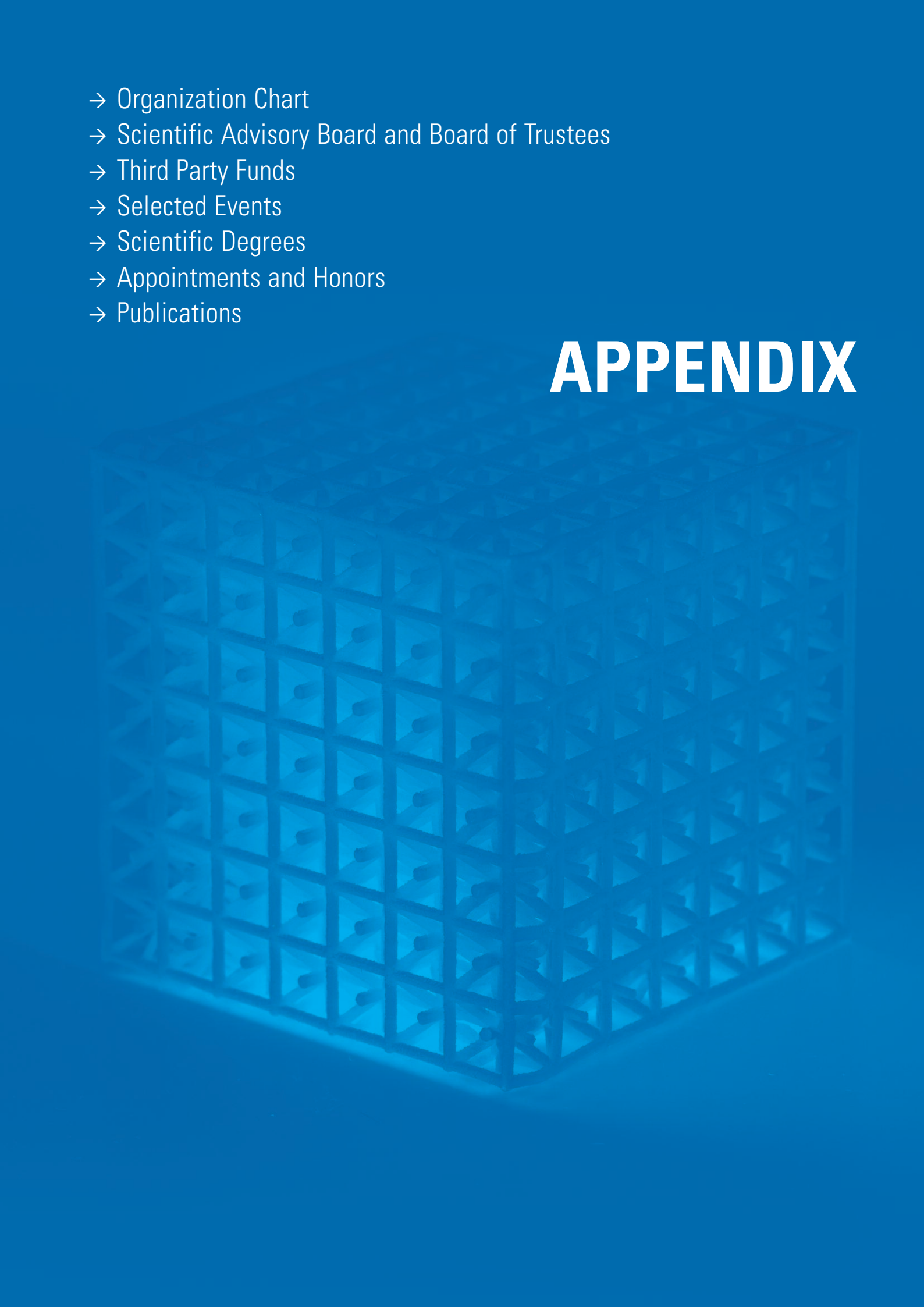
→ Organization Chart
→ Scientific Advisory Board and Board of Trustees
→ Third Party Funds
→ Selected Events
→ Scientific Degrees
→ Appointments and Honors
→ Publications

APPENDIX



Organigramm
Organization Chart

Biomaterials — Prof. Dr. Dr.h.c. Peter Fratzl · Personal Assistant: Kerstin Gabbe

- Biomimetic Actuation and Tissue Growth/Dr. John Dunlop
- Plant Material Adaptation/Dr. Michaela Eder
- Molecular Biomimetics and Magnets Biomineralization/Dr. Damien Faivre
- Biochemical Strategies in Load-Bearing Natural Materials/Dr. Matthew Harrington
- Thermodynamics, Kinetics and Rheology of Interfacial Layers/Dr. Reinhard Miller
- Biological Chitin-Based Tools and Sensors/Dr. Yael Politi
- Physics of Biomolecular Interfaces/Dr. Emanuel Schneck
- Hierarchical Structure of Biological and Biomimetic Materials/Dr. Wolfgang Wagermaier
- Mechanobiology/Dr. Richard Weinkamer

Independent Researchers

- Water Interactions in Complex Biological Materials/Dr. Luca Bertinetti
- Evolutionary Perspectives on Vertebrate Hard Tissues/Dr. Mason Dean
- Synthesis and Thermodynamic Stability of Amorphous Minerals/Dr. Wouter Habraken
- Advanced Raman Spectroscopic Imaging of Biological Tissues/Dr. Admir Masic
- Methodologies for Formation of Encapsulation System Scaffolds/Dr. Katja Skorb
- In-Situ Mechanical Characterization of Internal Interfaces in Biomaterials/Dr. Igor Zlotnikov

Biomolecular Systems — Director: Prof. Dr. Peter H. Seeberger · Personal Assistant: Dorothee Böhme

- GPI and Glycoproteins/Dr. Daniel Varón Silva
- Chemical Glycobiology of Infectious Diseases/Prof. Peter Seeberger
- Glycobiology of Microbe/Host Interaction/Dr. Chakkumkal Anish
  (Since September 2014 Senior Scientist Johnson & Johnson, Janssen Vaccines Division)
- Glycoimmunology/Dr. Bernd Lepenies
  (Since July 2015 Associate Professor (W2) for Infection Immunology at the University of Veterinary Medicine Hannover)
- Continuous Chemical Systems/Dr. Kerry Gilmore
- Polymeric Biomimetics (Emmy Noether Nachwuchsgruppe)/Dr. Laura Hartmann
  (Since June 2014 Full Professor (W3) for Preparative Polymer Chemistry at the University of Düsseldorf)
- Synthetic Plant Carbohydrates/Dr. Fabian Pfrengle
- Automated Carbohydrate Synthesis/Prof. Peter Seeberger
- Glycoproteomics/Dr. Daniel Kolarich
- Immunomics/Dr. Zoltan Konthur
- Structural Glycobiology/Dr. Christoph Rademacher

Colloid Chemistry — Director: Prof. Dr. Dr. h.c. Markus Antonietti · Personal Assistant: Carolin Nuglisch

- Biorefinery/Dr. Davide Esposito
- Poly(ionic liquid)s: Synthesis and Materials Application/Dr. Jiayin Yuan
- Artificial Photosynthesis/Dr. Dariya Dontsova
- Electrochemical Energy Materials/Dr. Tim-Patrick Fellinger
- Heterophase Polymerizations/Dr. Klaus Tauer

Modern Techniques of Colloid Analysis

- Electron Microscopic Studies of Colloidal Systems and Biomaterials/Dr. Jürgen Hartmann
- Supramolecular Porous Materials/Dr. Nina Fechler
- Nanojunction Design for Uphill Photosynthesis/Dr. Menny Shalom

Self-Organizing Polymers

- Bioinspired Polymers und Block Copolymers/Dr. Helmut Schlaad
  (Since June 2014 Full Professor (W2) for Polymer Chemistry at the University Potsdam)

Mesoporous Materials and Nanoparticles

- De Novo Nanoparticles: Novel synthetic routes for nanoparticle production/Dr. Christina Giordano
  (Since March 2014 Independent Researcher in the Research Group Physical Chemistry/Molecular Material Sciences at the TU Berlin)
- Organic Energy Polymers/Dr. Filipe Vilela
  (Since September 2013 Lecturer in Chemistry at Heriot-Watt University in Edinburgh)
- Interactions in Complex Monolayers/Prof. Gerald Brezesinski

Managing Director (2013-2014)
Prof. Dr. Dr.h.c. Peter Fratzl

Theory & Bio-Systems
Director: Prof. Dr. Reinhard Lipowsky · Personal Assistant: Susann Weber

- Biophysics Lab/Dr. Rumiana Dimova
- Multiscale Modelling/Dr. Andrea Grafmüller
- Proteins and Membranes/Dr. Thomas Weikl
- Carbohydrates and Polysaccharides/Dr. Mark Santer
- Polymers and Polyelectrolytes/Dr. Christian Seidel
  (Since September 2014 retired)
- Stochastic Processes in Complex and Biological Systems/Dr. Angelo Valleriani
- Regulation of Bio-Processes/Dr. Stephan Klumpp
- Soft Matter Simulations/Dr. Ana Vila Verde
- Phase Transitions and Transport Phenomena in Thin Films at Solid/Air Interfaces/Dr. Hans Riegler

Max Planck Research Group Mechano(bio)chemistry
Head: Dr. Kerstin Blank · Personal Assistant: Stefanie Riedel

The research group started to work on July 1st 2014 and is currently being set up.

Emeritus Group (Interfaces)
Prof. Dr. Dr. h.c. Helmuth Möhwald, Director (em.)

The Department of Interfaces was closed on February 1st, 2014 with the retirement of Helmuth Möhwald. Since then he serves as emeritus at the institute.
With termination of the Department Interfaces the remaining groups were transferred to

→ The Department of Colloid Chemistry · Interactions in Complex Monolayers/Prof. Dr. Gerald Brezesinski
→ The Department of Biomaterials · Thermodynamics, Kinetics and Rheology of Interfacial Layers/Dr. Reinhard Miller
→ The Department of Theory & Bio-Systems · Phase Transitions and Transport Phenomena in Thin Films at Solid/Air Interfaces/Dr. Hans Riegler

Administration/OtherServices
Head: Andreas Stockhaus
Personal Assistant: Angelina Schneider

Operating Technology (Campus)
Head: Heiko Jung

Budgeting/Accountancy
Head: Karin Schönfeld
Thea Dumke, Anke Klein

Drittmittel:
Katarzyna Gerwatowska, Stefanie Riedel, Nadine Stolz

Personnel
Head: Heike Kienert
Stefanie Ebschner, Judith Hoyer, Janice Sommer
Apprentice: Jasmin Müller

Procurement/Purchase
Head: Katharina Zesch
Sylvia Ost

Other Services
Head: Andreas Stockhaus
Olaf Gaida, Bodo Ryschka

Location Manager
Reina Schlender

Works Council

The Equal Opportunities Commissioners

The Ph.D. Students Representatives

IT-Service Group
Head: Roy Pfitzner
Marco Ehlert, Ingo Fiedler, David Schetter, Frank Seidel
Apprentices: Paul Meißner, Markus Herklotz

Public Relations
Katja Schulze

Library
Head: Silke Niehaus-Weingärtner
Frank Grimm, Annette Pape

Mechanic Workshop
Head: Günter Haseloff
Marco Bott, Andreas Kretzschmar, Jan von Szada-Borryszkowski

Electronic Workshop
Michael Born, Klaus Bienert, Henryk Pitas

Glass Blowing Workshop
Cliff Janiszewski

Building Services
Head: Heiko Jung
Guido Behrendt, Olaf Gaida, Hagen Hannemann, Jannick Krüger, Dirk Nast, Marco Stetzmann, Thomas Vogt

Caretaker
Head: Olaf Gaida

Fachbeirat
Scientific Advisory Board

Name	Institution
Prof. Dr. Colin Bain	University of Durham, Department of Chemistry, Durham, Großbritannien
Prof. Dr. Matthias Drieß	Technische Universität Berlin, Institut für Chemie, Berlin
Prof. Dr. Erwin Frey	Ludwig-Maximilians-Universität München, Fakultät für Physik
Prof. Dr. Deborah Leckband	The University of Illinois at Urbana Champaign, Department of Chemical & Biomolecular Engineering, Urbana, USA
Prof. Dr. Thisbe Lindhorst	Universität Kiel, Otto Diels-Institut für Organische Chemie, Kiel
Prof. Dr. Todd L. Lowary	University of Alberta, Department of Chemistry
Prof. Dr. Christine Ortiz	Massachusetts Institute of Technology, Department of Materials Science and Engineering
Prof. Dr. Dr. h.c. Bernhard Rieger	Technische Universität München, WACKER-Lehrstuhl für Makromolekulare Chemie
Prof. Dr. Viola Vogel	Eidgenössische Technische Hochschule Zürich, Biologisch-Orientierte Materialwissenschaften, Zürich, Schweiz
Prof. Dr. Annette Zippelius	Universität Göttingen, Institut für Theoretische Physik

Kuratorium
Board of Trustees

Name	Institution
Prof. Dr. rer. nat. Ulrich Buller	Mitglied des Vorstands Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e. V.
Prof. Dr. Dr. h. c. Rolf Emmermann	Stellv. Kuratoriumsvorsitzender GeoForschungsZentrum Potsdam (GFZ)
Prof. Dr. Detlev Ganten	Kuratoriumsvorsitzender Vorsitzender des Vorstands Charité - Universitätsmedizin Berlin
Jann Jakobs	Oberbürgermeister der Landeshauptstadt Potsdam
Dr. Wilhelm Krull	Generalsekretär VolkswagenStiftung
Prof. Dr.-Ing. Dr. Sabine Kunst	Ministerin für Wissenschaft, Forschung und Kultur des Landes Brandenburg
Prof. Dr. Wolfgang Plischke	Mitglied des Vorstands Bayer AG
Prof. Dr. Robert Seckler	Vizepräsident für Forschung und Wissenschaftlichen Nachwuchs an der Universität Potsdam

Drittmittelprojekte
Third Party Funds

Bund

Zuwendungs-geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
BMBF	Nachwuchsgruppe Glykobiotechnologie: Malaria-Untersuchung der Erythrozytheninvasion und der schweren Pathologie	Dr. Anish BS	01.04.2009-31.03.2014	
BMBF	Nachwuchsgruppe Glykobiotechnologie: Funktion der C-Typ Lektinrezeptoren (CLRs) bei der Modulation der Immunantwort	Dr. Lepenies BS	01.02.2009-31.12.2013	Bernhard-Nocht-Institut für Tropenmedizin, Hamburg Universität Regensburg Technische Universität München Universität Würzburg
BMBF	Verbundprojekt: Spitzenforschung und Innovation in den neuen Ländern-Das Taschentuchlabor: Impulszentrum für Integrierte Bioanalyse (IZIB)	Prof. Seeberger BS	01.10.2009-30.09.2014	Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V. (FhG), München Universität Potsdam Charitè-Universitätsmedizin Berlin Helmholtz-Zentrum für Infektionsforschung GmbH, Braunschweig Ruhr-Universität Bochum IDM Institut für Dünnschichttechnologie und Mikrosensorik e.V., Teltow Technische Fachhochschule Wildau MicroDiscovery GmbH, Berlin BST Bio Sensor Technologie GmbH, Berlin Congen Biotechnologie GmbH, Berlin Scienion AG, Dortmund Poly-An Gesellschaft zur Herstellung von Polymeren für spezielle Anwendungen und Analytik mbH, Berlin
BMBF	Verbundprojekt: Spitzenforschung und Innovationen in den neuen Ländern-Light2Hydrogen - Energie für die Zukunft-Photokatalytische Spaltung von Wasser zu Wasserstoff -TP2	Prof. Antonietti KC	01.11.2009-31.10.2014	Leibniz-Institut für Katalyse e.V. an der Universität Rostock Leibniz-Institut für Plasmaforschung und Technologie e.V. (INP), Greifswald Technische Universität Berlin Helmholtz-Zentrum Berlin für Materialien und Energie GmbH (HZB), Berlin Fachhochschule Stralsund Universität Rostock

BM – Abteilung Biomaterialien/Department of Biomaterials
BS – Abteilung Biomolekulare Systeme/Department of Biomolecular Systems
GF – Abteilung Grenzflächen/Department of Interfaces
KC – Abteilung Kolloidchemie/Department of Colloid Chemistry
TH – Abteilung Theorie & Bio-Systeme/Department of Theory & Bio-Systems

Bund

Zuwendungs-geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
A.v.H.	Max-Planck-Forschungspreis 2008: Biological and Biomimetic Materials	Prof. Fratzl BM	01.09.2008-31.08.2013	Ludwig Boltzmann Institute of Osteology, Vienna, Austria Harvard University, Department of Chemistry and Chemical Biology, USA University of California at Santa Barbara, USA Weizmann Institute of Science, Rehovot, Israel Montanuniversität Leoben, Austria Institut National Polytechnique de Grenoble, France Department of Materials Science, Technion, Haifa, Israel
BMBF	Verbundprojekt: Molekulare Pathologie der Osteoporose (OsteoPath)	Prof. Fratzl Dr. Wagermaier BM	01.06.2010-31.05.2013	Ludwig Boltzmann Gesellschaft, Ludwig Boltzmann Institut für Osteologie, Wien
BMBF-DLR	Fortführung der experimentellen und theoretischen Untersuchungen zur Bildung und Deformation von Einzeltropen als Modell für Schäume und Emulsionen sowie Begleitung der FASES-Experimente auf der ISS	Dr. Miller GF Since 31.01.2014 BM	01.07.2011-30.06.2014	
BMBF-PTJ	WoodWisdom-Net: WOP-Wood Supply TP Mechanische und nanostrukturelle Charakterisierung von Pappeln	Dr. Eder BM	01.02.2012-31.01.2015	University Helsinki, Helsinki Swedish University of Agricultural Sciences, Umea
BMBF-PTJ	EXIST-Forschungstransfer: Smart Pigments für nachhaltige umweldfreundliche Antikorrosionsbeschichtungen „SigmA“	Dr. Grigoriev GF	01.06.2014-30.11.2015	
BMBF	KMU - innovative-8: ProgRate Prognostische Marker in der Rheumatoiden Arthritis zur Verwendung als Therapieentscheider	Dr. Konthur BS	01.03.2013-31.12.2014	in.vent Diagnostica GmbH, Henningsdorf Charité Universitätsmedizin Berlin
BMBF - AiF	Entwicklung und Herstellung der Nanopartikel und Nanocontainer zur Einbindung in elektrolytische und mechanische Zink-Schichten im Labormaßstab	Prof. Möhwald Dr. Grigoriev GF		

EU

Zuwendungs-geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
EU/ ERC Adv. Grant	Hydrothermal and Ionothermal Chemistry for Sustainable Materials	Prof. Antonietti KC	01.11.2008-31.10.2013	
EU/ ERC Adv. Grant	Automated Synthesis of Heparin and Chondroitin Libraries for the Preparation of Diverse Carbohydrate Arrays	Prof. Seeberger BS	01.01.2009-31.12.2013	
EU/ ERC Adv. Grant	Molecular Biomimetics and Magnets Biomineralization: Towards Swimming Nanorobots	Dr. Faivre BM	01.01.2011 - 31.12.2015	
EU	Biomimetic and Biomineralized Magnetic Nanoparticles for Magnetic Resonance Imaging	Prof. Fratzl Dr. Faivre BM	01.09.2011 - 31.08.2014	Pannon Egyetem, Veszprem, Hungary Latvijas Universitate, Riga, Latvia nanoPET Pharma GmbH, Berlin Ludwig-Maximilians Universität, Münschen Ludwig Boltzmann Gesellschaft Österreichische Vereinigung zur Förderung der Wissenschaftlichen Forschung, Wien Eidgenössische Technische Hochschule Zürich, Switzerland
EU	Biomimetic Membrane Systems	Prof. Brezesinski GF Since 31.01.2014 KC	01.03.2011-29.02.2014	Universite Claude Bernard Lyon, Villeurbanne, France Institute of Chemistry, Chinese Academy of Sciences, Beijing, China Harbin Institute of Technlogoy, Harbin, China
EU	Quantitative Glycomics and Glycoproteomics for Biomarker Discovery	Dr. Kolarich BS	01.08.2011-31.07.2015	
EU	Diagnostic and Prognostic Biomarkers for Inflammatory Bowel Disease	Dr. Kolarich BS	01.10.2012 - 30.09.2016	The University of Edinburgh, UK Genos Doo Za Vjestacenje I Analiz, Osijek, Coratia Ludger Ltd, Abingdon, UK IP research Consulting Sasu, Noisy le Grand, France Azienda Ospedaliero-Universitaria Careggi, Firenze, Italy Academisch Ziekenhuis Leiden - Leids Universitair Medisch Centrum, Leiden, Netherlands Faculty of Science University of Zagreb, Zagreb, Croatia Cedars-Sinai Medical Center, Los Angeles, US

EU

Zuwendungs-geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
EU	Advanced European Lithium Sulphur Cells for Automotive Applications	Prof. Antonietti KC	01.10.2012-30.09.2016	Kemijski Institut, Ljubljana, Slovenia Centre National de la Recherche Scientifique, Paris, France Chalmers University of Technology, Goeteborg, Sweden Sincrotrone Trieste S.C.p.A., Basovizza Trieste Italy Centre of Excellence for Low-Carbon Technologies, Ljubljana, Slovenia Renault SAS, Boulogne Billancourt, France Solvionic SA, Toulouse, France Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., Münschen Saft SAS, Bagnolet, France Volvo Technology AB, Göteborg, Sweden
EU	Nanomar - Nanocontainer-Based Active Coatings for Maritime Applications	Prof. Möhwald Dr. Shchukin GF	01.05.2012-30.04.2014	IPT Brazil ICRAS Russia UAVR Portugal
EU	Training Network in Innovative Polyelectrolytes for Energy and Environment	Prof. Antonietti KC	01.05.2012-30.04.2016	University of the Basque Country, Leioa, Spain Centre National de la Recherche Scientifique, Paris, France Linkopings Universitet, Linkoping, Sweden Universite de Liege, Liege, Belgium Fundaction IMDEA Energia, Mostoles, Spain Kitozyme SA, Herstal, Belgium Procter&Gamble Italia SPA, Santa Palomba-Pomezia, Italy

EU

Zuwendungs-geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
EU	Nanomedicine for Target-Specific Imaging and Treatment of Atherothrombosis: Development and Initial Clinical Feasibility	Dr. Faivre BM	01.02.2013-31.01.2018	Institut National de la Sante et de la Recherche Medicale, Paris, France Assistance Publique - Hopizaux de Paris, Paris, France Inserm-Transfert SA, Paris, France Academic Medical Center, Amsterdam, The Netherlands Medical University of Graz, Clinical Institute for Medical and Chemical Laboratory Diagnosis, Graz, Austria Syddansk Universitet, Odense, Denmark Universitätsklinikum Erlangen, Erlangen University of Twente, Enschede, Netherlands CEA-LETI, Commissariat à l'Energie Atomiques et aux Energies Alternatives, Paris, France CLINAM - European Foundation for Clinical Nanomedicine, Basel, Switzerland WizSoft, Tel Aviv, Israel nanoPET Pharma GmbH, Berlin Semmelweis University, Budapest, Hungary Bracco Imaging S.p.A., Milan, Italy Edinethics Ltd., Edinburgh, UK
EU	Systems Glycobiology of Gastric Cancer	Dr. Kolarich BS	01.05.2013-30.04.2017	University of Gothenburg, Göteborg, Sweden National Institute for Bioprocessing Research & Training, Dublin, Ireland Institute of Molecular Pathology and Immunology of the University of Porto, Porto, Portugal Swiss Institute of Bioinformatics, Geneva, Switzerland Umeå University, Umeå, Sweden University of Copenhagen, Copenhagen, Denmark OLINK AB, Uppsala, Sweden University of Siena, Siena, Italy Uppsala University, Uppsala, Sweden Syddansk Universitet, Odense, Denmark Ariana Pharma SA, Paris, France

EU

Zuwendungs-geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
EU	Complex Wetting Phenomena	Dr. Miller GF Since 31.01.2014 BM	01.01.2014-31.12.2017	Technische Universität Darmstadt Aristotle University of Thessaloniki, Greece Aristotle University of Thessaloniki, Greece Hebrew University of Jerusalem, Israel Loughborough University, UK Universidad Complutense de Madrid, Spain Maria Curie-Sklodovska University, Lublin, Poland University of Twente, Enschede, Netherlands Evonik AG, Essen Unilever UK Central Resources Limited, London, UK
EU	1D Magnetic Nanostructures Using Mineralizing Peptidess	Prof. Fratzl BM	01.03.2014-29.02.2015	
EU	Network for Integrated Cellular Homeostasis	Prof. Lipowsky Dr. Valleriani TH	01.01.2012-31.12.2015	University of Groningen, Groningen, Netherlands University of Potsdam University of Aberdeen, UK Consejo Superior de Investigaciones Científicas, Madrid, Spain University of Oxford, UK DSM Biotechnology Center, Delft, Netherlands AstraZeneca, London, UK RiNA GmbH, Berlin

DFG

DFG	Multivalenz als chemisches Organisations- und Wirkprinzip: Neue Architekturen, Funktionen und Anwendungen	Prof. Seeberger BS	01.01.2012-31.12.2015	Humboldt-Universität, Berlin Technische Universität Berlin Freie Universität Berlin Charité - Universitätsmedizin Berlin Leibniz-Institut für Molekulare Pharmakologie (FMP) Konrad-Zuse-Zentrum für Informationstechnik Berlin (ZIB)
DFG	Experimental and Computational Analysis of Fluidic Interfaces Influenced by Soluble Surfactant	Dr. Miller GF	01.05.2010-30.04.2013	Technische Universität Darmstadt
DFG	Experimental and Computational Analysis of Fluidic Interfaces Influenced by Soluble Surfactant	Dr. Miller GF Since 31.01.2014 BM	01.08.2013-31.07.2017	Technische Universität Darmstadt

DFG

Zuwendungs-geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
DFG	Synthesis amd Properties of Glycopolypeptide Biohybrid Materials Thema: Novel Polymer Synthesis and New Supramolecular Polymer Assemblies	Dr. Schlaad KC	01.01.2011-31.10.2013	
DFG	Einfluss von Proteinen auf die Schaumbildung und Schaumstabilität	Dr. Miller GF Since 31.01.2014 BM	01.08.2011-31.07.2014	
DFG	Protein Metal Complexes as Reversible Sacrificial Bonds in Self-Healing Biopolymers	Dr. Harrington BM	01.08.2011-31.07.2014	
DFG	Multifunctional Layered Magnetite Composites	Dr. Faivre BM	01.12.2012-31.11.2014	
DFG DIP Grant	Grundlegende Untersuchungen zu strukturellen Ordnungsübergängen in Materialien im Kontext der Biomineralisation	Prof. Fratzl BM	01.01.2012-31.12.2016	
DFG	Hygroskopische Eigenschaften von natürlichen Oligosacchariden Modellentwicklung und Test für die Wechselwirkungen mit Wasser	Dr. Grafmüller TH	01.11.2012-30.10.2015	Weizmann Institute of Science, Israel
DFG	Stochastic Processing of mRNA and tRNA by Ribosomes during Translational Elongati	Prof. Lipowsky TH	01.07.2012-30.06.2015	
DFG	Materials World Network: Structural Design and Micromechanical Properties of echanotransducing Biological Materials	Dr. Yael Politi BM	01.12.2012-31.11.2015	
DFG	European Young Investigator Award	Dr. Degtyar BM	01.12.2013-31.05.2014	
DFG	Mechanische Anpassung von Biomaterialien durch Protein-Metall-Komplexe	Dr. Harrington BM	01.01.2014-31.12.2016	
DFG	Structural and Morphological Characterization of Ceramide-1-Phosphate Model Membranes	Prof. Brezesinski GF	01.04.2010-31.03.2013	
DFG	Generation of Nanoparticles with Tunable Surface Wettability and Surface Funcionality to Cross Hydrophilic/Hydrophobic Interfaces of Biological Barriers	Prof. Möhwald Dr. Dayang Wang GF	15.04.2009-31.03.2014	
DFG	Thermodynamisch stabile Pickering-Emulsion	Dr. Miller GF	01.09.2011-31.08.2013	
DFG Emmy-Noether-Programm	Synthese monodisperser, multifunktionaler Neoglycopolymere und Neoglycopolymer-Hybride und ihre Anwendung in der Medizin	Dr. Hartmann BS	04.08.2009-01.07.2014	

DFG

Zuwendungs-geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
DFG Emmy-Noether-Programm	Targeting C-type Lectins on Dendritic Cells Using Carbohydrate-Analogs for the Specific Delivery of Tumor Vaccines	Dr. Rademacher BS	01.06.2012-31.05.2015	
DFG	Multiscale Smart Coatings wiht Sustained Anticorrosive Action	Dr. Shchukin Prof. Möhwald GF	01.09.2012-31.08.2015	NIMS Louisiana Tech University Kazan Federal Universtiy
DFG	New Methods for the Synthesis of glycosylphosphatidylinositol Anchored Proteins with Therapeutic Applications	Dr. Varón Silva BS	01.11.2012-30.10.2015	
DFG	Untersuchung des Einflusses und der Funktion unterschiedlicher Ceramidsubspezies auf die Nanostruktur und die Dynamik von Stratum corneum Lipidmodellsystemen	Prof. Brezesinski GF Since 31.01.2014 KC	01.03.2013-28.02.2016	Martin-Luther-Universität Halle-Wittenberg Universität Leipzig Institut für Angewandte Dermatopharmazie an der Martin-Luther-Universität Halle-Wittenberg e.V.
DFG	Nanoporöse Polymere für die Wasseraufbereitung	Dr. Weber KC	15.04.2013-28.02.2014	
DFG	Graduiertenkolleg "1524"	Jaime Agudo TH	01.03.2013-29.02.2016	
DFG Transregios	Funktionelle Biomaterialien zur Steuerung von Heilungsprozessen in Knochen- und Hautgewebe - vom Material zur Klinik	Prof. Seeberger BS	01.07.2013-30.06.2017	Universitätsklinikum Leipzig Universität Leipzig Technische Universität Dresden Universitätsklinikum Dresden Helmholtz-Zentrum für Umweltforschung Leipzig-Halle Leibniz-Institut für Polymerforschung Dresden e. V. Innovent e. V., Jena
DFG	eScience-konforme Standards für die Morphologie	Prof. Fratzl BM	01.09.2014-30.08.2017	Leibniz-Zentrum für Biodiversität der Tiere (ZFMK) Museum für Naturkunde Leibniz-Institut für Evolutions- und Biodiversitätsforschung Universität Rostock Rheinische Friedrich-Wilhelms-Universität Bonn
DFG	Multifunktionelle geschichtete Magnetit Komposite	Dr. Faivre BM	01.07.2014-31.12.2014	Universität Konstanz Forschungszentrum Jülich GmbH Friedrich-Alexander-Universität Erlangen-Nürnberg

DFG

Zuwendungs-geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
DFG	Magneto-Aerotaxis bei magnetotaktischen Bakterien	Dr. Faivre BM	01.10.2014-30.09.2017	
DFG	Magneto-Aerotaxis bei magnetotaktischen Bakterien	Dr. Klumpp TH	01.11.2014-31.10.2017	
DFG	Selbstheilende Metallopolymere: Vom biologischen Modell bis zu synthetischen Materialien	Dr. Harrington BM	01.07.2014-30.06.2017	Max-Planck-Institut für molekulare Pflanzenphysiologie, Potsdam
DFG Transregios	Verbesserte Anti-Kohlenhydrat-basierte Impfstoffe durch gezielte Aktivierung des angeborenen Immunsystems	Prof. Seeberger BS	01.07.2014-30.06.2018	Charité - Universitätsmedizin Berlin
DFG	Skalenkaskaden in komplexen Systemen	Dr. Weikl TH	01.10.2014-30.06.2018	Freie Universität Berlin
DFG	Untersuchung des Ablaufes der Kalzitbiomineralisation in Coccolithophoriden	Dr. Faivre BM	01.09.2014-30.08.2017	
DFG Emmy-Noether-Programm	Die Physik der nicht-spezifischen Wechselwirkungen zwischen Biomembranen	Dr. Schneck BM	01.11.2014-31.10.2017	
DFG	"Greigit oder Magnetit: Umwelt und genetische Faktoren, die die Biomineralisation in magnetotaktische Bakterien kontrollieren"	Dr. Faivre BM	01.04.2015-31.03.2018	
DFG	Biometric Materials Research: Functionality by Hierarchical Structuring of Materials	Prof. Fratzl Dr. Aichmayer Dr. Zaslansky Dr. Faivre Dr. Burgert Dr. Schlaad Dr. Cölfen BM	01.05.2010-	Institut National Polytechnique E.N.S.E.E.G./ L.T.P.C.M. Grenoble Foundry Institute of RWTH Aachen Department of Materials Engineering, Technical University Berlin Evolutionary Biomaterials Group, MPI für Metallforschung, Stuttgart Department of Materials Science and Engineering, University Erlangen-Nürnberg Dept. Of Microstructure Physics and Metal Forming, MPI Eisenforschung Düsseldorf Plant Biomechanics Group, Botanic Garden, University of Freiburg
DFG	Gottfried Wilhelm Leibniz-Programm	Prof. Fratzl Dr. Dunlop Dr. Wagermaier Dr. Dean BM	01.09.2010-31.08.2017	

DFG

Zuwendungs-geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
DFG	Exzellenzcluster UniCat: Unifying Concepts in Catalysis	Prof. Möhwald GF Prof. Antonietti KC	01.01.2008-31.12.2010 01.11.2012-31.12.2015	Technische Universität Berlin Humboldt-Universität Berlin Freie Universität Berlin Universität Potsdam Fritz-Haber-Institut der Max-Planck-Gesellschaft Berlin

Supranationale Einrichtungen

ESA/ESTEC	Fundamental and Applied Studies of Emulsion Stability	Dr. Miller GF Since 31.01.2014 BM	01.10.2003-30.06.2014	IENI, Genua, Italien Université Aix-Marseille Université Compiegne, France Universität Complutense Madrid Universität Florenz, Italien IPF, Dresden CNR - Consiglio Nazionale delle Ricerche, Italien Eni S.p.A., Italien Aristotele Universität Thessaloniki
ESA/ESTEC	Topical Team: Foam and Emulsion Technologies-Concerted Action Team (FETCAT)	Dr. Miller GF Since 31.01.2014 BM	01.01.2013-31.12.2015	CNR, Genua, Italien Universität Florence, Italien Universität Marseille, Frankreich Universität Compienge, Frankreich Murmansk State Technical University, Russland Aristotele Universität Thessaloniki, Griechenland Universität Stockholm, Schweden EniTecnologie, Milano, Italien University College Dublin, Irland Nestlé Research Center, Lausanne, Schweiz Wageningen University, Niederlande Univerity of Manchester Institute of Science and Technology, Großbritanien Institute of Food Research, Norwich, Großbritanien Norwegian Univerity of Science and Technology, Trondheim, Norwegen St. Petersburg State Univerity, Russland Université d'Orsay et CNRS, Frankreich Université de Marne La Vallée, Frankreich Unilever, Großbritanien Norsk Hydro ASA, Norwegen IPF, Dresden
HFSP Research Grant		Dr. Dean BM	01.09.2013-31.08.2015	Wyss Institut - Harvard University, USA Konrad-Zuse-Zentrum für Informationstechnik Berlin (ZIB)

Stiftungen

Zuwendungs-geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
Körber-Stiftung	Körber-Preis 2007	Prof. Seeberger BS	01.01.09.2007-	
VW-Stiftung	Synthetic Woven Bone Development by an Unconventional Biochemical Process	Prof. Omelon BM	01.02.2014-31.07.2015	
GIF-German Israeli Foundation	Emulsion-templated Porous Carbons: Hierarchical Porosities and Surface Functionalities	Prof. Antonietti KC	01.01.2013-31.12.2015	Technion, Haifa, Israel
GIF-German Israeli Foundation	Targeting Antibiotic Resistance of Bacteria with Self-Immolative Dendritic Prodrugs	Prof. Seeberger BS	01.01.2015-31.12.2017	Tel Aviv University

Sonstige deutsche Forschungsfinanzierer

DAAD	Projektbezogener Personenaustausch mit der China	Prof. Brezesinski GF Since 31.01.2014 KC Prof. Seeberger BS	2014-2015 2014	Shanghai Institute of Applied Physics, China Jiangnan University, Wuxi, China
DAAD	Projektbezogener Personenaustausch mit Frankreich	Dr. Wagermaier BM	2013-2014	Laboratoire d'Archéologie, Ivry-sur-Seine, France
DAAD	Projektbezogener Personenaustausch mit Polen	Prof. Brezesinski GF Since 31.01.2014 KC	2014-2015	Warsaw University of Technology, Poland
DAAD	Projektbezogener Personenaustausch mit Hong Kong	Dr. Jiayin Yuan KC	2014-2015	The Hong Kong Polytechnic University

Ausgewählte Veranstaltungen
Selected Events

2013

- **20.-22. March The 7th Glycan Forum in Berlin**
  nhow Hotel, Berlin

- **24. April Girls' Day**
  Max Planck Campus, Potsdam Golm Science Park

- **31. May Alumni Meeting**
  MPI of Colloids and Interfaces

- **5.-6. June Annual General Meeting of the Max Planck Society**
  Dorint Sanssouci, Potsdam

- **10.-13. June 14th European Student Colloid Conference**
  MPI of Colloids and Interfaces

- **10. September Open Day**
  MPI of Colloids and Interfaces

- **23.-25. September Multiscale Motility of Molecular Motors**
  MPI of Colloids and Interfaces

- **25. October Biomolecular Systems Day**
  MPI of Colloids and Interfaces

2014

- **17.-18. March SPP1420 Winter School**

- **27. March Girls' Day**
  Max Planck Campus, Potsdam Golm Science Park

- **13.-16. April Food Colloids**
  Karlsruhe Institute of Technology (KIT)

- **20. June Alumni Meeting**
  Max Planck Institute of Colloids and Interfaces

- **1.-3. September Biomembrane Days II**
  Max Planck Institute of Colloids and Interfaces

- **6. September Open Day**
  Potsdam-Golm Science Park

- **10. October Biomolecular Systems Day**
  Max Planck Institute of Colloids and Interfaces

Wissenschaftliche Abschlüsse
Scientific Degrees

Bachelor Theses

Department of Biomaterials

Gjardy, A.: Untersuchung von Truthahnsehnen auf ihre Eignung als Matrize für die Infiltration von Nanopartikeln, Humboldt-Universität zu Berlin (2014).

