



BPS '11

Bayreuth Polymer Symposium

Conference Program

Sunday, September 11, 2011

Lecture Hall H 18

16:00 – 19:30 BPS '11 Registration

17:45 Opening Remarks BPS '11

Hans-Werner Schmidt, Vice-President of the University of Bayreuth (Research and Development)

18:00 L 01 Self-assembled nanostructures of block copolymers as smart vehicles for gene and drug delivery

Kazunori Kataoka, Department of Materials Engineering, Graduate School of Engineering / Department of Bioengineering, Graduate School of Engineering / Center for Disease Biology & Integrated Medicine, Graduate School of Medicine / Center for NanaBio Integration, The University of Tokyo, Japan

18:45 L 02 Strong organic liquids

Ludwik Leibler, Damien Montarnal, Mathieu Capelot, François Tournilhac
Matière Molle et Chimie, ESPCI, Paris, France

19:30 "BPS": Beer, Pretzel, Sausages

(University Bayreuth, Foyer Building NW II)



8:30 L 03 Functional supramolecular materials from metal-containing block copolymers via solution self-assembly and living, crystallization-driven supramolecular polymerizations

Ian Manners, School of Chemistry, University of Bristol, UK

09:10 L 04 Hybrid materials and nanocomposites: lines, grids, and super-networks

Todd Emrick, Department of Polymer Science and Engineering, University of Massachusetts - Amherst, Amherst, MA, USA

09:40 L 05 Assembling amphiphilic colloids into crystalline and quasi-crystalline structures

*Stephan Förster*¹, *Alexander Exner*¹, *S. Fischer*², *Horst Weller*², *Walter Steurer*³, *Jan Perlich*⁴, *Peter Lindner*⁵

¹ Physical Chemistry I, University of Bayreuth, Germany

² University of Hamburg, Germany, ³ ETH Zürich, Switzerland

⁴ HASYLAB/DESY, Hamburg, Germany. ⁵ Inst. Laue-Langevin, Grenoble, France

10:10 Introduction to Poster Session I

10:45 Poster Discussion, Coffee Break

Special Session I:

“Self-Organized Nanostructures”

(H 18, NW II)

Special Session II:

“Polymer Foams”

(H 19, NW II)

11:45 L 06

Directing the self-assembly of hybrid (bio)nanoparticles

Alexander Böker, DWI an der RWTH Aachen e.V., Lehrstuhl für Makromolekulare Materialien und Oberflächen, RWTH Aachen University, Germany

11:45 L 12

In situ observation of the foaming processes under shear stress

Chul Park, A. Wong
MPML (Microcellular Plastics Manufacturing Laboratory), Department of Mechanical and Industrial Engineering, University of Toronto, Toronto, Ontario, Canada

12:15 L 07

Regulation of self-assembly in peptide-block-polymers

Hans Börner, Romina I. Kühnle
Humboldt-Universität zu Berlin, Department of Chemistry, Laboratory of Organic Synthesis of functional Systems, Berlin, Germany

12:15 L 13

Simultaneous measurement of solubility, diffusivity, interfacial tension, and specific volume of molten polymer/gas mixtures: experimental data and theoretical analysis

*Ernesto Di Maio*¹, *Maria Giovanna Pastore Carbone*¹, *Salvatore Iannace*², *Giuseppe Menzietti*¹

¹ Dept. of Mater. and Prod. Engin., Univ. of Naples Federico II, Naples, Italy

² Institute of Composite and Biomedical Materials, National Research Council, Naples, Italy

12:45 – 14:00 Lunch Break



**Special Session I:
“Self-Organized Nanostructures”**

(H 18, NW II)

14:00 L 08

Macromolecular material design via modular synthetic strategies

Christopher Barner-Kowollik, Preparative Macromolecular Chemistry, Institut für Technische Chemie und Polymerchemie, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

14:30 L 09

Smart polyoxazolines

Helmut Schlaad, Christina Diehl, Niels ten Brummelhuis
Max Planck Institute of Colloids and Interfaces, Department of Colloid Chemistry, Potsdam, Germany

15:00 L 10

Functional dendritic supramolecular architectures

Rainer Haag¹, S. Gupta¹, C. Böttcher²
¹ Institut für Chemie und Biochemie, Freie Universität Berlin, Germany
² Forschungszentrum für Elektronenmikroskopie, Freie Universität Berlin, Germany

15:30 L 11

Optical metamaterials made by polymer self-assembly

Ulrich Steiner, Cambridge University, UK

**Special Session II:
“Polymer Foams”**

(H 19, NW II)

14:00 L 14

Preparation of nanocellular foams and their properties

Masahiro Ohshima, Haruo Shikuma, Rahida Wati Sharudin
Department of Chemical Engineering, Kyoto University, Kyoto, Japan

14:30 L 15

Elongational rheology applied to the extrusion foaming process

Richard Gendron, Pierre Sammut, Michel F. Champagne
Industrial Materials Institute, National Research Council of Canada, Boucherville, Canada

15:00 L 16

Research for innovative and sustainable polymer foams

Holger Ruckdäschel, Roland Hingmann, Klaus Hahn
BASF SE, Polymer Research, Ludwigshafen, Germany

15:30 L 17

Fundamentals related to lightweight foams with controlled density and property profile

Volker Altstädt, Marieluise Stumpf
Department of Polymer Engineering, University of Bayreuth, Germany

16:00 Poster Discussion, Coffee Break



- 17:00 L 18 Three-dimensional morphologies of multi-component block copolymers**
Hiroshi Jinnai, Japan Science and Technology Agency (JST), ERATO, Takahara Soft Interface Project, and Institute for Materials Chemistry and Engineering (IMCE), Kyushu University, Fukuoka, Japan
- 17:30 L 19 2D Polymers: How to create lateral repeat units**
A. Dieter Schlüter, Junji Sakamoto
ETH Zürich, Department of Materials, Laboratory of Polymer Chemistry, Zürich, Switzerland
- 18:00 L 20 Polymers for biomimetics – why should we be interested in polycationic mineralization additives?**
Andreas Taubert, MPI of Colloids and Interfaces, and University of Potsdam, Institute of Chemistry, Potsdam, Germany
- 19:00 Concert**
Reception and Concert (Schloss Fantaisie, Eckersdorf, see Concert Program)
Bus Shuttles departs at 18:45, return to downtown and university at ca. 20:30



