

INSTITUT FÜR MAKROMOLEKULARE CHEMIE DER UNIVERSITÄT FREIBURG

Hermann – Staudinger – Haus



Bericht über die wissenschaftlichen Aktivitäten

2011

PUBLIKATIONEN

- 1 BRÖMMEL, F.
STILLE, W.
FINKELMANN, H.
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Soft Matter **7**, 2387 (2011)
- 2 CHRISTEN, E.H.
KARLSSON, M.
KÄMPF, M.M.
SCHOENMAKERS, R.
GÜBELI, R.J.
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- 3 CROITORU, C.
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- 4 CROITORU, C.
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- 9 GALL, B.
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- 10 GÖRTZ, H. H.
MINKWITZ, R.
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WISSERT, R.
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PCT Int. Appl., WO 2011032899 A1 20110324, BASF SE (2011)
- 11 IVÁN, B.
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Macromol Rapid Comm **32**, F35 (2011)
- 12 KAMMERER, M.
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- 40 WILLENBACHER, N.
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THORWARTH, O.
BARTSCH, E. An alternative route to highly concentrated, freely
flowing colloidal dispersions
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DISSERTATIONEN

BITTO, Alexandro	Cellulose-Nanofüllstoffe und multifunktionelle Bio-Amidoamine für thermoplastische Biocompounds und isocyanatfreie Polyurethane
RICHTER, Thomas	Synthetic Design of Solution Processable Semiconductors and their Application in Optoelectronics – 3D Polythiophenes and ZnO Nanoparticles
SCHNEIDER, René	Synthese und Charakterisierung von Modellkolloiden auf der Basis von PEG-stabilisierten Poly(heptafluorobutylmethacrylat)-Partikeln und Poly(styrol-co-tert-butylmethacrylat)-Mikrogelen
STILKE, Carl	Kinetischer Arrest in Kolloidsuspensionen, ausgelöst durch Packungseffekte oder attraktive Wechselwirkungen.
VOGT, Robert	Untersuchung und Bestimmung der rheologischen Eigenschaften von Polyethylenschmelzen im konventionellen, kHz und MHz Frequenzbereich
WISSERT, Meik	Anhydrid-gehärtete Epoxidharz-Nanocomposite auf der Basis von organophilen Schichtsilikaten und Blends von isotropen mit anisotropen Füllstoffen

DIPLOMARBEITEN

AHRENS, Lucas	Towards Artificial Cell Capture: Biotin-Avidin Mediated Adhesion of Microspheres on Surface-Modified Poly(Ethylene Terephthalate) Substrates
BECKERT, Fabian	Graphen/Polystyrol-Pfropfcopolymere und neue Nanocomposite auf der Basis von Graphen-Makrotransferreagenzien
BÜHLER, Christian	Funktionalisierung hyperverzweigter Polythiophene mit ionischen Gruppen
FISCHER, Florian	Richtungsabhängiger Ladungstransport in ausgerichteten Poly(3-Hexylthiophen)-Filmen
HARTLEB, Wibke	Fabrication and Characterization of Magnetically Actuated Rubber Cilia
HEINY, Markus	Novel Functional Comonomers for the Synthesis of Biodegradable Polyelectrolytes based on Poly(lactic acid)
KEINATH, Michaela	Funktionalisierte Graphene aus Graphitoxid für Polyamid 12-Nanocomposite
KORF, Nils Alexander	Beschichtung von Mikroelektroden mit zellrepulsiven Hydrogelen mit variabler mechanischer Stabilität
KUMMER, Harry	Beschichtungssysteme für Wärmetauscher in thermisch betriebenen Adsorptionskälteanlagen
MEDESI, Anna Julia	Charakterisierung und Vergleich chemisch reduzierter Graphitoxide und thermisch reduzierter Graphitoxide
POOCZA, Leander	Nano-Topography Impacts Cell Shape in a Roughness Dependent Manner
PÜRCKHAUER, Tanja	Synthese und Charakterisierung leitfähiger Donor-Akzeptor-Co- und Terpolymere zum Einsatz in organischen Solarzellen
RITTER, Benjamin Sebastian	Epoxidharze und thermoplastische Polyharnstoffe auf Basis nachwachsender Rohstoffe und glycidylisierte Graphene
SAMADI, Mariam	Polyesters Derived from Lipid Analogs