Master Theses

Department of Biomaterials

2013

Mlynarczyk, B: The mechanical role of His-metal complexes in biological elastomers. Universität Potsdam.

2014

Arngold, X: Chemical and mechanical characterization of mussel derived metal binding domain. Universität Potsdam.

Department of Biomolecular Systems

2013

Knaack, J.: Synthesis of Glycopeptides for Evaluating the Influence of N-Glycan Core-Fucosylation on Protease Activity, Freie Universität Berlin.

Poremski, S.: Towards the De Novo Synthesis of Pseudaminic Acid. Freie Universität Berlin.

Wang, H.: Functionalization of Soft Colloidal Probes for Biosensing. Freie Universität Berlin.

Zhukova, Y.: Synthesis of porous PEG-protein particles by hard templating with $CaCO_3$. Humboldt-Universität Berlin.

Zimmermann, S.: The murine C-type lectin receptor Mincle: Functional characterization, ligand specificity, and its role in inflammation. Universität Potsdam.

2014

Bartetzko, M.: Automated solid-phase synthesis of plant arabinogalactan fragments. Freie Universität Berlin.

Czarnecki, M.: Solid Phase Synthesis and Characterization of Zwitterionic Precision Polymers for Biomedical Applications. Universität Potsdam.

Größel, J.: Synthesis of glycosylated Dolichol Derivatives. Freie Universität Berlin.

Schmidt, D.: Automated solid-phase synthesis of plant arabinoxylan fragments. Freie Universität Berlin.

Wagner, T.: Generation of C-type lectin receptor-Fc fusion proteins and their functional characterization: SIGN-R1-hFc and Dectin-2-hFc. Universität Potsdam.

Zelmer, Ch.: Precision Glycomacromolecules and their Multivalent Presentation at Soft Surfaces. Freie Universität Berlin.

Department of Colloid Chemistry

2013

Blaszkiewicz, Joanna: The Potential of Hydroxylated Poly(N-alkyl glycine)s as Antifreeze Additives. Universität Potsdam.

Castaño Romera Fernandez, M: Sustainable building blocks for polymers. Humboldt-Universität Berlin.

Doriti, A.: Synthesis of functionalized polypeptides. Humboldt-Universität Berlin.

Metzke, S.: Synthesis and Characterization of Transition Metal Nitrides and Carbides for Catalysis and Electrochemistry Application. Universität Potsdam.

PhD Theses

Department of Biomaterials

2013

Bidan, C.: Geometric Control of Tissue Growth and Organisation. Universität Potsdam

Körnig, A.: Assembled biogenic magnetic nanoparticles: Properties of magnetosome chains and their stability against external magnetic fields. Universität Potsdam.

Saxe, F.: Significance of cell-wall ultrastructure for growth and mechanical properties of Arabidopsis thaliana. Universität Potsdam.

2014

Carillo, M. A.: Chains of nanomagnets: How biological macromolecules stabilize their assembly. Universität Potsdam.

Ermeydan, M. A.: Wood Cell Wall Modification with Hydrophobic Molecules. Universität Potsdam.

Guiducci, L.: Passive biomimetic actuators: the role of material architecture. Universität Potsdam.

Hörth, R.: Structural and Mechanical Changes of Bone Tissue during Healing and Implant Integration at the Micrometer and Nanometer Scale. Dissertation. Technische Universität Berlin.

Razghandi, K.: Passive Hydro-actuated Unfolding of Ice Plant Seed Capsules as a Concept Generator for Autonomously Deforming Devices. Technische Universität Berlin.

Vach, P.: Solution Synthesis and Actuation of Magnetic Nanostructures. Humbold-Universität Berlin.

Department of Biomolecular Systems

2013

Behra, M.: Synthesis of Functional Porous Poly(ethylene glycol) Microgels for Biotechnological Applications. Freie Universität Berlin.

Calin, O.: Assembly of Oligosaccharides: from the De novo Synthesis of Building Blocks to the Automated Solid Phase Synthesis. Freie Universität Berlin.

Eriksson, M.: C-type Lectin Receptors: from Immunomodulatory Carbohydrate Ligands to a Role in Murine Colitis. Freie Universität Berlin.

Grünstein, D.: Carbohydrate Systems for Biosensing, Imaging and Medial Applications. Freie Universität Berlin.

Maglinao, M.: C-type lectin receptors in cell-specific targeting and malaria infection. Freie Universität Berlin.

Mosca, S.: 3R3-Peptides -Peptidomimetic Foldamers for Biomedical Applications: Design, Structure and Activity. Freie Universität Berlin.

2014

Götze, S.: Synthesis of Parasite Related Carbohydrates and their Use as Probes for Glycobiology. Freie Universität Berlin.

Kurucz, R.: Generation and Characterization of monoclonal Antibodies directed against synthetic P. falciparum Glycosylphosphatidylinositol glycans. Freie Universität Berlin.

Ponader, D.: Synthesis of Sequence defined Glycooligomers for Studying Multivalent Interactions. Freie Universität Berlin.

Pussak, D.: Synthesis and Functionalization of Soft Colloidal Probes based on Poly(ethylene glycol) as Carbohydrate Biosensors. Freie Universität Berlin.

Wojcik, F.: Sequence-Defined Oligo(amidoamines): Synthesis, Carbohydrate Functionalization and Biomedical Applications. Freie Universität Berlin.

Department of Colloid Chemistry

2013

Glatzel, S.: Cellulose Based Transition Metal Nano-Composites: Structure and Development. Universität Potsdam.

Robinson, J. W.: Novel poly(N-substituted glycine)s: synthesis, post-modification, and physical properties. Universität Potsdam.

Yu, L.: Hydrothermal Synthesis of Carbon and Carbon Nanocomposite Materials for Environmental and Energy Applications. Universität Potsdam.

Fechler, N.: Salts as Highly Diverse Porogens: Functional Ionic Liquid-Derived Carbons and Carbon-Based Composites for Energy-Related Applications. Universität Potsdam.

Soll, S.: Structural Properties and Functional Materials of Vinylimidazolium-type Poly(ionic Liquid)s. Universität Potsdam.

Krannig, K.-S.: Smart, Biohybrid Polymers: Synthesis and Structures of Novel Glycopolypeptides. Universität Potsdam.

Haro Dominguez, P.: Nanostructured Poly(benzimidazole)s by Chemical Modification. Universität Potsdam.

2014

Chung, K. K.: Heteroatom-containing carbons for high energy density supercapacitor. Universität Potsdam.

Höhne, P.: Bioinspirierte Untersuchungen zu polymeren Hydrogelen. Universität Potsdam.

Krüger, K.: Zur hydrophob initiierten Photoemulsionspolymerisation. Universität Potsdam.

Men, Y.: Poly(ionic Liquid)-based Themoresponsive Polymers and Porous Carbon Materials. Universität Potsdam.

Prescher, S.: Poly(Ionic Liquid)s: Synthesis and Function as Nanoparticles and Liquid Bulk Materials. Universität Potsdam.

Ran, Y.: Via Redox Heterophase Polymerisation. Universität Potsdam.

Ressnig, D.: The Preparative Decomposition of Semi-Organic Crystals: Metal Carbodiimides become Functional. Universität Potsdam.

Schipper, F.: Biomass Derived Carbon for New Energy Storage Technologies. Universität Potsdam.

Department of Interfaces

2013

Dannehl, C.: Fragments of the Human Antimicrobial LL-37 and their Interaction with Model Membranes. Universität Potsdam.

Department of Theory & Bio-Systems

2013

Bahrami, A.: Vesicles interacting with nanoparticles. Technische Universität Berlin.

Fricke, N.: Eine Risenvesikel-Studie zum Einfluss des Glycolipids GM1 auf Phospholipid-Membranen. Universität Potsdam.

Pobandt, T.: Modeling Peptides at Interfaces in Atomic Detail. Technische Universität Berlin.

Patra, P.: Population Dynamics of Bacterial Persistence. Universität Potsdam.

2014

Raatz, M.: Modeling the wrapping of nanoparticles by membrane. Universität Potsdam.

Jin, C.: Theoretical and Experimental Study of Capillary Effects on Melting. Universität Potsdam.

Mauri, M.: A model for sigma factor competition in bacterial cells. Universität Potsdam.

Habilitations

Department of Biomaterials

Damien, F.: Biological and Biomimetic Formation and Organization of Magnetic Nanoparticles. Uni Potsdam (2014).

Department of Biomolecular Systems

Hartmann, L.: Precision GLycomacromolecules and Glycohydrogels: Synthesis and Applications in Biotechnology and Biomedicine. FU Berlin (2014).

Lepenies, B.: C-Typ Lektinrezeptoren – Ligandenidentifikation, zellspezifisches Targeting und ihre Funktion in Infektion und Inflammation. Freie Universität Berlin (2014).

Department of Collod Chemistry

Titirici, M. M.: Sustainable Carbon Materials from Hydrothermal Processes. Universität Potsdam (2013).

Giordano, Cristina: A neglected World: Transition Metal Nitride and Metal Carbide Based Nanostructures. Novel Synthesis and Future Prospectives. Universität Potsdam (2014).

Personalien
Appointments and Honors

Ehrungen/Mitgliedschaften/Honorarprofessuren
Honors/Memberships/Honorary Professorships

2013

Prof. Dr. Peter Fratzl: Director of the Department of Biomaterials has been elected as member of the German Academy of Science and Engineering (ACATECH).

Prof. Dr. Peter Fratzl: Director of the Department of Biomaterials received the Jerome B. Cohen Distinguished Lecture Series of the Northwestern University, Evanston, USA.

Prof. Dr. Peter H. Seeberger: Director of the Department of Biomolecular Systems has been elected to become a member of the Berlin Brandenburg Academy of Sciences and Humanities.

Prof. Dr. Peter H. Seeberger: Director of the Department of Biomolecular Systems received the C. S. Hamilton Award for Organic Chemistry of the University of Nebraska.

2014

Prof. Dr. Markus Antonietti: Director of the Department of Colloid Chemistry received the Friedrich Bergius Lecture award.

Prof. Dr. Markus Antonietti: Director of the Department of Colloid Chemistry received the "Krister Holmberg Lecture", Göteburg.

Dr. Rumiana Dimova: Group Leader in the Department of Theory & Bio-Systems received the Spring 2014 EPS Emmy Noether Distinction for Women in Physics.

Prof. Dr. Helmuth Möhwald: Director (em.) has been named a 2014 Langmuir Lecturer.

Dr. Jiayin Yuan: Group Leader in the Department of Colloid Chemistry received an ERC Starting Grant of the European Research Council.

Ruf an eine Universität
Appointments

2013

Dr. Filipe Vilela: Group Leader in the Department of Colloid Chemistry accepted a position as Lecturer in Chemistry at the Heriot-Watt University in Edinburgh.

2014

Dr. Laura Hartmann: Group Leader in the Department of Biomolecular Systems, accepted a position as W3 professor for Preparative Polymer Chemistry at the Heinrich-Heine-University Düsseldorf.

Dr. Helmut Schlaad: Group Leader in the Department of Colloid Chemistry accepted a position as W2 professor for Polymer Chemistry at the University Potsdam.

Publikationen

Biomaterialien 2013

Articles

Aizenberg, J.; Fratzl, P.; Addadi, L.: Preface for the special issue celebrating Stephen Weiner's 65th birthday. J. Struct. Biol. 183 105-106 (2013)

Aizenberg, J.; Fratzl, P.: New Materials through Bioinspiration and Nanoscience. Adv. Funct. Mater. 23 (36), 4398-4399 (2013)

Baumgartner, J.; Dey, A.; Bomans, P. H. H.; Le Coadou, C.; Fratzl, P.; Sommerdijk, N. A. J. M.; Faivre, D.: Nucleation and growth of magnetite from solution. Nat. Mater. 12 (4), 310-314 (2013)

Baumgartner, J.; Bertinetti, L.; Widdrat, M.; Hirt, A. M.; Faivre, D.: Formation of Magnetite Nanoparticles at Low Temperature: From Superparamagnetic to Stable Single Domain Particles. PLoS One 8 (3) (2013)

Baumgartner, J.; Morin, G.; Menguy, N.; Gonzalez, T. P.; Widdrat, M.; Cosmidis, J.; Faivre, D.: Magnetotactic bacteria form magnetite from a phosphate-rich ferric hydroxide via nanometric ferric (oxyhydr)oxide intermediates. Proc. Natl. Acad. Sci. U. S. A. 110 (37), 14883-14888 (2013)

Bennet, M.; Perez-Gonzalez, T.; Wood, D.; Faivre, D.: Magnetosomes. Bionanotechnology: Biological Self-Assembly and its Applications 241-271 (2013)

Bertinetti, L.; Fischer, F. D.; Fratzl, P.: Physicochemical Basis for Water-Actuated Movement and Stress Generation in Nonliving Plant Tissues. PHYSICAL REVIEW LETTERS 111 (23) (2013)

Bidan, C. M.; Wang, F. M.; Dunlop, J. W. C.: A three-dimensional model for tissue deposition on complex surfaces. COMPUTER METHODS IN BIOMECHANICS AND BIOMEDICAL ENGINEERING 16 (10), 1056-1070 (2013)

Bidan, C. M.; Kommareddy, K. P.; Rumpler, M.; Kollmannsberger, P.; Fratzl, P.; Dunlop, J. W. C.: Geometry as a Factor for Tissue Growth: Towards Shape Optimization of Tissue Engineering Scaffolds. Adv. Healthc. Mater. 2 (1 Sp. Iss. SI), 186-194 (2013)

Bikondoa, O.; Carbone, D.; Chamard, V.; Metzger, T. H.: Ageing dynamics of ion bombardment induced self-organization processes. Sci Rep 3 (2013)

Carillo, M. A.; Bennet, M.; Faivre, D.: Interaction of Proteins Associated with the Magnetosome Assembly in Magnetotactic Bacteria As Revealed by Two-Hybrid Two-Photon Excitation Fluorescence Lifetime Imaging Microscopy Förster Resonance Energy Transfer. The Journal of Physical Chemistry B 117 (47), 14642-14648 (2013)

Claes, J. M.; Dean, M. N.; Nilsson, D. E.; Hart, N. S.; Mallefet, J.: A deepwater fish with 'lightsabers' - dorsal spine-associated luminescence in a counterilluminating lanternshark. Sci Rep 3 (2013)

Dunlop, J. W. C.; Fratzl, P.: Multilevel architectures in natural materials. Scr. Mater. 68 (1), 8-12 (2013)

Eder, M.; Arnould, O.; Dunlop, J. W. C.; Hornatowska, J.; Salmen, L.: Experimental micromechanical characterisation of wood cell walls. Wood Sci. Technol. 47 (1), 163-182 (2013)

Erko, M.; Hartmann, M. A.; Zlotnikov, I.; Serrano, C. V.; Fratzl, P.; Politi, Y.: Structural and mechanical properties of the arthropod cuticle: Comparison between the fang of the spider Cupiennius salei and the carapace of American lobster Homarus americanus. J. Struct. Biol. 183 (2), 172-179 (2013)

Fischer, F. D.; Harrington, M. J.; Fratzl, P.: Thermodynamic modeling of a phase transformation in protein filaments with mechanical function. New J. Phys. 15 (2013)

Fritz-Popovski, G.; Van Opdenbosch, D.; Zollfrank, C.; Aichmayer, B.; Paris, O.: Development of the Fibrillar and Microfibrillar Structure During Biomimetic Mineralization of Wood. Adv. Funct. Mater. 23 (10), 1265-1272 (2013)

Gal, A.; Habraken, W.; Gur, D.; Fratzl, P.; Weiner, S.; Addadi, L.: Calcite Crystal Growth by a Solid-State Transformation of Stabilized Amorphous Calcium Carbonate Nanospheres in a Hydrogel. Angew. Chem.-Int. Edit. 52 (18), 4867-4870 (2013)

Galvis, L.; Dunlop, J. W. C.; Duda, G.; Fratzl, P.; Masic, A.: Polarized Raman Anisotropic Response of Collagen in Tendon: Towards 3D Orientation Mapping of Collagen in Tissues. PLoS One 8 (5) (2013)

Gamsjäger, E.; Bidan, C. M.; Fischer, F. D.; Fratzl, P.; Dunlop, J. W. C.: Modelling the role of surface stress on the kinetics of tissue growth in confined geometries. Acta Biomater. 9 (3), 5531-5543 (2013)

Guerette, P. A.; Hoon, S.; Seow, Y.; Raida, M.; Masic, A.; Wong, F. T.; Ho, V. H. B.; Kong, K. W.; Demirel, M. C.; Pena-Francesch, A.; Amini, S.; Tay, G. Z.; Ding, D.; Miserez, A.: Accelerating the design of biomimetic materials by integrating RNA-seq with proteomics and materials science. NATURE BIOTECHNOLOGY 31 (10), 908-915 (2013)

Gupta, H. S.; Krauss, S.; Kerschnitzki, M.; Karunaratne, A.; Dunlop, J. W. C.; Barber, A. H.; Boesecke, P.; Funari, S. S.; Fratzl, P.: Intrafibrillar plasticity through mineral/collagen sliding is the dominant mechanism for the extreme toughness of antler bone. JOURNAL OF THE MECHANICAL BEHAVIOR OF BIOMEDICAL MATERIALS 28 366-382 (2013)

Gur, D.; Politi, Y.; Sivan, B.; Fratzl, P.; Weiner, S.; Addadi, L.: Guanine-Based Photonic Crystals in Fish Scales Form from an Amorphous Precursor. Angew. Chem.-Int. Edit. 52 (1), 388-391 (2013)

Habraken, W. J. E. M.; Tao, J. H.; Brylka, L. J.; Friedrich, H.; Bertinetti, L.; Schenk, A. S.; … [mehr] Ion-association complexes unite classical and non-classical theories for the biomimetic nucleation of calcium phosphate. Nat. Commun. 4 (2013)

Herzog, G.; Benecke, G.; Buffet, A.; Heidmann, B.; Perlich, J.; Risch, J. F. H.; Santoro, G.; Schwartzkopf, M.; Yu, S.; Wurth, W.; Roth, S. V.:In Situ Grazing Incidence Small-Angle X-ray Scattering Investigation of Polystyrene Nanoparticle Spray Deposition onto Silicon. LANGMUIR 29 (36), 11260-11266 (2013)

Huber, P.; Busch, M.; Calus, S.; Kityk, A. V.: Thermotropic nematic order upon nanocapillary filling. Phys. Rev. E 87 (4) (2013)

Hwang, D. S.; Masic, A.; Prajatelistia, E.; Iordachescu, M.; Waite, J. H.: Marine hydroid perisarc: A chitin- and melanin-reinforced composite with DOPA-iron(III) complexes. Acta Biomater. 9 (9), 8110-8117 (2013)

Kerschnitzki, M.; Kollmannsberger, P.; Burghammer, M.; Duda, G. N.; Weinkamer, R.; Wagermaier, W.; Fratzl, P.: Architecture of the osteocyte network correlates with bone material quality. J. Bone Miner. Res. 28 (8), 1837-1845 (2013)

Krauss, S.; Metzger, T. H.; Fratzl, P.; Harrington, M. J.: Self-Repair of a Biological Fiber Guided by an Ordered Elastic Framework. Biomacromolecules 14 (5), 1520-1528 (2013)

Publikationen

Kuttner, C.; Hanisch, A.; Schmalz, H.; Eder, M.; Schlaad, H.; Burgert, I.; Fery, A.: Influence of the Polymeric Interphase Design on the Interfacial Properties of (Fiber-Reinforced) Composites. ACS Appl. Mater. Interfaces 5 (7), 2469-2478 (2013)

Lukas, C.; Ruffoni, D.; Lambers, F. M.; Schulte, F. A.; Kuhn, G.; Kollmannsberger, P.; Weinkamer, R.; Muller, R.: Mineralization kinetics in murine trabecular bone quantified by time-lapsed in vivo micro-computed tomography. Bone 56 (1), 55-60 (2013)

Maerten, A.; Zaslansky, P.; Mochales, C.; Traykova, T.; Mueller, W. D.; Fratzl, P.; Fleck, C.: Characterizing the transformation near indents and cracks in clinically used dental yttria-stabilized zirconium oxide constructs. Dent. Mater. 29 (2), 241-251 (2013)

Makyla, K.; Muller, C.; Lörcher, S.; Winkler, T.; Nussbaumer, M. G.; Eder, M.; Bruns, N.: Fluorescent Protein Senses and Reports Mechanical Damage in Glass-Fiber-Reinforced Polymer Composites. Adv. Mater. 25 (19), 2701-2706 (2013)

Maziero, P.; Jong, J.; Mendes, F. M.; Goncalves, A. R.; Eder, M.; Driemeier, C.: Tissue-Specific Cell Wall Hydration in Sugarcane Stalks. J. Agric. Food Chem. 61 (24), 5841-5847 (2013)

Pabisch, S.; Wagermaier, W.; Zander, T.; Li, C.; Fratzl, P.: Imaging the nanostructure of bone and dentin through small- and wide-angel X-ray scattering. Methods Enzymol. 532 391-413 (2013)

Pussak, D.; Ponader, D.; Mosca, S.; Ruiz, S. V.; Hartmann, L.; Schmidt, S.: Mechanical Carbohydrate Sensors Based on Soft Hydrogel Particles. Angew. Chem.-Int. Edit. 52 (23), 6084-6087 (2013)

Rüggeberg, M.; Saxe, F.; Metzger, T. H.; Sundberg, B.; Fratzl, P.; Burgert, I.: Enhanced cellulose orientation analysis in complex model plant tissues. J. Struct. Biol. 183 (3), 419-428 (2013)

Rumpler, M.; Würger, T.; Roschger, P.; Zwettler, E.; Sturmlechner, I.; Altmann, P.; Fratzl, P.; Rogers, M. J.; Klaushofer, K.: Osteoclasts on Bone and Dentin In Vitro: Mechanism of Trail Formation and Comparison of Resorption Behavior. CALCIFIED TISSUE INTERNATIONAL 93 (6), 526-539 (2013)

Schmidt, S.; Volodkin, D.: Microparticulate biomolecules by mild $CaCO_3$ templating. J. Mat. Chem. B 1 (9), 1210-1218 (2013)

Schmidt, S.; Behra, M.; Uhlig, K.; Madaboosi, N.; Hartmann, L.; Duschl, C.; Volodkin, D.: Mesoporous Protein Particles Through Colloidal $CaCO_3$ Templates. Adv. Funct. Mater. 23 (1), 116-123 (2013)

Schulze, N.; Tiersch, B.; Zenke, I.; Koetz, J.: Polyampholyte-tuned lyotrop lamellar liquid crystalline systems. COLLOID AND POLYMER SCIENCE 291 (11), 2551-2559 (2013)

Schütz, R.; Bertinetti, L.; Rabin, I.; Fratzl, P.; Masic, A.: Quantifying degradation of collagen in ancient manuscripts: the case of the Dead Sea Temple Scroll. Analyst 138 (19), 5594-5599 (2013)

Shahar, R.; Dean, M. N.: The enigmas of bone without osteocytes. BoneKEy Reports 2 (2013)

Siponen, M. I.; Legrand, P.; Widdrat, M.; Jones, S. R.; Zhang, W.-J.; Chang, M. C. Y.; Faivre, D.; Arnoux, P.; Pignol, D.: Structural insight into magnetochrome-mediated magnetite biomineralization. NATURE 502 (7473), 681-684 (2013)

Stoychev, G.; Turcaud, S.; Dunlop, J. W. C.; Ionov, L.: Hierarchical Multi-Step Folding of Polymer Bilayers. Adv. Funct. Mater. 23 (18), 2295-2300 (2013)

Tamjid, E.; Simchi, A.; Dunlop, J. W. C.; Fratzl, P.; Bagheri, R.; Vossoughi, M.: Tissue growth into three-dimensional composite scaffolds with controlled micro-features and nanotopographical surfaces. J. Biomed. Mater. Res. Part A 101 (10), 2796-2807 (2013)

Trajkovski, B.; Petersen, A.; Perka, C.; Scharnagl, N.; Wischke, C.; Wagermaier, W.; Lendlein, A.; Duda, G. N.: Local drug delivery by personalized, intraoperative custom-made implant coating. J. Biomed. Mater. Res. Part B 101B (6), 950-963 (2013)

Tritschler, U.; Zlotnikov, I.; Zaslansky, P.; Aichmayer, B.; Fratzl, P.; Schlaad, H.; Coelfen, H.: Hierarchical Structuring of Liquid Crystal Polymer-Laponite Hybrid Materials. LANGMUIR 29 (35), 11093-11101 (2013)

Vach, P. J.; Brun, N.; Bennet, M.; Bertinetti, L.; Widdrat, M.; Baumgartner, J.; Klumpp, S.; Fratzl, P.; Faivre, D.: Selecting for Function: Solution Synthesis of Magnetic Nanopropellers. NANO LETTERS 13 (11), 5373-5378 (2013)

Vetter, A.; Sander, O.; Duda, G. N.; Weinkamer, R.: Healing of a mechano-responsive material. Europhysics Letters 104 (2013)

Weinkamer, R.; Dunlop, J. W. C.; Brechet, Y.; Fratzl, P.: All but diamonds Biological materials are not forever. Acta Mater. 61 (3), 880-889 (2013)

Woodruff, M. A.; Lange, C.; Chen, F. L.; Fratzl, P.; Hutmacher, D. W.: Nano- to Macroscale Remodeling of Functional Tissue-Engineered Bone. Adv. Healthc. Mater. 2 (4), 546-551 (2013)

Yashchenok, A.; Masic, A.; Gorin, D.; Shim, B. S.; Kotov, N. A.; Fratzl, P.; Möhwald, H.; Skirtach, A.: Nanoengineered Colloidal Probes for Raman-based Detection of Biomolecules inside Living Cells. Small 9 (3), 351-356 (2013)

Yu, J.; Wei, W.; Menyo, M. S.; Masic, A.; Waite, J. H.; Israelachvili, J. N.:

Adhesion of Mussel Foot Protein-3 to TiO_2 Surfaces: the Effect of pH. Biomacromolecules 14 (4), 1072-1077 (2013)

Zaslansky, P.; Maerten, A.; Fratzl, P.: Apatite alignment and orientation at the Ångstrom and nanometer length scales shed light on the adaptation of dentine to whole tooth mechanical function. BIOINSPIRED BIOMIMETIC AND NANOBIOMATERIALS 2 (4), 194-202 (2013)

Zlotnikov, I.; Shilo, D.; Dauphin, Y.; Blumtritt, H.; Werner, P.; Zolotoyabko, E.; Fratzl, P.: In situ elastic modulus measurements of ultrathin protein-rich organic layers in biosilica: towards deeper understanding of superior resistance to fracture of biocomposites. RSC Adv. 3 (17), 5798-5802 (2013)

Zvarec, O.; Purushotham, S.; Masic, A.; Ramanujan, R. V.; Miserez, A.: Catechol-Functionalized Chitosan/Iron Oxide Nanoparticle Composite Inspired by Mussel Thread Coating and Squid Beak Interfacial Chemistry. Langmuir 29 (34), 10899-10906 (2013)

Publikationen

Books
Materials design inspired by nature, function through inner architecture (Hrsg. Fratzl, P.; Dunlop, J. W. C.; Weinkamer, R.). The Royal Society of Chemistry, Cambridge (2013)

Book Chapters
Carillo, M. A.; Vach, P. J.; Faivre, D.: Magnetic Nanoparticles in Bacteria. In: Materials Design Inspired by Nature: Function Through Inner Architecture, 235-255 (Hrsg. Fratzl, P.; Dunlop, J. W. C.; Weinkamer, R.). RSC, Cambridge (2013)

Habraken, W.: The Integration of Ion Potentiometric Measurements with Chemical, Structural, and Morphological Analysis to Follow Mineralization Reactions in Solution. In: Methods in Enzymology, 25-44 Elsevier Academic Press , San Diego (2013)

Wagermaier, W.; Gourrier, A.; Aichmayer, B.:Understanding Hierarchy and Functions of Bone Using Scanning X-ray Scattering Methods. In: Materials Design Inspired by Nature: Function Through Inner Architecture, 46-73 (Hrsg. Fratzl, P.; Dunlop, J. W. C.; Weinkamer, R.). RSC, Cambridge (2013)

Willie, B.; Duda, G. N.; Weinkamer, R.: Bone Structural Adaptation and Wolff's Law. In: Materials Design Inspired by Nature: Function Through Inner Architecture, 17-45 (Hrsg. Fratzl, P.; Dunlop, J. W. C.; Weinkamer, R.). RSC, Cambridge (2013)

Zuddas, P.; Faivre, D.; Duhamel, J.-R.: Magnetite minerals in the human brain: What is their role? In: Medical Geochemistry: Geological Materials and Health, 91-99 (Hrsg. Censi, P.). Springer, Dordrecht (2013)

Event Summaries
Ionov, L.; Stoychev, G.; Zakharchenko, S.; Turcaud, S.; Dunlop, J.: Soft microorigami: Shape-programmed folding of stimuli-responsive polymer films. (2013)

Kuttner, C.; Eder, M.; Schlaad, H.; Burgert, I.; Fery, A.: Influence of macromolecule-grafting on the interfacial adhesion in composites. (2013)

Biomaterialien 2014

Articles
Achrai, B.; Bar-On, B.; Wagner, H. D.: Bending mechanics of the red-eared slider turtle carapace. Journal of the Mechanical Behavior of Biomedical Materials 30 223-233 (2014)

Agostini, G.; Piovano, A.; Bertinetti, L.; Pellegrini, R.; Leofanti, G.; Groppo, E.; Lamberti, C.: Effect of Different Face Centered Cubic Nanoparticle Distributions on Particle Size and Surface Area Determination: A Theoretical Study. J. Phys. Chem. C 118 (8), 4085-4094 (2014)
Aidarova, S.; Sharipova, A.; Krägel, J.; Miller, R.: Polyelectrolyte/surfactant mixtures in the bulk and at water/oil interfaces. Adv. Colloid Interface Sci. 205 87-93 (2014)