Tuesday, September 13, 2011 morning

Lecture Hall H 18 & 19

08:30 L 21 Degradable engineering polycarbonates derived from polyhydroxy natural products

Karen L. Wooley, Céline J. Besset, Samantha Kristufek, Alexander T. Lonnecker, Koichiro Mikami, Jennifer M. Streff

Texas A&M University, Dept. of Chem., Dept. of Chem. Eng., Texas, USA

09:10 L 22 Nanostructured materials via imprinted polymer templates

Kenneth Carter, James Watkins, Burcin Erenturk, Nicholas Hendricks

Univ. of Massachusetts - Amherst, Polym. Sci. and Eng., Amherst, MA, USA

09:40 L 23 Circuit pattern formation on flexible polymer films using metal nanoinks

Masami Nakamoto, Osaka Municipal Technical Research Institute, Nanomaterials Laboratory, Osaka, Japan

10:10 Introduction to Poster Session II

11:00 Poster Discussion, Coffee Break

Self-Organized Nanostructures

(H 18, NW II)

11:45 L 24

Self-assembled supramolecular structures of (non)glycosylated dendritic architectures – Examples for 1D hybrid nanofibers and tube-like networks

Dietmar Appelhans¹, Amir Fahm², Joachim Koetz³, Brigitte Voit¹

¹ Leibniz Inst. of Poly. Res., Dresden, Germany

² University of Nottingham, UK

³ Inst. of Chem., University Potsdam, Germany

12:10 L 25

Responsive polymeric nano-assemblies through self-assembly of ionic building blocks

Franziska Gröhn, Sabine Frühbeißer, Daniel Moldenhauer, Immanuel Willerich

Interdisciplinary Center for Molecular Materials (ICMM), Univ. Erlangen-Nürnberg, Germany

12:35 L 26

Supercritical CO₂ and RAFT controlled dispersion polymerisation; A new route to block co-polymers and organised micro-particulate nanostructures

Steve Howdle¹, J. Jennings¹, M. Beija¹, A Richez¹, K. Thurecht², K. Jack²

¹ School of Chemistry, Univ. of Nottingham, UK

² AIBN, University of Queensland, Australia

General Papers

(H 19, NW II)

11:45 L 31

Highly porous polymer systems through emulsion templating

Michael Silverstein, Department of Materials Engineering, Technion - Israel Institute of Technology, Haifa, Israel

12:10 L 32

Living conjugated polymers: advances and perspectives

Anton Kiriy, Volodymyr Senkovskyy, Roman Tkachov

Nanostructured Materials, Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany

12:35 L 33

Functional hybrid materials based on thermosensitive microgels

Yan Lu, Matthias Ballauff

Soft Matter and Functional Materials, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany

13:00 – 14:15 Lunch Break



Self-Organized Nanostructures

14:15 L 27

Generation of wafer-scale functional and complex colloidal monolayers

Clemens Weiss, Nicolas Vogel, Katharina Landfester

Max-Planck-Institute for Polymer Research,
Mainz, Germany

14:40 L 28

Thermally-responsive polymer cubosomes

Beulah E. McKenzie¹, Heiner Friedrich¹, Simon J. Holder², Nico A.J.M. Sommerdijk²

¹ Materials and Interface Chemistry, Chemistry Department, Eindhoven University of Technology, Eindhoven, The Netherlands

² School of Physical Sciences, University of Kent, Canterbury, Kent, UK

15:05 L 29

Poly(ionic liquid)s as versatile poly-electrolytes: synthesis, morphology and applications

Jiayin Yuan, Sebastian Soll, Markus Antonietti
Max-Planck-Institute of Colloids and Interfaces,
Colloid Chemistry, Potsdam, Germany

15:30 L 30

A simple route to nanoporous metal foams

Ivana Vukovic¹, Sergey Punzhir², Zorica Vukovic³, Patrick Onck², Jeff Th. M. De Hosson², Gerrit ten Brinke¹, Katja Loos¹

¹ Department of Polymer Chemistry, Zernike Institute for Advanced Materials, University of Groningen, The Netherlands

² Materials Science, Zernike Institute for Advanced Materials, University of Groningen, The Netherlands

³ ICTM, Center for Catalysis and Chemical Engineering, Belgrade, Serbia

General Papers

14:15 L 34

Functional polymers: A perfect match for applications using light interactions

Elisabeth Holder, Functional Polymers Group,
University of Wuppertal, Germany

14:40 L 35

Spreading dynamics of polymeric fluids

Dirk W. Schubert, Michael Härth

Institute of Polymer Materials, Department of Materials Science, University Erlangen-Nuremberg, Erlangen, Germany

15:05 L 36

Combining SEC with medium resolution NMR and FT-IR spectroscopy to correlate chemical information and molecular weight distribution

Manfred Wilhelm¹, Markus Cudaj^{1,3}, Timo Florian Beskers^{1,3}, Giesela Guthausen², Thorsten Hofe³, Peter Montag³, Andreas Kamlowski⁴, Albrecht Rager⁵

¹ Institute for Chemical Technology and Polymer Chemistry, Karlsruhe Institute of Technology, Karlsruhe, Germany

² Institute of Mechanical Process Engineering and Mechanics, Karlsruhe Institute of Technology, Karlsruhe, Germany