SCHADT, Kristina Katharina	Semifluorierte polyionische Flüssigkeiten mit Perfluoralkylschale und hyperverzweigtem Polyoxetankern: Synthese und Anwendung als Nanoreaktor
SCHEIBELEIN, Christoph	Synthesis of Biodegradable Segmented Polyurethanes and Synthesis of a Novel Polyether Diisocyanate
TESKE, Nele	Synthesis and Characterization of Poly(Lactic Acid) copolymerized with HEMA-modified MPO
TSCHOPPE, Katrin	Mehrphasige Blends von Epoxidharzen mit Thermoplast-Mikropulvern, Bis-Hydroxybenzoaten und funktionalisiertem Graphen
ZOU, Peng	Molekulare Dynamik und Biaxialität nematischer flüssigkristalliner Hauptketten-Polymere und –Elastomere

MASTERARBEITEN

BLUMENTHAL, Nils Control of Neuronal Differentiation Events Using Nano-
Topographical Cues

BACHELORARBEITEN

BROLL, Sebastian Olefinpolymerisation mittels einwertigem Galliumsalz

BURKARD, Jochen Migrierfähige Polyetheramphiphile zur Oberflächenmodifizie-
rung von SAN

HEILEMANN, Axel Polyurethan/Acrylat-Hybridpartikel via Emulsionspolymerisation
für Polyurethan-Gießharze

KEMPE, Fabian Synthese von mono- und bimodalen Polyethylenreaktorkompo-
siten mittels Immobilisierung von Single-site Katalysatoren

NÜBLING, Fritz Wasserstoffbrückenmodifizierte Oligomere zur Selbstheilung
von Kautschuk-Dichtungsmassen

SCHIMPF, Vitalij Migrierfähige Nanotransporter als Selbstheilungsadditive in
Kautschuk-Matrices

SCHWÄRZLE, David Isocyanatfreie Polyurethane auf Basis von nachwachsenden
Rohstoffen

VORTRÄGE und POSTER

- 1 BÄHR, M.
MÜLHAUPT, R. Kunststoffe aus Kohlendioxid und nachwachsenden Rohstoffen
FMF-Kolloquium, Schluchsee, Oktober 2011
- 2 BRÖMMEL, F.
KRAMER, D.
OSTERWINTER, G.
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HOFFMANN, A. Reorientation Behaviour of the Minor Director of Biaxial Nematic and Smectic-A Elastomers
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- 3 BRÖMMEL, F.
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HOFFMANN, A. Biaxiality of nematic lc elastomers
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- 4 CANTOW, H.J. Laudeamus Martin Möller
DWI an der RWTH Aachen, Kolloquium zum 60. Geburtstag von Prof. Dr. M. Möller, September 2011
- 5 FRIEDRICH, C. Flüssig-fest Übergänge in dispersen Materialien am Beispiel von Polymeren mit nanoskaligen Füllstoffen
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- 7 GILLIG, C.
KERSCHER, B.
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FRIEDRICH, C. Dynamics of Hyperbranched Polyionic Liquids in Bulk and Solution
*Makromolekulares Kolloquium Freiburg
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- 9 GILLIG, C.
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FRIEDRICH, C. Physical properties of hyperbranched polyionic liquids in dilution series
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- 11 GILLIG, C.
FRIEDRICH, C. Transient self-assembled network: network restructuring and mechanical behavior under shear
IRTG – summer school, Middelwihr, Juli 2011
- 12 HEINY, M.
SHASTRI, V.P. Novel Functional Comonomers for the Synthesis of Biodegradable Polyelectrolytes based on Poly(lactic acid)
24th European Conference on Biomaterials, European Society for Biomaterials, Dublin, September 2011
- 13 KAILER, A.
DOLD, CH.
POGODINA, N.
FRIEDRICH, C. Tribo-rheological Properties of Imidazolium Based Ionic Liquids with Different Molecular Structures
DFG-SPP1191 meeting, Fürth, November 2011
- 14 KERSCHER, B.
MÜLHAUPT, M. Hyperverzweigte Polyelektrolyte als nanostrukturierte polyionische Flüssigkeiten und neue Polymeradditive
FMF-Kolloquium, Schluchsee, Oktober 2011
- 15 KIESSLING, A.
BARTSCH, E. Influence of nanofillers on the drying process and the properties of polymer latex films (Poster)
Tag der Forschung und Graduierung, Universität Freiburg, Juli 2011
- 16 KORTH, Y.
FRIEDRICH, C. Rheological properties of Suspensions of multi walled carbon nanotubes in ionic liquids: Effects of solvents polarity and anion size
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- 17 KRAMER, D.
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- 18 LEDERER, A.
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BURCHARD, W. SANS Study on Hyperbranched Polyesters in Correlation to Molecular Dynamics Simulation (Poster)
5th European Conference on Neutron Scattering, Prag, Tschechische Republik, Juli 2011
- 19 MÜLHAUPT, R. Graphen-Makromoleküle, Graphen-Dispersionen und Hybridnanopartikel für Katalyse, 3D-Druck und polymere Nanocomposite
Arbeitsausschuß „Polyreaktionen“ ProcessNet, DECHEMA Frankfurt a.M., Januar 2011

