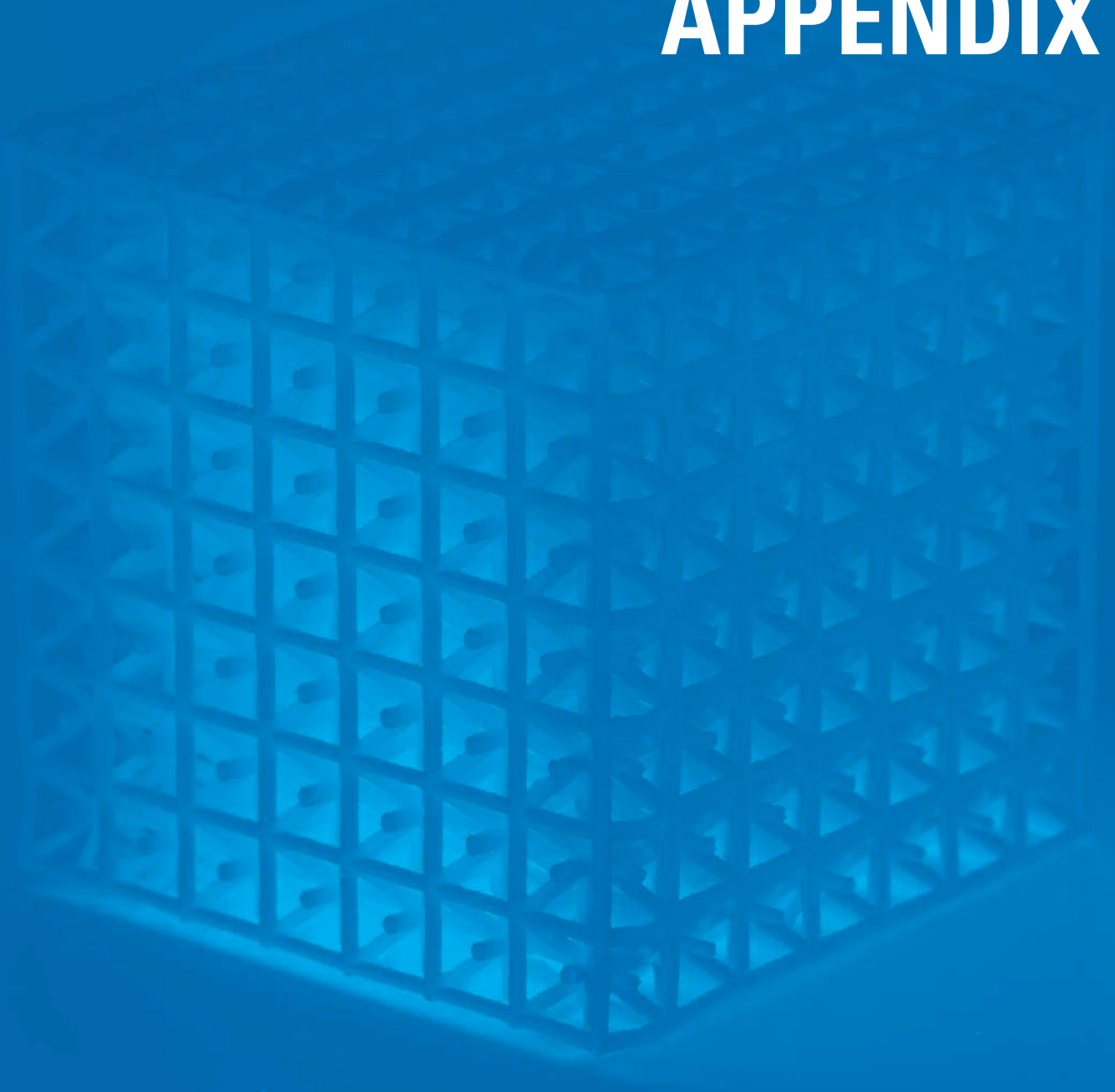


APPENDIX



Organigramm Organization Chart

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

- 3D Imaging of Forming Tissues/Dr. Luca Bertinetti
 - Biomimetic Actuation and Tissue Growth/Dr. John Dunlop /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 (Since December 2015 retired)
 - 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**
- 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
(Since September 2015 Assistant Professor at the Massachusetts Institute of Technology, Department of Civil and Environmental Engineering)
 - Methodologies for Formation of Encapsulation System Scaffolds/Dr. Katja Skorb
(Since September 2017 Full Professor at the Laboratory of Solution Chemistry of Advanced Materials and Technologies (SCAMT), University St. Petersburg)
 - In-Situ Mechanical Characterization of Internal Interfaces in Biomaterials/Dr. Igor Zlotnikov
(Since July 2016 Leader of the Junior Research Group ZIK B CUBE, Research Center for Molecular Bioengineering at TU Dresden)