³ PSS Polymer Standards Service GmbH, Mainz, Germany

⁴ Bruker BioSpin GmbH, Rheinstetten, Germany

⁵ Bruker Optik GmbH, Ettlingen, Germany

15:30 L 37

Elucidation of polymer reactions by comprehensive mass spectrometry

Peter Kilz¹, Christopher Barner-Kowollik², Till Gründling²

¹ PSS Polymer Standards Service GmbH, Mainz, Germany

² KIT, Macromolecular Chemistry, Karlsruhe, Germany

15:55 – 17:00 Poster Discussion, Coffee Break



- 17:00 L 38 Synergetic combination of polymer self-assembly and direct stamping of metal nano-particles for flexible electronics**
Woo Soo Kim, Functional Materials Engineering Laboratory, Mechatronic Systems Engineering, School of Engineering Science, Simon Fraser University, Surrey, BC, Canada
- 17:30 L 39 Biomimetic design of modular dynamic polymers**
Zhibin Guan, Department of Chemistry, University of California, Irvine, CA, USA
- 18:00 L 40 Functional group tolerant and controlled catalytic polymerization**
Stefan Mecking, Chair of Chemical Materials Science, Department of Chemistry, University of Konstanz, Germany
- 18:30 – 19:00 Poster Awards, Concluding Remarks**
Axel Müller
- 20:30 Conference Dinner**
(Restaurant "Zur Sudpfanne", Oberkonnersreuther Str. 6, 95448 Bayreuth, shuttle bus transport available)



POSTER SESSION I

Introduction to Poster Session I: **10:10 – 11:00**

- P I 01 Polymer hybrid nanocapsules – towards multifunctional delivery systems**
Markus B. Bannwarth, Anna Musyanovych, Katharina Landfester
Max Planck Institute for Polymer Research, Physical Chemistry of Polymers, Mainz, Germany
- P I 02 Light-switchable supramolecular nano-objects from dendrimer macroions and dye counterions**
Daniel Moldenhauer, Immanuel Willerich, Franziska Gröhn
Department for Chemistry and Pharmacy & Interdisciplinary Center for Molecular Materials (ICMM), University of Erlangen-Nürnberg, Erlangen, Germany
- P I 03 Extending the capabilities of MS technologies for polymers and petrochemicals analysis using novel sources and ion mobility**
Michael Desor¹, A. Newton², H. Major²
¹ Waters GmbH, Eschborn, Germany
² Waters Corporation, Atlas Park, Manchester, UK
- P I 04 Novel microphase separated P β BOS-*b*-P4VP diblock copolymers synthesized by RAFT**
Anton H. Hofman, Martin G. Faber, Katja Loos, Gerrit ten Brinke
Department of Polymer Chemistry & Zernike Institute for Advanced Materials, University of Groningen, The Netherlands
- P I 05 Functional nanoparticle assemblies**
Julia Gensel¹, Christoph Hanske¹, Christoph Hasenöhrl¹, Mareen Müller¹, Moritz Tebbe¹, Eva Betthausen², Nicolas Pazos Pérez¹, Alexander Wittemann³, Andreas Fery¹
¹ Physical Chemistry II, University of Bayreuth, Germany
² Macromolecular Chemistry II, University of Bayreuth, Germany
³ Physical Chemistry I, University of Bayreuth, Germany
- P I 06 Self-assembly of multiblock copolymers with two length scales**
Martin Faber, Vincent Voet, Katja Loos, Gerrit ten Brinke
Department of Polymer Chemistry, University of Groningen, The Netherlands
- P I 07 Use of functional ATRP initiators to prepare functional biocompatible phosphorylcholine-based block copolymers and block copolymer nanostructures for biological applications**
Jeppe Madsen¹, Giuseppe Battaglia², Steven P. Armes¹, Andrew L. Lewis³
¹ Department of Chemistry, University of Sheffield, UK
² Department of Biomedical Science, University of Sheffield, UK
³ Biocompatibles UK Ltd.

POSTER SESSION I cont'd

- P I 08** **Microemulsions with an anionic/nonionic surfactant mixture and a HIPME structure**
Lukas Wolf, Heinz Hoffmann
University of Bayreuth, BZKG/BayColl, Bayreuth, Germany
- P I 09** **Investigation of “patchy” worm-like surface-compartmentalized nanostructures by SANS**
Frank Lüdel¹, Sabine Rosenfeldt², Joachim Schmelz³, Thomas Hellweg¹, Holger Schmalz³
¹ Physical and Biophysical Chemistry III, University of Bielefeld, Germany
² Physical Chemistry I, University of Bayreuth, Germany
³ Macromolecular Chemistry II, University of Bayreuth, Germany
- P I 10** **Tailor made synthesis of amphiphilic semiconductor block copolymers for self-assembled nanocomposite organic photovoltaics**
Ruth Lohwasser, Sebastien Maria, Thelakkat Mukundan
Applied Functional Polymers, University of Bayreuth, Germany
- P I 11** **Facile synthesis of pH-responsive glycopolypeptides**
Robert Mildner, Henning Menzel
Institut für Technische Chemie, Technische Universität Braunschweig, Germany
- P I 12** **Behavior of polyelectrolyte solutions in a wide temperature range**
Sergey K. Filippov¹, Thomas A.P. Seery^{2,3}, Peter Černoch¹, Jiří Pánek¹, Petr Stepanek¹
¹ Inst. Macromol. Chem., Acad. of Sci. Czech Republic, Prague, Czech Republic
² Department of Chemistry, University of Connecticut, Storrs, Connecticut, USA
³ Polymer Program, Institute of Materials Science, University of Connecticut, Storrs, Connecticut, USA
- P I 13** **Amine and ammonium functionalized polyethylene: preparation and applications**
Ian German^{1,2}, Christophe Boisson², Franck D'Agosto², Corinne Soulie³, Ludwik Leibler³
¹ Université Claude Bernard Lyon 1, France
² École Supérieure de Chimie, Physique et Électronique de Lyon, France
³ École Supérieure de Physique et de Chimie Industrielles de la Ville de Paris, France
- P I 14** **PLA- and PCL-based Pd(II)-pyridine macrocomplexes**
Guido Giachi¹, Marco Frediani¹, Werner Oberhauser², Elisa Passaglia³
¹ Department of Chemistry, University of Florence, Italy
² ICCOM-CNR Florence, Italy
³ ICCOM-CNR UOS Pisa, Italy
- P I 15** **Precise hierarchical self-assembly of multicompartement micelles**
André H. Gröschel, Sandrine Tea, Joachim Schmelz, Felix H. Schacher, Holger Schmalz, Andreas Walther, Axel H. E. Müller
Macromolecular Chemistry II, University of Bayreuth, Germany