- 20 MÜLHAUPT, R. Graphen-Makromoleküle und Hybridnanopartikel für Katalyse, 3D-Druck und polymere Werkstoffe
20. Diskussionstagung „Anorganisch-Technische Chemie“ ProcessNet, DECHEMA Frankfurt a.M., Februar 2011
- 21 MÜLHAUPT, R. UHMWPE Nanomaterials, Multi-site Catalysis and Reactor Blends
Makromolekulares Kolloquium Freiburg, Februar 2011
- 22 MÜLHAUPT, R. Bioinspired macromolecular materials
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- 23 MÜLHAUPT, R. Makromolekulare Chemie - Polymerwissenschaft
Schülertage, Freiburg, März 2011
- 24 MÜLHAUPT, R. Functionalized graphenes from graphite oxide: Prospects and challenges of 3D carbon macromolecules
Frühjahrstagung des Arbeitskreises Kohlenstoff der Deutschen Keramischen Gesellschaft e.V., Heuchelheim April, 2011
- 25 MÜLHAUPT, R. Reaktorblends
Vortrag bei Firma Sika, Wieden/CH, Mai 2011
- 26 MÜLHAUPT, R. Biomaterials and Biofunctional Processing
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- 27 MÜLHAUPT, R. Neues vom Kohlenstoff: Vom Graphit zum Nobelpreis und Graphen-Nanomaterialien
Vortrag beim Rotary Club Freiburg, Mai 2011
- 28 MÜLHAUPT, R. Funktionalisierte Graphene – vielseitige Bausteine für polymere Werkstoffe und Katalyse
GDCh-Vortrag Universität Stuttgart, Mai 2011
- 29 MÜLHAUPT, R. Funktionalisierte Graphene: Vielseitige Bausteine für Katalyse, 3D-Druck und Nanoverbundstoffe
Vortrag Univ.Karlsruhe, Institut für Technische und Polymerchemie, Mai 2011
- 30 MÜLHAUPT, R. Ressourcen- und energieeffiziente Materialien
Festkolloquium zu Ehren von Professor Kaminskys 70. Geburtstag, Universität Hamburg, Juni 2011
- 31 MÜLHAUPT, R. Freiburg: FIT für die Materialforschung
Tag der Forschung und Graduierung, Universität Freiburg, Juli 2011