Aido, M.; Kerschnitzki, M.; Hörth, R. M.; Burghammer, M.; Montero, C.; Checa, S.; Fratzl, P.; Duda, G. N.; Willie, B. M.; Wagermaier, W.: Relationship between nanoscale mineral properties and calcein labeling in mineralizing bone surfaces. Connect. Tissue Res. 55 15-17 (2014)

Albéric, M.; Gourrier, A.; Müller, K.; Zizak, E.; Wagermaier, W.; Fratzl, P.; Reiche, I.: Early diagenesis of elephant tusk in marine environment. Palaeogeography, Palaeoclimatology, Palaeoecology 416 (SI), 120-132 (2014)

Amini, S.; Masic, A.; Bertinetti, L.; Teguh, J. S.; Herrin, J. S.; Zhu, X.; Su, H.; Miserez, A.: Textured fluorapatite bonded to calcium sulphate strengthen stomatopod raptorial appendages. Nat. Commun. 5 (2014)

Atkins, A.; Dean, M. N.; Habegger, M. L.; Motta, P. J.; Ofer, L.; Repp, F.; Shipov, A.; Weiner, S.; Currey, J. D.; Shahar, R.: Remodeling in bone without osteocytes: Billfish challenge bone structure-function paradigms. Proc. Natl. Acad. Sci. U. S. A. 111 (45), 16047-16052 (2014)

Baumgartner, J.; Carillo, M. A.; Eckes, K. M.; Werner, P.; Faivre, D.: Biomimetic Magnetite Formation: From Biocombinatorial Approaches to Mineralization Effects. Langmuir 30 (8), 2129-2136 (2014)

Bayerlein, B.; Zaslansky, P.; Dauphin, Y.; Rack, A.; Fratzl, P.; Zlotnikov, I.: Self-similar mesostructure evolution of the growing mollusc shell reminiscent of thermodynamically driven grain growth. Nat. Mater. 13 (12), 1102-1107 (2014)

Benecke, G.; Wagermaier, W.; Li, C.; Schwartzkopf, M.; Flucke, G.; Hörth, R. M.; Zizak, I.; Burghammer, M.; Metwalli, E.; Müller-Buschbaum, P.; Trebbin, M.; Förster, S.; Paris, O.; Roth, S. V.; Fratzl, P.: A customizable software for fast reduction and analysis of large X-ray scattering data sets: applications of the new DPDAK package to small-angle X-ray scattering and grazing-incidence small-angle X-ray scattering. Journal of Applied Crystallography 47 1797-1803 (2014)

Bennet, M.; McCarthy, A.; Fix, D.; Edwards, M. R.; Repp, F.; Vach, P.; Dunlop, J. W. C.; Sitti, M.; Buller, G. S.; Klumpp, S.; Faivre, D.: Influence of magnetic fields on magneto-aerotaxis. PLoS One 9 (7) (2014)

Bennet, M.; Akiva, A.; Faivre, D.; Malkinson, G.; Yaniv, K.; Abdelilah-Seyfried, S.; Fratzl, P.; Masic, A.: Simultaneous Raman Microspectroscopy and Fluorescence Imaging of Bone Mineralization in Living Zebrafish Larvae. Biophys. J. 106 (4), L17-L19 (2014)

Bertinetti, L.; Hangen, U. D.; Eder, M.; Leibner, P.; Fratzl, P.; Zlotnikov, I.: Characterizing moisture-dependent mechanical properties of organic materials: humidity-controlled static and dynamic nanoindentation of wood cell walls. Philos. Mag. (2014)

Birkhold, A. I.; Razi, H.; Duda, G. N.; Weinkamer, R.; Checa, S.; Willie, B. M.: Mineralizing surface is the main target of mechanical stimulation independent of age: 3D dynamic in vivo morphometry. Bone 66 15-25 (2014)

Birkhold, A. I.; Razi, H.; Duda, G. N.; Weinkamer, R.; Checa, S.; Willie, B. M.: The influence of age on adaptive bone formation and bone resorption. Biomaterials 35 (34), 9290-9301 (2014)

Blouin, S.; Puchegger, S.; Roschger, A.; Berzlanovich, A.; Fratzl, P.; Klaushofer, K.; Roschger, P.: Mapping Dynamical Mechanical Properties of Osteonal Bone by Scanning Acoustic Microscopy in Time-of-Flight Mode. Microscopy and Microanalysis 20 (3), 924-936 (2014)

Borodina, T. N.; Grigoriev, D. O.; Carillo, M. A.; Hartmann, J.; Möhwald, H.; Shchukin, D. G.: Preparation of Multifunctional Polysaccharide Microcontainers for Lipophilic Bioactive Agents. ACS Applied Materials & Interfaces 6 (9), 6570-6578 (2014)

Bykov, A. G.; Noskov, B. A.; Loglio, G.; Lyadinskaya, V. V.; Miller, R.: Dilational surface elasticity of spread monolayers of polystyrene microparticles. Soft Matter 10 (34), 6499-6505 (2014)

Publikationen

Cui, Q.; Yashchenok, A. M.; Zhang, L.; Li, L.; Masic, A.; Wienskol, G.; Möhwald, H.; Bargheer, M.: Fabrication of Bifunctional Gold/Gelatin Hybrid Nanocomposites and Their Application. ACS Appl. Mater. Interfaces 6 (3), 1999-2002 (2014)

Dan, A.; Wüstneck, R.; Krägel, J.; Aksenenko, E. V.; Fainerman, V. B.; Miller, R.: Interfacial adsorption and rheological behavior of -casein at the water/hexane interface at different pH. Food Hydrocolloids 34 (1), 193-201 (2014)

Degtyar, E.; Harrington, M. J.; Politi, Y.; Fratzl, P.: The mechanical role of metal ions in biogenic protein-based materials. Angew. Chem. Int. Ed. 53 (45), 12026-12044 (2014)

Dieter-Kissling, K.; Karbaschi, M.; Marschall, H.; Javadi, A.; Miller, R.; Bothe, D.: On the applicability of Drop Profile Analysis Tensiometry at high flow rates using an interface tracking method. Colloids and Surfaces A: Physicochemical and Engineering Aspects 441 837-845 (2014)

Dudeck, J.; Rehberg, S.; Bernhardt, R.; Schneiders, W.; Zierau, O.; Manjubala, I.; Goebbels, J.; Vollmer, G.; Fratzl, P.; Scharnweber, D.; Rammelt, S.: Increased bone remodelling around titanium implants coated with chondroitin sulfate in ovariectomized rats. Acta Biomater. 10 (6), 2855-2865 (2014)

Dutschk, V.; Karapantsios, T.; Liggieri, L.; McMillan, N.; Miller, R.; Starov, V. M.: Smart and green interfaces: From single bubbles/drops to industrial environmental and biomedical applications. Adv. Colloid Interface Sci. 209 109-126 (2014)

Ermeydan, M. A.; Cabane, E.; Hass, P.; Koetz, J.; Burgert, I.: Fully biodegradable modification of wood for improvement of dimensional stability and water absorption properties by poly(-caprolactone) grafting into the cell walls . Green Chem. 16 3313-3321 (2014)

Ermeydan, M. A.; Cabane, E.; Gierlinger, N.; Koetz, J.; Burgert, I.: Improvement of wood material properties via in situ polymerization of styrene into tosylated cell walls. RSC Adv. 4 (25), 12981-12988 (2014)

Fainerman, V. B.; Aksenenko, E. V.; Mucic, N.; Javadi, A.; Miller, R.: Thermodynamics of adsorption of ionic surfactants at water/alkane interfaces. Soft Matter 10 (36), 6873-6887 (2014)

Fainerman, V. B.; Lotfi, M.; Javadi, A.; Aksenenko, E. V.; Tarasevich, Y. I.; Bastani, D.; Miller, R.: Adsorption of Proteins at the Solution/Air Interface Influenced by Added Nonionic Surfactants at Very Low Concentrations for Both Components. 2. Effect of Different Surfactants and Theoretical Model Langmuir 30 (43), 12812-12818 (2014)

Fomina, E. S.; Vysotsky, Y. B.; Belyaeva, E. A.; Vollhardt, D.; Fainerman, V. B.; Miller, R.: On Hexagonal Orientation of Fatty Alcohols in Monolayers at the Air/Water Interface: Quantum-Chemical Approach. J. Phys. Chem. C 118 (8), 4122-4130 (2014)

Fratzl, P.: Applied physics: The virtues of tiling. Nature 516 (7530), 178-179 (2014)

Fratzl-Zelman, N.; Schmidt, I.; Roschger, P.; Glorieux, F. H.; Klaushofer, K.; Fratzl, P.; Rauch, F.; Wagermaier, W.: Mineral particle size in children with osteogenesis imperfecta type I is not increased independently of specific collagen mutations. Bone 60 122-128 (2014)

Gal, A.; Kahil, K.; Vidavsky, N.; DeVol, R. T.; Gilbert, P. U. P. A.; Fratzl, P.; Weiner, S.; Addadi, L.: Particle Accretion Mechanism Underlies Biological Crystal Growth from an Amorphous Precursor Phase. Adv. Funct. Mater. 24 (34), 5420-5426 (2014)

Gamsjaeger, S.; Hofstetter, B.; Fratzl-Zelman, N.; Roschger, P.; Roschger, A.; Fratzl, P.; Brozek, W.; Masic, A.; Misof, B. M.; Glorieux, F. H.; Klaushofer, K.; Rauch, F.; Paschalis, E. P.: Pediatric reference Raman data for material characteristics of iliac trabecular bone. Bone 69 89-97 (2014)

Gerber, L.; Zhang, B.; Roach, M.; Rende, U.; Gorzsas, A.; Kumar, M.; Burgert, I.; Niittyla, T.; Sundberg, B.: Deficient sucrose synthase activity in developing wood does not specifically affect cellulose biosynthesis, but causes an overall decrease in cell wall polymers. New Phytol. 203 (4), 1220-1230 (2014)

Gochev, G.; Retzlaff, I.; Exerowa, D.; Miller, R.: Electrostatic stabilization of foam films from beta-lactoglobulin solutions. Colloids and Surfaces A: Physicochemical and Engineering Aspects 460 272-279 (2014)

Gröger, D.; Kerschnitzki, M.; Weinhart, M.; Reimann, S.; Schneider, T.; Kohl, B.; Wagermaier, W.; Schulze-Tanzil, G.; Fratzl, P.; Haag, R.: Selectivity in Bone Targeting with Multivalent Dendritic Polyanion Dye Conjugates. Advanced Healthcare Materials 3 (3), 375-385 (2014)

Grygiel, K.; Wicklein, B.; Zhao, Q.; Eder, M.; Pettersson, T.; Bergstroem, L.; Antonietti, M.; Yuan, J.: Omnidispersible poly(ionic liquid)-functionalized cellulose nanofibrils: surface grafting and polymer membrane reinforcement. Chem. Commun. 50 (83), 12486-12489 (2014)

Guerette, P. A.; Hoon, S.; Ding, D.; Amini, S.; Masic, A.; Ravi, V.; Venkatesh, B.; Weaver, J. C.; Miserez, A.: Nanoconfined beta-Sheets Mechanically Reinforce the Supra-Biomolecular Network of Robust Squid Sucker Ring Teeth. ACS Nano 8 (7), 7170-7179 (2014)

Guerette, P. A.; Tay, G. Z.; Hoon, S.; Loke, J. J.; Hermawan, A. F.; Schmitt, C. N. Z.; Harrington, M. J.; Masic, A.; Karunaratne, A.; Gupta, H. S.; Tan, K. S.; Schwaighofer, A.; Nowak, C.; Miserez, A.: Integrative and comparative analysis of coiled-coil based marine snail egg cases - a model for biomimetic elastomers. Biomaterials Science 2 (5), 710-722 (2014)

Guiducci, L.; Fratzl, P.; Bréchet, Y. J. M.; Dunlop, J. W. C.: Pressurized honeycombs as soft-actuators: a theoretical study. J. R. Soc. Interface 11 (98) (2014)

Helminger, M.; Wu, B.; Kollmann, T.; Benke, D.; Schwahn, D.; Pipich, V.; Faivre, D.; Zahn, D.; Coelfen, H.: Synthesis and Characterization of Gelatin-Based Magnetic Hydrogels. Adv. Funct. Mater. 24 (21), 3187-3196 (2014)

Holten-Andersen, N.; Jaishankar, A.; Harrington, M. J.; Fullenkamp, D. E.; DiMarco, G.; He, L.; McKinley, G. H.; Messersmith, P. B.; Lee, K. Y. C.: Metal-coordination: using one of nature's tricks to control soft material mechanics. Journal of Materials Chemistry B 2 (17), 2467-2472 (2014)

Hong Nguyen, H.; Valverde Serrano, C.; Lavedan, P.; Goudouneche, D.; Mingotaud, A.-F.; Lauth-de Viguerie, N.; Marty, J.-D.: Mesomorphic ionic hyperbranched polymers: effect of structural parameters on liquid-crystalline properties and on the formation of gold nanohybrids. Nanoscale 6 (7), 3599-3610 (2014)

Publikationen

Hörth, R. M.; Seidt, B. M.; Shah, M.; Schwarz, C.; Willie, B. M.; Duda, G. N.; Fratzl, P.; Wagermaier, W.: Mechanical and structural properties of bone in non-critical and critical healing in rat. Acta Biomater. 10 (9), 4009-4019 (2014)

Hörth, R. M.; Katunar, M. R.; Gomez Sanchez, A.; Orellano, J. C.; Cere, S. M.; Wagermaier, W.; Ballarre, J.: A comparative study of zirconium and titanium implants in rat: osseointegration and bone material quality. J. Mater. Sci.-Mater. Med. 25 (2), 411-422 (2014)

Javadi, A.; Karbaschi, M.; Bastani, D.; Ferri, J. K.; Kovalchuk, V. I.; Kovalchuk, N. M.; Javadi, K.; Miller, R.: Marangoni instabilities for convective mobile interfaces during drop exchange: Experimental study and CFD simulation. Colloids and Surfaces A: Physicochemical and Engineering Aspects 441 846-854 (2014)

Kanduc, M.; Schneck, E.; Netz, R. R.: Attraction between hydrated hydrophilic surfaces. Chem. Phys. Lett. 610 375-380 (2014)

Karbaschi, M.; Lotfi, M.; Krägel, J.; Javadi, A.; Bastani, D.; Miller, R.: Rheology of interfacial layers. Curr. Opin. Colloid Interface Sci. 19 (6), 514-519 (2014)

Karbaschi, M.; Orr, R.; Bastani, D.; Javadi, A.; Lotfi, M.; Miller, R.: A novel technique to semi-quantitatively study the stability of emulsions and the kinetics of the coalescence under different dynamic conditions. Colloids and Surfaces A: Physicochemical and Engineering Aspects 460 327-332 (2014)

Karbaschi, M.; Javadi, A.; Bastani, D.; Miller, R.: High frequency oscillatory flow in micro channels. Colloids and Surfaces A: Physicochemical and Engineering Aspects 460 355-360 (2014)

Kartashynska, E. S.; Vysotsky, Y. B.; Belyaeva, E. A.; Fainerman, V. B.; Vollhardt, D.; Miller, R.: Quantum-chemical analysis of hexagonal crystalline monolayers of ethoxylated nonionic surfactants at the air/water interface. Phys. Chem. Chem. Phys. 16 (45), 25129-25142 (2014)

Kerschnitzki, M.; Zander, T.; Zaslansky, P.; Fratzl, P.; Shahar, R.; Wagermaier, W.: Rapid alterations of avian medullary bone material during the daily egg-laying cycle. Bone 69 109-117 (2014)

Kim, B. J.; Oh, D. X.; Kim, S.; Seo, J. H.; Hwang, D. S.; Masic, A.; Han, D. K.; Cha, H. J.: Mussel-Mimetic Protein-Based Adhesive Hydrogel. Biomacromolecules 15 (5), 1579-1585 (2014)

Kolednik, O.; Predan, J.; Fischer, F. D.; Fratzl, P.: Improvements of strength and fracture resistance by spatial material property variations. Acta Mater. 68 (15), 279-294 (2014)

Kolmann, M. A.; Huber, D. R.; Dean, M. N.; Grubbs, R. D.: Myological Variability in a Decoupled Skeletal System: Batoid Cranial Anatomy. J. Morphol. 275 (8), 862-881 (2014)

Körnig, A.; Hartmann, M. A.; Teichert, C.; Fratzl, P.; Faivre, D.: Magnetic force imaging of a chain of biogenic magnetite and Monte Carlo analysis of tip-particle interaction. Journal of Physics D: Applied Physics 47 (23) (2014)

Körnig, A.; Winklhofer, M.; Baumgartner, J.; Perez-Gonzalez, T.; Fratzl, P.; Faivre, D.: Magnetite Crystal Orientation in Magnetosome Chains. Adv. Funct. Mater. 24 (25), 3926-3932 (2014)

Körnig, A.; Dong, J.; Bennet, M.; Widdrat, M.; Andert, J.; Müller, F. D.; Schüler, D.; Klumpp, S.; Faivre, D.: Probing the Mechanical Properties of Magnetosome Chains in Living Magnetotactic Bacteria. Nano Letters 14 (8), 4653-4659 (2014)

Kühnisch, J.; Seto, J.; Lange, C.; Stumpp, S.; Kobus, K.; Grohmann, J.; Elefteriou, F.; Fratzl, P.; Mundlos, S.; Kolanczyk, M.: Neurofibromin inactivation impairs osteocyte development in Nf1Prx1 and Nf1Col1 mouse models. Bone 66 155-162 (2014)

Kühnisch, J.; Seto, J.; Lange, C.; Schrof, S.; Stumpp, S.; Kobus , K.; Grohmann, J.; Kossler, N.; Varga, P.; Oßwald, M.; Emmerich, D.; Tinschert, S.; Thielemann, F.; Duda, G.; Seifert, W.; el Khassawna, T.; Stevenson, D. A.; Elefteriou, F.; Kornak, U.; Raum, K.; Fratzl, P.; Mundlos, S.; Kolanczyk, M.: Multiscale, Converging Defects of Macro-Porosity, Microstructure and Matrix Mineralization Impact Long Bone Fragility in NF1. PLoS One 9 (1) (2014)

Kumari, M.; Widdrat, M.; Tompa, E.; Uebe, R.; Schüler, D.; Pósfai, M.; Faivre, D.; Hirt, A. M.: Distinguishing magnetic particle size of iron oxide nanoparticles with first-order reversal curves. J. Appl. Phys. 116 (12) (2014)

Lefèvre, C. T.; Bennet, M.; Landau, L.; Vach, P.; Pignol, D.; Bazylinski, D. A.; Frankel, R. B.; Klumpp, S.; Faivre, D.: Diversity of magneto-aerotactic behaviors and oxygen sensing mechanisms in cultured magnetotactic bacteria. Biophys. J. 107 (2), 527-538 (2014)

Lin, W.; Benzerara, K.; Faivre, D.; Pan, Y.: Intracellular biomineralization in bacteria. Frontiers in Microbiology 5 (2014)

Liu, X.; Dean, M. N.; Youssefpour, H.; Summers, A. P.; Earthman, J. C.: Stress relaxation behavior of tessellated cartilage from the jaws of blue sharks. Journal of the Mechanical Behavior of Biomedical Materials 29 68-80 (2014)

Lohsse, A.; Borg, S.; Raschdorf, O.; Kolinko, I.; Tompa, E.; Posfai, M.; Faivre, D.; Baumgartner, J.; Schueler, D.: Genetic Dissection of the mamAB and mms6 Operons Reveals a Gene Set Essential for Magnetosome Biogenesis in Magnetospirillum gryphiswaldense. J. Bacteriol. 196 (14), 2658-2669 (2014)

Lotfi, M.; Bastani, D.; Ulaganathan, V.; Miller, R.; Javadi, A.: Bubble in flow field: A new experimental protocol for investigating dynamic adsorption layers by using capillary pressure tensiometry. Colloids and Surfaces A: Physicochemical and Engineering Aspects 460 369-376 (2014)

Lotfi, M.; Karbaschi, M.; Javadi, A.; Mucic, N.; Krägel, J.; Kovalchuk, V. I.; Rubio, R. G.; Fainerman, V. B.; Miller, R.: Dynamics of liquid interfaces under various types of external perturbations. Curr. Opin. Colloid Interface Sci. 19 (4), 309-319 (2014)

Lyadinskaya, V. V.; Bykov, A. G.; Campbell, R. A.; Varga, I.; Lin, S. Y.; Loglio, G.; Miller, R.; Noskov, B. A.: Dynamic surface elasticity of mixed poly(diallyldimethylammonium chloride)/sodium dodecyl sulfate/NaCl solutions. Colloids and Surfaces A: Physicochemical and Engineering Aspects 460 3-10 (2014)

Mendoza, A. J.; Guzman, E.; Martinez-Pedrero, F.; Ritacco, H.; Rubio, R. G.; Ortega, F.; Starov, V. M.; Miller, R.: Particle laden fluid interfaces: Dynamics and interfacial rheology. Adv. Colloid Interface Sci. 206 303-319 (2014)

Metzger, T. H.; Politi, Y.; Carbone, G.; Bayerlein, B.; Zlotnikov, I.; Zolotoyabko, E.; Fratzl, P.: Nanostructure of Biogenic Calcite and Its Modification under Annealing: Study by High-Resolution X-ray Diffraction and Nanoindentation. Cryst. Growth Des. 14 (10), 5275-5282 (2014)

Publikationen

Mikhailovskaya, A. A.; Noskov, B. A.; Nikitin, E. A.; Lin, S. -.; Loglio, G.; Miller, R.: Dilational surface viscoelasticity of protein solutions. Impact of urea. Food Hydrocolloids 34 (1), 98-103 (2014)

Mileva, E.; Radoev, B.; Miller, R.: ECIS 2013: 27th Conference of the European Colloid and Interface Society, September 01-06, 2013, Sofia, Bulgaria. Colloids and Surfaces A: Physicochemical and Engineering Aspects 460 1-2 (2014)

Milyaeva, O. Y.; Noskov, B. A.; Lin, S.-Y.; Loglio, G.; Miller, R.: Influence of polyelectrolyte on dynamic surface properties of BSA solutions. Colloids and Surfaces A: Physicochemical and Engineering Aspects 442 63-68 (2014)

Misof, B. M.; Dempster, D. W.; Zhou, H.; Roschger, P.; Fratzl-Zelman, N.; Fratzl, P.; Silverberg, S. J.; Shane, E.; Cohen, A.; Stein, E.; Nickolas, T. L.; Recker, R. R.; Lappe, J.; Bilezikian, J. P.; Klaushofer, K.: Relationship of Bone Mineralization Density Distribution (BMDD) in Cortical and Cancellous Bone Within the Iliac Crest of Healthy Premenopausal Women. Calcified Tissue International 95 (4), 332-339 (2014)

Mucic, N.; Moradi, N.; Javadi, A.; Aksenenko, E. V.; Fainerman, V. B.; Miller, R.: Mixed adsorption layers at the aqueous C(n)TAB solution/hexane vapour interface. Colloids and Surfaces A: Physicochemical and Engineering Aspects 442 50-55 (2014)

Mucic, N.; Kovalchuk, N. M.; Pradines, V.; Javadi, A.; Aksenenko, E. V.; Krägel, J.; Miller, R.: Dynamic properties of CnTAB adsorption layers at the water/oil interface. Colloids and Surfaces A: Physicochemical and Engineering Aspects 441 825-830 (2014)

Nabavi, S. S.; Harrington, M. J.; Paris, O.; Fratzl, P.; Hartmann, M. A.: The role of topology and thermal backbone fluctuations on sacrificial bond efficacy in mechanical metalloproteins. New J. Phys. 16 (2014)

Nabavi, S. S.; Harrington, M. J.; Fratzl, P.; Hartmann, M. A.: Influence of sacrificial bonds on the mechanical behaviour of polymer chains. Bioinspired, Biomimetic and Nanobiomaterials 3 (3), 139-145 (2014)

Nandi, N.; Vollhardt, D.: Helfrich's concept of intrinsic force and its molecular origin in bilayers and monolayers. Adv. Colloid Interface Sci. 208 110-120 (2014)

Naveh, G. R. S.; Brumfeld, V.; Dean, M. N.; Shahar, R.; Weiner, S.: Direct MicroCT imaging of non-mineralized connective tissues at high resolution. Connect. Tissue Res. 55 (1), 52-60 (2014)

Noskov, B. A.; Yazhgur, P. A.; Liggieri, L.; Lin, S.-Y.; Loglio, G.; Miller, R.; Ravera, F.: Dilational rheology of spread and adsorbed layers of silica nanoparticles at the liquid-gas interface. Colloid J. 76 (2), 127-138 (2014)

Omelon, S.; Georgiou, J.; Variola, F.; Dean, M. N.: Colocation and role of polyphosphates and alkaline phosphatase in apatite biomineralization of elasmobranch tesserae. Acta Biomater. 10 (9), 3899-3910 (2014)

Partyka-Jankowska, E.; Leroch, S.; Akbarzadeh, J.; Pabisch, S.; Wendland, M.; Peterlik, H.: SAXS studies on silica nanoparticle aggregation in a humid atmosphere. Journal of Nanoparticle Research 16 (10) (2014)

Peterson, A. M.; Pilz-Allen, C.; Möhwald, H.; Shchukin, D. G.: Evaluation of the role of polyelectrolyte deposition conditions in growth factor release. Journal of Materials Chemistry B 2 (18), 2680-2687 (2014)

Poulsen, N.; Kröger, N.; Harrington, M. J.; Brunner, E.; Paasch, S.; Buhmann, M. T.: Isolation and biochemical characterization of underwater adhesives from diatoms. Biofouling 30 (4), 513-523 (2014)

Prozorov, T.; Perez-Gonzalez, T.; Valverde-Tercedor, C.; Jimenez-Lopez, C.; Yebra-Rodriguez, A.; Körnig, A.; Faivre, D.; Mallapragada, S. K.; Howse, P. A.; Bazylinski, D. A.; Prozorov, R.: Manganese incorporation into the magnetosome magnetite: magnetic signature of doping. Eur. J. Mineral. 26 (4), 457-471 (2014)

Puchegger, S.; Fix, D.; Pilz-Allen, C.; Roschger, P.; Fratzl, P.; Weinkamer, R.: The role of angular reflection in assessing elastic properties of bone by scanning acoustic microscopy. Journal of the Mechanical Behavior of Biomedical Materials 29 438-450 (2014)

Radziuk, D. V.; Schütz, R.; Masic, A.; Möhwald, H.: Chemical imaging of live fibroblasts by SERS effective nanofilm. Phys. Chem. Chem. Phys. 16 (44), 24621-24634 (2014)

Razghandi, K.; Bertinetti, L.; Guiducci, L.; Dunlop, J. W. C.; Fratzl, P.; Neinhuis, C.; Burgert, I.: Hydro-actuation of ice plant seed capsules powered by water uptake. Bioinspired, Biomimetic and Nanobiomaterials 3 (3), 169-182 (2014)

Rennhofer, H.; Puchegger, S.; Pabisch, S.; Rentenberger, C.; Li, C.; Siegel, S.; Steiger-Thirsfeld, A.; Paris, O.; Peterlik, H.: The structural evolution of multi-layer graphene stacks in carbon fibers under load at high temperature - A synchrotron radiation study. Carbon 80 373-381 (2014)

Roschger, P.; Misof, B.; Paschalis, E.; Fratzl, P.; Klaushofer, K.: Changes in the Degree of Mineralization with Osteoporosis and its Treatment. Current Osteoporosis Reports 12 (3), 338-350 (2014)

Roschger, A.; Gamsjaeger, S.; Hofstetter, B.; Masic, A.; Blouin, S.; Messmer, P.; Berzlanovich, A.; Paschalis, E. P.; Roschger, P.; Klaushofer, K.; Fratzl, P.: Relationship between the v2PO4/amide III ratio assessed by Raman spectroscopy and the calcium content measured by quantitative backscattered electron microscopy in healthy human osteonal bone. Journal of Biomedical Optics 19 (6) (2014)

Rothe, M.; Frederichs, T.; Eder, M.; Kleeberg, A.; Hupfer, M.:Evidence for vivianite formation and its contribution to long-term phosphorus retention in a recent lake sediment: a novel analytical approach. Biogeosciences 11 (18), 5169-5180 (2014)

Saxe, F.; Eder, M.; Benecke, G.; Aichmayer, B.; Fratzl, P.; Burgert, I.; Rüggeberg, M.: Measuring the distribution of cellulose microfibril angles in primary cell walls by small angle X-ray scattering. Plant Methods 10 (2014)

Schelero, N.; Miller, R.; von Klitzing, R.: Effect of oppositely charged hydrophobic additives (alkanoates) on the stability of C14TAB foam films. Colloids and Surfaces A: Physicochemical and Engineering Aspects 460 158-167 (2014)

Schmidt, I.; Lee, K.; Zolotoyabko, E.; Werner, P.; Shim, T. S.; Oh, Y.-K.; Fratzl, P.; Wagermaier, W.: Nanocrystalline Calcitic Lens Arrays Fabricated by Self-Assembly Followed by Amorphous-to-Crystalline Phase Transformation. ACS Nano 8 (9), 9233-9238 (2014)

Schmidt, S.; Reinecke, A. A.; Wojcik, F.; Pussak, D.; Hartmann, L.; Harrington, M. J.: Metal-mediated molecular self-healing in histidine-rich mussel peptides. Biomacromolecules 15 (5), 1644-1652 (2014)

Publikationen

Schrof, S.; Varga, P.; Galvis, L.; Raum, K.; Masic, A.: 3D Raman mapping of the collagen fibril orientation in human osteonal lamellae. J. Struct. Biol. 187 (3), 266-275 (2014)

Seidel, R.; Lüter, C.: Overcoming the fragility - X-ray computed micro-tomography elucidates brachiopod endoskeletons. Frontiers in Zoology 11 (2014)

Seidel, R.; Lüter, C.: Overcoming the fragility – X-ray computed micro-tomography elucidates brachiopod endoskeletons. Frontiers in Zoology (2014)

Sharipova, A.; Aidarova, S. B.; Fainerman, V. B.; Aksenenko, E. V.; Bekturganova, N. E.; Tarasevich, Y. I.; Miller, R.: Effect of electrolyte on adsorption of polyallyl amine hydrochloride/sodium dodecyl sulphate at water/tetradecane interface. Colloids and Surfaces A: Physicochemical and Engineering Aspects 460 11-17 (2014)

Skorb, E. V.; Möhwald, H.: "Smart" Surface Capsules for Delivery Devices. Advanced Materials Interfaces 1 (6) (2014)

Skorb, E. V.; Volkova, A. V.; Andreeva, D. V.: Layer-by-Layer Assembled Hybrid Materials for Sustainable Applications. Current Organic Chemistry 18 (18), 2315-2333 (2014)

Tebbe, M.; Cherepanov, P.; Skorb, E. V.; Poznyak, S. K.; Garcia de Abajo, J.; Fery, A.; Andreeva, D. V.; Puebla, R. A. A.; Pazos-Perez, N.: SERS Platforms of Plasmonic Hydrophobic Surfaces for Analyte Concentration: Hierarchically Assembled Gold Nanorods on Anodized Aluminum. Part. Part. Syst. Charact. 31 (11), 1134-1140 (2014)

Tritschler, U.; Zlotnikov, I.; Keckeis, P.; Schlaad, H.; Cölfen, H.: Optical Properties of Self-Organized Gold Nanorod-Polymer Hybrid Films. Langmuir 30 (46), 13781-13790 (2014)

Tritschler, U.; Zlotnikov, I.; Zaslansky, P.; Fratzl, P.; Schlaad, H.; Cölfen, H.: Hierarchically Structured Vanadium Pentoxide-Polymer Hybrid Materials. ACS Nano 8 (5), 5089-5104 (2014)

Ulaganathan, V.; Fainerman, V. B.; Gochev, G.; Aksenenko, E. V.; Gunes, D. Z.; Gehin-Delval, C.; Miller, R.:Evidence of negative surface pressure induced by β-lactoglobulin and β-casein at water/air interface. Food Hydrocolloids 34 (1), 10-14 (2014)

Ulaganathan, V.; Krzan, M.; Lotfi, M.; Dukhin, S. S.; Kovalchuk, V. I.; Javadi, A.; Gunes, D. Z.; Gehin-Delval, C.; Malysa, K.; Miller, R.: Influence of β-lactoglobulin and its surfactant mixtures on velocity of the rising bubbles. Colloids and Surfaces A: Physicochemical and Engineering Aspects 460 361-368 (2014)

Vollhardt, D.: Brewster angle microscopy: A preferential method for mesoscopic characterization of monolayers at the air/water interface. Curr. Opin. Colloid Interface Sci. 19 (3), 183-197 (2014)

Vollhardt, D.: Honorary note for Wolfgang Helfrich. Adv. Colloid Interface Sci. 208 VII-IX (2014)

Vysotsky, Y. B.; Belyaeva, E. A.; Fomina, E. S.; Vollhardt, D.; Fainerman, V. B.; Miller, R.: The quantum-chemical approach to calculations of thermodynamic and structural parameters of formation of fatty acid monolayers with hexagonal packing at the air/water interface. Phys. Chem. Chem. Phys. 16 (7), 3187-3199 (2014)

Wang, H.; Yan, X. H.; Li, G. L.; Pilz-Allen, C.; Möhwald, H.; Shchukin, D.: Sono-Assembly of Highly Biocompatible Polysaccharide Capsules for Hydrophobic Drug Delivery. Advanced Healthcare Materials 3 (6), 825-831 (2014)

Widdrat, M.; Kumari, M.; Tompa, E.; Posfai, M.; Hirt, A. M.; Faivre, D.: Keeping Nanoparticles Fully Functional: Long-Term Storage and Alteration of Magnetite. ChemPlusChem 79 (8), 1225-1233 (2014)