POSTER SESSION I cont'd

- P I 16** **Hydrogels prepared by thiol-ene-polymerization and characterized by dynamic light scattering**
Svenja Grube, Wilhelm Oppermann
Institute of Physical Chemistry, Clausthal University of Technology, Clausthal-Zellerfeld, Germany
- P I 17** **Universal end-capping reagents for living olefin metathesis polymerization**
Nils Hanik, Andreas F.M. Kilbinger
University of Fribourg, Chemistry Department, Fribourg, Switzerland
- P I 18** **Stabilization of crystalline order in thin films of polyethylene close to a graphite substrate**
Ann-Kristin Löhmann, Thomas Henze, Thomas Thurn-Albrecht
Martin-Luther-Universität Halle-Wittenberg, Germany
- P I 19** **Block copolymer synthesis in dispersed systems: a supercritical fluid/RAFT approach**
James Jennings¹, Steve Howdle¹, Mariana Beija¹, Alexandre Richez¹, Kris Thurecht², Kevin Jack²
¹ School of Chemistry, University of Nottingham, UK
² AIBN University of Queensland, Australia
- P I 20** **Towards designing micro-porous organic materials via molecular simulations**
Jelena Jordanovic, Mark Lewis, Abbie Trewin
University of Liverpool, Department of Chemistry, Liverpool, UK
- P I 21** **Tunable band-gap colloidal crystals made of gold-poly-NIPAM core-shell hybrid microgels**
Matthias Karg¹, Thomas Hellweg², Paul Mulvaney¹
¹ Nanoscience Laboratory, Bio21 & School of Chemistry, University of Melbourne, Australia
² Physical and Biophysical Chemistry, University of Bielefeld, Germany
- P I 22** **Elasticity of polystyrene melts filled with silica nanoparticles: Influence of matrix polydispersity**
Peter Kunzelmann¹, Christian Triebel¹, Malte Blankenburg¹, Dirk Schubert¹, Helmut Münstedt²
¹ Institute of Polymer Materials, Department of Materials Science, Friedrich-Alexander University Erlangen-Nürnberg, Germany
² Helmholtz-Zentrum Geesthacht, Zentrum für Material- und Küstenforschung GmbH, Geesthacht, Germany
- P I 23** **Mechanisms of adhesion of colloidal particles on modified electrodes**
Volodymyr Kuznetsov, Georg Papastavrou
Department of Physical Chemistry II, University of Bayreuth, Germany

POSTER SESSION I cont'd

- P I 24 Helical structures of block copolymers in nanoparticles**
Takeshi Higuchi¹, Hiroshi Yabu^{2,3}, Masatsugu Shimomura^{2,4}, Hiroshi Jinnai^{1,4,5}
¹ Institute for Materials Chemistry and Engineering (IMCE), Kyushu University, Fukuoka, Japan
² Institute of Multidisciplinary Research for Advanced Materials (IMRAM), Tohoku University, Sendai, Japan
³ Precursory Research for Embryonic Science and Technology (PRESTO), Japan Science and Technology Agency (JST), Japan
⁴ WPI Research Center: Advanced Institute for Materials Research (WPI-AIMR), Tohoku University, Sendai, Japan
⁵ Exploratory Research for Advanced Technology (ERATO), JST, Japan
- P I 25 Anisotropic colloidal rutile-nanowires templated by cylindrical polyelectrolyte brushes**
Thomas Lunkenbein¹, Markus Müllner², Axel H.E. Müller², Josef Brey¹
¹ Inorganic Chemistry I, University of Bayreuth, Germany
² Macromolecular Chemistry II, University of Bayreuth, Germany
- P I 26 Schiff base chitosan derivatives: a pathway to biodynamers**
Luminita Marin¹, Mihai Barboiu², Bogdan C. Simionescu³
¹ "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania
² Institut Européen des Membranes, Montpellier, France
³ "Gheorghe Asachi" Technical University of Iasi, Romania
- P I 27 Novel dendronized polymers based on polyphosphazenes**
Sandra Wilfert, Ian Teasdale, Oliver Brüggemann
Institute of Polymer Chemistry, Johannes Kepler University, Leonding, Austria
- P I 28 Improved entrapment efficiency of hydrophilic drug in poly(ϵ -caprolactone) nanoparticles by nanoprecipitation technique**
Parameswara Rao Vuddanda, Sanjay Singh
Department of Pharmaceutics, Institute of Technology, Banaras Hindu University, Varanasi, India
- P I 29 Reducing the density of natural fiber polymer composites**
Sônia Marlí Bohrz Nachtigall, Franciela Arenhardt Soares
Chemistry Institute, Federal University of Rio Grande do Sul, Porto Alegre, Brazil
- P I 30 Adsorption of amphiphilic macromolecules on patterned surface**
Anna Glagoleva¹, Valentina V. Vasilevskaya², Alexei Khokhlov^{1,2}
¹ M.V. Lomonosov Moscow State University, Faculty of Physics, Chair of Polymer and Crystal Physics, Moscow, Russia
² A.N. Nesmeyanov Institute of Organoelement Compounds RAS, Moscow, Russia



