9:15 F.J. Tölle, P. Steurer, A.-K. Appel, F. Beckert, M. Fabritius, D. Hofmann, S. Schopp, M. Stürzel, R. MÜLHAUPT, Freiburg  
From Graphite to Graphene Dispersions and Multifunctional Carbon Hybrid Materials
- 9:45 I.A. KINLOCH, L. Gong, C. Valles, Z. Li, A. Raju, I. Riaz, R. Jalil, K. Novoselov, R.J. Young, Manchester/UK  
Polymer Graphene Composites and Processing

## 10:15 INTRODUCTION OF POSTERS

- 1 X. ZHANG, C.G. Palivan, W. Meier, Basel/Switzerland  
Biomimetic Solid-Supported Polymer Bilayer Incorporated with Membrane Proteins
- 2 P.J.M. STALS, M.A.J. Gillissen, E. Huerta, A.R.A. Palmans, E.W. Meijer, Eindhoven/The Netherlands  
Water-Soluble Single-Chain Nanoparticles as Enzyme Mimics
- 3 S. HAAS, S. Handschuh, K.-S. Tücking, V. Grützner, L. Choritz, H. Schönherr, Siegen, Mainz  
Synthesis, Properties and Response of Biodegradable Block Copolymer Vesicles for Infection Signaling Wound Dressings
- 4 M. ANGARANO, S. Schulz, M. Fabritius, R. Vogt, T. Steinberg, P. Tomakidi, C. Friedrich, R. Mülhaupt, Freiburg  
Gradient Scaffolds for Soft Tissue Regeneration Based on Electrospun In-situ Crosslinked Gelatin Nanofibers
- 5 R. SCHRÖDER, A. Schmidt, W. Richtering, A. Pich, Aachen  
Zwitterionic Microgels: From Chemical Design to Controlled Biomineralization
- 6 R. LÖBBICKE, M. Junginger, K. Kita-Tokarczyk, F.H. Schacher, H. Schlaad, A.H.E. Müller, A. Taubert, Potsdam, Jena, Mainz, Basel/Switzerland  
Polymer Surface and Interface-Controlled Calcium Phosphate Mineralization
- 7 A. THOMAS, T. Steinbach, F. Wurm, H. Frey, Mainz  
Poly(glycerol) Based Macromonomers: From Clickable Amphiphiles to Bioconjugation
- 8 N. ALVARADO, L. Alegría, A. Leiva, L. Gargallo, D. Radic, Santiago/Chile  
Blends of Dendronized Polymer and Drugs. Thermal and IR Spectroscopic Studies
- 9 A. BIRKE, D. Huesmann, J. Krebs, P. Heller, M. Barz, Mainz  
Multifunctional Synthetic Polypeptides: About Block Copolypeptides and their Application
- 10 C. FLEISCHMANN, H. Ritter, Düsseldorf  
Phenolphthalein-Containing Polymers and Cyclodextrins: Applications for pH-Indication and Detection of Suitable Guest Molecules
- 11 F. MARSICO, E. Alexandrino, S. Ritz, V. Mailänder, K. Landfester, F. Wurm, Mainz  
Biocompatible Polyphosphate Nanoparticles via Acyclic Diene Metathesis Polymerization for Bone Regeneration
- 12 J. SCHNEIDER, V.P. Shastri, Freiburg  
The Impact of Surface Chemistry on NP Uptake into Cells
- 13 S. STARKE, T. Bünker, D. Pospiech, R. Frenzel, F. Simon, M. Opitz, R. Kruspe, B. Voit, Dresden, Ottendorf-Okrilla  
Semifluorinated Copolymers for Anti-Biofouling Coatings
- 14 F. DI LORENZO, S. Seiffert, Berlin  
Macro- and Micro-Rheology of Heterogeneous Microgel Packings
- 15 A. HASSAN-RAEISI, O. Okay, W. Oppermann, Clausthal-Zellerfeld, Istanbul/Turkey  
Dynamics in Polyacrylamide Hydrogels Formed via Hydrophobic Associations
- 16 J. WEBER, J. Jeromenok, A. Wilke, F. Yazdanbakhsh, Potsdam  
Nanoporous Polymers for Separation Applications
- 17 A. EZHOVA, R. Michels, T. Hikov, G. Goerigk, K. Huber, Paderborn, Berlin  
Specific Binding of Ag<sup>+</sup> Ions to Polyacrylate in Dilute Solution – a Combined SAXS and ASAXS Study
- 18 H. PLETSCHE, S. Agarwal, A. Greiner, Bayreuth  
Systematic Study on Grafting of Thio-Functionalized Polystyrene on Silver Nanoparticles as a Function of Molecular Weight
- 19 K. ZHANG, H. Urakami, M. Antonietti, F. Vilela, Potsdam  
Conjugated Microporous Polymers for Heterogeneous Photocatalysis
- 20 K. KRAUS, T. Mielke, T. Friedrich, B. Tiede, Köln  
Catalytically Active Copolymer Hydrogels Prepared upon In-Situ Generation of Gold, Palladium and Platinum Nanoparticles
- 21 P. PAYAMYAR, K. Kaja, A. Stemmer, J. Sakamoto, A.D. Schlüter, Zürich, Rüschlikon/Switzerland  
A Free-Standing, Covalently-Bonded Monolayer: Preparation and Mechanical Characterization
- 22 G. Gullo, G. Ruggeri, A. PUCCL, Pisa/Italy  
Thermochromic Polyethylene Films Based on Functionalized Perylene Chromophores
- 23 A. FAHMI, Kleve  
Nanostructure Fabrication via Self-Assembly of Soft Hybrid Materials