Wilke, P.; Helfricht, N.; Mark, A.; Papastavrou, G.; Faivre, D.; Börner, H. G.: A Direct Biocombinatorial Strategy toward Next Generation, Mussel-Glue Inspired Saltwater Adhesives. JACS 136 (36), 12667-12674 (2014)

Woehl, T. J.; Kashyap, S.; Firlar, E.; Perez-Gonzalez, T.; Faivre, D.; Trubitsyn, D.; Bazylinski, D. A.; Prozorov, T.: Correlative Electron and Fluorescence Microscopy of Magnetotactic Bacteria in Liquid: Howard In Vivo Imaging. Sci. Rep. 4 (2014)

Won, J. Y.; Krägel, J.; Gochev, G.; Ulaganathan, V.; Javadi, A.; Makievski, A. V.; Miller, R.: Bubble-bubble interaction in aqueous β-Lactoglobulin solutions. Food Hydrocolloids 34 (1), 15-21 (2014)

Won, J. Y.; Krägel, J.; Makievski, A. V.; Javadi, A.; Gochev, G.; Loglio, G.; Pandolfini, P.; Leser, M. E.; Gehin-Delval, C.; Miller, R.: Drop and bubble micro manipulator (DBMM)-A unique tool for mimicking processes in foams and emulsions. Colloids and Surfaces A: Physicochemical and Engineering Aspects 441 807-814 (2014)

Young, S. L.; Chyasnavichyus, M.; Erko, M.; Barth, F. G.; Fratzl, P.; Zlotnikov, I.; Politi, Y.; Tsukruk, V. V.: A spider's biological vibration filter: icromechanical characteristics of a biomaterial surface. Acta Biomater. 10 (11), 4832-4842 (2014)

Zedler, L.; Hager, M. D.; Schubert, U. S.; Harrington, M. J.; Schmitt, M.; Popp, J.; Dietzek, B.:Monitoring the chemistry of self-healing by vibrational spectroscopy - current state and perspectives. Materials Today 17 (2), 57-69 (2014)

Zhao, Q.; Dunlop, J. W. C.; Qiu, X.; Huang, F.; Zhang, Z.; Heyda, J.; Dzubiella, J.; Antonietti, M.; Yuan, J.: An instant multi-responsive porous polymer actuator driven by solvent molecule sorption. Nat. Commun. 5 (2014)

Zlotnikov, I.; Masic, A.; Dauphin, Y.; Fratzl, P.; Zolotoyabko, E.: Composition and Mechanical Properties of a Protein/Silica Hybrid Material Forming the Micron-Thick Axial Filament in the Spicules of Marine Sponges. Adv. Eng. Mater. 16 (9), 1073-1077 (2014)

Zlotnikov, I.; Werner, P.; Blumtritt, H.; Graff, A.; Dauphin, Y.; Zolotoyabko, E.; Fratzl, P.: A Perfectly Periodic Three-Dimensional Protein/Silica Mesoporous Structure Produced by an Organism. Adv. Mater. 26 (11), 1682-1687 (2014)

Zlotnikov, I.; Fratzl, P.; Zolotoyabko, E.: Nanoscale elastic modulus mapping revisited: the concept of effective mass. J. Appl. Phys. 116 (11) (2014)

Book Chapters

Kovalchuk, V.I.; Zholkovskiy, E.K.; Bondarenko, M.P.; Vollhardt, D.: Wetting instabilities in Langmuir-Blodgett film deposition. In: Surfactant Science and Technology: Retrospects and Prospects, 193-212 (Hrsg. Romstedt, L.). CRC Press/Taylor and Francis Group, Boca Raton (2014)

Publikationen

Miller, R.; Fainerman, V.B.; Pradines, V.; Kovalchuk, V.I.; Kovalchuk, N.M.; Aksenenko, E.V.; Liggieri, L.; Ravera, F.; Loglio, G.; Sharipova, A.; Vysotsky, Y.; Vollhardt, D.; Mucic, N.; Wüstneck, R.; Krägel, J.; Javadi, A.: Surfactant Adsorption Layers at Liquid Interfaces. In: Surfactant Science and Technology: Retrospects and Prospects, 149-170 (Hrsg. Romstedt, L.). CRC Press/Taylor and Francis Group, Boca Raton (2014)

Peukert, W.; Braunschweig, B.; Engelhardt, K.; Miller, R.; Gochev, G.: Einfluß von Proteinen auf die Schaumbildung und Schaumstabilität. In: Proteinschäume in der Lebensmittelproduktion: Mechanismenaufklärung, Modellierung und Simulation, 11-30 (Hrsg. Häusser, V.; Kinkel, D.). Bonner Universitäts-Buchdruckerei, Bonn (2014)

Weinkamer, R.: Modelle in der Computersimulation: aktuelle Herausforderungen. In: Modelle und Modellierung, 33 -46 (Hrsg. Balke, F.; Siegert, B.; Vogl, J.). Wilhelm Fink, Paderborn (2014)

Event Summaries

Bar-On, B.; Barth, F. G.; Fratzl, P.; Politi, Y.: Multiscale structural gradients enhance the biomechanical functionality of the spider fang. (2014)

Bruns, N.; Lörcher, S.; Makyla, K.; Müller, C.; Winkler, T.; Ouellet-Plamondon, C.; Eder, M.; Burgert, I.: Yellow fluorescent protein senses and reports mechanical damage in fiber-reinforced polymer composites. (2014)

Harrington, M. J.; Degtyar, E.; Reinecke, A.; Schmidt, S.; Schmitt, C. N. Z.; Politi, Y.; Fratzl, P.: Enhancing soft matter mechanics via metal coordination: lessons from the mussel byssus. (2014)

Editorial

Arnebrant, T.; Nylander, T.; Miller, R.: The 26th Conference of the European Colloid and Interface Society held in Malmo, Sweden on 2-7 September 2012. (2014)

Liggieri, L.; Miller, R.: Interfacial analysis techniques. (2014)

Malysa, K.; Miller, R.; Warszynski, P.: Preface. (2014)

Biomolecular Systems 2013

Articles

Anish, C.; Guo, X. Q.; Wahlbrink, A.; Seeberger, P. H.; Seeberger, P. H.: Plague Detection by Anti-carbohydrate Antibodies. Angew. Chem.-Int. Edit. 52 (36), 9524-9528 (2013)

Anish, C.; Martin, C. E.; Wahlbrink, A.; Bogdan, C.; Ntais, P.; Antoniou, M.; Seeberger, P. H.: Immunogenicity and Diagnostic Potential of Synthetic Antigenic Cell Surface Glycans of Leishmania. ACS CHEMICAL BIOLOGY 8 (11), 2412-2422 (2013)

Aoki-Kinoshita, K. F.; Sawaki, H.; An, H. J.; Campbell, M.; Cao, Q.; Cummings, R.; Hsu, D. K.; Kato, M.; Kawasaki, T.; Khoo, K.-H.; Kim, J.; Kolarich, D.; Li, X.; Liu, M.; Matsubara, M.; Okuda, S.; Packer, N. H.; Ranzinger, R.; Shen, H.; Shikanai, T.; Shinmachi, D.; Toukach, P.; Yamada, I.; Yamaguchi, Y.; Yang, P.; Ying, W.; Yoo, J. S.; Zhang, Y.; Zhang, Y.; Narimatsu, H.: The Fifth ACGG-DB Meeting Report: Towards an International Glycan Structure Repository. GLYCOBIOLOGY 23 (12), 1422-1424 (2013)

Azzouz, N.; Kamena, F.; Laurino, P.; Kikkeri, R.; Mercier, C.; Cesbron-Delauw, M. F.; Dubremetz, J. F.; De Cola, L.; Seeberger, P. H.: Toxoplasma gondii secretory proteins bind to sulfated heparin structures. Glycobiology 23 (1), 106-120 (2013)

Behra, M.; Azzouz, N.; Schmidt, S.; Volodkin, D. V.; Mosca, S.; Chanana, M.; Seeberger, P. H.; Hartmann, L.: Magnetic Porous Sugar-Functionalized PEG Microgels for Efficient Isolation and Removal of Bacteria from Solution. Biomacromolecules 14 (6), 1927-1935 (2013)

Bou-Hamdan, F. R.; Krüger, K.; Tauer, K.; McQuade, D. T.; Seeberger, P. H.: Visible Light-Initiated Preparation of Functionalized Polystyrene Monoliths for Flow Chemistry. Aust. J. Chem. 66 (2), 213-217 (2013)

Broecker, F.; Kube, M.; Klumpp, J.; Schuppler, M.; Biedermann, L.; Hecht, J.; Hombach, M.; Keller, P. M.; Rogler, G.; Moelling, K.: Analysis of the Intestinal Microbiome of a Recovered Clostridium difficile Patient after Fecal Transplantation. DIGESTION 88 (4), 243-251 (2013)

Calin, O.; Eller, S.; Seeberger, P. H.: Automated Polysaccharide Synthesis: Assembly of a 30mer Mannoside. Angew. Chem.-Int. Edit. 52 (22), 5862-5865 (2013)

Calin, O.; Eller, S.; Hahm, H. S.; Seeberger, P. H.: Total Synthesis of the Escherichia coli O111 O-Specific Polysaccharide Repeating Unit. Chem.-Eur. J. 19 (12), 3995-4002 (2013)

Collot, M.; Eller, S.; Weishaupt, M.; Seeberger, P. H.: Glycosylation efficiencies on different solid supports using a hydrogenolysis-labile linker. Beilstein J. Org. Chem. 9 97-105 (2013)

Correia, C. A.; McQuade, D. T.; Seeberger, P. H.: Copper(I)/N-Heterocyclic Carbene (NHC)-Catalyzed Addition of Terminal Alkynes to Trifluoromethyl Ketones for Use in Continuous Reactors. ADVANCED SYNTHESIS & CATALYSIS 355 (18), 3517-3521 (2013)

Doknic, D.; Abramo, M.; Sutkeviciute, I.; Reinhardt, A.; Guzzi, C.; Schlegel, M. K.; Potenza, D.; Nieto, P. M.; Fieschi, F.; Seeberger, P. H.; Bernardi, A.: Synthesis and Characterization of Linker-Armed Fucose-Based Glycomimetics. Eur. J. Org. Chem. 2013 (24), 5303-5314 (2013)

Eller, S.; Collot, M.; Yin, J.; Hahm, H. S.; Seeberger, P. H.: Automated Solid-Phase Synthesis of Chondroitin Sulfate Glycosaminoglycans. Angew. Chem.-Int. Edit. 52 (22), 5858-5861 (2013)

Eriksson, M.; Johannssen, T.; von Smolinski, D.; Gruber, A. D.; Seeberger, P. H.; Lepenies, B.: The C-type lectin receptor SIGNR3 binds to fungi present in commensal microbiota and influences immune regulation in experimental colitis. Front immunol 4 (2013)

Everest-Dass, A. V.; Abrahams, J. L.; Kolarich, D.; Packer, N. H.; Campbell, M. P.: Structural Feature Ions for Distinguishing N- and O-Linked Glycan Isomers by LC-ESI-IT MS/MS. J. Am. Soc. Mass Spectrom. 24 (6), 895-906 (2013)

Everest-Dass, A. V.; Kolarich, D.; Campbell, M. P.; Packer, N. H.: Tandem mass spectra of glycan substructures enable the multistage mass spectrometric identification of determinants on oligosaccharides. Rapid Commun. Mass Spectrom. 27 (9), 931-939 (2013)

Goh, B. C.; Rynkiewicz, M. J.; Cafarella, T. R.; White, M. R.; Hartshorn, K. L.; Allen, K.; Crouch, E. C.; Calin, O.; Seeberger, P. H.; Schulten, K.; Seaton, B. A.: Molecular Mechanisms of Inhibition of Influenza by Surfactant Protein D Revealed by Large-Scale Molecular Dynamics Simulation. BIOCHEMISTRY 52 (47), 8527-8538 (2013)

Publikationen

Hartl, D.; Klatt, S.; Roch, M.; Konthur, Z.; Klose, J.; Willnow, T. E.; Rohe, M.: Soluble Alpha-APP (sAPPalpha) Regulates CDK5 Expression and Activity in Neurons. PLoS One 8 (6) (2013)

Hartl, D.; Klatt, S.; Roch, M.; Konthur, Z.; Klose, J.; Willnow, T. E.; Rohe, M.: Soluble Alpha-APP (sAPPalpha) Regulates CDK5 Expression and Activity in Neurons. PLoS One 8 (6) (2013)

Hütter, J.; Rödig, J. V.; Höper, D.; Seeberger, P. H.; Reichl, U.; Rapp, E.; Lepenies, B.: Toward Animal Cell Culture-Based Influenza Vaccine Design: Viral Hemagglutinin N-Glycosylation Markedly Impacts Immunogenicity. J. Immunol. 190 (1), 220-230 (2013)

Kandasamy, J.; Hurevich, M.; Seeberger, P. H.: Automated solid phase synthesis of oligoarabinofuranosides. Chem. Commun. 49 (40), 4453-4455 (2013)

Karton-Lifshin, N.; Vogel, U.; Sella, E.; Seeberger, P. H.; Shabat, D.; Lepenies, B.: Enzyme-mediated nutrient release: glucose-precursor activation by β-galactosidase to induce bacterial growth. Org. Biomol. Chem. 11 (17), 2903-2910 (2013)

Kennedy, D. C.; Grünstein, D.; Lai, C. H.; Seeberger, P. H.: Glycosylated Nanoscale Surfaces: Preparation and Applications in Medicine and Molecular Biology. Chem.-Eur. J. 19 (12), 3794-3800 (2013)

Klatt, S.; Hartl, D.; Fauler, B.; Gagoski, D.; Castro-Obregon, S.; Konthur, Z.: Generation and Characterization of a Leishmania tarentolae Strain for Site-Directed in Vivo Biotinylation of Recombinant Proteins. J. Proteome Res. 12 (12), 5512-5519 (2013)

Klatt, S.; Hartl, D.; Fauler, B.; Gagoski, D.; Castro-Obregon, S.; Konthur, Z.: Generation and Characterization of a Leishmania tarentolae Strain for Site-Directed in Vivo Biotinylation of Recombinant Proteins. JOURNAL OF PROTEOME RESEARCH 12 (12), 5512-5519 (2013)

Klatt, S.; Rohe, M.; Alagesan, K.; Kolarich, D.; Konthur, Z.; Hartl, D.: Production of Glycosylated Soluble Amyloid Precursor Protein Alpha (sAPPalpha) in Leishmania tarentolae. J. Proteome Res. 12 (1), 355-362 (2013)

Kolarich, D.; Rapp, E.; Struwe, W. B.; Haslam, S. M.; Zaia, J.; McBride, R.; Agravat, S.; Campbell, M. P.; Kato, M.; Ranzinger, R.; Kettner, C.; York, W. S.: The Minimum Information Required for a Glycomics Experiment (MIRAGE) Project: Improving the Standards for Reporting Mass-spectrometry-based Glycoanalytic Data. Mol. Cell. Proteomics 12 (4), 991-995 (2013)

Kopetzki, D.; Levesque, F.; Seeberger, P. H.: A Continuous-Flow Process for the Synthesis of Artemisinin. Chem.-Eur. J. 19 (17), 5450-5456 (2013)

Leonori, D.; Seeberger, P. H.: De novo synthesis of D- and L-fucosamine containing disaccharides. Beilstein J. Org. Chem. 9 332-341 (2013)

Lepenies, B.; Lee, J.; Sonkaria, S.: Targeting C-type lectin receptors with multivalent carbohydrate ligands. ADVANCED DRUG DELIVERY REVIEWS 65 (9), 1271-1281 (2013)

Leymarie, N.; Griffin, P. J.; Jonscher, K.; Kolarich, D.; Orlando, R.; McComb, M.; Zaia, J.; Aguilan, J.; Alley, W. R.; Altmann, F.; Ball, L. E.; Basumallick, L.; Bazemore-Walker, C. R.; Behnken, H.; Blank, M. A.; Brown, K. J.; Bunz, S.-C.; Cairo, C. W.; Cipollo, J. F.; Daneshfar, R.; Desaire, H.; Drake, R. R.; Go, E. P.; Goldman, R.; Gruber, C.; Halim, A.; Hathout, Y.; Hensbergen, P. J.; Horn, D. M.; Hurum, D.; Jabs, W.; Larson, G.; Ly, M.; Mann, B. F.; Marx, K.; Mechref, Y.; Meyer, B.; Moeginger, U.; Neususs, C.; Nilsson, J.; Novotny, M. V.; Nyalwidhe, J. O.; Packer, N. H.; Pompach, P.; Reiz, B.; Resemann, A.; Rohrer, J. S.; Ruthenbeck, A.; Sanda, M.; Schulz, J. M.; Schweiger-Hufnagel, U.; Sihlbom, C.; Song, E.; Staples, G. O.; Suckau, D.; Tang, H.; Thaysen-Andersen, M.; Viner, R. I.; An, Y.; Valmuv, L.; Wada, Y.; Watson, M.; Windwarder, M.; Whittal, R.; Wuhrer, M.; Zhu, Y.; Zou, C.: Interlaboratory Study on Differential Analysis of Protein Glycosylation by Mass Spectrometry: The ABRF Glycoprotein Research Multi-Institutional Study 2012. MOLECULAR & CELLULAR PROTEOMICS 12 (10), 2935-2951 (2013)

Maglinao, M.; Klopfleisch, R.; Seeberger, P. H.; Lepenies, B.: The C-Type Lectin Receptor DCIR Is Crucial for the Development of Experimental Cerebral Malaria. J. Immunol. 191 (5), 2551-2559 (2013)

Martin, C. E.; Broecker, F.; Oberli, M. A.; Komor, J.; Mattner, J.; Anish, C.; Seeberger, P. H.: Immunological Evaluation of a Synthetic Clostridium difficile Oligosaccharide Conjugate Vaccine Candidate and Identification of a Minimal Epitope. J. Am. Chem. Soc. 135 (26), 9713-9722 (2013)

Martin, C. E.; Broecker, F.; Eller, S.; Oberli, M. A.; Anish, C.; Pereira, C. L.; Seeberger, P. H.: Glycan arrays containing synthetic Clostridium difficile lipoteichoic acid oligomers as tools toward a carbohydrate vaccine. Chem. Commun. 49 (64), 7159-7161 (2013)

McQuade, D. T.; Seeberger, P. H.: Applying Flow Chemistry: Methods, Materials, and Multistep Synthesis. J. Org. Chem. 78 (13), 6384-6389 (2013)

McQuade, D. T.; O'Brien, A. G.; Dorr, M.; Rajaratnam, R.; Eisold, U.; Monnanda, B.; Nobuta, T.; Löhmannsröben, H. G.; Meggers, E.; Seeberger, P. H.: Continuous synthesis of pyridocarbazoles and initial photophysical and bioprobe characterization. Chem. Sci. 4 (10), 4067-4070 (2013)

McQuade, D. T.; Plutschack, M. B.; Seeberger, P. H.: Passive fructose transporters in disease: a molecular overview of their structural specificity. Org. Biomol. Chem. 11 (30), 4909-4920 (2013)

Mosca, S.; Dannehl, C.; Möginger, U.; Brezesinski, G.; Hartmann, L.: β(3R3)-Peptides: design and synthesis of novel peptidomimetics and their self-assembling properties at the air-water interface. Org. Biomol. Chem. 11 (33), 5399-5403 (2013)

Orts-Gil, G.; Natte, K.; Österle, W.: Multi-parametric reference nanomaterials for toxicology: state of the art, future challenges and potential candidates. RSC ADVANCES 3 (40), 18202-18215 (2013)

Plutschack, M.; McQuade, D. T.; Valenti, G.; Seeberger, P. H.: Flow synthesis of a versatile fructosamine mimic and quenching studies of a fructose transport probe. BEILSTEIN JOURNAL OF ORGANIC CHEMISTRY 9 2022-2027 (2013)

Pussak, D.; Ponader, D.; Mosca, S.; Ruiz, S. V.; Hartmann, L.; Schmidt, S.: Mechanical Carbohydrate Sensors Based on Soft Hydrogel Particles. Angew. Chem.-Int. Edit. 52 (23), 6084-6087 (2013)

Publikationen

Rillahan, C. D.; Schwartz, E.; Rademacher, C.; McBride, R.; Rangarajan, J.; Fokin, V. V.; Paulson, J. C.: On-Chip Synthesis and Screening of a Sialoside Library Yields a High Affinity Ligand for Siglec-7. ACS Chem. Biol. 8 (7), 1417-1422 (2013)

Schmidt, S.; Behra, M.; Uhlig, K.; Madaboosi, N.; Hartmann, L.; Duschl, C.; Volodkin, D.: Mesoporous Protein Particles Through Colloidal $CaCO_3$ Templates. Adv. Funct. Mater. 23 (1), 116-123 (2013)

Shao, L.; Zhang, W.; Theil Kuhn, L.: Trapping of Metal Atoms on Nanoprotrusions of Carbon Nanotubes. Advanced Engineering Materials 15 (11), 1111-14 (2013)

Shao, L.; Zhang, W.; Kuhn, L. T.: Trapping of Metal Atoms on Nanoprotrusions of Carbon Nanotubes. Adv. Eng. Mater. 15 (11), 1111-1114 (2013)

Shirato, K.; Gao, C. X.; Ota, F.; Angata, T.; Shogomori, H.; Ohtsubo, K.; Yoshida, K.; Lepenies, B.; Taniguchi, N.: Flagellin/Toll-like receptor 5 response was specifically attenuated by keratan sulfate disaccharide via decreased EGFR phosphorylation in normal human bronchial epithelial cells. Biochem. Biophys. Res. Commun. 435 (3), 460-465 (2013)

Silva, D. V.: Zwischen Protein und Membran. NACHRICHTEN AUS DER CHEMIE 61 (9), 882-886 (2013)

Stavenhagen, K.; Hinneburg, H.; Thaysen-Andersen, M.; Hartmann, L.; Varón Silva, D.; Fuchser, J.; Kaspar, S.; Rapp, E.; Seeberger, P. H.; Kolarich, D.: Quantitative mapping of glycoprotein micro-heterogeneity and macro-heterogeneity: an evaluation of mass spectrometry signal strengths using synthetic peptides and glycopeptides. Journal of Mass Spectrometry 48 (6), 627-639 (2013)

Tanasova, M.; Plutschack, M.; Muroski, M. E.; Sturla, S. J.; Strouse, G. F.; McQuade, D. T.: Fluorescent THF-Based Fructose Analogue Exhibits Fructose-Dependent Uptake. CHEMBIOCHEM 14 (10), 1263-1270 (2013)

Tsai, Y. H.; Götze, S.; Vilotijevic, I.; Grube, M.; Varón Silva, D.; Seeberger, P. H.; Seeberger, P. H.: A general and convergent synthesis of diverse glycosylphosphatidylinositol glycolipids. Chemical Science 4 (1), 468-481 (2013)

Weishaupt, M. W.; Matthies, S.; Seeberger, P. H.: Automated Solid-Phase Synthesis of a β-(1,3)-Glucan Dodecasaccharide. Chem.-Eur. J. 19 (37), 12497-12503 (2013)

Witt, R. M.; Hecht, M. L.; Pazyra-Murphy, M. F.; Cohen, S. M.; Noti, C.; van Kuppevelt, T. H.; Fuller, M.; Chan, J. A.; Hopwood, J. J.; Seeberger, P. H.; Segal, R. A.: Heparan Sulfate Proteoglycans Containing a Glypican 5 Core and 2-O-Sulfoiduronic Acid Function as Sonic Hedgehog Coreceptors to Promote Proliferation. JOURNAL OF BIOLOGICAL CHEMISTRY 288 (36), 26275-26288 (2013)

Wojcik, F.; Ponader, D.; Pussak, D.; Mosca, S.; Lel, S.; Schmidt, S.; Hartmann, L.: Monodisperse, sequence-defined homo- and heterofunctionalized glycooligomers and their multivalent binding modes. Abstracts of Papers of the American Chemical Society 246 (2013)

Wojcik, F.; Pussak, D.; Ponader, D.; Mosca, S.; Lel, S.; Schmidt, S.; Hartmann, L.: Monodisperse, sequence-defined glycomacromolecules for biomedical applications. Abstracts of Papers of the American Chemical Society 246 (2013)

Wojcik, F.; O'Brien, A. G.; Götze, S.; Seeberger, P. H.; Hartmann, L.: Synthesis of Carbohydrate-Functionalised Sequence-Defined Oligo(amidoamine)s by Photochemical ThiolEne Coupling in a Continuous Flow Reactor. Chem.-Eur. J. 19 (9), 3090-3098 (2013)

Wojcik, F.; Lel, S.; O'Brien, A. G.; Seeberger, P. H.; Hartmann, L.: Synthesis of homo- and heteromultivalent carbohydrate-functionalized oligo(amidoamines) using novel glyco-building blocks. BEILSTEIN JOURNAL OF ORGANIC CHEMISTRY 9 2395-2403 (2013)

Wongtrakul-Kish, K.; Kolarich, D.; Pascovici, D.; Joss, J. L.; Deane, E.; Packer, N. H.: Characterization of N- and O-linked glycosylation changes in milk of the tammar wallaby (Macropus eugenii) over lactation. Glycoconjugate Journal; Springer 30 (5), 523-536 (2013)

Yang, Y.; Oishi, S.; Martin, C. E.; Seeberger, P. H.: Diversity-oriented Synthesis of Inner Core Oligosaccharides of the Lipopolysaccharide of Pathogenic Gram-negative Bacteria. J. Am. Chem. Soc. 135 (16), 6262-6271 (2013)

Zhang, K.; Kopetzki, D.; Seeberger, P. H.; Antonietti, M.; Vilela, F.: Surface Area Control and Photocatalytic Activity of Conjugated Microporous Poly(benzothiadiazole) Networks. Angew. Chem.-Int. Edit. 52 (5), 1432-1436 (2013)

Book Chapters

Schumann, B.; Anish, C.; Pereira, C. L.; Seeberger, P. H.: Carbohydrate Vaccines. In: Biotherapeutics: Recent Development using Chemical and Molecular Biology, 68-104 (Hrsg. Jones, L. H.; McKnight, A. J.). RSC , Cambridge (2013)

Event Summaries

Behra, M.; Azzouz, N.; Schmidt, S.; Seeberger, P. H.; Hartmann, L.: Selective detection and magnetic removal of bacteria using novel porous PEG microgels combining magnetic properties and biofunctionalization with carbohydrate ligands. (2013)

Maglinao, M.; Klopfleisch, R.; Seeberger, P. H.; Lepenies, B.: Critical role of the C-type lectin receptor DCIR in cerebral malaria pathogenesis. (2013)

McQuade, D. T.: Fluorescent THF-based fructose analog as a fructose-specific-transport affinity probe. (2013)

McQuade, D. T.: Asymmetric allylic substitutions and regioselective hydroborations using optically active 6-NHC-Cu(I) catalysts. (2013)

McQuade, D. T.: Solids in flow: From catalyst synthesis to using solid reagents. (2013)

Mosca, S.; Brezesinski, G.; Hartmann, L.: β(3r6) foldamers: Design, structures, and activity. (2013)

Ponader, D.; Pussak, D.; Glanz, M.; Schmidt, S.; Wojcik, F.; Hartmann, L.: Investigating multivalent binding modes of precision glycopolymers. (2013)

Publikationen

Biomolecular Systems 2014

Articles

Anish, C.; Schumann, B.; Pereira, C. L.; Seeberger, P. H.: Chemical Biology Approaches to Designing Defined Carbohydrate Vaccines. Chem. Biol. 21 (1), 38-50 (2014)

Aretz, J.; Wamhoff, E.-C.; Hanske, J.; Heymann, D.; Rademacher, C.: Computational and experimental prediction of human C-type lectin receptor druggability. Front immunol (2014)

Barandov, A.; Grünstein, D.; Apostolova, I.; Buchert, R.; Roger, M.; Brenner, W.; Abram, U.; Seeberger, P. H.: A New Bifunctional Chelator Enables Facile Biocoupling and Radiolabeling as the Basis for a Bioconjugation Kit. ChemBioChem 15 (7), 986-994 (2014)

Behra, M.; Hartmann, L.: Ammonium Carbamate Functionalization of Microgels for pH-Sensitive Loading and Release of Anionic and Cationic Molecules. Macromol. Chem. Phys. 215 (1), 90-95 (2014)

Bröcker, F.; Aretz, J.; Yang, Y.; Hanske, J.; Guo, X.; Reinhardt, A.; Wahlbrink, A.; Rademacher, C.; Anish, C.; Seeberger, P. H.: Epitope Recognition of Antibodies against a Yersinia pestis Lipopolysaccharide Trisaccharide Component. ACS Chemical Biology 9 (4), 867-873 (2014)

Campbell, M. P.; Nguyen-Khuong, T.; Hayes, C. A.; Flowers, S. A.; Alagesan, K.; Kolarich, D.; Packer, N. H.; Karlsson, N. G.: Validation of the curation pipeline of UniCarb-DB: Building a global glycan reference MS/MS repository. BBA-Proteins Proteomics 1844 (1), 108-116 (2014)

Cavallari, M.; Stallforth, P.; Kalinichenko, A.; Rathwell, D. C. K.; Gronewold, T. M. A.; Adibekian, A.; Mori, L.; Landmann, R.; Seeberger, P. H.; De Libero, G.: A semisynthetic carbohydrate-lipid vaccine that protects against S-pneumoniae in mice. Nat. Chem. Biol. 10 (11), 950-956 (2014)

Dechtrirat, D.; Gajovic-Eichelmann, N.; Wojcik, F.; Hartmann, L.; Bier, F. F.; Scheller, F. W.: Electrochemical displacement sensor based on ferrocene boronic acid tracer and immobilized glycan for saccharide binding proteins and E. coli. Biosens. Bioelectron. 58 1-8 (2014)

Eriksson, M.; Serna, S.; Maglinao, M.; Schlegel, M. K.; Seeberger, P. H.; Reichardt, N.-C.; Lepenies, B.: Biological Evaluation of Multivalent Lewis X-MGL-1 Interactions. ChemBioChem 15 (6), 844-851 (2014)

Farr, T. D.; Lai, C.-H.; Grünstein, D.; Orts-Gil, G.; Wang, C.-C.; Boehm-Sturm, P.; Seeberger, P. H.; Harms, C.: Imaging Early Endothelial Inflammation Following Stroke by Core Shell Silica Superparamagnetic Glyconanoparticles That Target Selectin. Nano Letters 14 (4), 2130-2134 (2014)

Galiveti, C. R.; Raabe, C. A.; Konthur, Z.; Rozhdestvensky, T. S.: Differential regulation of non-protein coding RNAs from Prader-Willi Syndrome locus. Sci. Rep. 4 (2014)

Geißner, A.; Anish, C.; Seeberger, P. H.: Glycan arrays as tools for infectious disease research. Curr. Opin. Chem. Biol. 18 38-45 (2014)

Gilmore, K.; Kopetzki, D.; Lee, J. W.; Horvath, Z.; McQuade, D. T.; Seidel-Morgenstern, A.; Seeberger, P. H.: Continuous synthesis of artemisinin-derived medicines. Chem. Commun. 50 (84), 12652-12655 (2014)

Gilmore, K.; Seeberger, P. H.: Continuous flow photochemistry. Chem. Rec. 14 (3), 410-418 (2014)

Gilmore, K.; Kopetzki, D.; Lee, J. W.; Horvath, Z.; McQuade, D. T.; Seidel-Morgenstern, A.; Seeberger, P. H.: Continuous synthesis of artemisinin-derived medicines. Chem. Commun. 50 (84), 12652-12655 (2014)

Gilmore, K.; Vukelic, S.; McQuade, D. T.; Koksch, B.; Seeberger, P. H.: Continuous Reductions and Reductive Aminations Using Solid NaBH4. Org. Process Res. Dev. 18 (12), 1771-1776 (2014)

Glas, A.; Bier, D.; Hahne, G.; Rademacher, C.; Ottmann, C.; Grossmann, T.: Constrained Peptides with Target-Adapted Cross-Links as Inhibitors of a Pathogenic Protein-Protein Interaction . Angew. Chem. Int. Ed. 53 (9), 2489-2493 (2014)

Glaubitz, M.; Medvedev, N.; Pussak, D.; Hartmann, L.; Schmidt, S.; Helm, C. A.; Delcea, M.: A novel contact model for AFM indentation experiments on soft spherical cell-like particles. Soft Matter 10 (35), 6732-6741 (2014)

Götze, S.; Azzouz, N.; Tsai, Y.-H.; Groß, U.; Reinhardt, A.; Anish, C.; Seeberger, P. H.; Silva, D. V.: Diagnosis of Toxoplasmosis Using a Synthetic Glycosylphosphatidylinositol Glycan. Angew. Chem. Int. Ed. Engl. 53 (50), 13701-13705 (2014)

Hacht, A. v.; Seifert, O.; Menger, M.; Schütze, T.; Arora, A.; Konthur, Z.; Neubauer, P.; Wagner, A. ; Weise, C.; Kurreck, J.: Identification and characterization of RNA guanine-quadruplex binding proteins. Nucleic Acids Res 42 (10), 6630-6644 (2014)

Hurevich, M.; Seeberger, P. H.: Automated glycopeptide assembly by combined solid-phase peptide and oligosaccharide synthesis. Chem. Commun. 50 (15), 1851-1853 (2014)

Hurevich, M.; Kandasamy, J.; Ponnappa, B. M.; Collot, M.; Kopetzki, D.; McQuade, D. T.; Seeberger, P. H.: Continuous Photochemical Cleavage of Linkers for Solid-Phase Synthesis. Org. Lett. 16 (6), 1794-1797 (2014)

Hütter, J.; Eriksson, M.; Johannssen, T.; Klopfleisch, R.; von Smolinski, D.; Gruber, A. D.; Seeberger, P. H.; Lepenies, B.: Role of the C-Type Lectin Receptors MCL and DCIR in Experimental Colitis. PLoS One 9 (7) (2014)

Kandasamy, J.; Schuhmacher, F.; Hahm, H. S.; Klein, J. C.; Seeberger, P. H.: Modular automated solid phase synthesis of dermatan sulfate oligosaccharides. Chem. Commun. 50 (15), 1875-1877 (2014)