- 32 MÜLHAUPT, R. Basic principles of macromolecular chemistry I + II
*Summerschool of Soft Matter Graduate, Mittelwihr/F
Juli 2011*
- 33 MÜLHAUPT, R. Basic principles of macromolecular chemistry and engineering
IRTG Summerschool, Titisee, Oktober 2011
- 34 MÜLHAUPT, R. Potenziale von Graphenen: Herstellung, Funktionalisierung
und Eigenschaften
WING.de 2011 Konferenz, Berlin, Oktober 2011
- 35 MÜLHAUPT, R. Strukturierte polyionische Flüssigkeiten als Nanoreaktoren
und Nanotransporter
*1. Humboldt-Preisträger-Forum der Alexander von
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- 36 MÜLHAUPT, R. Nanomaterials and 3D Printing Based upon Functionalized
Graphenes
*Aquitaine Conferences of Polymers 2011, Arcachon/
Frankreich, Oktober 2011*
- 37 MÜLHAUPT, R. Enhancing polyolefin crystallization: Self-nucleation and nano
additives
*International Expert Symposium "Nucleation Control in
hermoplastics", BASF SE Ludwigshafen, Oktober 2011*
- 38 MÜLHAUPT, R. 3D-printing of advanced functional materials
*Opening Symposium JONAS: Polymer Research's
European PostDoc Initiative "Joint Research Network on
Advanced Materials and Systems", BASF SE
Ludwigshafen, Dezember 2011*
- 39 POGODINA, N.
JOFORE, B.D.
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- 40 POGODINA, N.V.
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Liquids
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- 41 RATZSCH, K.-F.
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FRIEDRICH, C. Niederfeld - RheoNMR als kombinierte rheologische
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A new RheoNMR
*Discussion Meeting "Challenges in and Potential of Polymer
Physics", Schluchsee, Mai 2011*
- 43 SCHILLER, S. Bionische Chemie: Von unnatürlichen Aminosäuren in der
chemischen Biologie zu biomakromolekularer
Biomineralisation
*Tag der Forschung und Graduierung, Universität
Freiburg, Juli 2011*
- 44 SCHILLER, S. Biomacromolecules and Bioengineering of Materials I + II
*Summerschool of Soft Matter Graduate, Mittelwihr/F
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BARTSCH, E. Synthesis of sterically stabilized fluorinated aqueous latex
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- 46 SCHNEIDER, R.
WIEMANN, M.
BARTSCH, E. Hochkonzentrierte, fließfähige Dispersionen
Tag der Forschung, Freiburg, Juli 2011
- 47 SCHOPP, S.
MÜLHAUPT, R. Kautschuk-Graphen-Nanokomposite
FMF-Kolloquium, Schluchsee, Oktober 2011
- 48 SCHÜSSELE, A.C.
MÜLHAUPT R. Ionomers as self-healing agents for elastomeric products
3rd International Conference on Self-healing materials,
Bath, Juni 2011
- 49 SHASTRI, V.P. Why is "Nano" Important in Biological Sciences, Institute of
Neuroscience
Karolinska Institute, Stockholm, Schweden, Februar 2001
- 50 SHASTRI, V.P. Controlling Mesenchymal Stem Cell Fate In Vivo
Ludwig Boltzmann Institute for Experimental and Clinical
Traumatology, Wien, Österreich, März 2011
- 51 SHASTRI, V.P. Evolving strategies for functionalized poly(hydroxy acids)
EUPOC 2011 Meeting, Gargnano, Italien, Mai 2011
- 52 SHASTRI, V.P. Synthetic Cellular Microenvironment
BIOSS Scientific Advisor Board Meeting, Saig, Juni 2011
- 53 SHASTRI, V.P. When Chemistry Meets Engineering: The New Horizon of Life
Sciences
*Tag der Forschung und Graduierung, Universität Freiburg,
Juli 2011*
- 54 SHASTRI, V.P. The Origin of Cell Shape: A Materials View
Universität Mainz, Institut für Organische Chemie, Juli 2011