## 11:30 COFFEE BREAK

- 12:15 A. Pucci, G. Ruggeri, S. Bronco, F. Signori, F. CIARDELLI, Pisa/Italy  
Supramolecular Optical Response of Organic Chromophores Included in Macromolecular Materials
- 12:45 T. RÖLLE, H. Berneth, F.-K. Bruder, T. Fäcke, R. Hagen, D. Hönel, G. Walze, M.-S. Weiser, Leverkusen  
Development of a New Photopolymer for Light Guiding Applications Using Multi-Component Photo Initiating Systems

## 13:15 LUNCH BREAK                      The scholars meet at 13.30 h for lunch in HOTEL OBERKIRCH (Münsterplatz)

- 15:00 D. CRESPI, Mainz  
New Strategies for the Preparation of Anisotropic and Multicompartment Particles
- 15:30 N. Welsch, J. Dzubiella, M. BALLAUFF, Berlin  
Interaction of Proteins with Soft Polymeric Layers
- 16:00 T. Meins, K. Hyun, B. Struth, K. Ratzsch, C. Friedrich, G. Guthausen, M. WILHELM, Karlsruhe, Hamburg, Freiburg, Busan/Korea  
Combined Methods in Rheology: Rheo-SAXS, Rheo-NMR and Rheo-Dielectric to Gain Unique Correlations

## 16:30 COFFEE BREAK

### 17:00 Poster Prizes Award (Donated by Wiley VCH)

- 17:10 S. FÖRSTER, M. Trebbin, S. With, S.V. Roth, Bayreuth, Hamburg  
From the Cuvette to the Microfluidic Chip – Studying Fast Structural Evolution at the Nano- and Mesoscale
- 17:40 G. REITER, K. Rahimi, I. Botiz, N. Stingelin, N. Kayunkid, M. Brinkmann, M. Sommer, F.P.V. Koch, H. Nguyen, O. Coulembier, P. Dubois  
Freiburg, London/UK, Zürich/Switzerland, Strasbourg/France, Mons/Belgium  
Properties of Single Crystals of Conjugated Polymers
- 18:10 G. HÖRPEL, M. Winter, Münster  
Polymers as Essential Components in New Electrochemical Storage Devices

# SATURDAY, FEBRUARY 23<sup>RD</sup>, 2013

- 9:00 U. WIESNER, Ithaca/USA  
Cornell Dots: From Macromolecular Concepts to Fluorescent Nanoparticles for Translational Clinical Applications
- 9:30 J. Nitsche, H. Häger, K. BURGER, Marl  
Biobased Polyamides – Past, Present and Future
- 10:00 F. KREMER, P. Papadopoulos, R. Ene, W. Kossack, M. Anton, Leipzig, Mainz, Karlsruhe  
Spider Silk - A High-Performance Fiber in Non-Equilibrium
- 10:30 COFFEE BREAK**
- 11:00 J.P. SPATZ, Heidelberg  
Spatially and Temporally Coordinated Processes of Cells from Molecular to Cellular Scales
- 11:30 K. RISCHKA, S. Ghanaati, H. Haupt, M. Mularczyk, M. Koziol, K. Richter, B. Saldamli, R. Sader  
Bremen, Frankfurt/M., Mainz, Darmstadt, München  
A Hybrid Wet Bonding Agent Based on Mussel Adhesive Proteins for Dental Implantology – BioClou
- 12:00 D. Steinhilber, I. Papp, F. Paulus, T. Rossow, S. Seiffert, R. HAAG, Berlin  
Multifunctional Dendritic Polyglycerol Nano- and Microgels by Miniemulsion, Nanoprecipitation and Microfluidic Techniques
- 12:30 R. MÜLHAUPT  
CLOSING REMARKS

Registration is open from November 5<sup>th</sup>, 2012 until February 10<sup>th</sup>, 2013 on <http://portal.uni-freiburg.de/makro-chemie/kolloquium>

A later registration is possible at the conference desk for an additional fee.

Hotel reservation can be made by HolidayInsider AG until January 23<sup>rd</sup>, <http://portal.uni-freiburg.de/makro-chemie/kolloquium/hotelbuchung>

**Regular registration fee until January 31<sup>st</sup>: 250,- €, from February 1<sup>st</sup> onwards: 270,- €.**

**Reduced registration fee for students until January 31<sup>st</sup>: 50,- €, from February 1<sup>st</sup> onwards: 70,- €.**

Included are the Conference Dinner on Thursday, refreshments during the coffee breaks, and the Conference issue of Macromolecular Journals containing the abstracts.

Guests are welcome at the Dinner. Tickets may be obtained for 50,- € at the conference desk.

Please make payment of your registration fee into the account of:

**Förderungsgemeinschaft des Instituts für Makromolekulare Chemie, Konto Nr. 242 636, BLZ 680 700 24, Deutsche Bank AG, Freiburg**

BIC: DEUTDE33HAN, IBAN: DE65 6807 0024 0024 2636 00

Cancellations with full refund of the conference fee are only accepted before February 10<sup>th</sup>, 2013.

**The conference desk opens at 8:00 a.m. on Thursday. Telephone: +49 (0)761 203 4473**

The conference pack can be collected at the conference desk.

**THE NEXT FREIBURG MAKROMOLEKULARES KOLLOQUIUM WILL TAKE PLACE ON FEBRUARY 27<sup>th</sup> – MARCH 1<sup>st</sup>, 2014**