Kennedy, D. C.; Orts-Gil, G.; Lai, C.-H.; Müller, L.; Haase, A.; Luch, A.; Seeberger, P. H.: Carbohydrate functionalization of silver nanoparticles modulates cytotoxicity and cellular uptake. Journal of Nanobiotechnology 12 (1) (2014)

Kesel, S.; Mader, A.; Seeberger, P. H.; Lieleg, O.; Opitz, M.: Carbohydrate-Coating Reduces Adhesion of Biofilm-Forming Bacillus subtilis to Gold Surfaces. Appl. Environ. Microbiol. 80 (19), 5911-5917 (2014)

Koziol, M. J.; Sievers, T. K.; Smuda, K.; Xiong, Y.; Müller, A.; Wojcik, F.; Steffen, A.; Dathe, M.; Georgieva, R.; Bäumler, H.: Kinetics and Efficiency of a MethylCarboxylated 5-Fluorouracil- Bovine Serum Albumin Adduct for Targeted Delivery(a). Macromolecular Bioscience 14 (3), 428-439 (2014)

Lee, J. W.; Horvath, Z.; O'Brien, A. G.; Seeberger, P. H.; Seidel-Morgenstern, A.: Design and optimization of coupling a continuously operated reactor with simulated moving bed chromatography. Chemical Engineering Journal 251 355-370 (2014)

Publikationen

Lee, J. W.; Horváth, Z.; O'Brien, A. G.; Seeberger, P. H.; Seidel-Morgenstern, A.: Design and optimization of coupling a continuously operated reactor with simulated moving bed chromatography. Chemical Engineering Journal 251 355-370 (2014)

Leitsch, D.; Sóki, J.; Kolarich, D.; Urbán, E.; Nagy, E.: A study on Nim expression in Bacteroides fragilis. Microbiology/SGM 160 616-622 (2014)

Leitsch, D.; Janssen, B. D.; Kolarich, D.; Johnson, P. J.; Duchene, M.: Trichomonas vaginalis flavin reductase 1 and its role in metronidazole resistance. Mol. Microbiol. 91 (1), 198-208 (2014)

Lepenies, B.; Seeberger, P. H.: Simply better glycoproteins. Nature biotechnology 32 (5), 443-445 (2014)

Maglinao, M.; Eriksson, M.; Schlegel, M. K.; Zimmermann, S.; Johannssen, T.; Götze, S.; Seeberger, P. H.; Lepenies, B.: A platform to screen for C-type lectin receptor-binding carbohydrates and their potential for cell-specific targeting and immune modulation. Journal of Controlled Release 175 36-42 (2014)

Marco-Ramell, A.; Miller, I.; Nöbauer, K.; Möginger, U.; Segales, J.; Razzazi-Fazeli, E.; Kolarich, D.; Bassols, A.: Proteomics on porcine haptoglobin and IgG/IgA show protein species distribution and glycosylation pattern to remain similar in PCV2-SD infection. Journal of Proteomics 101 205-216 (2014)

Meret, M.; Kopetzki, D.; Degenkolbe, T.; Kleessen, S.; Nikoloski, Z.; Tellstroem, V.; Barsch, A.; Kopka, J.; Antonietti, M.; Willmitzer, L.: From systems biology to systems chemistry: metabolomic procedures enable insight into complex chemical reaction networks in water. RSC Adv. 4 (32), 16777-16781 (2014)

Mietzsch, M.; Broecker, F.; Reinhardt, A.; Seeberger, P. H.; Heilbronn, R.: Differential Adeno-Associated Virus Serotype-Specific Interaction Patterns with Synthetic Heparins and Other Glycans. Journal of Virology 88 (5), 2991-3003 (2014)

Miltsch, S. M.; Seeberger, P. H.; Lepenies, B.: The C-type lectin-like domain containing proteins Clec-39 and Clec-49 are crucial for Caenorhabditis elegans immunity against Serratia marcescens infection. Developmental and Comparative Immunology 45 (1), 67-73 (2014)

Mitrovic, J.; Siewert, C.; Duduk, B.; Hecht, J.; Mölling, K.; Broecker, F.; Beyerlein, P.; Büttner, C.; Bertaccini, A.; Kube, M.: Generation and Analysis of Draft Sequences of 'Stolbur' Phytoplasma from Multiple Displacement Amplification Templates. J. Mol. Microbiol. Biotechnol. 24 (1), 1-11 (2014)

Mosca, S.; Keller, J.; Azzouz, N.; Wagner, S.; Titz, A.; Seeberger, P. H.; Brezesinski, G.; Hartmann, L.: Amphiphilic Cationic ß3R3-Peptides: Membrane Active Peptidomimetics and Their Potential as Antimicrobial Agents. Biomacromolecules 15 (5), 1687-1695 (2014)

Nonaka, M.; Bao, X.; Matsumura, F.; Götze, S.; Kandasamy, J.; Kononov, A.; Broide, D. H.; Nakayama, J.; Seeberger, P. H.; Fukuda, M.: Synthetic di-sulfated iduronic acid attenuates asthmatic response by blocking T-cell recruitment to inflammatory sites. Proc. Natl. Acad. Sci. U. S. A. 111 (22), 8173-8178 (2014)

Ponader, D.; Maffre, P.; Aretz, J.; Pussak, D.; Ninnemann, N. M.; Schmidt, S.; Seeberger, P. H.; Rademacher, C.; Nienhaus, G. U.; Hartmann, L.: Carbohydrate-Lectin Recognition of Sequence-defined Heteromultivalent Glycooligomers. JACS 136 (5), 2008-2016 (2014)

Ponader, D.; Igde, S.; Wehle, M.; Märker, K.; Santer, M.; Bleger, D.; Hartmann, L.: Photoswitchable precision glycooligomers and their lectin binding. Beilstein Journal of Organic Chemistry 10 1603-1612 (2014)

Schmidt, S.; Reinecke, A. A.; Wojcik, F.; Pussak, D.; Hartmann, L.; Harrington, M. J.: Metal-mediated molecular self-healing in histidine-rich mussel peptides. Biomacromolecules 15 (5), 1644-1652 (2014)

Schoenen, H.; Huber, A.; Sonda, N.; Zimmermann, S.; Jantsch, J.; Lepenies, B.; Bronte, V.; Lang, R.: Differential Control of Mincle-Dependent Cord Factor Recognition and Macrophage Responses by the Transcription Factors C/EBPβ and HIF1α. Journal of Immunology 193 (7), 3664-3675 (2014)

Schumann, B.; Pragani, R.; Anish, C.; Pereira, C. L.; Seeberger, P. H.: Synthesis of conjugation-ready zwitterionic oligosaccharides by chemoselective thioglycoside activation. Chemical Science 5 (5), 1992-2002 (2014)

Sorge, N. M. v.; Cole, J. N.; Kuipers, K.; Henningham, A.; Aziz, R. K.; Kasirer-Friede, A.; Lin, L.; Berends, E. T.M.; Davies, M. R.; Dougan, G.; Zhang, F.; Dahesh, S.; Shaw, L.; Gin, J.; Cunningham, M.; Merriman, J. A.; Hütter, J.; Lepenies, B.; Rooijakkers, S. H.M.; Malley, R.; Walker, M. J.; Shattil, S. J.; Schlievert, P. M.; Choudhury, B.; Nizet, V.: The Classical Lancefield Antigen of Group A Streptococcus Is a Virulence Determinant with Implications for Vaccine Design. Cell Host & Microbe 15 729-740 (2014)

Stefaniu, C.; Vilotijevic, I.; Santer, M.; Brezesinski, G.; Seeberger, P. H.; Silva, D. V.: Versatility of a Glycosylphosphatidylinositol Fragment in Forming Highly Ordered Polymorphs. Langmuir 30 (18), 5185-5192 (2014)

Stefaniu, C.; Vilotijevic, I.; Brezesinski, G.; Seeberger, P. H.; Varón Silva, D.: A comparative structural study in monolayers of GPI fragments and their binary mixtures. Phys. Chem. Chem. Phys. 16 (20), 9259-9265 (2014)

Theodoratou, E.; Campbell, H.; Ventham, N. T.; Kolarich, D.; Pucic-Bakovic, M.; Zoldos, V.; Fernandes, D.; Pemberton, I. K.; Rudan, I.; Kennedy, N. A.; Wuhrer, M.; Nimmo, E.; Annese, V.; McGovern, D. P. B.; Satsangi, J.; Lauc, G.: The role of glycosylation in IBD. Nature Reviews Gastroenterology & Hepatology 11 (10), 588-600 (2014)

Ushakov, D. B.; Gilmore, K.; Seeberger, P. H.: Consecutive oxygen-based oxidations convert amines to α-cyanoepoxides. Chem. Commun. 50 (84), 12649-12651 (2014)

Ushakov, D. B.; Gilmore, K.; Kopetzki, D.; McQuade, D. T.; Seeberger, P. H.: Continuous-Flow Oxidative Cyanation of Primary and Secondary Amines Using Singlet Oxygen. Angew. Chem. Int. Ed. 53 (2), 557-561 (2014)

Wallbrecher, R.; Verdurmen, W. P. R.; Schmidt, S.; Bovee-Geurts, P. H.; Bröcker, F.; Reinhardt, A.; van Kuppevelt, T. H.; Seeberger, P. H.; Brock, R.: The stoichiometry of peptide-heparan sulfate binding as a determinant of uptake efficiency of cell-penetrating peptides. Cellular and Molecular Life Sciences 71 (14), 2717-2729 (2014)

Publikationen

York, W. S.; Agravat, S.; Aoki-Kinoshita, K. F.; McBride, R.; Campbell, M. P.; Costello, C. E.; Dell, A.; Feizi, T.; Haslam, S. M.; Karlsson, N.; Khoo, K.-H.; Kolarich, D.; Liu, Y.; Novotny, M.; Packer, N. H.; Paulson, J. C.; Rapp, E.; Ranzinger, R.; Rudd, P. M.; Smith, D. F.; Struwe, W. B.; Tiemeyer, M.; Wells, L.; Zaia, J.; Kettner, C.:
MIRAGE: The minimum information required for a glycomics experiment. Glycobiology 24 (5), 402-406 (2014)

Books
Carbohydrates as Drugs (Hrsg. Seeberger, P. H.; Rademacher, C.). Springer, Cham (2014)

Book Chapters
Seeberger, P. H.: Impfstoffe und Wirkstoffe - von der Grundlagenforschung zur Anwendung. In: Wie kommt das Neue in Technik und Medizin, 238-246 (Hrsg. Popp, M.). Karl Heinz Beckurts Stiftung, Garching (2014)

Vilotijevic, I.; Götze, S.; Seeberger, P. H.; Varón Silva, D.: Chemical Synthesis of GPI Anchors and GPI-Anchored Molecules. In: Modern synthetic methods in carbohydrate chemistry : from monosaccharides to complex glycoconjugates, 335-372 (Hrsg. Werz, D. B.; Vidal, S.). Wiley-VCH, Weinheim (2014)

Wojcik, F.; Ponader, D.; Mosca, S.; Hartmann, L.: Recent Advances in Solid Phase Polymer Synthesis: Polyamides from Tailor-Made Building Blocks. In: Sequence-Controlled Polymers: Synthesis, Self-Assembly, and Properties, 85-101 (Hrsg. Lutz, J.-F.; Meyer, T. Y.). Oxford University Press, USA (2014)

Conference Proceedings
Seeberger, P. H.: Automated Oligosaccharide Synthesis: From Insights into Fundamental Glycobiology to Vaccines and Diagnostics . In: New Chemistry and New Opportunities from the Expanding Protein Universe, 136-140 (Hrsg. Wüthrich, K.; Hilvert, D.). Proceedings of the 23rd International Solvay Conference on Chemistry, Brussels, 2013-10-16 - 2013-10-16. World Scientific, New Jersey usw. (2014)

Event Summaries
Aretz, J.; Wamhoff, E.-C.; Hanske, J.; Heymann, D.; Rademacher, C.: Druggability of mammalian C-type lectin receptors. (2014)

Bröcker, F.; Martin, C.; Hanske, J.; Rademacher, C.; Pereira, C. L.; Anish, C.; Seeberger, P.: Deciphering Glycan-Antibody Interactions: towards a Carbohydrate-based Vaccine against Clostridium difficile. (2014)

Fujinawa, R.; Ota, F.; Gao, C.; Hirayama, T.; Kabata, H.; Korekane, H.; Kitazume, S.; Ohtsubo, K.; Yoshida, K.; Yamguchi, Y.; Lepenies, B.; Rademacher, C.; Betsuyaku, T.; Kida, K.; Taniguchi, N.: Binding of langerin/CD207 to keratan sulfate disaccharide, Gal (6SO3) β1, 4-GlcNAc (6SO3) and its triangle derivative in vitro and in vivo: possible drug targets for COPD (chronic obstructive pulmonary disease). (2014)

Hahm, H. S.; Seeberger, P. H.: Installation of multiple 1,2-cis glycosidic bonds by automated synthesis. (2014)

Pfrengle, F.; Schlegel, M. K.; Geissner, A.; Seeberger, P. H.: Automated solid-phase synthesis of oligoxylans. (2014)

Reinhardt, A.; Yang, Y.; Claus, H.; Pereira, C. L.; Cox, A. D.; Vogel, U.; Anish, C.; Seeberger, P. H.: Antigenic Potential of a Highly Conserved Lipopolysaccharide Inner Core Structure Defined by Synthetic Approach. (2014)

Roller, R.; Vilotijevic, I.; Michel, D.; Seeberger, P. H.; Varón Silva, D.: Semi-synthesis of glycosylphosphatidylinositol anchored anchored glycopeptides and glycoproteins. (2014)

Roller, R.; Eraña, H.; Castilla, J.; Seeberger, P. H.; Varón Silva, D.: INTEIN-BASED LIGATION STRATEGIES FOR THE GENERATION OF HOMOGENEOUS GPI-ANCHORED PROTEINS. (2014)

Talks
Seidel-Morgenstern, A.; Lee, J. W.; Horvath, Z.; Horosanskaia, E.; Lorenz, H.; Gilmore, K.; Kopetzki, D.; McQuade, D. T.; Seeberger, P. H.: Continuous purification of artemisinin and artesunate. 2014 AIChE Annual Meeting, Atlanta, USA (2014-11-16 - 2014-11-16)

Colloid Chemistry 2013

Articles
Ahmad, H.; Abu-Waesmin, M.; Rahman, M. M.; Miah, M. A. J.; Tauer, K.: Preparation of hydrophobic polymer particles by radical polymerization and subsequent modification into magnetically doped particles. J. Appl. Polym. Sci. 127 (1), 620-627 (2013)

Ahmad, H.; Mahluddin, M.; Rahman, M. A.; Rahman, M. M.; Miah, M. A. J.; Tauer, K.: Preparation of Crosslinked Cationic Poly(2-dimethylaminoethyl methacrylate) Microspheres by Precipitation Copolymerization. JOURNAL OF POLYMER MATERIALS 30 (2), 225-237 (2013)
Antonietti, M.: On the Way to Artificial Photosynthesis: Simple Materials and System Designs for Photoelectrodes. Angew. Chem.-Int. Edit. 52 (4), 1086-1087 (2013)

Antonietti, M.: The 70th Birthday of Macromolecular Chemistry and Physics: A Special Date, Worth Some Special Considerations. Macromol. Chem. Phys. 214 (2 Sp. Iss. SI), 130-131 (2013)

Asanuma, H.; Subedi, P.; Hartmann, J.; Shen, Y. F.; Möhwald, H.; Nakanishi, T.; Skirtach, A.: Nanoplasmonic Modification of the Local Morphology, Shape, and Wetting Properties of Nanoflake Microparticles. Langmuir 29 (24), 7464-7471 (2013)

Balach, J.; Wu, H. P.; Polzer, F.; Kirmse, H.; Zhao, Q.; Wei, Z. X.; Yuan, J. Y.: Poly(ionic liquid)-derived nitrogen-doped hollow carbon spheres: synthesis and loading with Fe_2O_3 for high-performance lithium ion batteries. RSC Adv. 3 (21), 7979-7986 (2013)

Bermúdez, J. M.; Dominguez, P. H.; Arenillas, A.; Cot, J.; Weber, J.; Luque, R.: CO2 Separation and Capture Properties of Porous Carbonaceous Materials from Leather Residues. Materials 6 4641-4653 (2013)

Bojdys, M. J.; Severin, N.; Rabe, J. P.; Cooper, A. I.; Thomas, A.; Antonietti, M.: Exfoliation of Crystalline 2D Carbon Nitride: Thin Sheets, Scrolls and Bundles via Mechanical and Chemical Routes. Macromol. Rapid Commun. 34 (10), 850-854 (2013)

Bou-Hamdan, F. R.; Krüger, K.; Tauer, K.; McQuade, D. T.; Seeberger, P. H.: Visible Light-Initiated Preparation of Functionalized Polystyrene Monoliths for Flow Chemistry. Aust. J. Chem. 66 (2), 213-217 (2013)

Publikationen

Brun, N.; Garcia-Gonzalez, C. A.; Smirnova, I.; Titirici, M. M.: Hydrothermal synthesis of highly porous carbon monoliths from carbohydrates and phloroglucinol. RSC ADVANCES 3 (38), 17088-17096 (2013)

Brun, N.; Sakaushi, K.; Yu, L. H.; Giebeler, L.; Eckert, J.; Titirici, M. M.: Hydrothermal carbon-based nanostructured hollow spheres as electrode materials for high-power lithium-sulfur batteries. Phys. Chem. Chem. Phys. 15 (16), 6080-6087 (2013)

Brun, N.; Wohlgemuth, S. A.; Osiceanu, P.; Titirici, M. M.: Original design of nitrogen-doped carbon aerogels from sustainable precursors: application as metal-free oxygen reduction catalysts. Green Chem. 15 (9), 2514-2524 (2013)

Brun, N.; Edembe, L.; Gounel, S.; Mano, N.; Titirici, M. M.: Emulsion-Templated Macroporous Carbons Synthesized By Hydrothermal Carbonization and their Application for the Enzymatic Oxidation of Glucose. ChemSusChem 6 (4), 701-710 (2013)

Chen, S.-F.; Cölfen, H.; Antonietti, M.; Yu, S.-H.: Ethanol assisted synthesis of pure and stable amorphous calcium carbonate nanoparticles. CHEMICAL COMMUNICATIONS 49 (83), 9564-9566 (2013)

Chong, S. Y.; Jones, J. T. A.; Khimyak, Y. Z.; Cooper, A. I.; Thomas, A.; Antonietti, M.; Bojdys, M. J.: Tuning of gallery heights in a crystalline 2D carbon nitride network. J. Mater. Chem. A 1 (4), 1102-1107 (2013)

Corbiere, T. C. M.; Ressnig, D.; Giordano, C.; Antonietti, M.: Focused radiation heating for controlled high temperature chemistry, exemplified with the preparation of vanadium nitride nanoparticles. RSC Adv. 3 (35), 15337-15343 (2013)

Diehl, C.; Schlaad, H.: Glycopolyoxazoline-lectin interactions. Effects of ligand structure on clustering kinetics. Polimery 58 (9), 650-653 (2013)

Dong, S.; Zheng, B.; Yao, Y.; Han, C.; Yuan, J.; Antonietti, M.; Huang, F.: LCST-Type Phase Behavior Induced by Pillar[5]arene/Ionic Liquid Host-Guest Complexation. ADVANCED MATERIALS 25 (47), 6864-6867 (2013)

Draude, F.; Galla, S.; Pelster, A.; Tentschert, J.; Jungnickel, H.; Haase, A.; Mantion, A.; Thünemann, A. F.; Taubert, A.; Luch, A.; Arlinghaus, H. F.: ToF-SIMS and Laser-SNMS analysis of macrophages after exposure to silver nanoparticles. Surf. Interface Anal. 45 (1 Sp. Iss. SI), 286-289 (2013)

Erbe, A.; Sigel, R.: Incoherent dynamic light scattering by dilute dispersions of spherical particles: wavelength-dependent dynamics. PHYSICAL CHEMISTRY CHEMICAL PHYSICS 15 (44), 19143-19146 (2013)

Esposito, D.; Antonietti, M.: Chemical Conversion of Sugars to Lactic Acid by Alkaline Hydrothermal Processes. ChemSusChem 6 (6), 989-992 (2013)

Esposito, D.; Kirchhecker, S.; Antonietti, M.: A Sustainable Route towards Imidazolium Building Blocks Based on Biomass Molecules. CHEMISTRY-A EUROPEAN JOURNAL 19 (45), 15097-15100 (2013)

Falco, C.; Sieben, J. M.; Brun, N.; Sevilla, M.; van der Mauelen, T.; Morallon, E.; Cazorla-Amoros, D.; Titirici, M. M.: Hydrothermal Carbons from Hemicellulose-Derived Aqueous Hydrolysis Products as Electrode Materials for Supercapacitors. ChemSusChem 6 (2), 374-382 (2013)

Fechler, N.; Wohlgemuth, S.-A.; Jäker, P.; Antonietti, M.: Salt and sugar: direct synthesis of high surface area carbon materials at low temperatures via hydrothermal carbonization of glucose under hypersaline conditions. J. Mater. Chem. A 1 (33), 9418-9421 (2013)

Fechler, N.; Fellinger, T.-P.; Antonietti, M.: „Salt Templating": A Simple and Sustainable Pathway toward Highly Porous Functional Carbons from Ionic Liquids. Adv. Mater. 25 (1), 75-79 (2013)

Fechler, N.; Fellinger, T.-P.; Antonietti, M.: One-pot synthesis of nitrogen-sulfur-co-doped carbons with tunable composition using a simple isothiocyanate ionic liquid. JOURNAL OF MATERIALS CHEMISTRY A 1 (45), 14097-14102 (2013)

Fellinger, T.-P.; Thomas, A.; Yuan, J.; Antonietti, M.: 25th Anniversary Article: „Cooking Carbon with Salt": Carbon Materials and Carbonaceous Frameworks from Ionic Liquids and Poly(ionic liquid)s. ADVANCED MATERIALS 25 (41), 5838-5854 (2013)

Giordano, C.; Corbiere, T.: A step forward in metal nitride and carbide synthesis: from pure nanopowders to nanocomposites. Colloid Polym. Sci. 291 (6), 1297-1311 (2013)

Glatzel, S.; Schnepp, Z.; Giordano, C.: From Paper to Structured Carbon Electrodes by Inkjet Printing. Angew. Chem.-Int. Edit. 52 (8), 2355-2358 (2013)

Grzelczak, M.; Zhank, J.; Pfrommer, J.; Hartmann, J.; Driess, M.; Antonietti, M.; Wang, X.: Electro- and Photochemical Water Oxidation on Ligand-free Co3O4 Nanoparticles with Tunable Sizes. ACS Catal. 3 (3), 383-388 (2013)

Guiet, A.; Reier, T.; Heidary, N.; Felkel, D.; Johnson, B.; Vainio, U.; Schlaad, H.; Aksu, Y.; Driess, M.; Strasser, P.; Thomas, A.; Polte, J.; Fischer, A.: A One-Pot Approach to Mesoporous Metal Oxide Ultrathin Film Electrodes Bearing One Metal Nanoparticle per Pore with Enhanced Electrocatalytic Properties. Chem. Mater. 25 (23), 4645-4652 (2013)

Guiet, A.; Reier, T.; Heidary, N.; Felkel, D.; Johnson, B.; Vainio, U.; Schlaad, H.; Aksu, Y.; Driess, M.; Strasser, P.; Thomas, A.; Polte, J.; Fischer, A.: A One-Pot Approach to Mesoporous Metal Oxide Ultrathin Film Electrodes Bearing One Metal Nanoparticle per Pore with Enhanced Electrocatalytic Properties. Chem. Mater. 25 4645-4652 (2013)

Gupta, S.; Giordano, C.; Gradzielski, M.; Mehta, S. K.: Microwave-assisted synthesis of small Ru nanoparticles and their role in degradation of congo red. JOURNAL OF COLLOID AND INTERFACE SCIENCE 411 173-181 (2013)

Habraken, W. J. E. M.; Tao, J. H.; Brylka, L. J.; Friedrich, H.; Bertinetti, L.; Schenk, A. S.; Verch, A.; Dmitrovic, V.; Bomans, P. H. H.; Frederik, P. M.; Laven, J.; van der Schoot, P.; Aichmayer, B.; de With, G.; DeYoreo, J. J.; Sommerdijk, N. A. J. M.: Ion-association complexes unite classical and non-classical theories for the biomimetic nucleation of calcium phosphate. Nat. Commun. 4 (2013)

Höhne, P.; Krüger, K.; Tauer, K.: Vapor phase composition and radical polymerization-how the gas phase influences the kinetics of heterophase polymerization. Colloid Polym. Sci. 291 (3), 483-500 (2013)

Jeromenok, J.; Weber, J.: Restricted Access: On the Nature of Adsorption/Desorption Hysteresis in Amorphous, Microporous Polymeric Materials. Langmuir 29 12982-12989 (2013)

Jeromenok, J.; Böhlmann, W.; Jäger, C.; Weber, J.: Carbon Dioxide Adsorption in Betulin-Based Micro- and Macroporous Polyurethanes. ChemistryOpen 2 17-20 (2013)

Jiang, Y.; Gong, H. F.; Grzywa, M.; Volkmer, D.; Gower, L.; Cölfen, H.: Microdomain Transformations in Mosaic Mesocrystal Thin Films. Adv. Funct. Mater. 23 (12), 1547-1555 (2013)

Publikationen

Katekomol, P.; Roeser, J.; Bojdys, M.; Weber, J.; Thomas, A.: Covalent Triazine Frameworks Prepared from 1,3,5-Tricyanobenzene. Chem. Mat. 25 (9), 1542-1548 (2013)

Konne, J. L.; Davis, S. A.; Glatzel, S.; Hall, S. R.: Synthesis of phase pure praseodymium barium copper iron oxide. Chem. Commun. 49 (48), 5477-5479 (2013)

Konne, J.; Davis, S. A.; Glatzel, S.; Lees, M. R.; Hall, S. R.: A new stoichiometry of cuprate nanowires (vol 25, 115005, 2012). Supercond. Sci. Technol. 26 (10) (2013)

Krannig, K. S.; Huang, J.; Heise, A.; Schlaad, H.: Photochemical thiol-yne functionalization of polypeptide scaffolds. Polym. Chem. 4 (14), 3981-3986 (2013)

Kubo, S.; White, R. J.; Tauer, K.; Titirici, M.-M.: Flexible Coral-like Carbon Nanoarchitectures via a Dual Block Copolymer-Latex Templating Approach. CHEMISTRY OF MATERIALS 25 (23), 4781-4790 (2013)

Kuttner, C.; Hanisch, A.; Schmalz, H.; Eder, M.; Schlaad, H.; Burgert, I.; Fery, A.: Influence of the Polymeric Interphase Design on the Interfacial Properties of (Fiber-Reinforced) Composites. ACS Appl. Mater. Interfaces 5 (7), 2469-2478 (2013)

Kuttner, C.; Maier, P. C.; Kunert, C.; Schlaad, H.; Fery, A.: Direct Thiol-Ene Photocoating of Polyorganosiloxane Microparticles. LANGMUIR 29 (52), 16119-16126 (2013)

Li, X.-H.; Antonietti, M.: Metal nanoparticles at mesoporous N-doped carbons and carbon nitrides: functional Mott-Schottky heterojunctions for catalysis. CHEMICAL SOCIETY REVIEWS 42 (16), 6593-6604 (2013)

Li, X.-H.; Antonietti, M.: Polycondensation of Boron- and Nitrogen-Codoped Holey Graphene Monoliths from Molecules: Carbocatalysts for Selective Oxidation. Angew. Chem. Int. Ed. Engl. 52 (17), 4572-4576 (2013)

Li, X.-H.; Baar, M.; Blechert, S.; Antonietti, M.: Facilitating room-temperature Suzuki coupling reaction with light: Mott-Schottky photocatalyst for C-C-coupling. Sci. Rep. 3 (2013)

Liu, X. F.; Antonietti, M.; Giordano, C.: Manipulation of Phase and Microstructure at Nanoscale for SiC in Molten Salt Synthesis. Chem. Mat. 25 (10), 2021-2027 (2013)

Liu, X.; Antonietti, M.: Moderating Black Powder Chemistry for the Synthesis of Doped and Highly Porous Graphene Nanoplatelets and Their Use in Electrocatalysis. ADVANCED MATERIALS 25 (43), 6284-6290 (2013)

Liu, J.; Antonietti, M.: Bio-inspired NADH regeneration by carbon nitride photocatalysis using diatom templates. Energy Environ. Sci. 6 (5), 1486-1493 (2013)

Liu, J.; Huang, J.; Dontsova, D.; Antonietti, M.: Facile synthesis of carbon nitride micro-/nanoclusters with photocatalytic activity for hydrogen evolution. RSC Adv. 3 22988-22993 (2013)

Liu, X.; Fechler, N.; Antonietti, M.: Salt melt synthesis of ceramics, semiconductors and carbon nanostructures. CHEMICAL SOCIETY REVIEWS 42 (21), 8237-8265 (2013)

Men, Y.; Siebenbürger, M.; Qiu, X.; Antonietti, M.; Yuan, J.: Low fractions of ionic liquid or poly(ionic liquid) can activate polysaccharide biomass into shaped, flexible and fire-retardant porous carbons. J. Mater. Chem. A 1 (38), 11887-11893 (2013)

Men, Y. J.; Schlaad, H.; Yuan, J. Y.: Cationic Poly(ionic liquid) with Tunable Lower Critical Solution Temperature-Type Phase Transition. ACS Macro Lett. 2 (5), 456-459 (2013)

Men, Y.; Drechsler, M.; Yuan, J.: Double-stimuli-responsive spherical polymer brushes with a poly(ionic liquid) core and a thermoresponsive shell. Macromolecular Rapid Communications 34 (21), 1721-7 (2013)

Men, Y.; Drechsler, M.; Yuan, J.: Double-Stimuli-Responsive Spherical Polymer Brushes with a Poly(ionic liquid) Core and a Thermoresponsive Shell. MACROMOLECULAR RAPID COMMUNICATIONS 34 (21), 1721-1727 (2013)

Petkov, V.; Hessel, C. M.; Ovtchinnikoff, J.; Guillaussier, A.; Korgel, B. A.; Liu, X. F.; Giordano, C.: Structure-Properties Correlation in Si Nanoparticles by Total Scattering and Computer Simulations. Chem. Mat. 25 (11), 2365-2371 (2013)

Ran, Y.; Hartmann, J.; Tauer, K.: Stabile, Thermoresponsive Colloidal Clusters: An Unusual Morphology of Polymer Dispersions. MACROMOLECULAR RAPID COMMUNICATIONS 34 (20), 1629-1634 (2013)

Robinson, J. W.; Secker, C.; Weidner, S.; Schlaad, H.: Thermoresponsive Poly(N-C3 glycine)s. Macromolecules 46 (3), 580-587 (2013)

Roman, S.; Nabais, J. M. V.; Ledesma, B.; Gonzalez, J. F.; Laginhas, C.; Titirici, M. M.: Production of low-cost adsorbents with tunable surface chemistry by conjunction of hydrothermal carbonization and activation processes. Microporous Mesoporous Mat. 165 127-133 (2013)

Roohi, F.; Tauer, K.: Amphiphilically stabilized block copolymer particles via heterophase polymerization in glacial acetic acid. Colloid Polym. Sci. 291 (1 Sp. Iss. SI), 3-20 (2013)

Rozik, N.; Antonietti, M.; Yuan, J.; Tauer, K.: Polymerized Ionic Liquid as Stabilizer in Aqueous Emulsion Polymerization Enables a Hydrophilic-Hydrophobic Transition during Film Formation. Macromol. Rapid Commun. 34 (8), 665-671 (2013)

Sakaushi, K.; Nickerl, G.; Kandpal, H. C.; Cano-Cortes, L.; Gemming, T.; Eckert, J.; Kaskel, S.; van den Brink, J.: Polymeric Frameworks as Organic Semiconductors with Controlled Electronic Properties. JOURNAL OF PHYSICAL CHEMISTRY LETTERS 4 (17), 2977-2981 (2013)

Schlaad, H.: Bio-synthetic Polymer Conjugates Preface. Advances in Polymer Science 253 v-vi (2013)

Schliehe, C.; Giordano, C.: Bottom-up synthesis of Zn1.7GeN1.8O nanoparticles for photocatalytic application. Nanoscale 5 (8), 3235-3239 (2013)

Schraub, M.; Soll, S.; Hampp, N.: High refractive index coumarin-based photorefractive polysiloxanes. Eur. Polym. J. 49 (6), 1714-1721 (2013)

Sevilla, M.; Yu, L. H.; Fellinger, T. P.; Fuertes, A. B.; Titirici, M. M.: Polypyrrole-derived mesoporous nitrogen-doped carbons with intrinsic catalytic activity in the oxygen reduction reaction. RSC Adv. 3 (25), 9904-9910 (2013)

Shabnam, R.; Ali, A. I.; Miah, M. A. J.; Tauer, K.; Ahmad, H.: Influence of the third monomer on lauryl methacrylate-methyl methacrylate emulsion terpolymerization. Colloid Polym. Sci. 291 (9), 2111-2120 (2013)

Shalom, M.; Inal, S.; Fettkenhauer, C.; Neher, D.; Antonietti, M.: Improving Carbon Nitride Photocatalysis by Supramolecular Preorganization of Monomers. J. Am. Chem. Soc. 135 (19), 7118-7121 (2013)

Publikationen

Soll, S.; Zhang, P.; Zhao, Q.; Wang, Y.; Yuan, J.: Mesoporous zwitterionic poly(ionic liquid)s: intrinsic complexation and efficient catalytic fixation of CO2. POLYMER CHEMISTRY 4 (19), 5048-5051 (2013)

Soll, S.; Fellinger, T.-P.; Wang, X.; Zhao, Q.; Antonietti, M.; Yuan, J.: Water Dispersible, Highly Graphitic and Nitrogen-Doped Carbon Nanobubbles. SMALL 9 (24), 4135-4141 (2013)

Soll, S.; Zhao, Q.; Weber, J.; Yuan, J. Y.: Activated CO Sorption in Mesoporous Imidazolium-Type Poly(ionic liquid)-Based Polyampholytes. Chem. Mat. 25 (15), 3003-3010 (2013)