- 55 SHASTRI, V.P. Nanoengineered Systems in Life Sciences
Institute for Toxicology and Genetic, Karlsruhe Institute of Technology, Karlsruhe, Juli 2011
- 56 SHASTRI, V.P. Research Efforts at the Institute for Macromolecular Chemistry
School of Materials Science and Engineering, Nanyang Technological University, Singapore, August 2011
- 57 SHASTRI, V.P. Teaching Old Materials New Tricks: Reengineering Polymer Structure for Biomedical Applications
GDCh-Vortrag Universität Ulm, Organische Chemie III, Oktober 2011
- 58 SHASTRI, V.P. Teaching Old Materials New Tricks: Reengineering Polymer Structure for Biomedical Applications
Karlsruhe Institute of Technology, November 2011
- 59 SHASTRI, V.P. Translating Laboratory Findings into the Clinic: Need for a Comprehensive Strategy and Infrastructure
Symposium on Challenges in Translation from Bench-to-Bedside: Bridging Life Sciences and Materials, University of Freiburg, November 2011
- 60 SHASTRI, V.P. Engineering Functional Surfaces
Materials Research Society Fall Meeting, Boston, MA, USA, November 2011
- 61 SHASTRI, V.P. Controlling Cell Fate and Lineage Choices using Material Cues
Department of Chemistry, Rensselaer Polytechnic Institute, Troy, NY, USA, Dezember 2011
- 62 SHASTRI, V.P. Controlling Cell Fate and Lineage Choices using Material Cues
Applied Biophysics, Inc., Troy, NY, USA, Dezember 2011
- 63 SHASTRI, V.P. Strategies for Controlling Macromolecular Diffusion: Retooling Known Polymers, Evolving New Concepts
FU Berlin, Institut für Chemie und Biochemie - Organische Chemie, Berlin, Dezember 2011
- 64 STÜRZEL, M.
MARK, S.
ENDERS, M.
MÜLHAUPT, R. UHMWPE Nanocomposites with Functionalized Graphene by Polymerization Filling Technique
Heidelberg Forum of Molecular Catalysis, Heidelberg, Juli 2011
- 65 STÜRZEL, M.
MARK, S.
ENDERS, M.
MÜLHAUPT, R. Graphene/UHMWPE Nanocomposites via Immobilization of Single-Site Catalysts
Humboldt 1st Award Winner Forum, Bonn, Oktober 2011

- 66 VIELHAUER, M.
ZHANG, H.
REITER, G.
LUTZ, P.
MÜLHAUPT, R. Isotactic Polystyrene POSS Nanocomposites
*IRTG Soft Matter Science, Summer School, Mittelwihr,
Juli 2011*
- 67 VIELHAUER, M.
ZHANG, H.
REITER, G.
LUTZ, P.
MÜLHAUPT, R. Isotactic Polystyrene Hybrid Materials and POSS
Nanocomposites
Conference Aquitaine Polymers, Arcachon, Oktober 2011
- 68 VOGT, R.
FRIEDRICH, C. The Determination of the Entanglement Relaxation Time of
Polyethylene by Quartz-Rheometer in the MHz-Range
*Annual Meeting of the German Rheological Society, Berlin,
March 2011*
- 69 WIEMANN, M.
BARTSCH, E. Effect of cross-link density on reentrant melting of microgel
colloids
WILLENBACHER, N. *European Colloid and Interface Society, Berlin,
September 2011*
- 70 WIEMANN, M.
WILLENBACHER, N. Effect of cross-link density on reentrant melting of microgel
colloids
BARTSCH, E. *8th Liquid Matter Conference, Wien, September 2011*
- 71 WURTH, J.
TOBIAS, S. Peptide-functionalized Poly(ϵ -caprolactone)
SHASTRI, V.P. *Makromolekulares Kolloquium, Freiburg
Februar 2011*

VERANSTALTUNGEN

Makromolekulares Kolloquium Freiburg, Februar 2011 (1014 Teilnehmer)

KOOPERATIONEN UND PROJEKTE

E. Bartsch:

Hochkonzentrierte, fließfähige Dispersionen durch maßgeschneiderte attraktive Wechselwirkungen

DFG-Schwerpunkt 1273 "Kolloidverfahrenstechnik", Teilprojekt B6
Universität Freiburg, KIT Karlsruhe
(N. Willenbacher)

Influence of nanofillers on the drying and properties of polymer latex films

IRTG Soft Matter Science (DFG), Project B3
Universität Freiburg, Universite Strasbourg
(H. Meyer, Y. Holl, C. Gauthier)

Colloidal stabilization by unattached homopolymer and copolymers

IRTG Soft Matter Science (DFG), Project B4
Universität Freiburg, Universite Strasbourg
(A.N. Semonov, M. Maaloum)

Kristallisation in entropisch attraktiven Kolloiddispersionen

DFG-Normalverfahren
Universität Freiburg, Universität Mainz
(T. Palberg)

C. Friedrich:

Triborheological Properties of Ionic Liquids

Priority program of DFG, SPP 1191 "Ionic Liquids"

Combined methods for the rheological characterization of graphene nanocomposites

FunGraphen-Project with BMBF

Transient self-assembled networks: network restructuring and mechanical behavior under shear

IRTG SoMaS by DFG

R. Mülhaupt:

Bionische polymere Haftstrukturen mit permanenter hochfester Haftfunktion nach dem Vorbild pflanzlicher Haftorgane