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

- Synthetic Carbohydrates Vaccines/Dr. Claney L. Pereira
(Since July 2016 Director of Chemistry at Vaxxilon AG, Reinach (Switzerland))
- GPI and Glycoproteins/Dr. Daniel Varón Silva
- Glycobiology and Vaccine Development/Prof. Peter H. Seeberger
- Glycoimmunology/Dr. Bernd Lepenies
(Since July 2015 W2 Professor for Infection Immunology at the University of Veterinary Hannover, Germany)
- Continuous Chemical Systems/Dr. Kerry Gilmore
- Protein-Carbohydrate Interactions/Dr. Ursula Neu
- Synthetic Plant Carbohydrates/Dr. Fabian Pfrengle
- Automated Carbohydrate Synthesis/Prof. Peter H. Seeberger
- Glycoproteomics/Dr. Daniel Kolarich
(Since January 2017 Associated Professor at Griffith University, Australia)
- 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
 - Artificial Photosynthesis/Dr. Dariya Dontsova
 - Science to Objects/Dr. Nina Fechner
 - Electrochemical Energy Materials/Dr. Tim-Patrick Fellingner
- Modern Techniques of Colloid Analysis**
- Electron Microscopic Studies of Colloidal Systems and Biomaterials/Dr. Jürgen Hartmann
 - Next Generation Electrochemistry/Dr. Clemens Liedel
 - Kitchen Lab/Dr. Valerio Molinari
 - Energy and Environmental Utilization of Carbon Nanomaterials/Dr. Martin Oschatz
 - Novel Self-Assembly Polymers/Dr. Bernhard Schmidt
 - Nanojunction Design for Uphill Photosynthesis/Dr. Menny Shalom
(Since September 2016 Associate Professor for Physical Chemistry and Nanotechnology at the Ben Gurion University, Israel)
 - Heterophase Polymerizations/Dr. Klaus Tauer
(Since March 2017 retired)
 - Poly(ionic liquid)s: Synthesis and Materials Application/Dr. Jiayin Yuan
(Since January 2017 Associate Professor for Chemistry & Biomolecular Science at the Clarkson University, Potsdam, New York, USA)
 - New Techniques of Electron Microscopy/Dr. Marc Willinger
 - Interactions in Complex Monolayers/Prof. Gerald Brezesinski
(Since September 2015 retired)

Managing Director (2015-2016) Prof. Dr. Reinhard Lipowsky

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

- Biophysics Lab/Dr. Rumiana Dimova
- Multiscale Modelling/Dr. Andrea Grafmüller
- Regulation of Bio-Processes/Dr. Stephan Klumpp
- (Since October 2015 W2 Professor for Theoretical Biophysics at the Georg-August-Universität Göttingen)*
- Dynamics of Bio-Membranes/Dr. Roland Knorr
- Phase Transitions and Transport Phenomena in Thin Films at Solid/Air Interfaces/Dr. Hans Riegler
- Biomicrofluidic Systems/Dr. Tom Robinson
- Biomolecular Processes/Dr. Sophia Rudolf
- Carbohydrates and Polysaccharides/Dr. Mark Santer
- Stochastic Processes in Complex and Biological Systems/Dr. Angelo Valleriani
- Soft Matter Simulations/Dr. Ana Vila Verde
- Proteins and Membranes/Dr. Thomas Weikl

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

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

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Third Party Funds

Bund

Zuwendungsgeber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
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 umweltfreundliche 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	01.03.2013–31.12.2015	in.vent Diagnostica GmbH, Hennigsdorf 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		
BMBF	Biotechnologie2020+ Strukturvorhaben: MaxSynBio – Max Planck Forschungsnetzwerk Synthetische Biologie Teilprojekte A - I	Prof. Lipowsky TH	01.08.2014–31.07.2017	MPI für Dynamik komplexer technischer Systeme, Magdeburg MPI für Biochemie, Martinsried MPI für molekulare Physiologie, Dortmund Friedrich-Alexander-Universität, Erlangen MPI für molekulare Zellbiologie und Genetik, Dresden MPI für Polymerforschung, Mainz MPI für Intelligente Systeme, Stuttgart MPI für terrestrische Mikrobiologie, Marburg MPI für Dynamik und Selbstorganisation, Göttingen
BMBF	Kortikale Porosität und Osteozytennetzwerke bei Osteoporose	Prof. Fratzl Dr. Wagermaier BM	01.02.2015–31.07.2018	Zentrum für Muskel- und Knochenforschung, Berlin Julius Wolf Institut, Berlin Universitätsklinikum Hamburg Universität Würzburg Institute of Medical Genetics and Human Genetics, Berlin
BMBF	Verbundprojekt 05K2016 – 3PhaseNR: Entwicklung einer planaren Drei-Phasen Wechselwirkungs- umgebung für die Neutronenreflektometrie	Dr. Schneck BM	01.01.2016–31.12.2018	Institut Laue-Langevin, Grenoble