Soorholtz, M.; White, R. J.; Zimmermann, T.; Titirici, M.-M.; Antonietti, M.; Palkovits, R.; Schüth, F.: Direct methane oxidation over Pt-modified nitrogen-doped carbons. Chem. Commun. 49 (3), 240-242 (2013)

Tentschert, J.; Draude, F.; Jungnickel, H.; Haase, A.; Mantion, A.; Galla, S.; Thünemann, A. F.; Taubert, A.; Luch, A.; Arlinghaus, H. F.: TOF-SIMS analysis of cell membrane changes in functional impaired human macrophages upon nanosilver treatment. Surf. Interface Anal. 45 (1 Sp. Iss. SI), 483-485 (2013)

Tritschler, U.; Zlotnikov, I.; Zaslansky, P.; Aichmayer, B.; Fratzl, P.; Schlaad, H.; Coelfen, H.: Hierarchical Structuring of Liquid Crystal Polymer-Laponite Hybrid Materials. LANGMUIR 29 (35), 11093-11101 (2013)

Unuabonah, E. I.; Gunter, C.; Weber, J.; Lubahn, S.; Taubert, A.: Hybrid Clay: A New Highly Efficient Adsorbent for Water Treatment. ACS Sustain. Chem. Eng. 1 (8), 966-973 (2013)

Urakami, H.; Yilmaz, A. G.; Osiceanu, P.; Yagci, Y.; Vilela, F.; Titirici, M. M.: Facile Polymer Functionalization of Hydrothermal-Carbonization-Derived Carbons. MACROMOLECULAR RAPID COMMUNICATIONS 34 (13), 1080-1084 (2013)

Urakami, H.; Zhang, K.; Vilela, F.: Modification of conjugated microporous poly-benzothiadiazole for photosensitized singlet oxygen generation in water. Chem. Commun. 49 (23), 2353-2355 (2013)

Vach, P. J.; Brun, N.; Bennet, M.; Bertinetti, L.; Widdrat, M.; Baumgartner, J.; Klumpp, S.; Fratzl, P.; Faivre, D.: Selecting for Function: Solution Synthesis of Magnetic Nanopropellers. NANO LETTERS 13 (11), 5373-5378 (2013)

Vargantwar, P. H.; Brannock, M. C.; Tauer, K.; Spontak, R. J.: Midblock-sulfonated triblock ionomers derived from a long-chain poly[styrene-b-butadiene-b-styrene] triblock copolymer. J. Mater. Chem. A 1 (10), 3430-3439 (2013)

Wang, Z. W.; Schliehe, C.; Bian, K. F.; Dale, D.; Bassett, W. A.; Hanrath, T.; Klinke, C.; Weller, H.: Correlating Superlattice Polymorphs to Internanoparticle Distance, Packing Density, and Surface Lattice in Assemblies of PbS Nanoparticles. Nano Lett. 13 (3), 1303-1311 (2013)

Wang, L. P.; Schnepp, Z.; Titirici, M. M.: Rice husk-derived carbon anodes for lithium ion batteries. J. Mater. Chem. A 1 (17), 5269-5273 (2013)

Wohlgemuth, S.-A.; Fellinger, T.-P.; Jäker, P.; Antonietti, M.: Tunable nitrogen-doped carbon aerogels as sustainable electrocatalysts in the oxygen reduction reaction. J. Mater. Chem. A 1 (12), 4002-4009 (2013)

Yang, L. C.; Wang, S. N.; Mao, J. J.; Deng, J. W.; Gao, Q. S.; Tang, Y.; Schmidt, O. G.: Hierarchical MoS /Polyaniline Nanowires with Excellent Electrochemical Performance for Lithium-Ion Batteries. Adv. Mater. 25 (8), 1180-1184 (2013)

Yee, K. K.; Reimer, N.; Liu, J.; Cheng, S. Y.; Yiu, S. M.; Weber, J.; Stock, N.; Xu, Z. T.: Effective Mercury Sorption by Thiol-Laced Metal-Organic Frameworks: in Strong Acid and the Vapor Phase. J. Am. Chem. Soc. 135 (21), 7795-7798 (2013)

Yu, L. H.; Cai, D.; Wang, H.; Titirici, M.-M.: Hydrothermal synthesis of SnO2 and SnO2@C nanorods and their application as anode materials in lithium-ion batteries. RSC ADVANCES 3 (38), 17281-17286 (2013)

Yu, L. H.; Brun, N.; Sakaushi, K.; Eckert, J.; Titirici, M. M.: Hydrothermal nanocasting: Synthesis of hierarchically porous carbon monoliths and their application in lithium-sulfur batteries. Carbon 61 245-253 (2013)

Yuan, J. Y.; Mecerreyes, D.; Antonietti, M.: Poly(ionic liquid)s: An update. Prog. Polym. Sci. 38 (7), 1009-1036 (2013)

Zhang, P. F.; Yuan, J. Y.; Li, H. R.; Liu, X. F.; Xu, X.; Antonietti, M.; Wang, Y.: Mesoporous nitrogen-doped carbon for copper-mediated Ullmann-type C-O/-N/-S cross-coupling reactions. RSC Adv. 3 (6), 1890-1895 (2013)

Zhang, K.; Kopetzki, D.; Seeberger, P. H.; Antonietti, M.; Vilela, F.: Surface Area Control and Photocatalytic Activity of Conjugated Microporous Poly(benzothiadiazole) Networks. Angew. Chem.-Int. Edit. 52 (5), 1432-1436 (2013)

Zhang, P. F.; Yuan, J. Y.; Fellinger, T. P.; Antonietti, M.; Li, H. R.; Wang, Y.: Improving Hydrothermal Carbonization by Using Poly(ionic liquid)s. Angew. Chem.-Int. Edit. 52 (23), 6028-6032 (2013)

Zhang, L.; Dong, W. F.; Sun, H. B.: Multifunctional superparamagnetic iron oxide nanoparticles: design, synthesis and biomedical photonic applications. Nanoscale 5 (17), 7664-7684 (2013)

Zhang, K.; Vobecka, Z.; Tauer, K.; Antonietti, M.; Vilela, F.: π-Conjugated polyHIPEs as highly efficient and reusable heterogeneous photosensitizers. CHEMICAL COMMUNICATIONS 49 (95), 11158-11160 (2013)

Zhao, Q.; Fellinger, T. P.; Antonietti, M.; Yuan, J. Y.: A novel polymeric precursor for micro/mesoporous nitrogen-doped carbons. J. Mater. Chem. A 1 (16), 5113-5120 (2013)

Zhao, Q.; Yin, M. J.; Zhang, A. P.; Prescher, S.; Antonietti, M.; Yuan, J. Y.: Hierarchically Structured Nanoporous Poly(Ionic Liquid) Membranes: Facile Preparation and Application in Fiber-Optic pH Sensing. J. Am. Chem. Soc. 135 (15), 5549-5552 (2013)

Zhao, J. P.; Schlaad, H.: Synthesis of Terpene-Based Polymers. Advances in Polymer Science 253 151-190 (2013)

Zhao, Q.; Soll, S.; Antonietti, M.; Yuan, J. Y.: Organic acids can crosslink poly(ionic liquid)s into mesoporous polyelectrolyte complexes. Polym. Chem. 4 (8), 2432-2435 (2013)

Book Chapters

Baccile, N.; Weber, J.; Falco, C.; Titirici, M.-M.: Characterization of Hydrothermal Carbonization Materials. In: Sustainable Carbon Materials from Hydrothermal Processes, 151-211 (Hrsg. Titirici, M.-M.). Wiley, Chichester (2013)

White, R. J.; Fellinger, T.-P.; Kubo, S.; Brun, N.; Titirici, M. M.: Porous Hydrothermal Carbons. In: Sustainable Carbon Materials from Hydrothermal Processes, 37-73 (Hrsg. Titirici, M. M.). Wiley, Chichester (2013)

Publikationen

Wohlgemuth, S. A.; Urakami, H.; Zhao, L.; Titirici, M.-M.: Chemical Modification of Hydrothermal Carbon Materials. In: Sustainable Carbon Materials from Hydrothermal Processes, 125-149 (Hrsg. Titirici, M.-M.). Wiley, Chichester (2013)

Event Summaries

Kuttner, C.; Eder, M.; Schlaad, H.; Burgert, I.; Fery, A.: Influence of macromolecule-grafting on the interfacial adhesion in composites. (2013)

Soll, S.; Zhao, Q.; Men, Y.; Balach, J. M.; Antonietti, M.; Yuan, J.: Poly(ionic liquid) for shaped functional carbons. (2013)

Soll, S.; Men, Y.; Antonietti, M.; Yuan, J.: Double stimuli-responsive poly(ionic liquid) stabilizers for carbon nanostructures. (2013)

Texter, J.; Crombez, R.; Zhao, L.; Caballero, F. P.; White, R.; Titirici, M.; Antonietti, M.: Waterborne dispersions and advanced coatings of hydrothermal carbon. (2013)

Weber, J.; Jeromenok, J.; Zhao, J. P.; Schlaad, H.: Polymers from birch bark: Microporous membranes and new amphiphiles. (2013)

Weber, J.: Carbon dioxide adsorption in nanoporous polymers: Interactions, mechanism, and adsorption selectivity. (2013)

Other

Kron, J.; Deichmann, K.; Egly, K.; Rose, K.; Sextl, G.; Schottner, G.; Landfester, K.; Crespy, D.; Fickert, J.; Rohwerder, M.; Tran, T. H.; Vimalanandan, A.; Jobmann, M.; Börner, F.; Paulke, B.-R.: Schichtsystem zum Korrosionsschutz. (2013)

Colloid Chemistry 2014

Articles

Ahlers, P.; Frisch, H.; Spitzer, D.; Vobecka, Z.; Vilela, F.; Besenius, P.: The Synthesis of Dendritic EDOT-Peptide Conjugates and their Multistimuli-Responsive Self-Assembly into Supramolecular Nanorods and Fibers in Water. Chem. – Asian J. 9 (8), 2052-2057 (2014)

Ahmad, H.; Nurunnabi, M.; Rahman, M. M.; Kumar, K.; Tauer, K.; Minami, H.; Gafur, M. A.: Magnetically doped multi stimuli-responsive hydrogel microspheres with IPN structure and application in dye removal. Colloids and Surfaces A: Physicochemical and Engineering Aspects 459 39-47 (2014)

Ahmad, H.; Rashid, M.; Rahman, M. M.; Miah, M. A. J.; Tauer, K.; Gafur, M. A.: Surface modification of temperature-responsive polymer particles by an electrically conducting polyaniline shell layer. Polymer International 63 (4), 667-673 (2014)

Algara-Siller, G.; Severin, N.; Chong, S. Y.; Bjorkman, T.; Palgrave, R. G.; Laybourn, A.; Antonietti, M.; Khimyak, Y. Z.; Krasheninnikov, A. V.; Rabe, J. P.; Kaiser, U.; Cooper, A. I.; Thomas, A.; Bojdys, M. J.: Triazine-Based Graphitic Carbon Nitride: a Two-Dimensional Semiconductor. Angew. Chem. Int. Ed. 53 (29), 7450-7455 (2014)

Ambrogi, M.; Men, Y.; Polzer, F.; Yuan, J.: Salt-confinement enables production of nitrogen-doped porous carbons in an air oven. RSC Adv. 4 (71), 37714-37720 (2014)

Antonietti, M.; Fechler, N.; Fellinger, T.-P.: Carbon Aerogels and Monoliths: Control of Porosity and Nanoarchitecture via Sol-Gel routes. CHEM MATER 26 (1), 196-210 (2014)

Atilkan, N.; Schlaad, H.; Nur, Y.; Hacaloglu, J.: Direct Pyrolysis - Mass Spectrometry Analysis of Thermal Degradation of Thio-Click-Modified Poly(2-oxazoline). Macromol. Chem. Phys. 215 (2), 148-152 (2014)

Barzyk, W.; Lunkenheimer, K.; Warszynski, P.; Jachimska, B.; Pomianowski, A.: Effect of molecular structure of amphiphiles on the surface pressure and electric surface potential isotherms at the air/solution interface. Colloids and Surfaces A: Physicochemical and Engineering Aspects 443 515-524 (2014)

Bergek, J.; Andersson Trojer, M.; Mok, A.; Nordstierna, L.: Controlled release of microencapsulated 2-n-octyl-4-isothiazolin-3-one from coatings: Effect of microscopic and macroscopic pores. Colloids and Surfaces A: Physicochemical and Engineering Aspects 458 155-167 (2014)

Borodina, T. N.; Grigoriev, D. O.; Carillo, M. A.; Hartmann, J.; Möhwald, H.; Shchukin, D. G.: Preparation of Multifunctional Polysaccharide Microcontainers for Lipophilic Bioactive Agents. ACS Applied Materials & Interfaces 6 (9), 6570-6578 (2014)

Brosnan, S.; Schlaad, H.: Modification of polypeptide materials by Thiol-X chemistry. Polymer 55 (22), 5511-5516 (2014)
I

Brun, N.; Sakaushi, K.; Eckert, J.; Titirici, M. M.: Carbohydrate-Derived Nanoarchitectures: On a Synergistic Effect Toward an Improved Performance in Lithium Sulfur Batteries. ACS Sustainable Chemistry & Engineering 2 (2), 126-129 (2014)

Brun, N.; Osiceanu, P.; Titirici, M. M.: Biosourced Nitrogen-Doped Microcellular Carbon Monoliths. ChemSusChem 7 (2), 397-401 (2014)

Chieffi, G.; Giordano, C.; Antonietti, M.; Esposito, D.: FeNi nanoparticles with carbon armor as sustainable hydrogenation catalysts: towards biorefineries. J. Mater. Chem. A 2 (30), 11591-11596 (2014)

Chung, K. K.; Fechler, N.; Antonietti, M.: A Salt-flux synthesis of highly porous, N- and O-doped carbons from a polymer precursor and its use for high capacity/high rate supercapacitors. Advanced Porous Materials 2 (1), 61-68 (2014)

Clavel, G.; Molinari, V.; Kraupner, A.; Giordano, C.: Easy Access to Ni3N- and Ni-carbon Nanocomposite Catalysts. Chem. Eur. J. 20 (29), 9018-9023 (2014)

Dadashi-Silab, S.; Tasdelen, M. A.; Kiskan, B.; Wang, X.; Antonietti, M.; Yagci, Y.: Photochemically Mediated Atom Transfer Radical Polymerization Using Polymeric Semiconductor Mesoporous Graphitic Carbon Nitride. Macromol. Chem. Phys. 215 (7), 675-681 (2014)

Dadashi-Silab, S.; Kiskan, B.; Antonietti, M.; Yagci, Y.: Mesoporous graphitic carbon nitride as a heterogeneous catalyst for photoinduced copper(I)-catalyzed azide-alkyne cycloaddition. RSC Adv. 4 (94), 52170-52173 (2014)

Publikationen

Dominguez, P. H.; Grygiel, K.; Weber, J.: Nanostructured poly(benzimidazole) membranes by N-alkylation. Express Polymer Letters 8 (1), 30-38 (2014)

Dong, S.; Yuan, J.; Huang, F.: A pillar[5]arene/imidazolium [2]rotaxane: solvent-and thermo-driven molecular motions and supramolecular gel formation. Chemical Science 5 (1), 247-252 (2014)

Elumeeva, K.; Antonietti, M.; Fechler, N.; Fellinger, T.-P.: Metal-free Ionic Liquid-derived Electrocatalyst for High-Performance Oxygen Reduction in Acidic and Alkaline Electrolytes. Materials Horizons 1 1-7 (2014)

Fechler, N.; Tiruye, G. A.; Marcilla, R.; Antonietti, M.: Vanadium nitride@N-doped carbon nanocomposites: tuning of pore structure and particle size through salt templating and its influence on supercapacitance in ionic liquid media. RSC Adv. 4 26981-26989 (2014)

Fettkenhauer, C.; Weber, J.; Antonietti, M.; Dontsova, D.: Novel carbon nitride composites with improved visible light absorption synthesized in ZnCl2-based salt melts. RSC Adv. 4 (77), 40803-40811 (2014)

Führer, F.; Schlaad, H.: ADMET Polymerization of Amino-Acid-Based Diene. Macromol. Chem. Phys. 215 (22), 2268-2273 (2014)

Gao, L.; Yao, Y.; Dong, S.; Yuan, J.: Host-guest complexation between 1,4-dipropoxypillar[5]arene and imidazolium-based ionic liquids. RSC Adv. 4 (67), 35489-35492 (2014)

Göbel, R.; Hesemann, P.; Friedrich, A.; Rothe, R.; Schlaad, H.; Taubert, A.: Modular Thiol-Ene Chemistry Approach towards Mesoporous Silica Monoliths with Organically Modified Pore Walls. Chem. – Eur. J. 20 (52), 17579-17589 (2014)

Grygiel, K.; Wicklein, B.; Zhao, Q.; Eder, M.; Pettersson, T.; Bergstroem, L.; Antonietti, M.; Yuan, J.: Omnidispersible poly(ionic liquid)-functionalized cellulose nanofibrils: surface grafting and polymer membrane reinforcement. Chem. Commun. 50 (83), 12486-12489 (2014)

Grygiel, K.; Chabanne, L.; Men, Y.; Yuan, J.: Thiazolium-Containing Poly(ionic liquid)s and Ionic Polymers. Macromolecular Symposia 342 (1), 67-77 (2014)

Heyda, J.; Soll, S.; Yuan, J.; Dzubiella, J.: Thermodynamic Description of the LCST of Charged Thermoresponsive Copolymers. Macromolecules 47 (6), 2096-2102 (2014)

Höhne, P.; Tauer, K.: How much weighs the swelling pressure. Colloid Polym. Sci. 292 (11), 2983-2992 (2014)

Ishida, Y.; Chabanne, L.; Antonietti, M.; Shalom, M.: Morphology Control and Photocatalysis Enhancement by the One-Pot Synthesis of Carbon Nitride from Preorganized Hydrogen-Bonded Supramolecular Precursors. Langmuir 30 (2), 447-451 (2014)

Janich, C.; Wölk, C.; Tassler, S.; Drescher, S.; Meister, A.; Brezesinski, G.; Dobner, B.; Langner, A.: Composites of malonic acid diamides and phospholipids - Structural parameters for optimal transfection efficiency in A549 cells. Eur. J. Lipid Sci. Technol. 116 (9), 1184-1194 (2014)

Kaur, R.; Giordano, C.; Gradzielski, M.; Mehta, S. K.: Synthesis of Highly Stable, Water-Dispersible Copper Nanoparticles as Catalysts for Nitrobenzene Reduction. Chem. – Asian J. 9 (1), 189-198 (2014)

Kedracki, D.; Chekini, M.; Maroni, P.; Schlaad, H.; Nardin, C.: Synthesis and Self-Assembly of a DNA Molecular Brush. Biomacromolecules 15 (9), 3375-3382 (2014)

Kedracki, D.; Maroni, P.; Schlaad, H.; Vebert-Nardin, C.: Polymer-Aptamer Hybrid Emulsion Templating Yields Bioresponsive Nanocapsules. Adv. Funct. Mater. 24 (8), 1133-1139 (2014)

Kirchhecker, S.; Antonietti, M.; Esposito, D.: Hydrothermal decarboxylation of amino acid derived imidazolium zwitterions: a sustainable approach towards ionic liquids. Green Chem. 16 (8), 3705-3709 (2014)

Krannig, K.-S.; Esposito, D.; Antonietti, M.: Highly Efficient Transfer of Amino Groups to Imidazolium Entities for Polymer Coupling and Cross-Linking. Macromolecules 47 (7), 2350-2353 (2014)

Krannig, K.-S.; Doriti, A.; Schlaad, H.: Facilitated Synthesis of Heterofunctional Glycopolypeptides. Macromolecules 47 (7), 2536-2539 (2014)

Krannig, K.-S.; Schlaad, H.: Emerging bioinspired polymers: glycopolypeptides. Soft Matter 10 4229-4235 (2014)

Krannig, K.-S.; Sun, J.; Schlaad, H.: Stimuli-Responsivity of Secondary Structures of Glycopolypeptides Derived from Poly(L-glutamate-co-allylglycine). Biomacromolecules 15 (3), 978-984 (2014)

Krüger, K.; Hernandez, H.; Tauer, K.: Particle Size-Dependent Effects in Hydrophobically Initiated Emulsion Polymerization. Macromolecular Theory and Simulations 23 (3), 125-135 (2014)

Kuzmicz, D.; Prescher, S.; Polzer, F.; Soll, S.; Seitz, C.; Antonietti, M.; Yuan, J.: The Colloidal Stabilization of Carbon with Carbon: Carbon Nanobubbles as both Dispersant and Glue for Carbon Nanotubes. Angew. Chem. Int. Ed. 53 (4), 1062-1066 (2014)

Kuzmicz, D.; Coupillaud, P.; Men, Y.; Vignolle, J.; Vendraminetto, G.; Ambrogi, M.; Taton, D.; Yuan, J.: Functional mesoporous poly(ionic liquid)-based copolymer monoliths: From synthesis to catalysis and microporous carbon production. Polymer 55 (16), 3423-3430 (2014)

Li, G. L.; Schenderlein, M.; Men, Y.; Möhwald, H.; Shchukin, D. G.: Monodisperse Polymeric Core-Shell Nanocontainers for Organic Self-Healing Anticorrosion Coatings. Advanced Materials Interfaces 1 (1) (2014)

Liu, X.; Giordano, C.; Antonietti, M.: A Facile Molten-Salt Route to Graphene Synthesis. Small 10 (1), 193-200 (2014)

Liu, J.; Huang, J.; Zhou, H.; Antonietti, M.: Uniform Graphitic Carbon Nitride Nanorod for Efficient Photocatalytic Hydrogen Evolution and Sustained Photoenzymatic Catalysis. ACS Applied Materials & Interfaces 6 8434-8440 (2014)

Liu, J.; Cazelles, R.; Chen, Z.; Zhou, H.; Galarneau, A.; Antonietti, M.: The bioinspired construction of an ordered carbon nitride array for photocatalytic mediated enzymatic reduction. Phys. Chem. Chem. Phys. 16 14699-14705 (2014)

Liu, X.; Antonietti, M.: Molten salt activation for synthesis of porous carbon nanostructures and carbon sheets. Carbon 69 460-466 (2014)

Long, T. E.; Yuan, J.: Polymerized ionic liquids: from structure and properties to emerging technology. Polymer 55 (16), 3287-3288 (2014)

Publikationen

Mai, T.; Rakhmatullina, E.; Bleek, K.; Boye, S.; Yuan, J.; Völkel, A.; Gräwert, M.; Cheaib, Z.; Eick, S.; Günter, C.; Lederer, A.; Lussi, A.; Taubert, A.: Poly(ethylene oxide)-b-poly(3-sulfopropyl methacrylate) Block Copolymers for Calcium Phosphate Mineralization and Biofilm Inhibition. Biomacromolecules 15 (11), 3901-3914 (2014)

Maneeratana, V.; Portehault, D.; Chaste, J.; Mailly, D.; Antonietti, M.; Sanchez, C.: Original Electrospun Core Shell Nanostructured Magneli Titanium Oxide Fibers and their Electrical Properties. Adv. Mater. 26 (17), 2654-2658 (2014)

Maneeratana, V.; Portehault, D.; Chaste, J.; Mailly, D.; Antonietti, M.; Sanchez, C.: Titanium Oxide Fibers: Original Electrospun Core-Shell Nanostructured Magneli Titanium Oxide Fibers and their Electrical Properties. Adv. Mater. 26 (17), 2609-2609 (2014)

Men, Y.; Kuzmicz, D.; Yuan, J.: Poly(ionic liquid) colloidal particles. Curr. Opin. Colloid Interface Sci. 19 (2), 76-83 (2014)

Men, Y.; Schlaad, H.; Völkel, A.; Yuan, J.: Thermoresponsive polymerized gemini dicationic ionic liquid. Polym. Chem. 5 (11), 3719-3724 (2014)

Meng, Q. B.; Weber, J.: Lignin-based Microporous Materials as Selective Adsorbents for Carbon Dioxide Separation. ChemSusChem 12 (7), 3312-3318 (2014)

Meret, M.; Kopetzki, D.; Degenkolbe, T.; Kleessen, S.; Nikoloski, Z.; Tellstroem, V.; Barsch, A.; Kopka, J.; Antonietti, M.; Willmitzer, L.: From systems biology to systems chemistry: metabolomic procedures enable insight into complex chemical reaction networks in water. RSC Adv. 4 (32), 16777-16781 (2014)

Milke, B.; Wall, C.; Metzke, S.; Clavel, G.; Fichtner, M.; Giordano, C.: A simple synthesis of MnN0.43@C nanocomposite: characterization and application as battery material. Journal of Nanoparticle Research 16 (12) (2014)

Molinari, V.; Antonietti, M.; Esposito, D.: An integrated strategy for the conversion of cellulosic biomass into gamma-valerolactone. Catal. Sci. Technol. 4 (10), 3626-3630 (2014)

Molinari, V.; Giordano, C.; Antonietti, M.; Esposito, D.: Titanium Nitride-Nickel Nanocomposite as Heterogeneous Catalyst for the Hydrogenolysis of Aryl Ethers. JACS 136 (5), 1758-1761 (2014)

Mosca, S.; Keller, J.; Azzouz, N.; Wagner, S.; Titz, A.; Seeberger, P. H.; Brezesinski, G.; Hartmann, L.: Amphiphilic Cationic ß3R3-Peptides: Membrane Active Peptidomimetics and Their Potential as Antimicrobial Agents. Biomacromolecules 15 (5), 1687-1695 (2014)

Nisticò, R.; Magnacca, G.; Antonietti, M.; Fechler, N.: "Salted Silica": Sol-Gel Chemistry of Silica under Hypersaline Conditions. Z. Anorg. Allg. Chem. 640 (3-4), 582-587 (2014)

Peikert, M.; Chen, X.; Chi, L.; Brezesinski, G.; Janich, S.; Würthwein, E.-U.; Schäfer, H. J.: Phase Behavior and Molecular Packing of Octadecyl Phenols and their Methyl Ethers at the Air/Water Interface. Langmuir 30 (20), 5780-5789 (2014)

Pereira, R. C.; Arbestain, M. C.; Kaal, J.; Sueiro, M. V.; Sevilla, M.; Hindmarsh, J.: Detailed carbon chemistry in charcoals from pre-European Maori gardens of New Zealand as a tool for understanding biochar stability in soils. Eur. J. Soil Sci. 65 (1), 83-95 (2014)

Prescher, S.; Ghasimi, S.; Höhne, P.; Grygiel, K.; Landfester, K.; Zhang, K. A. I.; Yuan, J.: Polyfluorene Polyelectrolyte Nanoparticles: Synthesis of Innovative Stabilizers for Heterophase Polymerization. Macromolecular Rapid Communications 22 (35), 1925-1930 (2014)

Prescher, S.; Polzer, F.; Yang, Y.; Siebenbürger, M.; Ballauff, M.; Yuan, J.: Polyelectrolyte as Solvent and Reaction Medium. JACS 136 (1), 12-15 (2014)

Ran, Y.; Tauer, K.: From particles to stabilizing blocks - polymerized ionic liquids in aqueous heterophase polymerization. Polym. Chem. 5 (19), 5644-5655 (2014)

Ren, J.; Antonietti, M.; Fellinger, T.-P.: Efficient Water Splitting Using a Simple Ni/N/C Paper Electrocatalyst. Advanced Energy Materials (2014)

Ressnig, D.; Antonietti, M.: Ultrafast Syntheses of Silver Foams from Ag2NCN: Combustion Synthesis versus Chemical Reduction. Chem. Mater. 26 (14), 4064-4067 (2014)

Ressnig, D.; Corbiere, T.; Lunkenbein, T.; Braun, U.; Willinger, M. G.; Antonietti, M.: Decomposition synthesis of tuneable, macroporous carbon foams from crystalline precursors via in situ templating. Journal of Materials Chemistry A 2 (42), 18076-18081 (2014)

Ressnig, D.; Clavel, G.; Scharnagl, N.; Antonietti, M.: Dye-Mediated Growth of 2D Coppercarbodiimide (CuNCN) Nanostructures and their Metamorphosis into a 3D Cu@CxNyHybrid. Part. Part. Syst. Charact. 31 (5), 557-560 (2014)

Ressnig, D.; Corbiere, T.; Lunkenbein, T.; Braun, U.; Willinger, M. G.; Antonietti, M.: Decomposition synthesis of tuneable, macroporous carbon foams from crystalline precursors via in situ templating. J. Mater. Chem. A 2 (42), 18076-18081 (2014)

Sakaushi, K.; Hosono, E.; Nickerl, G.; Zhou, H.; Kaskel, S.; Eckert, J.: Bipolar porous polymeric frameworks for low-cost, high-power, long-life all-organic energy storage devices. J. Power Sources 245 553-556 (2014)

Schuster, M. E.; Teschner, D.; Popovic, J.; Ohmer, N.; Girgsdies, F.; Tornow, J.; Willinger, M. G.; Samuelis, D.; Titirici, M. M.; Maier, J.; Schlögl, R.: Charging and Discharging Behavior of Solvothermal LiFePO4 Cathode Material Investigated by Combined EELS/NEXAFS Study. Chem. Mater. 26 (2), 1040-1047 (2014)

Schuster, M. E.; Teschner, D.; Popovic, J.; Ohmer, N.; Girgsdies, F.; Tornow, J.; Willinger, M. G.; Samuelis, D.; Titirici, M. M.; Maier, J.; Schlögl, R.: Charging and Discharging Behavior of Solvothermal LiFePO4 Cathode Material Investigated by Combined EELS/NEXAFS Study. Chem. Mater. 26 (2), 1040-1047 (2014)

Sevilla, M.; Yu, L.; Zhao, L.; Ania, C. O.; Titiricic, M.-M.: Surface Modification of CNTs with N-Doped Carbon: An Effective Way of Enhancing Their Performance in Supercapacitors. ACS Sustainable Chemistry & Engineering 2 (4), 1049-1055 (2014)

Sevilla, M.; Yu, L.; Ania, C. O.; Titirici, M.-M.: Supercapacitive Behavior of Two Glucose-Derived Microporous Carbons: Direct Pyrolysis versus Hydrothermal Carbonization. ChemElectroChem 1 (12), 2138-2145 (2014)

Shalom, M.; Guttentag, M.; Fettkenhauer, C.; Inal, S.; Neher, D.; Llobet, A.; Antonietti, M.: In Situ Formation of Heterojunctions in Modified Graphitic Carbon Nitride: Synthesis and Noble Metal Free Photocatalysis. Chem. Mater. 26 (19), 5812-5818 (2014)

Publikationen

Shalom, M.; Gimenez, S.; Schipper, F.; Herraiz-Cardona, I.; Bisquert, J.; Antonietti, M.: Controlled Carbon Nitride Growth on Surfaces for Hydrogen Evolution Electrodes. Angew. Chem. Int. Ed. 53 (14), 3654-3658 (2014)

Shalom, M.; Molinari, V.; Esposito, D.; Clavel, G.; Ressnig, D.; Giordano, C.; Antonietti, M.: Sponge-like Nickel and Nickel Nitride Structures for Catalytic Applications. Adv. Mater. 26 (8), 1272-1276 (2014)

Shalom, M.; Inal, S.; Neher, D.; Antonietti, M.: SiO2/carbon nitride composite materials: The role of surfaces for enhanced photocatalysis. Catalysis Today 225 185-190 (2014)

Skorupska, K.; Giordano, C.; Zoladek, S.; Zurowski, A.; Milke, B.; Gao, Q. S.; Ramirez, A.; Fiechter, S.; Lewerenz, H. J.; Kulesza, P. J.: Semiconducting Ta3N5-polymer Nanohybrid that Photoelectrolyze Water. ECS Transactions 58 (30), 1-7 (2014)

Soll, S.; Antonietti, M.; Yuan, J.: Poly(ionic liquid) nanoparticles as novel colloidal template for silica nanocasting. Polymer 55 (16), 3415-3422 (2014)

Stefaniu, C.; Brezesinski, G.: X-ray investigation of monolayers formed at the soft air/water interface. Curr. Opin. Colloid Interface Sci. 19 (3), 216-227 (2014)

Stefaniu, C.; Vilotijevic, I.; Santer, M.; Brezesinski, G.; Seeberger, P. H.; Silva, D. V.: Versatility of a Glycosylphosphatidylinositol Fragment in Forming Highly Ordered Polymorphs. Langmuir 30 (18), 5185-5192 (2014)

Stefaniu, C.; Vilotijevic, I.; Brezesinski, G.; Seeberger, P. H.; Varón Silva, D.: A comparative structural study in monolayers of GPI fragments and their binary mixtures. Phys. Chem. Chem. Phys. 16 (20), 9259-9265 (2014)

Stefaniu, C.; Brezesinski, G.: Grazing incidence X-ray diffraction studies of condensed double-chain phospholipid monolayers formed at the soft air/water interface. Adv. Colloid Interface Sci. 207 265-279 (2014)

Taskin, O. S.; Kiskan, B.; Aksu, A.; Balkis, N.; Weber, J.; Yagci, Y.: Polybenzoxazine: A Powerful Tool for Removal of Mercury Salts from Water. Chem. Eur. J. 20 (35), 10953-10958 (2014)

Tentschert, J.; Jungnickel, H.; Reichardt, P.; Leube, P.; Kretzschmar, B.; Taubert, A.; Luch, A.: Identification of nano clay in composite polymers. Surface and Interface Analysis 46 (SI), 334-336 (2014)

Tritschler, U.; Zlotnikov, I.; Keckeis, P.; Schlaad, H.; Cölfen, H.: Optical Properties of Self-Organized Gold Nanorod-Polymer Hybrid Films. Langmuir 30 (46), 13781-13790 (2014)

Tritschler, U.; Zlotnikov, I.; Zaslansky, P.; Fratzl, P.; Schlaad, H.; Cölfen, H.: Hierarchically Structured Vanadium Pentoxide-Polymer Hybrid Materials. ACS Nano 8 (5), 5089-5104 (2014)