POSTER SESSION II

Introduction to Poster Session II: **10:10 – 11:00**

- P II 01 Synthesis and characterization of longitudinal polymer gradient materials**
Kai Uwe Claussen¹, Reiner Giesa¹, Thomas Scheibel², Hans-Werner Schmidt¹
¹ Macromolecular Chemistry I, University of Bayreuth, Germany
² Biomaterials, University of Bayreuth, Germany
- P II 02 Magnetically actuated polymer flap arrays mimicking artificial cilia**
Oswald Prucker¹, N. Schorr¹, J. Belardi¹, S. Wells², V. Patel², J. Rühle¹
¹ Department of Microsystems Engineering (IMTEK), University of Freiburg, Germany
² Liquids Research Limited, Gwynedd, Wales, UK
- P II 03 Association phenomena in siloxane-containing polymers**
Carmen Racles, Maria Cazacu, Mihaela Alexandru
"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania
- P II 04 Novel clay-hydrophobin stabilized surfactant-free emulsions**
Martin Reger¹, Tomoko Sekine², Kei Watanabe², Tohru Okamoto², Heinz Hoffmann¹
¹ University of Bayreuth, BZKG/BayColl, Bayreuth, Germany
² Shiseido Research Center, Yokohama, Japan
- P II 05 Thiolactone as *in situ* thiol source for functional and complex polymer architectures**
Stefan Reinicke, Pieter Espeel, Lionel Petton, Milan Stamenovic, Fabienne Goethals, Sofie Wallyn, Filip Du Prez
Department of Organic Chemistry, Polymer Chemistry Research Group, Ghent University, Belgium
- P II 06 Cyclic durovoltageammetry – electrochemically addressed crosslinks in polyelectrolyte multilayers**
Andreas Reisch^{1,2}, L. A. Al-Hariri¹, M. D. Moussallem¹, J. B. Schlenoff¹
¹ The Florida State University, Department of Chemistry and Biochemistry, Tallahassee, USA
² Laboratoire de Conception et Application de Molécules Bioactives, Université de Strasbourg, France
- P II 07 Reversible crosslinking of polyisoprene in polyferrocenylsilane block copolymer micelles**
Paul A. Ruper¹, Mitchell A. Winnik², Ian Manners¹
¹ School of Chemistry, University of Bristol, UK
² Department of Chemistry, University of Toronto, Toronto, Ontario, Canada

POSTER SESSION II cont'd

- P II 08** **Formation of electrical networks of multiwalled carbon nanotubes in a polycarbonate matrix in oscillatory shear flows**
Rico Zeiler¹, Ulrich Alexander Handge¹, Dirk J. Dijkstra², Helmut Meyer³, Volker Altstädt¹
¹ Polymer Engineering, University of Bayreuth, Bayreuth, Germany
² Bayer MaterialScience AG, CAS-INN-Physics, Leverkusen, Germany
³ Bayer MaterialScience AG, CAS-INN-CNT, Leverkusen, Germany
- P II 09** **A detailed investigation of the free radical copolymerization behavior of *n*-butyl acrylate macromonomers**
Anna-Marie Zorn¹, Thomas Junkers², Christopher Barner-Kowollik¹
¹ Preparative Macromolecular Chemistry, Institut für Technische Chemie und Polymerchemie, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
² Universiteit Hasselt, Institute for Material Research, Polymer Reaction Design Group, Agoralaan, Diepenbeek, Belgium
- P II 10** **Responsive organometallic vesicles from poly(ethylene oxide)-*block*-poly(ferrocenylsilane) star-block copolymers: formation and superstructures**
Felix H. Schacher^{1,2,3}, Sanjib Patra³, Johannes Elbert³, Ian Manners³
¹ Institute of Organic and Macromolecular Chemistry, Friedrich-Schiller-Universität Jena, Germany
² Jena Center for Soft Matter, Friedrich-Schiller-University Jena, Germany
³ School of Chemistry, University of Bristol, UK
- P II 11** **Bionic approaches towards recombinant protein based polymers - designable nanostructures, assemblies and functions**
Stefan M. Schiller, A. Schreiber, C. Hege, E. Ronge, C. Yao, M.C. Huber, A. Bohnert
Freiburg Institute for Advanced Studies (FRIAS) & Institute for Macromolecular Chemistry, Albert-Ludwigs-Universität Freiburg, Germany
- P II 12** **Cyclodextrine-complexed RAFT agents for the ambient temperature aqueous living/controlled radical polymerization of acrylamido-monomers**
Bernhard V. K. J. Schmidt¹, Martin Hetzer², Helmut Ritter², Christopher Barner-Kowollik¹
¹ Preparative Macromolecular Chemistry, Institut für Technische Chemie und Polymerchemie, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
² Lehrstuhl für Präparative Polymerchemie, Institut für Organische Chemie und Makromolekulare Chemie, Heinrich-Heine Universität, Düsseldorf, Germany
- P II 13** **Specific vs. unspecific interaction and aggregation in bulk supramolecular polymers**
Tingzi Yan¹, Klaus Schröter¹, Florian Herbst², Wolfgang Binder², Thomas Thurn-Albrecht¹
¹ Institute of Physics, University of Halle-Wittenberg, Halle, Germany
² Institute of Chemistry, University of Halle-Wittenberg, Halle, Germany