Förderprogramm Molekulare Bionik Baden-Württemberg

Uni Freiburg (Botanischer Garten, Physik), Forschungszentrum Karlsruhe GmbH: Institut für Materialforschung II

Additive für verbesserte rheologische Eigenschaften und Kristallisation von POM

Ticona GmbH

Entwicklung von Kunststoffen und Nanocompositen auf der Basis von Kohlendioxid

Volkswagen AG

Alternativen für Epoxidharze

Henkel AG & Co. KGaA

Entwicklung neuer Reaktivharzsysteme

Fischerwerke GmbH & Co. KG

JONAS: Joint Research Network on Advanced Materials and Systems

BASF SE

Vorhaben Bionik: Vom biologischen Vorbild zum bionischen Produkt

BMBF

Uni Freiburg (Botanischer Garten - Kompetenznetz Biomimetik), Empa-Center for Synergetic Structures

Selbstheilende Polymerwerkstoffe

BMBF

Fraunhofer UMSICHT, Freudenberg Dichtungs- und Schwingungstechnik GmbH + Co KG, Uni Freiburg Botanischer Garten, IWF Ingenieurbüro, Gummi- und Kunststofftechnik GmbH

CarboFEM - CNT - und Graphen - systeme für Feldemitter

BMBF, Siemens AG, Graphit Kropfmühl AG

FUN-Graphen

BMBF-Industrieverbund

Bundesanstalt für Materialforschung und -prüfung, Universität Bayreuth, Fraunhofer-Institut für Werkstoffmechanik

(Schartel, Altstäd, Kailer)

Thermoplastische Werkstoffe aus nachwachsenden Rohstoffen mit vollständiger stofflicher Nutzung

Baden-Württemberg-Stiftung

Universität Konstanz

(Mecking)

V.P. Shastri:

Core Professor of BIOS: Centre for Biological Signalling Studies
Cluster of Excellence, DFG
University of Freiburg

Developmental Engineering of Endochondral Ossification from Mesenchymal Stem Cells
SINERGIA, Schweizerischer Nationalfonds (SNF)
University of Freiburg, University of Basel, University Hospital Basel and ETH Basel Campus
(Martin, Zeller, Eber)

Nano@Matrix
European INTERREG V Rhin Superieur Grant
University of Freiburg, KIT, CNRS and University of Strasbourg
(Pourroy, Weiss)

Helmholtz Virtual Institute on Multifunctional Biomaterials for Medicine
University of Freiburg, Free University Berlin, Helmholtz Zentrum Geesthacht, Helmholtz
Zentrum Berlin
(Haag, Lendlein, Ballauff)

WISSENSCHAFTLICHE LEITUNG UND MITARBEITER
DES INSTITUTS

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PROF. DR. V. PRASAD SHASTRI

DOZENTEN

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PROF. DR. DR. CHRISTIAN FRIEDRICH

EMERITI

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PROF. DR. DR. H.C. HEINO FINKELMANN
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BÄHR, Moritz
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POOCZA, Leander

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SCHNEIDER, Rene
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WIEMANN, Malte
WISSERT, Meik
WURTH, Jonathan
YAO, Chunyan
BURGER, Dominik
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HALLER, Heike
KUMMER, Harry
LAZAR, Ion
MEDESI, Anna
PÜRCKHAUER, Tanja
SCHEIBELEIN, Christoph
SCHEUBLE, Martin
SCHIEFER, Daniel
TSCHOPPE, Katrin

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BACHELORSTUDIUM

GAISER, Steffen

HAUSSER, Franziska

HEILEMANN,

KEMPE, Fabian

NÜBLING, Fritz

SCHIMPF, Vitalij

GÄSTE DES INSTITUTS

AUHL, D., DR.
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DE LOUVAIN, BELGIUM

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RESEARCH CENTER, HUNGARIAN ACADEMY OF SCIENCES, BUDAPEST, UNGARN

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UNIVERSIDAD DE ALICANTE, SPAIN

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CHEMICAL AND BIOLOGICAL ENGINEERING, UNIVERSITY OF WISCONSIN-MADISON,
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UNIVERSITÉ PIERRE ET MARIE CURIE, PARIS, FRANCE