Uhlig, K.; Börner, H. G.; Wischerhoff, E.; Lutz, J.-F.; Jaeger, M. S.; Laschewsky, A.; Duschl, C.: On the Interaction of Adherent Cells with Thermoresponsive Polymer Coatings. Polymers 6 (4), 1164-1177 (2014)

Unterlass, M. M.; Emmerling, F.; Antonietti, M.; Weber, J.: From dense monomer salt crystals to CO2 selective microporous polyimides via solid-state polymerization. Chem. Commun. 50 430-432 (2014)

Wang, L.; Schütz, C.; Salazar-Alvarez, G.; Titirici, M.-M.: Carbon aerogels from bacterial nanocellulose as anodes for lithium ion batteries. RSC Adv. 4 (34), 17549-17554 (2014)

Wei, C.; Ran, Y.; Tauer, K.: The wettability of polymer films depends on the polymerization conditions. Colloid Polym. Sci. 292 (7), 1545-1552 (2014)

Wessig, P.; Gerngroß, M.; Pape, S.; Bruhns, P.; Weber, J.: Novel porous materials based on oligospiroketals (OSK). RSC Adv. 4 (59), 31123-31129 (2014)

Wirth, J.; Neumann, R.; Antonietti, M.; Saalfrank, P.: Adsorption and photocatalytic splitting of water on graphitic carbon nitride: a combined first principles and semiempirical study. Phys. Chem. Chem. Phys. 16 (30), 15917-15926 (2014)

Wölk, C.; Pawlowska, D.; Drescher, S.; Auerswald, A.; Meister, A.; Hause, G.; Blume, A.; Langner, A. ; Brezesinski, G.; Dobner, B.: New Micellar Transfection Agents. Langmuir 30 (17), 4905-4915 (2014)

Xu, J.; Brenner, T. J. K.; Chen, Z.; Neher, D.; Antonietti, M.; Shalom, M.: Upconversion-Agent Induced Improvement of g-C3N4 Photocatalyst under Visible Light. ACS Appl. Mater. Interfaces 6 (19), 16481-16486 (2014)

Xu, J.; Brenner, T. J. K.; Chabanne, L.; Neher, D.; Antonietti, M.; Shalom, M.: Liquid-Based Growth of Polymeric Carbon Nitride Layers and Their Use in a Mesostructured Polymer Solar Cell with Voc Exceeding 1 V. JACS 136 (39), 13486-13489 (2014)

Yang, Y.; Wang, A.; Jia, Y.; Brezesinski, G.; Dai, L.; Zhao, J.; Li, J.: Peptide p160-Coated Silica Nanoparticles Applied in Photodynamic Therapy. Chem. Asian J. 9 (8), 2126-2131 (2014)

Zakrevskyy, Y.; Roxlau, J.; Brezesinski, G.; Lomadze, N.; Santer, S.: Photosensitive surfactants: Micellization and interaction with DNA. J. Chem. Phys. 140 (4) (2014)

Zhang, Z.; Zhao, Q.; Yuan, J.; Antonietti, M.; Huang, F.: A hybrid porous material from a pillar[5]arene and a poly(ionic liquid): selective adsorption of n-alkylene diols. Chem. Commun. 50 (20), 2595-2597 (2014)

Zhang, L.; Belova, V.; Wang, H.; Dong, W.; Möhwald, H.: Controlled Cavitation at Nano/Microparticle Surfaces. Chem. Mater. 26 (7), 2244-2248 (2014)

Zhang, C.; Antonietti, M.; Fellinger, T.-P.: Blood Ties: Co3O4 Decorated Blood Derived Carbon as a Superior Bifunctional Electrocatalyst. Adv. Funct. Mater. 24 (48), 7655-7665 (2014)

Zhao, Q.; Dunlop, J. W. C.; Qiu, X.; Huang, F.; Zhang, Z.; Heyda, J.; Dzubiella, J.; Antonietti, M.; Yuan, J.: An instant multi-responsive porous polymer actuator driven by solvent molecule sorption. Nat. Commun. 5 (2014)

Zhou, H.; Ding, L.; Fan, T.; Ding, J.; Zhang, D.; Guo, Q.: Leaf-inspired hierarchical porous CdS/Au/N-TiO2 heterostructures for visible light photocatalytic hydrogen evolution. Applied Catalysis B: Environmental 147 221-228 (2014)

Zou, H.; Schlaad, H.: Sodium silicate route to coat polymer particles with silica. Colloid Polym. Sci. 292 (7), 1693-1700 (2014)

Zou, Q.; Zhang, L.; Yan, X.; Wang, A.; Ma, G.; Li, J.; Möhwald, H.; Mann, S.: Multifunctional Porous Microspheres Based on Peptide-Porphyrin Hierarchical Co-Assembly. Angew. Chem. Int. Ed. 53 (9), 2366-2370 (2014)

Publikationen

Book Chapters
Kirchhecker, S.; Esposito, D.: Amino Acid-Derived Imidazolium Zwitterions: Building Blocks for Renewable Ionic Liquids and Materials. In: Green Technologies for the Environment, 53-68 (Hrsg. Obare, S. O.; Luque, R.). American Chemical Society, Washington, DC (2014)

Event Summaries
Antonietti, M.; Yuan, J.: Mesoporous engineering polymers and functional membranes. (2014)

Antonietti, M.; Fellinger, T.-P.; Fechler, N.: Black magic: Porous „designer" carbons for electrochemical energy converison and next generation supercapacitors. (2014)

Brosnan, S.; Schlaad, H.; Antonietti, M.: Double hydrophilic block copolymers as cellular mimics. (2014)

Diehl, C.; ten Brummelhuis, N.; Secker, C.; Schlaad, H.: Smart poly(2-oxazoline) particles. (2014)

Fechler, N.; Tiruye, G. A.; Marcilla, R.: Salt templating: Carbons with precise nanoporosity and their application as advanced supercapacitors. (2014)

Secker, C.; Robinson, J. W.; Schlaad, H.: Thermoresponsive polypeptoids. (2014)

Zhao, Q.; Soll, S.; Yang, Y.; Ambrogi, M.; Yuan, J.: Metal containing Poly(ionic liquid) for catalysis. (2014)

Zhao, Q.; Prescher, S.; Antonietti, M.; Yuan, J.: Nanoporous poly(ionic liquid) networks: Be ready to get charged. (2014)

Other
Liu, J.: NextGen Speaks. (2014)

Editorial
Jing, D.; Shi, J.; Meyrueis, P.; Zhou, H.: Semiconductor-Based Photocatalytic, Photoelectrochemical, and Photovoltaic Solar-Energy Conversion. (2014)

Interfaces 2013

Articles
Ai, B.; Yu, Y.; Möhwald, H.; Zhang, G.: Novel 3D Au nanohole arrays with outstanding optical properties. Nanotechnology 24 (3) (2013)

Ai, B.; Yu, Y.; Möhwald, H.; Zhang, G.: Responsive Monochromatic Color Display Based on Nanovolcano Arrays. ADVANCED OPTICAL MATERIALS 1 (10), 724-731 (2013)

Asanuma, H.; Subedi, P.; Hartmann, J.; Shen, Y. F.; Möhwald, H.; Nakanishi, T.; Skirtach, A.: Nanoplasmonic Modification of the Local Morphology, Shape, and Wetting Properties of Nanoflake Microparticles. Langmuir 29 (24), 7464-7471 (2013)

Avdeev, M. V.; Aksenov, V. L.; Gazova, Z.; Almasy, L.; Petrenko, V. I.; Gojzewski, H.; Feoktystov, A. V.; Siposova, K.; Antosova, A.; Timko, M.; Kopcansky, P.: On the determination of the helical structure parameters of amyloid protofilaments by small-angle neutron scattering and atomic force microscopy. J. Appl. Crystallogr. 46 (1), 224-233 (2013)

Babu, S. S.; Hollamby, M. J.; Aimi, J.; Ozawa, H.; Saeki, A.; Seki, S.; Kobayashi, K.; Hagiwara, K.; Yoshizawa, M.; Möhwald, H.; Nakanishi, T.: Nonvolatile liquid anthracenes for facile full-colour luminescence tuning at single blue-light excitation. Nat. Commun. 4 (2013)

Behra, M.; Azzouz, N.; Schmidt, S.; Volodkin, D. V.; Mosca, S.; Chanana, M.; Seeberger, P. H.; Hartmann, L.: Magnetic Porous Sugar-Functionalized PEG Microgels for Efficient Isolation and Removal of Bacteria from Solution. Biomacromolecules 14 (6), 1927-1935 (2013)

Belova, V.; Krasowska, M.; Wang, D. Y.; Ralston, J.; Shchukin, D. G.; Möhwald, H.: Influence of adsorbed gas at liquid/solid interfaces on heterogeneous cavitation. Chem. Sci. 4 (1), 248-256 (2013)

Borisova, D.; Akcakayiran, D.; Schenderlein, M.; Möhwald, H.; Shchukin, D. G.: Nanocontainer-Based Anticorrosive Coatings: Effect of the Container Size on the Self-Healing Performance. ADVANCED FUNCTIONAL MATERIALS 23 (30), 3799-3812 (2013)

Borisova, D.; Möhwald, H.; Shchukin, D. G.: Influence of Embedded Nanocontainers on the Efficiency of Active Anticorrosive Coatings for Aluminum Alloys Part II: Influence of Nanocontainer Position. ACS Appl. Mater. Interfaces 5 (1), 80-87 (2013)

Borisova, D.; Akcakayiran, D.; Schenderlein, M.; Möhwald, H.; Shchukin, D. G.: Nanocontainer-Based Anticorrosive Coatings: Effect of the Container Size on the Self-Healing Performance. ADVANCED FUNCTIONAL MATERIALS 23 (30), 3799-3812 (2013)

Cui, X. J.; Li, Z. F.; Zhong, S. L.; Wang, B. N.; Han, Y. S.; Wang, H. Y.; Möhwald, H.: A Facile Sonochemical Route for the Fabrication of Magnetic Protein Microcapsules for Targeted Delivery. Chem.-Eur. J. 19 (29), 9485-9488 (2013)

Cui, X. J.; Wang, B. N.; Zhong, S. L.; Li, Z. F.; Han, Y. S.; Wang, H. Y.; Moehwald, H.: Preparation of protein microcapsules with narrow size distribution by sonochemical method. Colloid Polym. Sci. 291 (10), 2271-2278 (2013)

Dan, A.; Wüstneck, R.; Krägel, J.; Aksenenko, E. V.; Fainerman, V. B.; Miller, R.: Adsorption and Dilational Rheology of Mixed beta-Casein/DoTAB Layers Formed by Sequential and Simultaneous Adsorption at the Water/Hexane Interface. Langmuir 29 (7), 2233-2241 (2013)

Dan, A.; Gochev, G.; Krägel, J.; Aksenenko, E. V.; Fainerman, V. B.; Miller, R.: Interfacial rheology of mixed layers of food proteins and surfactants. Curr. Opin. Colloid Interface Sci. 18 (4), 302-310 (2013)

Dannehl, C.; Gutsmann, T.; Brezesinski, G.: Surface activity and structures of two fragments of the human antimicrobial LL-37. Colloid Surf. B-Biointerfaces 109 129-135 (2013)

Engelhardt, K.; Lexis, M.; Gochev, G.; Konnerth, C.; Miller, R.; Willenbacher, N.; Peukert, W.; Braunschweig, B.: pH Effects on the Molecular Structure of beta-Lactoglobulin Modified Air-Water Interfaces and Its Impact on Foam Rheology. LANGMUIR 29 (37), 11646-11655 (2013)

Fainerman, V. B.; Aksenenko, E. V.; Krägel, J.; Miller, R.: Viscoelasticity Moduli of Aqueous C14EO8 Solutions as Studied by Drop and Bubble Profile Methods. Langmuir 29 (23), 6964-6968 (2013)

Publikationen

Fainerman, V. B.; Mucic, N.; Pradines, V.; Aksenenko, E. V.; Miller, R.: Adsorption of Alkyltrimethylammonium Bromides at Water/Alkane Interfaces: Competitive Adsorption of Alkanes and Surfactants. LANGMUIR 29 (45), 13783-13789 (2013)

Fedotenko, I. A.; Stefaniu, C.; Brezesinski, G.; Zumbuehl, A.: Monolayer Properties of 1,3-Diamidophospholipids. Langmuir 29 (30), 9428-9435 (2013)

Fomina, E. S.; Vysotsky, Y. B.; Vollhardt, D.; Fainerman, V. B.; Miller, R.: Quantum chemical analysis of the thermodynamics of 2D cluster formation of 2-hydroxycarboxylic acids at the air/water interface. Soft Matter 9 (31), 7601-7616 (2013)

Frueh, J.; Reiter, G.; Keller, J.; Möhwald, H.; He, Q.; Krastev, R.: Effect of Linear Elongation of PDMS-Supported Polyelectrolyte Multi layer Determined by Attenuated Total Reflectance IR Radiation. J. Phys. Chem. B 117 (10), 2918-2925 (2013)

Frueh, J.; Reiter, G.; Möhwald, H.; He, Q.; Krastev, R.: Novel controllable auxetic effect of linearly elongated supported polyelectrolyte multilayers with amorphous structure. Phys. Chem. Chem. Phys. 15 (2), 483-488 (2013)

Gawlitza, K.; Georgieva, R.; Tavraz, N.; Keller, J.; von Klitzing, R.: Immobilization of Water-Soluble HRP within Poly-N-isopropylacrylamide Microgel Particles for Use in Organic Media. LANGMUIR 29 (51), 16002-16009 (2013)

Gochev, G.; Retzlaff, I.; Aksenenko, E. V.; Fainerman, V. B.; Miller, R.: Adsorption isotherm and equation of state for beta-Lactoglobulin layers at the air/water surface. Colloids and Surfaces A: Physicochemical and Engineering Aspects 422 33-38 (2013)

Gojzewski, H.; Kappl, M.; Kircher, G.; Koczorowski, W.; Butt, H. J.; Ptak, A.: Nanoadhesion on Rigid Methyl-Terminated Biphenyl Thiol Monolayers: A High-Rate Dynamic Force Spectroscopy Study. ChemPhysChem 14 (3), 543-549 (2013)

Gross, S.; Wilms, D.; Krause, J.; Brezesinski, G.; Andrä, J.: Design of NK-2-derived peptides with improved activity against equine sarcoid cells. J. Peptide Sci. 19 (10), 619-628 (2013)

Hecht, L. L.; Schoth, A.; Munoz-Espi, R.; Javadi, A.; Köhler, K.; Miller, R.; Landfester, K.; Schuchmann, H. P.: Determination of the Ideal Surfactant Concentration in Miniemulsion Polymerization. Macromol. Chem. Phys. 214 (7), 812-823 (2013)

Hörnke, M.; Knecht, V.; Koksch, B.; Brezesinski, G.: Amyloid aggregation triggers: hydrophobic surfaces, metal ions, intramolecular interactions, lipids. European Biophysics Journal with Biophysics Letters 42 (Suppl. 1), S65-S65 (2013)

Huang, H.; Chen, J. B.; Yu, Y.; Shi, Z. M.; Möhwald, H.; Zhang, G.: Controlled gradient colloidal photonic crystals and their optical properties. Colloid Surf. A-Physicochem. Eng. Asp. 428 9-17 (2013)

Huang, H.; Chen, J.; Yu, Y.; Shi, Z.; Möhwald, H.; Zhang, G.: Controlled gradient colloidal photonic crystals and their optical properties. Colloids and Surfaces A: Physicochemical and Engineering Aspects 428 9-17 (2013)

Huttl, C.; Hettrich, C.; Miller, R.; Paulke, B. R.; Henklein, P.; Rawel, H.; Bier, F. F.: Self-assembled peptide amphiphiles function as multivalent binder with increased hemagglutinin affinity. BMC Biotechnol. 13 (2013)

Javadi, A.; Mucic, N.; Karbaschi, M.; Won, J. Y.; Lotfi, M.; Dan, A.; Ulaganathan, V.; Gochev, G.; Makievski, A. V.; Kovalchuk, V. I.; Kovalchuk, N. M.; Krägel, J.; Miller, R.: Characterization methods for liquid interfacial layers. Eur. Phys. J. Spec. Top. 222 (1), 7-29 (2013)

Karageorgiev, P.; Petrov, J. G.; Motschmann, H.; Moehwald, H.: Why Fluorination of the Polar Heads Reverses the Positive Sign of the Dipole Potential of Langmuir Mono layers: A Vibrational Sum Frequency Spectroscopic Study. Langmuir 29 (15), 4726-4736 (2013)

Karamitros, C.; Yashchenok, A. M.; Möhwald, H.; Skirtach, A. G.; Konrad, M.: Preserving Catalytic Activity and Enhancing Biochemical Stability of the Therapeutic Enzyme Asparaginase by Biocompatible Multi layered Polyelectrolyte Microcapsules . Biomacromolecules (14), 4398-4406 (2013)

Kazakova, L. I.; Shabarchina, L. I.; Anastasova, S.; Pavlov, A. M.; Vadgama, P.; Skirtach, A. G.; Sukhorukov, G. B.: Chemosensors and biosensors based on polyelectrolyte microcapsules containing fluorescent dyes and enzymes. Anal. Bioanal. Chem. 405 (5), 1559-1568 (2013)

Kolesnikova, T. A.; Skirtach, A. G.; Möhwald, H.: Red blood cells and polyelectrolyte multilayer capsules: natural carriers versus polymer-based drug delivery vehicles. Expert Opin. Drug Deliv. 10 (1), 47-58 (2013)

Li, G. L.; Möhwald, H.; Shchukin, D. G.: Precipitation polymerization for fabrication of complex core-shell hybrid particles and hollow structures. Chem. Soc. Rev. 42 (8), 3628-3646 (2013)

Li, G. L.; Zheng, Z. L.; Möhwald, H.; Shchukin, D. G.: Silica/Polymer Double-Walled Hybrid Nanotubes: Synthesis and Application as Stimuli-Responsive Nanocontainers in Self-Healing Coatings. ACS Nano 7 (3), 2470-2478 (2013)

Li, H. G.; Babu, S. S.; Turner, S. T.; Neher, D.; Hollamby, M. J.; Seki, T.; Yagai, S.; Deguchi, Y.; Möhwald, H.; Nakanishi, T.: Alkylated-C60 based soft materials: regulation of self-assembly and optoelectronic properties by chain branching. J. Mater. Chem. C 1 (10), 1943-1951 (2013)

Liu, B.; Möhwald, H.; Wang, D.: Synthesis of Janus particles via kinetic control of phase separation in emulsion droplets. CHEMICAL COMMUNICATIONS 49 (84), 9746-9748 (2013)

Mosca, S.; Dannehl, C.; Möginger, U.; Brezesinski, G.; Hartmann, L.: β(3R3)-Peptides: design and synthesis of novel peptidomimetics and their self-assembling properties at the air-water interface. Org. Biomol. Chem. 11 (33), 5399-5403 (2013)

Mucic, N.; Kovalchuk, N. M.; Aksenenko, E. V.; Fainerman, V. B.; Miller, R.: Adsorption layer properties of alkyltrimethylammonium bromides at interfaces between water and different alkanes. JOURNAL OF COLLOID AND INTERFACE SCIENCE 410 181-187 (2013)

Paiva, D.; Brezesinski, G.; Pereira, M. D.; Rocha, S.: Langmuir Monolayers of Monocationic Lipid Mixed with Cholesterol or Fluorocholesterol: DNA Adsorption Studies. Langmuir 29 (6), 1920-1925 (2013)

Palankar, R.; Pinchasik, B. E.; Schmidt, S.; De Geest, B. G.; Fery, A.; Möhwald, H.; Skirtach, A. G.; Delcea, M.: Mechanical strength and intracellular uptake of CaCO -templated LbL capsules composed of biodegradable polyelectrolytes: the influence of the number of layers. J. Mat. Chem. B 1 (8), 1175-1181 (2013)

Publikationen

Panariti, A.; Lettiero, B.; Alexandrescu, R.; Collini, M.; Sironi, L.; Chanana, M.; Morjan, I.; Wang, D. Y.; Chirico, G.; Miserocchi, G.; Bucci, C.; Rivolta, I.: Dynamic Investigation of Interaction of Biocompatible Iron Oxide Nanoparticles with Epithelial Cells for Biomedical Applications. J. Biomed. Nanotechnol. 9 (9), 1556-1569 (2013)

Pflieger, R.; Schneider, J.; Siboulet, B.; Möhwald, H.; Nikitenko, S. I.: Luminescence of Trivalent Lanthanide Ions Excited by Single-Bubble and Multibubble Cavitations. J. Phys. Chem. B 117 (10), 2979-2984 (2013)

Pinheiro, M.; Arede, M.; Giner-Casares, J. J.; Nunes, C.; Caio, J. M.; Moiteiro, C.; Lucio, M.; Camacho, L.; Reis, S.: Effects of a novel antimycobacterial compound on the biophysical properties of a pulmonary surfactant model membrane. Int. J. Pharm. 450 (1-2), 268-277 (2013)

Pinheiro, M.; Nunes, C.; Caio, J. M.; Moiteiro, C.; Lucio, M.; Brezesinski, G.; Reis, S.: The Influence of Rifabutin on Human and Bacterial Membrane Models: Implications for Its Mechanism of Action. J. Phys. Chem. B 117 (20), 6187-6193 (2013)

Pinheiro, M.; Nunes, C.; Caio, J. M.; Moiteiro, C.; Brezesinski, G.; Reis, S.: Interactions of N '-acetyl-rifabutin and N '-butanoyl-rifabutin with lipid bilayers: A synchrotron X-ray study. Int. J. Pharm. 453 (2), 560-568 (2013)

Pinheiro, M.; Pereira-Leite, C.; Arede, M.; Nunes, C.; Caio, J. M.; Moiteiro, C.; Giner-Casares, J. J.; Lucio, M.; Brezesinski, G.; Camacho, L.; Reis, S.: Evaluation of the Structure-Activity Relationship of Rifabutin and Analogs: A Drug-Membrane Study. ChemPhysChem 14 (12), 2808-2816 (2013)

Ropers, M.-H.; Brezesinski, G.: Lipid ordering in planar 2D and 3D model membranes. SOFT MATTER 9 (39), 9440-9448 (2013)

Rubia-Paya, C.; Jimenez-Millan, E.; Giner-Casares, J. J.; Brezesinski, G.; Martin-Romero, M. T.; Camacho, L.: From Two-Dimensional to Three-Dimensional at the Air/Water Interface: The Self-Aggregation of the Acridine Dye in Mixed Monolayers. Langmuir 29 (15), 4796-4805 (2013)

Schmidt, S.; Volodkin, D.: Microparticulate biomolecules by mild $CaCO_3$ templating. J. Mat. Chem. B 1 (9), 1210-1218 (2013)

Schmidt, S.; Behra, M.; Uhlig, K.; Madaboosi, N.; Hartmann, L.; Duschl, C.; Volodkin, D.: Mesoporous Protein Particles Through Colloidal $CaCO_3$ Templates. Adv. Funct. Mater. 23 (1), 116-123 (2013)

Serno, T.; Härtl, E.; Besheer, A.; Miller, R.; Winter, G.: The Role of Polysorbate 80 and HP beta CD at the Air-Water Interface of IgG Solutions. Pharm. Res. 30 (1), 117-130 (2013)

Shapovalov, V. L.; Möhwald, H.; Konovalov, O. V.; Knecht, V.: Negligible water surface charge determined using Kelvin probe and total reflection X-ray fluorescence techniques. Phys. Chem. Chem. Phys. 15 (33), 13991-13998 (2013)

Sharipova, A.; Aidarova, S.; Cernoch, P.; Miller, R.: Effect of surfactant hydrophobicity on the interfacial properties of polyallylamine hydrochloride/sodium alkylsulphate at water/hexane interface. COLLOIDS AND SURFACES A-PHYSICOCHEMICAL AND ENGINEERING ASPECTS 438 141-147 (2013)

Shchukin, D.; Möhwald, H.: A Coat of Many Functions. SCIENCE 341 (6153), 1458-1459 (2013)

Sievers, T. K.; Genre, C.; Bonnefond, F.; Demars, T.; Ravaux, J.; Meyer, D.; Podor, R.: Vapour pressure dependence and thermodynamics of cylindrical metal-organic framework mesoparticles: an ESEM study. PHYSICAL CHEMISTRY CHEMICAL PHYSICS 15 (38), 16160-16166 (2013)

Skorb, E. V.; Andreeva, D. V.: Bio-inspired ultrasound assisted construction of synthetic sponges. J. Mater. Chem. A 1 (26), 7547-7557 (2013)

Skorb, E. V.; Baidukova, O.; Andreeva, O. A.; Cherepanov, P. V.; Andreeva, D. V.: Formation of polypyrrole/metal hybrid interfacial layer with self-regulation functions via ultrasonication. Bioinspired, Biomimetic and Nanobiomaterials 2 (3), 123-129 (2013)

Skorb, E. V.; Andreeva, D. V.: Layer-by-Layer approaches for formation of smart self-healing materials. Polym. Chem. 4 (18), 4834-4845 (2013)

Skorb, E. V.; Andreeva, D. V.: Surface Nanoarchitecture for Bio-Applications: Self-Regulating Intelligent Interfaces. ADV FUNCT MATER 23 (36), 4483-4506 (2013)

Skorb, E. V.; Möhwald, H.: 25th Anniversary Article: Dynamic Interfaces for Responsive Encapsulation Systems. ADVANCED MATERIALS 25 (36), 5029-5042 (2013)

Timko, M.; Molcan, M.; Hashim, A.; Skumiel, A.; Müller, M.; Gojzewski, H.; Jozefczak, A.; Kovac, J.; Rajnak, M.; Makowski, M.; Kopcansky, P.: Hyperthermic Effect in Suspension of Magnetosomes Prepared by Various Methods. IEEE Trans. Magn. 49 (1), 250-254 (2013)

Travkova, O. G.; Andrä, J.; Möhwald, H.; Brezesinski, G.: Influence of Arenicin on Phase Transitions and Ordering of Lipids in 2D Model Membranes. LANGMUIR 29 (39), 12203-12211 (2013)

Travkova, O. G.; Brezesinski, G.: Adsorption of the antimicrobial peptide arenicin and its linear derivative to model membranes - A maximum insertion pressure study. Chem. Phys. Lipids 167 43-50 (2013)

Voronin, D. V.; Sadovnikov, A. V.; Shchukin, D. G.; Gorin, D. A.; Beginin, E. N.; Sharaevskii, Y. P. ; Nikitov, S. A.: Studying the spectra of thermal magnons in composite materials with embedded magnetite nanoparticles using Brillouin light-scattering spectroscopy. Tech. Phys. Lett. 39 (8), 715-718 (2013)

Vysotsky, Y. B.; Fomina, E. S.; Belyaeva, E. A.; Fainerman, V. B.; Vollhardt, D.: On the inclusion of alkanes into the monolayer of aliphatic alcohols at the water/alkane vapor interface: a quantum chemical approach. Phys. Chem. Chem. Phys. 15 (6), 2159-2176 (2013)

Vysotsky, Y. B.; Fomina, E. S.; Fainerman, V. B.; Vollhardt, D.; Miller, R.: A quantum chemical model for assessment of the temperature dependence in monolayer formation of amphiphiles at the air/water interface. Phys. Chem. Chem. Phys. 15 (28), 11623-11628 (2013)

Vysotsky, Y. B.; Fomina, E. S.; Belyaeva, E. A.; Vollhardt, D.; Fainerman, V. B.; Miller, R.: Superposition-Additive Approach: Clusterization Thermodynamic Parameters of Bifunctional Nonionic Amphiphiles at the Air/Water Interface. J. Phys. Chem. C 117 (31), 16065-16075 (2013)

Wang, H. Q.; Jia, L. C.; Bogdanoff, P.; Fiechter, S.; Möhwald, H.; Shchukin, D.: Size-related native defect engineering in high intensity ultrasonication of nanoparticles for photoelectrochemical water splitting. Energy Environ. Sci. 6 (3), 799-804 (2013)
Winkler, M.; Kofod, G.; Krastev, R.; Stockle, S.;

Publikationen

Abel, M.: Exponentially Fast Thinning of Nanoscale Films by Turbulent Mixing. Phys. Rev. Lett. 110 (9) (2013)

Xiong, R. H.; Soenen, S. J.; Braeckmans, K.; Skirtach, A. G.: Towards Theranostic Multicompartment Microcapsules: in-situ Diagnostics and Laser-induced Treatment. Theranostics 3 (3), 141-151 (2013)

Yashchenok, A.; Parakhonskiy, B.; Donatan, S.; Kohler, D.; Skirtach, A.; Möhwald, H.: Polyelectrolyte multilayer microcapsules templated on spherical, elliptical and square calcium carbonate particles. J. Mat. Chem. B 1 (9), 1223-1228 (2013)

Yashchenok, A.; Masic, A.; Gorin, D.; Shim, B. S.; Kotov, N. A.; Fratzl, P.; Möhwald, H.; Skirtach, A.: Nanoengineered Colloidal Probes for Raman-based Detection of Biomolecules inside Living Cells. Small 9 (3), 351-356 (2013)

Yazhgur, P. A.; Noskov, B. A.; Liggieri, L.; Lin, S. Y.; Loglio, G.; Miller, R.; Ravera, F.: Dynamic properties of mixed nanoparticle/surfactant adsorption layers. Soft Matter 9 (12), 3305-3314 (2013)

Zheng, Z.; Huang, X.; Schenderlein, M.; Borisova, D.; Cao, R.; Möhwald, H.; Shchukin, D. G.: Self-Healing and Antifouling Multifunctional Coatings Based on pH and Sulfide Ion Sensitive Nanocontainers. Adv. Funct. Mater. 23 (26), 3307-3314 (2013)

Zheng, Z.; Huang, X.; Schenderlein, M.; Borisova, D.; Cao, R.; Moehwald, H.; Shchukin, D. G.: Self-Healing and Antifouling Multifunctional Coatings Based on pH and Sulfide Ion Sensitive Nanocontainers. Adv. Funct. Mater. 23 (26), 3307-3314 (2013)

Book Chapters

Guzman, E.; Santini, E.; Liggieri, L.; Ravera, F.; Loglio, G.; Krägel, J.; Maestro, A.; Rubio, R. G. ; Grigoriev, D.; Miller, R.: Particle-surfactant interaction at liquid interfaces. In: Colloid and Interface Chemistry for Nanotechnology, 77-109 (Hrsg. Kralchevsky, P.; Miller, R.; Ravera, F.). CRC Press, Boca Raton (2013)

Javadi, A.; Mucic, N.; Karbaschi, M.; Won, J.; Fainerman, V. B.; Sharipova, A.; Aksenenko, E. V.; Kovalchuk, V. I.; Kovalchuk, N. M.; Krägel, J.; Miller, R.: Inferfacial dynamics methods. In: Encyclopedia of Colloid and Interface Science, 637-676 (Hrsg. Tadros, T.). Wiley-VCH, Weinheim (2013)
Javadi, A.; Krägel, J.; Karbaschi, M.; Won, J. Y.; Dan, A.; Makievski, A. V.; Loglio, G.; Liggieri, L.; Ravera, F.; Kovalchuk, N. M.; Kovalchuk, V. I.; Miller, R.: Capillary pressure experiments with single drops. In: Colloid and Interface Chemistry for Nanotechnology, 271-312 (Hrsg. Kralchevsky, P.; Ravera, F.). CRC Press, Boca Raton (2013)

Kovalchuk, N. M.; Vollhardt, D.: Surfactant Adsorption under Nonequilibrium. In: Encyclopedia of Colloid and Interface Science, 1126-1145 (Hrsg. Tadros, T.). Wiley-VCH, Weinheim (2013)

Miller, R.; Aksenenko, E. V.; Alahverdjieva, V.; Fainerman, V. B.; Kotsmár, C.; Krägel, J.; Leser, M. E.; Maldonado-Valderrama, J.; Noskov, B. A.; Pradines, V.; Stefaniu, C.; Stocco, A.; Wüstneck, R.: Thermodynamic and kinetics of mixed protein/surfactant adsorption layers at liquid interfaces. In: Proteins in solution and at interfaces: Methods and applications in biotechnology and materials science, 389-426 (Hrsg. Ruso, J. M.). John Wiley & Sons, Inc., Hoboken, NJ, USA (2013)

Mucic, N.; Javadi, A.; Karbaschi, M.; Sharipova, A.; Fainerman, V. B.; Aksenenko, E. V.; Kovalchuk, N. M.; Miller, R.: Adsorption kinetics of surfactants. In: Emulsion Formation and Stability, 1090-1126 (Hrsg. Tadros, T.). Wiley VCH, Weinheim (2013)

Vollhardt, D.: Surfactant Monolayers. In: Encyclopedia of Colloid and Interface Science, 1165-1201 (Hrsg. Tadros, T.). Wiley-VCH, Weinheim (2013)

Event Summaries

Mosca, S.; Brezesinski, G.; Hartmann, L.: β(3r6) foldamers: Design, structures, and activity. (2013)

Emeritus Group (Interfaces) 2014

Articles

Ai, B.; Wang, L.; Möhwald, H.; Yu, Y.; Zhao, Z.; Zhou, Z.; Zhang, G.; Lin, Q.: Real-Time Control of Uni-Directional Liquid Spreading on a Half-Cone Nanoshell Array. Sci. Rep. 4 (2014)

Ai, B.; Wang, L.; Möhwald, H.; Yu, Y.; Zhang, G.: Asymmetric half-cone/nanohole array films with structural and directional reshaping of extraordinary optical transmission. Nanoscale 6 (15), 8997-9005 (2014)

Ai, B.; Yu, Y.; Möhwald, H.; Zhang, G.; Yang, B.: Plasmonic films based on colloidal lithography. Adv. Colloid Interface Sci. 206 5-16 (2014)

Ai, B.; Yu, Y.; Möhwald, H.; Wang, L.; Zhang, G.: Resonant Optical Transmission through Topologically Continuous Films. ACS Nano 8 (2), 1566-1575 (2014)

Borodina, T. N.; Grigoriev, D. O.; Carillo, M. A.; Hartmann, J.; Möhwald, H.; Shchukin, D. G.: Preparation of Multifunctional Polysaccharide Microcontainers for Lipophilic Bioactive Agents. ACS Applied Materials & Interfaces 6 (9), 6570-6578 (2014)