POSTER SESSION II cont'd

- P II 14 All-conjugated copolymers for OPVs: synthesis and morphology**
Helga Seyler, Chao Yan, Wallace W.H. Wong, David J. Jones, Andrew B. Holmes
Bio21 Institute, University of Melbourne, Australia
- P II 15 Quantum dot-polyrotaxane supramolecules as drug delivery systems**
Mohsen Adeli, Department of Chemistry, Faculty of Science, Lorestan University, Khoramabad, Iran
- P II 16 Group transfer copolymerization of 2-(methoxyethoxy)ethyl methacrylate and *tert*-butyl methacrylate: an alternating copolymerization?**
Peter F. W. Simon^{1,2}, Dragutin Nedeljkovic¹
¹ Helmholtz-Zentrum Geesthacht, Centre for Materials and Coastal Research, Institute of Polymer Research, Geesthacht, Germany
² Faculty of Life Sciences, Rhine-Waal University of Applied Sciences, Kleve, Germany
- P II 17 Magneto-rheological fluids and elastomers based on injection moldable liquid silicone**
Joachim Kaschta¹, Matthias Musialek¹, Holger Böse², Dirk W. Schubert¹
¹ Institute of Polymer Materials, Friedrich-Alexander-University Erlangen-Nürnberg, Erlangen, Germany
² Cesma, Fraunhofer Institut für Silicatforschung, Würzburg, Germany
- P II 18 Dual responsive poly(2-ethyl-2-oxazoline) based comb and graft copolymers**
Christine Weber^{1,2,3}, Richard Hoogenboom⁴, Ulrich S. Schubert^{1,2,3}
¹ Laboratory of Organic and Macromolecular Chemistry (IOMC), Friedrich-Schiller-University Jena, Germany
² Dutch Polymer Institute (DPI), Eindhoven, The Netherlands
³ Jena Center for Soft Matter (JCSM), Friedrich-Schiller-University Jena, Germany
⁴ Supramolecular Chemistry Group, Department of Organic Chemistry, Ghent University, Belgium
- P II 19 The NanoWizard[®] 3 – the most flexible high-resolution AFM with true optical integration**
Elmar Hartmann, Heiko Haschke, Thorsten Jaehnke, Rachel Owen, Gerd Behme
JPK Instruments AG, Berlin, Germany

POSTER SESSION II cont'd

- P II 20** **Combinatorial screening of polymer/fullerene blends for solar cells by inkjet printing**
Anke Teichler^{1,2,3}, Rebecca Eckardt^{1,2,3}, Stephanie Hoepfener^{1,2,3}, Christian Friebe^{1,2}, Jolke Perelaer^{1,2,3}, Ulrich S. Schubert^{1,2,3}
¹ Laboratory of Organic and Macromolecular Chemistry (IOMC), Friedrich-Schiller-University Jena, Germany
² Jena Center for Soft Matter (JCSM), Jena, Germany
³ Dutch Polymer Institute (DPI), Eindhoven, The Netherlands
- P II 21** **Surface modifying multi-end-functional polyethylenes**
Richard Thompson, Solomon Kimani, Sarah Hardman, Nigel Clarke, Lian Hutchings
Department of Chemistry, Durham University, Durham, UK
- P II 22** **Stress relaxation and nanoscale deformation processes in elastomeric polypropylenes**
Martin Neumann, Toni Hille, Robert Magerle
Fakultät für Naturwissenschaften, Technische Universität Chemnitz, Germany
- P II 23** **Particle-orientation control in microfluidic devices**
Martin Trebbin¹, Julian Thiele¹, Sebastian With¹, Jan Perlich², Stephan V. Roth², Stephan Förster¹
¹ Physical Chemistry I, University of Bayreuth, Bayreuth, Germany
² HASYLAB/DESY, Hamburg, Germany
- P II 24** **Hydrothermal polymer synthesis - a promising tool for obtaining aromatic polyimides**
Miriam M. Unterlass, Markus Antonietti, Jens Weber
Max Planck Institute of Colloids and Interfaces, Golm, Germany
- P II 25** **Characterization of polyelectrolyte capsules in terms of the development of a microenvironment for primary T - lymphocytes**
Melanie Werner¹, Valérie Jérôme¹, Kenny Zambrano², Holger Hübner², Rainer Buchholz², Ruth Freitag¹
¹ Chair for Process Biotechnology, University of Bayreuth, Germany
² Institute of Bioprocess Engineering, University of Erlangen, Germany
- P II 26** **Synthesis and characterization of hydrogen-bond containing click polymers**
Sui Lung Yim^{1,2}, Hak-Fun Chow^{1,2,3}
¹ The Chinese University of Hong Kong, Hong Kong, China
² Institute of Molecular Functional Materials, UGC-AOE Scheme
³ The Center of Novel Functional Molecules, The Chinese University of Hong Kong, Hong Kong, China

POSTER SESSION II cont'd

- P II 27 Non-destructive adsorption of liposomes**
Andrey V. Sybachin¹, Olga V. Zaborova¹, Victor N. Orlov², Yeshayahu Talmon³, Matthias Ballauff⁴, Alexander Yaroslavov¹
¹ Chemistry Dept., M.V. Lomonosov Moscow State University, Moscow, Russia
² A.N. Belozersky Inst., Lomonosov Moscow State University, Moscow, Russia
³ Technion-Israel Institute of Technology, Haifa, Israel
⁴ Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany
- P II 28 CdSe quantum dots isolation in polymer matrix by diffusion embedding in supercritical carbon dioxide medium**
Piotr S. Timashev¹, Viktor N. Bagratashvili¹, Vladimir K. Popov¹, Jixin Yang²
¹ Institute of Laser and Information Technologies Russian Academy of Sciences, Troitsk, Russia
² School of Science and Technology, Glyndŵr University, Wales, UK
- P II 29 Co-assembled nanosized films based on micelle-forming ionic block copolymers and enzymes for surface modification and design of sensor systems**
Larisa V. Sigolaeva¹, Julia Gense², Eva Betthausen³, Dmitry V. Pergushov⁴, Ilya N. Kurochkin¹, Andreas Fery², Axel H.E. Müller³
¹ Department of Chemical Enzymology, School of Chemistry, Moscow State University, Moscow, Russia
² Physikalische Chemie II, Universität Bayreuth, Germany
³ Makromolekulare Chemie II, Universität Bayreuth, Germany
⁴ Department of Polymer Science, School of Chemistry, Moscow State University, Moscow, Russia
- P II 30 Spherical polycationic brushes decorated by anionic liposomes**
Olga V. Zaborova¹, Andrey V. Sybachin¹, Matthias Ballauff², Alexander A. Yaroslavov¹
¹ Chemistry Dept., Lomonosov Moscow State University, Moscow, Russia
² Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany
- P II 31 Synthesis of photoreactive polymers for the sub-100nm-patterning of thin films by SHG of gold nanoparticle antennae**
Ulrike Georgi¹, Philipp Reichenbach², Ulrich Oertel¹, Lukas Eng², Brigitte Voit¹
¹ Leibniz Institut für Polymerforschung Dresden e.V., Dresden, Germany
² Institut für Angewandte Photophysik, TU Dresden, Germany



POSTER SESSION III

The poster contributions of Session III are **without an oral introduction**.