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DEUTSCHES KUNSTSTOFF INSTITUT, TU DARMSTADT

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MELVILLE LABORATORY FOR POLYMER SYNTHESIS, DEPARTMENT OF CHEMISTRY,
UNIVERSITY OF CAMBRIDGE, ENGLAND

VAN MEGEN, B., PROF. DR.
DEPARTMENT OF APPLIED PHYSICS, ROYAL MELBOURNE INSTITUTE OF
TECHNOLOGY, MELBOURNE, AUSTRALIEN

GASTVORTRÄGE

im Institut für Makromolekulare Chemie der Universität Freiburg im Breisgau

(im Rahmen des Gemeinsamen Seminars über makromolekulare und physikalische Chemie und des IRTG: Soft Matter Science)

- 1 26.01.11 PROF. JOE SCHLENOFF
Department of Chemistry & Biochemistry, Florida State University
and Gutenberg Chair 2011
*Mechanical Properties and Cell Response of Polyelectrolyte
Complexes and Thin Films*
- 2 02.02.11 DR. ANDREY GURTOVENKO
Institute of Macromolecular Compounds, Russian Academy of
Sciences, St. Petersburg, Russia
*Modulating the Structure and Properties of Cell Membranes by Small
Amphiphilic Molecules: Insight from Computer Modeling*
- 3 09.02.11 PROF. DR. JENS-UWE SOMMER
Technische Universität Dresden, Theory of Polymers at Interfaces
Polymers and Nanoparticles: Theory and Computer simulations
- 4 10.02.11 DR. EWELINA BURAKOWSKA-MEISE
Department of Biomedical Engineering, Eindhoven University of
Technology, The Netherlands
*UPy-based supramolecular polymers - a modular approach to
biospecific materials*
- 5 16.02.11 DR. FABRICE THALMANN
Institut Charles Sadron, Strasbourg, France
Prediction of the mixing behaviour in lipid bilayers
- 6 22.02.11 PROF. A. A. DARINSKII
Institute of Macromolecular Compounds of Russ. Ac. Sc., St.
Petersburg, Russia
*Computer Simulation of Complexes of Branched Macroions with
Linear Polyelectrolytes*
- 7 28.02.11 DR. ULRICH A. HANDGE
Polymer Engineering, Universität Bayreuth
*Viscoelastic and electrical properties of polymer nanocomposites:
From carbon nanotubes to the mineral halloysite*

- 8 29.03.11 PROF. REGINA MURPHY
Chemical and Biological Engineering, University of Wisconsin-
Madison, USA
Protein Misfolding and Aggregation in Neurodegenerative Diseases
- 9 06.04.11 PATRICIA DAVIDSON
Institut de Science des Matériaux de Mulhouse, France
The plasticity of cancerous cells and the cell nucleus,
- 10 12.04.11 DR. FAJUN ZHANG
Institut für Angewandte Physik, Universität Tübingen
*Tuning Interactions in Protein Solutions towards to Controlled Protein
Crystallization*
- 11 20.04.11 PROF. MARK GEOGHEGAN
Department of Physics and Astronomy, University of Sheffield
Single polymer surface diffusion
- 12 27.04.11 PROF. JUAN RODRIGUEZ-HERMANDEZ
Institute of Polymer Science and Technology, Madrid, Spain
*Approaches for surface patterning and functionalization: towards
hierarchical structures*
- 13 11.05.11 PROF. DR. HELMUT SCHLAAD
Max Planck Institute of Colloids and Interfaces, Potsdam
Poly(2-oxazoline)s as “smart” bioinspired polymers
- 14 16.05.11 DR. MICHAEL SOMMER
Melville Laboratory for Polymer Synthesis, Department of Chemistry,
University of Cambridge, England
*Well-defined, defect-free and end-functionalized poly(3-
hexylthiophene) via externally initiated Grignard metathesis
polymerization*
- 15 18.05.11 PROF. DR. ALAIN M. JONAS
Institute Of Condensed Matter and Nanosciences (Bio- and Soft
Matter) & Ecole Polytechnique de Louvain, Belgium
*Responsive Polymer Brushes: Tuning the Collapse Transition for
Applications in Biology*
- 16 01.06.11 DR. SIEGFRIED EIGLER
Zentralinstitut für Neue Materialien und Prozesstechnik, Universität
Erlangen
Functionalized Carbon Allotropes
- 17 07.06.11 PROF. DR. BILL VAN MEGEN
09.06.11 Department of Applied Physics, Royal Melbourne Institute of
Technology, Melbourne, Australien.
*Solidification: perspectives from experiments with colloidal
suspensions of particles with hard sphere-like interactions*