Cui, Q.; He, F.; Li, L.; Möhwald, H.: Controllable metal-enhanced fluorescence in organized films and colloidal system. Adv. Colloid Interface Sci. 207 164-177 (2014)

Cui, Q.; Shen, G.; Yan, X.; Li, L.; Möhwald, H.; Bargheer, M.: Fabrication of Au@Pt Multibranched Nanoparticles and Their Application to In Situ SERS Monitoring. ACS Appl. Mater. Interfaces 6 (19), 17075-17081 (2014)

Cui, Q.; Yashchenok, A. M.; Zhang, L.; Li, L.; Masic, A.; Wienskol, G.; Möhwald, H.; Bargheer, M.: Fabrication of Bifunctional Gold/Gelatin Hybrid Nanocomposites and Their Application. ACS Appl. Mater. Interfaces 6 (3), 1999-2002 (2014)

Giner-Casares, J. J.; Brezesinski, G.; Möhwald, H.: Langmuir monolayers as unique physical models. Curr. Opin. Colloid Interface Sci. 19 (3), 176-182 (2014)

Grigoriev, D.; Akcakayiran, D.; Schenderlein, M.; Shchukin, D.: Protective Organic Coatings with Anticorrosive and Other Feedback-Active Features: Micro- and Nanocontainers-Based Approach. Corrosion 70 (5), 446-463 (2014)

Publikationen

Han, Y.; Shchukin, D.; Schneider, J.; Möhwald, H.: Fluorescence indicative pH drop in sonication. Colloids and Surfaces A: Physicochemical and Engineering Aspects 445 30-33 (2014)

Hodoroaba, V.-D.; Akcakayiran, D.; Grigoriev, D. O.; Shchukin, D. G.: Characterization of micro- and nanocapsules for self-healing anti-corrosion coatings by high-resolution SEM with coupled transmission mode and EDX. Analyst 139 (8), 2004-2010 (2014)

Hollamby, M. J.; Karny, M.; Bomans, P. H. H.; Sommerdijk, N. A. J. M.; Saeki, A.; Seki, S.; Minamikawa, H.; Grillo, I.; Pauw, B. R.; Brown, P.; Eastoe, J.; Möhwald, H.; Nakanishi, T.: Directed assembly of optoelectronically active alkyl-π-conjugated molecules by adding n-alkanes or π-conjugated species. Nature Chemistry 6 (8), 690-696 (2014)

Korte, M.; Akari, S.; Kuehn, H.; Baghdadli, N.; Möhwald, H.; Luengo, G. S.: Distribution and Localization of Hydrophobic and Ionic Chemical Groups at the Surface of Bleached Human Hair Fibers. Langmuir 30 (41), 12124-12129 (2014)

Koziol, M. J.; Sievers, T. K.; Smuda, K.; Xiong, Y.; Müller, A.; Wojcik, F.; Steffen, A.; Dathe, M.; Georgieva, R.; Bäumler, H.: Kinetics and Efficiency of a MethylCarboxylated 5-Fluorouracil- Bovine Serum Albumin Adduct for Targeted Delivery(a). Macromolecular Bioscience 14 (3), 428-439 (2014)

Li, G. L.; Schenderlein, M.; Men, Y.; Möhwald, H.; Shchukin, D. G.: Monodisperse Polymeric Core-Shell Nanocontainers for Organic Self-Healing Anticorrosion Coatings. Advanced Materials Interfaces 1 (1) (2014)

Li, Z.; Zhang, C.; Wang, B.; Wang, H.; Chen, X.; Möhwald, H.; Cui, X.: Sonochemical Fabrication of Dual-Targeted Redox-Responsive Smart Microcarriers. ACS Applied Materials & Interfaces 6 (24), 22166-22173 (2014)

Palankar, R.; Pinchasik, B.-E.; Khlebtsov, B. N.; Kolesnikova, T. A.; Möhwald, H.; Winterhalter, M.; Skirtach, A. G.: Nanoplasmonically-Induced Defects in Lipid Membrane Monitored by Ion Current: Transient Nanopores versus Membrane Rupture. Nano Letters 14 (8), 4273-4279 (2014)

Parakhonskiy, B. V.; Svenskaya, Y. I.; Yashchenok, A. M.; Fattah, H. A.; Inozemtseva, O. A.; Tessarolo, F.; Antolini, R.; Gorin, D. A.: Size controlled hydroxyapatite and calcium carbonate particles: Synthesis and their application as templates for SERS platform. Colloids and Surfaces B: Biointerfaces 118 243-248 (2014)

Parakhonskiy, B. V.; Yashchenok, A. M.; Donatan, S.; Volodkin, D. V.; Tessarolo, F.; Antolini, R.; Möhwald, H.; Skirtach, A. G.: Macromolecule Loading into Spherical, Elliptical, Star-Like and Cubic Calcium Carbonate Carriers. ChemPhysChem 15 (13), 2817-2822 (2014)

Peterson, A. M.; Pilz-Allen, C.; Möhwald, H.; Shchukin, D. G.: Evaluation of the role of polyelectrolyte deposition conditions in growth factor release. Journal of Materials Chemistry B 2 (18), 2680-2687 (2014)

Pinchasik, B.-E.; Möhwald, H.; Skirtach, A. G.: Mimicking Bubble Use in Nature: Propulsion of Janus Particles due to Hydrophobic-Hydrophilic Interactions. Small 10 (13), 2670-2677 (2014)

Pyatenko, A.; Wang, H.; Koshizakit, N.: Growth Mechanism of Monodisperse Spherical Particles under Nanosecond Pulsed Laser Irradiation. J. Phys. Chem. C 118 (8), 4495-4500 (2014)

Radziuk, D.; Möhwald, H.; Suslick, K.: Single bubble perturbation in cavitation proximity of solid glass: hot spot versus distance. Phys. Chem. Chem. Phys. 16 (8), 3534-3541 (2014)

Radziuk, D.; Möhwald, H.: Highly effective hot spots for SERS signatures of Live fibroblasts. Nanoscale 6 (11), 6115-6126 (2014)

Radziuk, D. V.; Schütz, R.; Masic, A.; Möhwald, H.: Chemical imaging of live fibroblasts by SERS effective nanofilm. Phys. Chem. Chem. Phys. 16 (44), 24621-24634 (2014)

Schrettl, S.; Stefaniu, C.; Schwieger, C.; Pasche, G.; Oveisi, E.; Fontana, Y.; Fontcuberta i Morral, A.; Reguera, J.; Petraglia, R.; Corminboeuf, C.; Brezesinski, G.; Frauenrath, H.: Functional carbon nanosheets prepared from hexayne amphiphile monolayers at room temperature. Nature Chemistry 6 (6), 468-476 (2014)

Skorb, E. V.; Möhwald, H.: „Smart" Surface Capsules for Delivery Devices. Advanced Materials Interfaces 1 (6) (2014)

Song, X.; Qiu, Z.; Yang, X.; Gong, H.; Zheng, S.; Cao, B.; Wang, H.; Möhwald, H.; Shchukin, D.: Submicron-Lubricant Based on Crystallized Fe3O4 Spheres for Enhanced Tribology Performance. Chem. Mater. 26 (17), 5113-5119 (2014)

Sousa, F.; Kreft, O.; Sukhorukov, G. B.; Möhwald, H.; Kokol, V.: Biocatalytic response of multi-layer assembled collagen/hyaluronic acid nanoengineered capsules. Journal of Microencapsulation 31 (3), 270-276 (2014)

Stefaniu, C.; Brezesinski, G.; Möhwald, H.: Langmuir monolayers as models to study processes at membrane surfaces. Adv. Colloid Interface Sci. 208 197-213 (2014)

Toca-Herrera, J. L.; Krasteva, N.; Müller, H.-J.; Krastev, R.: Interactions in lipid stabilised foam films. Adv. Colloid Interface Sci. 207 93-106 (2014)

Volodkin, D.; von Klitzing, R.; Möhwald, H.: Polyelectrolyte Multilayers: Towards Single Cell Studies. Polymers 6 (5), 1502-1527 (2014)

Wang, H.; Yan, X. H.; Li, G. L.; Pilz-Allen, C.; Möhwald, H.; Shchukin, D.: Sono-Assembly of Highly Biocompatible Polysaccharide Capsules for Hydrophobic Drug Delivery. Advanced Healthcare Materials 3 (6), 825-831 (2014)

Wettstein, C.; Kyne, C.; Doolan, A. M.; Möhwald, H.; Crowley, P. B.; Lisdat, F.: Study of Cytochrome c-DNA Interaction - Evaluation of Binding Sites on the Redox Protein. Nanoscale 6 (22), 13779-13786 (2014)

Wu, Y.; Lin, X.; Wu, Z.; Möhwald, H.; He, Q.: Self-Propelled Polymer Multilayer Janus Capsules for Effective Drug Delivery and Light-Triggered Release. ACS Appl. Mater. Interfaces 6 10476-10481 (2014)

Wuytens, P.; Parakhonskiy, B.; Yashchenok, A. M.; Winterhalter, M.; Skirtach, A.: Pharmacological aspects of release from microcapsules - from polymeric multilayers to lipid membranes. Curr. Opin. Pharmacol. 18 129-140 (2014)

Xiong, R.; Raemdonck, K.; Peynshaert, K.; Lentacker, I.; De Cock, I.; Demeester, J.; De Smedt, S. C. ; Skirtach, A. G.; Braeckmans, K.: Comparison of Gold Nanoparticle Mediated Photoporation: Vapor Nanobubbles Outperform Direct Heating for Delivering Macromolecules in Live Cells. ACS Nano 8 (6), 6288-6296 (2014)

Publikationen

Zhang, R.; Shang, J.; Xin, J.; Xie, B.; Li, Y.; Möhwald, H.: Self-assemblies of luminescent rare earth compounds in capsules and multilayers. Adv. Colloid Interface Sci. 207 361-375 (2014)

Zhang, L.; Belova, V.; Wang, H.; Dong, W.; Möhwald, H.: Controlled Cavitation at Nano/Microparticle Surfaces. Chem. Mater. 26 (7), 2244-2248 (2014)

Zou, Q.; Zhang, L.; Yan, X.; Wang, A.; Ma, G.; Li, J.; Möhwald, H.; Mann, S.: Multifunctional Porous Microspheres Based on Peptide-Porphyrin Hierarchical Co-Assembly. Angew. Chem. Int. Ed. 53 (9), 2366-2370 (2014)

Conference Proceedings

Wuytens, P. C.; Yashchenok, A. M.; Subramanian, A. Z.; Skirtach, A. G.; Baets, R.: Gold nanoparticle coated silicon nitride chips for intracellular surface-enhanced Raman spectroscopy. In: CLEO: Science and Innovations - Plasmonics, Raman and Resonance Sensing (2014) , 2 -2 2014 Conference on Lasers and Electro-Optics (CLEO) - Laser Science to Photonic Applications, San Jose, CA, USA. (2014)

Event Summaries

Möhwald, H.: From Langmuir monolayers to layer-by-layer assembly. (2014)

Peterson, A. M.; Magboo, R.; Möhwald, H.; Shchukin, D.: Effect of polyelectrolyte multilayer deposition conditions on growth factor release and preosteoblast behavior. (2014)

Theory & Bio-Systems 2013

Articles

Awasthi, N.; Ritschel, T.; Lipowsky, R.; Knecht, V.: Standard Gibbs energies of formation and equilibrium constants from ab-initio calculations: Covalent dimerization of NO_2 and synthesis of NH_3. J. Chem. Thermodyn. 62 211-221 (2013)

Bahrami, A. H.: Orientational changes and impaired internalization of ellipsoidal nanoparticles by vesicle membranes. Soft Matter 9 (36), 8642-8646 (2013)

Berger, F.; Keller, C.; Lipowsky, R.; Klumpp, S.: Elastic Coupling Effects in Cooperative Transport by a Pair of Molecular Motors. Cell. Mol. Bioeng. 6 (1 Sp. Iss. SI), 48-64 (2013)

Berger, F.; Keller, C.; Klumpp, S.; Lipowsky, R.: Distinct Transport Regimes of Two Elastically Coupled Molecular Motors. Biophys. J. 104 (2 Suppl. 1), 325A-325A (2013)

Bezlyepkina, N.; Gracia, R. S.; Shchelokovskyy, P.; Lipowsky, R.; Dimova, R.: Phase Diagram and Tie-Line Determination for the Ternary Mixture DOPC/eSM/Cholesterol. Biophys. J. 104 (7), 1456-1464 (2013)

Bierbaum, V.; Lipowsky, R.: Dwell Time Distributions of the Molecular Motor Myosin V. PLoS One 8 (2) (2013)

Cupelli, C.; Borchardt, T.; Steiner, T.; Paust, N.; Zengerle, R.; Santer, M.: Leukocyte enrichment based on a modified pinched flow fractionation approach. Microfluid. Nanofluid. 14 (3-4), 551-563 (2013)Deneke, C.; Lipowsky, R.; Valleriani, A.: Complex Degradation Processes Lead to Non-Exponential Decay Patterns and Age-Dependent Decay Rates of Messenger RNA. PLoS One 8 (2) (2013)

Deneke, C.; Lipowsky, R.; Valleriani, A.: Effect of ribosome shielding on mRNA stability. Phys. Biol. 10 (4) (2013)

Dong, J. J.; Klumpp, S.; Zia, R. K. P.: Mass transport perspective on an accelerated exclusion process: Analysis of augmented current and unit-velocity phases. Phys. Rev. E 87 (2) (2013)

Faber, M.; Klumpp, S.: Kinetic Monte Carlo approach to RNA folding dynamics using structure-based models. PHYSICAL REVIEW E 88 (5) (2013)

Gomez, D.; Marathe, R.; Bierbaum, V.; Klumpp, S.: Modeling Stochastic Gene Expression in Growing Cells. Biophys. J. 104 (2 Suppl. 1), 551A-552A (2013)

Grafmüller, A.; Noya, E. G.; Voth, G. A.: Nucleotide-Dependent Lateral and Longitudinal Interactions in Microtubules. J. Mol. Biol. 425 (12), 2232-2246 (2013)

Grafmüller, A.; Lipowsky, R.; Knecht, V.: Effect of tension and curvature on the chemical potential of lipids in lipid aggregates. Phys. Chem. Chem. Phys. 15 (3), 876-881 (2013)

Hintsche, M.; Klumpp, S.: Dilution and the theoretical description of growth-rate dependent gene expression. Journal of Biological Engineering 7 (2013)

Hintsche, M.; Klumpp, S.: Dilution and the theoretical description of growth-rate dependent gene expression. JOURNAL OF BIOLOGICAL ENGINEERING 7 (1) (2013)

Hörnke, M.; Knecht, V.; Koksch, B.; Brezesinski, G.: Amyloid aggregation triggers: hydrophobic surfaces, metal ions, intramolecular interactions, lipids. European Biophysics Journal with Biophysics Letters 42 (Suppl. 1), S65-S65 (2013)

Hu, J. L.; Lipowsky, R.; Weikl, T. R.: Binding constants of membrane-anchored receptors and ligands depend strongly on the nanoscale roughness of membranes. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA 110 (38), 15283-15288 (2013)

Irudayam, S. J.; Pobandt, T.; Berkowitz, M. L.: Free Energy Barrier for Melittin Reorientation from a Membrane-Bound State to a Transmembrane State. JOURNAL OF PHYSICAL CHEMISTRY B 117 (43), 13457-13463 (2013)

Jégou, A.; Niedermayer, T.; Lipowsky, R.; Carlier, M.-F.; Romet-Lemonne, G.: On Phosphate Release in Actin Filaments. BIOPHYSICAL JOURNAL 104 (12), 2778-2779 (2013)

Kang, Y.; Barbiz, S.; Lipowsky, R.; Santer, M.: Conformational Insights into Recognition Mechanism of O-Antigen Polysaccharides by Tailspike Protein. European Biophysics Journal with Biophysics Letters 42 (Suppl. 1), S112-S112 (2013)

Publikationen

Kar, P.; Lipowsky, R.; Knecht, V.: Importance of Polar Solvation and Configurational Entropy for Design of Antiretroviral Drugs Targeting HIV-1 Protease. J. Phys. Chem. B 117 (19), 5793-5805 (2013)

Keller, C.; Berger, F.; Liepelt, S.; Lipowsky, R.: Network Complexity and Parametric Simplicity for Cargo Transport by Two Molecular Motors. J. Stat. Phys. 150 (2), 205-234 (2013)

Klumpp, S.; Scott, M.; Pedersen, S.; Hwa, T.: Molecular crowding limits translation and cell growth. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA 110 (42), 16754-16759 (2013)

Klumpp, S.: A Superresolution Census of RNA Polymerase. BIOPHYSICAL JOURNAL 105 (12), 2613-2614 (2013)

Knecht, V.; Klasczyk, B.; Dimova, R.: Macro- versus Microscopic View on the Electrokinetics of a Water-Membrane Interface. LANGMUIR 29 (25), 7939-7948 (2013)

Knecht, V.; Klasczyk, B.: Specific Binding of Chloride Ions to Lipid Vesicles and Implications at Molecular Scale. Biophys. J. 104 (4), 818-824 (2013)

Li, X.; Lipowsky, R.; Kierfeld, J.: Bifurcation of Velocity Distributions in Cooperative Transport of Filaments by Fast and Slow Motors. Biophys. J. 104 (3), 666-676 (2013)

Lipowsky, R.: Spontaneous tubulation of membranes and vesicles reveals membrane tension generated by spontaneous curvature. Faraday Discuss. 161 305-331 (2013)

Lipowsky, R.; Rouhiparkouhi, T.; Discher, D. E.; Weikl, T. R.: Domain formation in cholesterol-phospholipid membranes exposed to adhesive surfaces or environments. Soft Matter 9 (35), 8438-8453 (2013)

Lira, R. B.; Dimova, R.; Riske, K. A.: Giant unilamellar vesicles from films of agarose and lipids display hindered mechanical response. European Biophysics Journal with Biophysics Letters 42 (Suppl. 1), S125-S125 (2013)

Mertins, O.; Dimova, R.: Insights on the Interactions of Chitosan with Phospholipid Vesicles. Part I: Effect of Polymer Deprotonation LANGMUIR 29 (47), 14545-14551 (2013)

Mertins, O.; Dimova, R.: Insights on the Interactions of Chitosan with Phospholipid Vesicles. Part II: Membrane Stiffening and Pore Formation LANGMUIR 29 (47), 14552-14559 (2013)

Minh Dang, T.; Vila Verde, A.; Van Nguyen, D.; Bolhuis, P. G.; Schall, P.: Temperature-sensitive colloidal phase behavior induced by critical Casimir forces. JOURNAL OF CHEMICAL PHYSICS 139 (9) (2013)

Neuman, B. W.; Kiss, G.; Al-Mulla, H. M. N.; Dokland, T.; Buchmeier, M. J.; Weikl, T.; Schley, D.: Direct Observation of Membrane Insertion by Enveloped Virus Matrix Proteins by Phosphate Displacement. PLoS One 8 (2) (2013)

Niedermayer, T.; Jegou, A.; Carlier, M. F.; Romet-Lemonne, G.; Lipowsky, R.: Interplay of Stochastic Processes during Actin Depolymerization. Biophys. J. 104 (2 Suppl. 1), 645A-645A (2013)

Patra, P.; Klumpp, S.: Population Dynamics of Bacterial Persistence. PLoS One 8 (5) (2013)

Perez-Hernandez, G.; Paul, F.; Giorgino, T.; De Fabritiis, G.; Noe, F.: Identification of slow molecular order parameters for Markov model construction. J. Chem. Phys. 139 (1) (2013)

Rouhiparkouhi, T.; Weikl, T. R.; Discher, D. E.; Lipowsky, R.: Adhesion-Induced Phase Behavior of Two-Component Membranes and Vesicles. Int. J. Mol. Sci. 14 (1), 2203-2229 (2013)

Rudorf, S.; Valleriani, A.; Lipowsky, R.: Dependence of Protein Synthesis on TRNA Concentrations. Biophys. J. 104 (2 Suppl. 1), 257A-257A (2013)

Sahoo, M.; Klumpp, S.: Backtracking dynamics of RNA polymerase: pausing and error correction. J. Phys.-Condes. Matter 25 (37) (2013)

Shapovalov, V. L.; Möhwald, H.; Konovalov, O. V.; Knecht, V.: Negligible water surface charge determined using Kelvin probe and total reflection X-ray fluorescence techniques. Phys. Chem. Chem. Phys. 15 (33), 13991-13998 (2013)

Smirnova, Y. G.; Aeffner, S.; Risselada, H. J.; Salditt, T.; Marrink, S. J.; Müller, M.; Knecht, V.: Interbilayer repulsion forces between tension-free lipid bilayers from simulation. Soft Matter 9 (45), 10705-10718 (2013)

Sosale, N.; Rouhi, T.; Lipowsky, R.; Discher, D. E.: 'Marker of Self', CD47, Modulates Mechanical Forces Imposed by Macrophages during Phagocytosis. Biophys. J. 104 (2 Suppl. 1), 480A-480A (2013)

Suraniti, E.; Kanoufi, F.; Gosse, C.; Zhao, X.; Dimova, R.; Pouligny, B.; Sojic, N.: Electrochemical Detection of Single Microbeads Manipulated by Optical Tweezers in the Vicinity of Ultramicroelectrodes. Analytical Chemistry 85 (19), 8902-8909 (2013)

Tong, Y.; Vila Verde, A.; Campen, K.: The Free OD at the Air/D2O Interface is Structurally and Dynamically Heterogeneous. The Journal of Physical Chemistry B 117 (39), 11753-11764 (2013)

Vach, P. J.; Brun, N.; Bennet, M.; Bertinetti, L.; Widdrat, M.; Baumgartner, J.; Klumpp, S.; Fratzl, P.; Faivre, D.: Selecting for Function: Solution Synthesis of Magnetic Nanopropellers. NANO LETTERS 13 (11), 5373-5378 (2013)

Vila Verde, A.; Lipowsky, R.: Cooperative Slowdown of Water Rotation near Densely charged Ions Is Intense but Short-Ranged. The Journal of Physical Chemistry B 117 10556-10566 (2013)

Weikl, T. R.; Hemmateenejad, B.: How conformational changes can affect catalysis, inhibition and drug resistance of enzymes with induced-fit binding mechanism such as the HIV-1 protease. BBA-Proteins Proteomics 1834 (5), 867-873 (2013)

Publikationen

Theory & Bio-Systems 2014

Articles

Bahrami, A. H.; Raatz, M.; Agudo-Canalejo, J.; Michel, R.; Curtis, E. M.; Hall, C. K.; Gradzielski, M.; Lipowsky, R.; Weikl, T. R.:
Wrapping of nanoparticles by membranes. Adv. Colloid Interface Sci. 208 214-224 (2014)

Bennet, M.; McCarthy, A.; Fix, D.; Edwards, M. R.; Repp, F.; Vach, P.; Dunlop, J. W. C.; Sitti, M.; Buller, G. S.; Klumpp, S.; Faivre, D.: Influence of magnetic fields on magneto-aerotaxis. PLoS One 9 (7) (2014)

Dasgupta, R.; Dimova, R.: Inward and outward membrane tubes pulled from giant vesicles. Journal of Physics D: Applied Physics 47 (28) (2014)

Dimova, R.: Recent developments in the field of bending rigidity measurements on membranes. Adv. Colloid Interface Sci. 208 225-234 (2014)

Gomez, D.; Marathe, R.; Bierbaum, V.; Klumpp, S.: Modeling stochastic gene expression in growing cells. J. Theor. Biol. 348 1-11 (2014)

Grafmüller, A.; Knecht, V.: The free energy of nanopores in tense membranes. Phys. Chem. Chem. Phys. 16 (23), 11270-11278 (2014)

Guskova, O. A.; Seidel, C.: Nanoparticle droplets at the polymer brush/solvent interface. Tver State University Bulletin. Series: Chemistry (1), 44-55 (2014)

Kang, Y.; Barbirz, S.; Lipowsky, R.; Santer, M.: Conformational Diversity of O-Antigen Polysaccharides of the Gram-Negative Bacterium Shigella flexneri Serotype Y. Journal of Physical Chemistry B 118 (9), 2523-2534 (2014)

Karpitschka, S.; Hanske, C.; Fery, A.; Riegler, H.: Coalescence and noncoalescence of sessile drops: Impact of surface forces. Langmuir 30 (23), 6826-6830 (2014)

Karpitschka, S.; Riegler, H.: Sharp transition between coalescence and non-coalescence of sessile drops. Journal of Fluid Mechanics 743 (2014)

Klumpp, S.: The secret life of a cellular business. LaboratoryNews (1), 20-21 (2014)

Klumpp, S.; Hwa, T.: Bacterial growth: global effects on gene expression, growth feedback and proteome partition. Curr. Opin. Biotechnol. 28 96-102 (2014)

Knorr, R. L.; Nakatogawa, H.; Ohsumi, Y.; Lipowsky, R.; Baumgart, T.; Dimova, R.: Membrane Morphology Is Actively Transformed by Covalent Binding of the Protein Atg8 to PE-Lipids. PLoS One 9 (12) (2014)

Körnig, A.; Dong, J.; Bennet, M.; Widdrat, M.; Andert, J.; Müller, F. D.; Schüler, D.; Klumpp, S.; Faivre, D.: Probing the Mechanical Properties of Magnetosome Chains in Living Magnetotactic Bacteria. Nano Letters 14 (8), 4653-4659 (2014)

Krukau, A.; Knecht, V.; Lipowsky, R.:
Allosteric control of kinesin's motor domain by tubulin: a molecular dynamics study. Phys. Chem. Chem. Phys. 16 (13), 6189-6198 (2014)

Lefèvre, C. T.; Bennet, M.; Landau, L.; Vach, P.; Pignol, D.; Bazylinski, D. A.; Frankel, R. B.; Klumpp, S.; Faivre, D.: Diversity of magneto-aerotactic behaviors and oxygen sensing mechanisms in cultured magnetotactic bacteria. Biophys. J. 107 (2), 527-538 (2014)

Li, X.; Kolomeisky, A. B.; Valleriani, A.: Pathway structure determination in complex stochastic networks with non-exponential dwell times. J. Chem. Phys. 140 (18) (2014)

Li, X.; Kolomeisky, A. B.; Valleriani, A.: Stochastic Kinetics on Networks: When Slow Is Fast. Journal of Physical Chemistry B 118 (35), 10419-10425 (2014)

Lipowsky, R.: Remodeling of membrane compartments: some consequences of membrane fluidity. Biol Chem Hoppe Seyler 395 (3), 253-274 (2014)

Lipowsky, R.: Coupling of bending and stretching deformations in vesicle membranes. Adv. Colloid Interface Sci. 208 14-24 (2014)

Lira, R. d.; Dimova, R.; Riske, K. A.: Giant Unilamellar Vesicles Formed by Hybrid Films of Agarose and Lipids Display Altered Mechanical Properties. Biophys. J. 107 (7), 1609-1619 (2014)

Lutz, B.; Faber, M.; Verma, A.; Klumpp, S.; Schug, A.: Differences between cotranscriptional and free riboswitch folding. Nucleic Acids Res. 42 (4), 2687-2696 (2014)

Marathe, R.; Meel, C.; Schmidt, N. C.; Dewenter, L.; Kurre, R.; Greune, L.; Schmidt, M. A.; Müller, M. J. I.; Lipowsky, R.; Maier, B.; Klumpp, S.:
Bacterial twitching motility is coordinated by a two-dimensional tug-of-war with directional memory. Nat. Commun. 5 3759-3759 (2014)

Mauri, M.; Klumpp, S.: A model for sigma factor competition in bacterial cells. PLoS Computational Biology 10 (10) (2014)

Miettinen, M. S.; Monticelli, L.; Nedumpully-Govindan, P.; Knecht, V.; Ignatova, Z.: Stable Polyglutamine Dimers Can Contain β-Hairpins with Interdigitated Side Chains But Not α-Helices, β-Nanotubes, β-Pseudohelices, or Steric Zippers. Biophys. J. 106 (8), 1721-1728 (2014)

Molcan, M.; Hashim, A.; Kovac, J.; Rajnak, M.; Kopcansky, P.; Makowski, M.; Gojzewski, H.; Molokac, M.; Hvizdak, L.; Timko, M.:
Characterization of Magnetosomes After Exposure to the Effect of the Sonication and Ultracentrifugation. Acta Physica Polonica A 126 (1), 198-199 (2014)

Pataraia, S.; Liu, Y.; Lipowsky, R.; Dimova, R.:
Effect of cytochrome c on the phase behavior of charged multicomponent lipid membranes. Biochimica et Biophysica Acta 1838 (8), 2036-2045 (2014)

Patra, P.; Klumpp, S.: Phenotypically heterogeneous populations in spatially heterogeneous environments. Phys. Rev. E 89 (3) (2014)

Pobandt, T.; Knecht, V.: Free Energy of Lipid Bilayer Defects Affected by Alzheimer's Disease-Associated Amyloid-ß42 Monomers. J. Phys. Chem. B 118 (13), 3507-3516 (2014)

Ponader, D.; Igde, S.; Wehle, M.; Märker, K.; Santer, M.; Bleger, D.; Hartmann, L.:
Photoswitchable precision glycooligomers and their lectin binding. Beilstein Journal of Organic Chemistry 10 1603-1612 (2014)

Raatz, M.; Lipowsky, R.; Weikl, T. R.: Cooperative wrapping of nanoparticles by membrane tubes. Soft Matter 10 (20), 3570-3577 (2014)

Rudorf, S.; Thommen, M.; Rodnina, M. V.; Lipowsky, R.: Deducing the Kinetics of Protein Synthesis In Vivo from the Transition Rates Measured In Vitro. PLoS Computational Biology 10 (10) (2014)

Sadej, M.; Andrzejewska, E.; Kurc, B.; Gojzewski, H.; Jesionowski, T.: Surface-Dependent Effect of Functional Silica Fillers on Photocuring Kinetics of Hydrogel Materials. J. Polym. Sci., Part A: Polym. Chem. 52 (24), 3472-3487 (2014)

Publikationen

Santer, M.: New Insights into Lipid Monolayers from Coarse-Grained Simulation Techniques. Biophys. J. 107 (5), 1038-1039 (2014)

Scott, M.; Klumpp, S.; Mateescu, E. M.; Hwa, T.: Emergence of robust growth laws from optimal regulation of ribosome synthesis. Molecular Systems Biology 10 (8) (2014)

Stefaniu, C.; Vilotijevic, I.; Santer, M.; Brezesinski, G.; Seeberger, P. H.; Silva, D. V.: Versatility of a Glycosylphosphatidylinositol Fragment in Forming Highly Ordered Polymorphs. Langmuir 30 (18), 5185-5192 (2014)

Valleriani, A.; Li, X.; Kolomeisky, A. B.: Unveiling the hidden structure of complex stochastic biochemical networks. J. Chem. Phys. 140 (6) (2014)

Weikl, T. R.; Paul, F.: Conformational selection in protein binding and function. Protein Science 23 (11), 1508-1518 (2014)

Yuzenkova, Y.; Gamba, P.; Herber, M.; Attaiech, L.; Shafeeq, S.; Kuipers, O. P.; Klumpp, S.; Zenkin, N.; Veening, J.-W.: Control of transcription elongation by GreA determines rate of gene expression in Streptococcus pneumoniae. Nucleic Acids Res. 42 (17), 10987-10999 (2014)

Ziobrowski, P.; Andrzejewska, E.; Szybowicz, M.; Nowicka, A.; Sadej-Bajerlein, M.; Gojzewski, H.; Drozdowski, M.: Particle Clustering in Photocurable Nanocomposites: Dependence of Curing Kinetics and Viscoelastic Properties. J. Appl. Polym. Sci. 131 (4) (2014)

Event Summaries

Dimova, R.: Vesicles in Electric Fields. (2014)

Kang, Y.; Barbirz, S.; Gohlke, U.; Santer, M.: Molecular dynamics study on the interaction of O-antigen polysaccharides of the gram-negative bacterium Shigella flexneri with the tail-spike-protein of bacteriophage Sf6. (2014)

Klumpp, S.: Tug-of-War: Mechanical Coordination of Molecular Motors. (2014)

Lira, R. B.; Dimova, R.; Riske, K. A.: Electroporation Dynamics of Giant Vesicles with Encapsulated Gel and in the Presence of Salt or Detergents. (2014)

Lutz, B.; Faber, M.; Verma, A.; Klumpp, S.; Schug, A.: Computational Analysis of Co-Transcriptional Riboswitch Folding. (2014)

Rudorf, S.; Thommen, M.; Rodnina, M. V.; Lipowsky, R.: Protein Synthesis by Ribosomes: Mapping In Vitro onto In Vivo Rates. (2014)

Steinkühler, J.; Lipowsky, R.; Hildebrandt, P.; Dimova, R.: Adhesion-Induced Domain Formation in Multicomponent Membranes. (2014)

Patents

2014

Synthesis of Diverse Glycosylphosphatidylinositol Glycans from Toxoplasma Gondii and their Application as Vaccines and Diagnostics
Azzouz, Nahid; Götze, Sebastian; Seeberger, Peter H.; Varón Silva, Daniel; Tsai, Yu-Hsuan. (2014).

2013

Method and Device for the Synthesis of Artemisinin
Seeberger, Peter H.; Kopetzki, Daniel; Lévesque, François. (2013).

Oligosaccharides and Oligosaccharides-Protein Conjugates Derived from Clostridium Difficile Polysaccharide PS-I, Methods of Synthesis and Uses thereof, in Particular as Vaccines and Diagnostic Tools
Seeberger, Peter H.; Martin, Christopher E.; Bröcker, Felix; Chakkumkal, Anish. (2013).

Polysaccharide Antigen-Glycolipid Conjugate Vaccines
Seeberger, Peter H.; Stallforth, Pierre; De Libero, Gennaro; Cavallari, Marco. (2013).

Corrosion Inhibiting Pigments and Methods for Preparing the Same
Shchukin, Dmitry G.; Grigoriev, Dimitri O.; Möhwald, Helmuth. (2013).