- P III 01** **The influence of amphiphilic polymers on the porphyrins activity in processes of singlet oxygen generation**
Nadezda A. Aksenova, Valeria V. Kardumjan, Alexander V. Chernjak, Vitalii I. Volkov, Anna B. Solovieva
Semenov Institute of chemical physics, Russian academy of science, Moscow, Russia
- P III 02** **FT-IR spectroscopy as a new, chemically sensitive online detection for size exclusion chromatography**
Timo F. Beskers^{1,2}, Thorsten Hofe², Peter Montag², Albrecht Rager³, Manfred Wilhelm¹
¹ Institute for Chemical Technology and Polymer Chemistry, Karlsruhe Institute of Technology (KIT), Germany
² PSS Polymer Standards Service GmbH, Mainz, Germany
³ Bruker Optik GmbH, Ettlingen, Germany
- P III 03** **Mussel-inspired (hetero) diels-alder precursors for surface modification**
Anja S. Goldmann¹, Corinna M. Preuß¹, Andreas Walther², Christopher Barner-Kowollik¹
¹ Preparative Macromolecular Chemistry Group, Institut für Technische Chemie und Polymerchemie, Karlsruhe Institute of Technology (KIT), Germany
² DWI at the RWTH Aachen University, Aachen, Germany
- P III 04** **Reversible polymerization based on Diels-Alder chemistry**
Nathalie Guimard¹, Jiawen Zhou¹, Andrew J. Inglis¹, Mansoor Namazian², Ching Y. Lin², Michelle L. Coote², Emmanouil Spyrou³, Stefan Hill³, Friedrich Georg Schmidt³, Christopher Barner-Kowollik¹
¹ Preparative Macromolecular Chemistry, Institut für Technische Chemie und Polymerchemie, Karlsruhe Institute of Technology, Germany
² ARC Centre of Excellence for Free-Radical Chemistry and Biotechnology, Research School of Chemistry, Australian National University, Canberra, Australia
³ Evonik Degussa GmbH, Marl, Germany
- P III 05** **Large-scale, low-cost fabrication of janus-type emulsifiers by selective decoration of natural kaolinite platelets**
Dunja Hirsemann¹, Shylesh Pilla², Bashar Diar-Bakerly¹, Roger deSouza³, Manfred Martin³, Rainer Schobert⁴, Jürgen Senker¹, Josef Breu¹
¹ Inorganic Chemistry I, University of Bayreuth, Germany
² Chemical Engineering, University of California, Berkeley, CA, USA
³ Department of Physical Chemistry, RWTH Aachen University, Germany
⁴ Organic Chemistry I, University of Bayreuth, Germany

POSTER SESSION III

- P III 06 The versatile world of janus particles**
Thomas M. Ruhland¹, André H. Gröschel¹, Paul M. Reichstein¹, Alexander P. Majewski¹, Andreas Walther², Axel H.E. Müller¹
¹ Macromolecular Chemistry II, University of Bayreuth, Germany
² DWI at the RWTH Aachen, Germany
- P III 07 Polystyrene-*block*-poly(2-oxazoline) - a new system in block copolymer nanolithography for the preparation of ordered thin films**
Kristian Kempe^{1,2,3}, Kato L. Killops³, Hyunjung Jung⁴, Joono Bang⁴, Luis M. Campos⁵, Craig J. Hawker³, Ulrich S. Schubert^{1,2,6}
¹ Laboratory of Organic and Macromolecular Chemistry (IOMC), Friedrich-Schiller-Universität Jena, Germany
² Jena Center for Soft Matter (JCSM), Friedrich-Schiller-Universität Jena, Germany
³ Materials Research Laboratory, Materials Department and Department of Chemistry and Biochemistry, University of California, Santa Barbara, USA
⁴ Department of Chemical and Biological Engineering, Korea University, Seoul, Republic of Korea
⁵ Department of Chemistry, Columbia University, New York, USA
⁶ Dutch Polymer Institute (DPI), Eindhoven, The Netherlands
- P III 08 Foaming of an immiscible blend system with combinations of blowing agents**
Sabrina Kerling, Peter Gutmann, Volker Altstädt
Department of Polymer Engineering, University of Bayreuth, Germany
- P III 09 Comparison of rheological and electrical properties of polymethylmethacrylate filled with carbon black or carbon fibres**
Johannes Krüchel, Zdeněk Starý, Dirk W. Schubert, Helmut Münstedt
Institute of Polymer Materials, Friedrich-Alexander Universität Erlangen-Nürnberg, Erlangen, Germany
- P III 10 Comparison of low-molecular and polymeric flame retardants for poly(butylene terephthalate)**
Thomas Köppel¹, Felipe Wolff-Fabris¹, Volker Altstädt¹, Michael Ciesielski², Yana Bykov², Manfred Döring², Oliver Fischer³, Doris Pospiech³, Sven Brehme⁴, Bernhard Schartel⁴
¹ Department of Polymer Engineering, University of Bayreuth, Germany
² Karlsruhe Institute of Technology, Germany
³ Leibniz Institute of Polymer Research Dresden, Germany
⁴ BAM Federal Institute for Materials Research and Testing
- P III 11 Subsurface mapping of amorphous surface layers on thiophene-based semicrystalline polymers**
Mario Zerson¹, E.-C. Spitzner¹, C. Riesch¹, R. Lohwasser², M. Thelakka², A. Sperlich³, H. Kraus³, A. Förtig³, V. Dyakonov³, R. Steyrlleuthner⁴, D. Neher⁴, R. Magerle¹
¹ Chemische Physik, Technische Universität Chemnitz, Germany
² Angewandte Funktionspolymere, Universität Bayreuth, Germany
³ Experimental Physics VI, Julius-Maximilian-University of Würzburg, Germany
⁴ Institut für Physik und Astronomie, Universität Potsdam, Potsdam, Germany