- 18 15.06.11 PROF. S. OBUKHOV
Department of Physics, University of Florida
Nanofluidity of Polymer Melt: Two velocity hydrodynamics
- 19 22.06.11 PROF. D. JOHANNSMANN
TU-Clausthal
Studies of Soft Matter with the Quartz Crystal Microbalance
- 20 29.06.11 PROF. DR. CLAUDIUS FÜTTERER
Biophysics of Tissues, Microsystems, Patterns and Non-equilibrium,
Experimentelle Physik, Universität Leipzig
Biophysics of Development and Microtechnologies with Applications
- 21 19.07.11 PROF. CHRISTOPHER OBER
Cornell University, Department of Materials, Science and
Engineering, Ithaca, USA
Polymer Brushes: Valuable tools for the biology-materials interface
- 22 20.07.11 PROF. AXEL BUGUIN
Institut Curie, Paris, France
Collective Behavior of Biological Cells
- 23 27.07.11 DR. CHRISTOPH GÜRTLER
Bayer MaterialScience AG, Leverkusen
Dream production - From basics to materials
- 24 28.09.11 PROF. HOSSEIN FAZLI
Institute for Advanced Studies in Basic Sciences (IASBS),
Department of Physics, Zanjan, Iran
*Novelties arising from the interplay between energetic and entropic
effects in systems of polymers and polyelectrolytes*
- 25 26.10.11 PROF. DR. CHRISTOPHER BARNER-KOWOLLIK
Preparative Macromolecular Chemistry, Institut für Technische
Chemie und Polymerchemie, KIT, Karlsruhe
Macromolecular Material Design via Modular Synthetic Strategies
- 26 27.10.11 PROF. DR. BELA IVAN
Chemical Research Center, Institute of Materials and Environmental
Chemistry, Academy of Sciences, Budapest, Hungary
*Nanophasic 'Chameleon' Amphiphilic Conetworks as Hydrogels and
Hydrophobic Gels in one Soft Material: From Novel Nanohybrids to
Nanocatalysts, Antimicrobial Materials and Smart Drug Release
Matrices*
- 27 02.11.11 PROF. JUN XU
Department of Chemical Engineering, Tsinghua University, Beijing,
China -- Humboldt Research Fellow, presently at the Institute of
Physics, University of Freiburg
*A Microscopic Kinetics Model for Polymer Crystallization and its
Application*

- 28 09.11.11 DR. HANS RIEGLER
Max Planck Institute of Colloids and Interfaces, Department of
Interfaces, Potsdam-Golm
*Phase transitions and transport phenomena in planar confined
systems*
- 29 16.11.11 DR. DIETMAR AUHL
Bio- and Soft Matter, Institute of Condensed Matter and
Nanosciences, Université catholique de Louvain, Belgium
*Dynamics of transient networks from macro- and supramolecular
polymers*
- 30 23.11.11 DR. CLEMENS WEISS
Max-Planck-Institut für Polymerforschung, Mainz
*Self-assembly of colloids at the air/water interface - towards complex
colloidal monolayers*
- 31 30.11.11 PROF. DR. MUKUNDAN THELAKKAT
Makromolekulare Chemie I, Universität Bayreuth
*Semiconductor crystalline polymers and block copolymers -
Synthesis and structure elucidation*
- 32 07.12.11 DR. NICO BRUNS
Departement Chemie, Universität Basel, Switzerland
*Polymer-Protein Hybrid Systems: From Damage Self-Reporting
Materials to ATRPases*
- 33 14.12.11 PD DR. GÖTZ P. HELLMANN
Deutsches Kunststoff-Institut, Darmstadt
From Nano to Micro Structures: The Value of Disorder
- 34 21.12.11 PROF. DR. MATTHIAS REHAHN
Deutsches Kunststoff Institut, TU Darmstadt
Electrically conductive polymers for (opto)electronics