POSTER SESSION III

- P III 12** **Tailor-made poly(vinylidene fluoride) containing block copolymers for the design of novel magnetoelectric polymer-nanocomposites**
Vincent S.D. Voet, Gerrit ten Brinke, Katja Loos
Polymer Chemistry Department, Zernike Institute for Advanced Materials, University of Groningen, The Netherlands
- P III 13** **Combination of AFM and optics for investigating adhesion, contact and deformation in soft matter systems**
Daniel Kluge, Johann Erath, Martin Neubauer, Melanie Pretzl, Andreas Fery
Physical Chemistry II, University of Bayreuth, Germany
- P III 14** **Versatile route to polymer-compatible nanoparticles**
Sascha Ehlert, Sara M. Taheri, Denise Barelmann, Stephan Förster
Physical Chemistry I, University of Bayreuth, Germany
- P III 15** **Supramolecular architectures of polypeptides**
Maria Stern, Henning Menzel
Institut für Technische Chemie, Technische Universität Braunschweig, Germany
- P III 16** **Host materials for blue phosphorescent OLEDs**
Daniel Wagner, Michael Rothmann, Peter Strohhriegl
Macromolecular Chemistry I, University of Bayreuth, Germany
- P III 17** **Polymer additives based on supramolecular nanostructures**
Roman Kress, Frank Abraham, Florian Richter, Markus Blomenhofer, Hans-Werner Schmidt
Macromolecular Chemistry I, University of Bayreuth, Germany
- P III 18** **Blood compatible hydrogel coatings**
C.K. Pandiyarajan¹, S. Goto³, O. Prucker¹, B. Zieger², J. Rühle¹
¹ University of Freiburg, Laboratory for Chemistry and Physics of Interfaces (CPI), Department of Microsystems Engineering (IMTEK), Freiburg, Germany
² University hospital Freiburg, Division of general pediatrics, Department of pediatrics and adolescent medicine, Freiburg, Germany
³ University of Tokai, Research center for metabolic disease, Tokai University school of medicine, Shimokasuya, Isehara Kanagawa, Japan
- P III 19** **On the way to “pharmagrade” linear polyethyleneimine**
Lutz Tauhardt^{1,2}, Kristian Kempe^{1,2}, Katrin Knop^{1,2,3}, Esra Altuntaş^{1,2}, Michael Jäger^{1,2,3}, Stephanie Schubert^{2,4}, Dagmar Fischer^{2,4}, Ulrich S. Schubert^{1,2,3}
¹ Laboratory of Organic and Macromolecular Chemistry (IOMC), Friedrich-Schiller-University Jena, Germany
² Jena Center for Soft Matter (JCSM), Jena, Germany
³ Dutch Polymer Institute (DPI), Eindhoven, The Netherlands
⁴ Department of Pharmaceutical Technology, Institute of Pharmacy, Friedrich-Schiller-University Jena, Germany

POSTER SESSION III

- P III 20** **The foaming behaviour of a recyclable polymer in presence of core-shell particles**
Marieluise Stumpf, Felipe Wolff-Fabris, Volker Altstädt
Department of Polymer Engineering, University of Bayreuth, Germany
- P III 21** **Chemical modification of POSS to improve physical dispersion**
Alicia Rul, Loic Le Pluart, Pierre-Jean Madec
Laboratoire de Chimie Moléculaire et Thioorganique, ENSICAEN & Université de Caen Basse-Normandie, Caen, France
- P III 22** **Synthesis & characterization of amphiphilic block copolymers: PLA-PMPC**
Lauren Cowie¹, Mike Driver², Brian Tarbit², Ezat Khosravi¹, Neil Cameron¹
¹ The Centre of Bioactive Chemistry, University Science Laboratories, Durham, UK
² Vertellus Specialties UK Ltd
- P III 23** **Lowering the dielectric permittivity of polyimides by swelling in supercritical carbon dioxide**
Inga A. Ronova¹, M- Bruma², N. K. Davydova¹, Stephan Chisca², H.-W. Schmidt³, A. A. Kuznezov⁴,
¹ Nesmeyanov Institute of Organoelement Compounds, Moscow, Russia
² "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania
³ Macromolecular Chemistry I, Universität Bayreuth, Germany
⁴ Institute of synthetic polymer materials RAS, Russia
- P III 24** **Pluronic based hydrogels - novel carriers of nonsteroidal anti-inflammatory drugs for topical delivery**
Cornelia Ilie¹, M Maxim¹, G. Ionita², T. Staicu³, M. Micutz³, D. F. Anghel¹
¹ Dept. of Colloids, I. Murgulescu Inst. Phys. Chem. Bucharest, Romania
² Dept. of Quantum Chem. and Mol. Struc. I. Murgulescu Inst. of Phys. Chem. Bucharest, Romania
³ Dept. of Macromolecules, Faculty of Chem., Bucharest University, Romania
- P III 25** **New kind of organic layers and emitting materials for application in the white flexible Organic Light Emitting Diodes (OLED-s)**
Andrzej S. Swinarew¹, Beata Swinarew², Sylwia Golba¹, Jadwiga Gabor¹, Jouzas V. Grazulevicius³, Andrzej Stolarzewicz¹
¹ Institute of Materials Science, University of Silesia, Poland
² Institute for Engineering of Polymer Materials and Dyes, Paint and Plastics Department, Gliwice, Poland
³ Department of Organic Technology, Kaunas University of Technology, Kaunas, Lithuania
- P III 26** **Insight into electrochemical properties of copolymers derived from derivatives of carbazole**
Sylwia Golba¹, Andrzej Swinarew¹, Jadwiga Gabor¹, Mieczysław Lapkowski²
¹ University of Silesia, Fac. of Comp. Sci. and Mat. Sci., Inst. of Mater. Sci., Polym. and Mater. Technology, Katowice, Poland
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