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

Zuwendungsgeber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
BMWi	CDN-theRA-Dx; Biomarker-Proteine für die rheumatoide Arthritis in verschiedenen Expressionssystemen	Dr. Konthur BS	01.01.2016–30.09.2017	in.vent DIAGNOSTICA GmbH, Hennigsdorf Charité Universitätsmedizin Berlin
BMBF	Manteltier mimetische Unterwasser-Klebstoffe basierend auf Zellulose und Polyphenolen	Dr. Harrington BM	01.09.2016–31.08.2018	Pohang University of Science and Technology, Südkorea University of Mons, Belgien

EU

EU/ERC Adv. Grant	Molecular Biomimetics and Magnets Biomaterialization: Towards Swimming Nanorobots	Dr. Faivre BM	01.01.2011–31.12.2015	
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, Croatia 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		Prof. Antonietti KC	01.10.2012–30.09.2016	Advanced European lithium sulphur cells for automotive applications 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, Goeteborg, Sweden

EU

Zuwendungs- geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
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 Linköpings Universitet, Linköping, Sweden Universite de Liege, Liege, Belgium Fundacion IMDEA Energia, Mostoles, Spain Kitozyme SA, Herstal, Belgium Procter&Gamble Italia SPA, Santa Palomba-Pomezia, Italy
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 - Hopitaux 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'énergie atomiques et aux énergies 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

Zuwendungs- geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
EU	Systems Glycobiology of Gastric Cancer	Dr. Kolarich BS	01.05.2013–30.04.2017	University of Gothenburg, Goeteborg, 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	Complex wetting phenomena	Dr. Miller GF	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-Sklodowska University, Lublin, Poland University of Twente, Enschede, Netherlands Evonik AG, Essen Unilever UK Central Resources Limited, London, UK
EU	1D magnetic nanostructures using mineralizing peptides	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

EU

Zuwendungs- geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
EU	Nanoporous Poly(Ionic Liquid) Membrane – NAPOLI	Dr. Yuan KC	01.03.2015–29.02.2020	
EU	Development of Selective Carbohydrate Immunomodulators Targeting C-type Lectin Receptors on Antigen Presenting Cells	Prof. Seeberger BS	01.01.2015–31.12.2018	Asociacion Centro de Investigacion Cooperativa en Biomateilales - CIC biomaGUNE, Spanien Glycodiag, Chevilly, Frankreich Universita Degli Studi Di Milano, Italien Universite Joseph Fouruer Grenoble, Frankreich Agencia Estatal Consejo Superior de Investigaciones Cientificas, Madrid Stichting VU.VUMC, Amsterdam Deutsches Krebsforschungsinstitut, Heidelberg Universiteit Leiden, Niederlande Glycouniverse GmbH & Co. KGAA, Berlin The University of Manchester, UK DC4U, Bussum, Niederlande Midatech Biogune, Derio, Spanien
EU	Automated synthesis of S. pneumoniae 7F capsular polysaccharide repeating unit as candidate for conjugate vaccines	Prof. Seeberger BS	01.04.2015–31.03.2017	
EU	Rapid and Inexpensive Diagnosis of Heparin Induced Thrombocytopenia Using Glycan Arrays Containing Synthetic Glycosaminoglycans	Prof. Seeberger BS	01.04.2015–30.09.2016	
EU	High energy lithium sulphur cells and batteries	Prof. Antonietti KC	01.06.2015–31.05.2019	Kemijski Institut, Ljubljana, Slovenia Saft SAS, Bagnolet, France Centre National de la Recherche Scientifique, Paris, France Solvionic SA, Toulouse, France Chalmers University of Technology, Goeteborg, Sweden Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., Münschen Picosun Oy, Espoo, Finnland Westfälische Wilhelms-Universität Münster Fundacio Institut de Recerca de L'Energia de Catalunya, Sant Adria De Besos, Spanien Accurec-Recycling GmbH, Mühlheim Tel Aviv University, Isreal Insitut National de L Environnement et des Risques Ineris, Verneuil En Halatte, Frankreich Peugeot Citroen Automobiles S.A., Velizy-Villacoublay, Frankreich

EU

Zuwendungsgeber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
EU	Exploiting Glycosylation of Colorectal Cancer for the development of improved diagnostics and therapeutics	Dr. Varon Silva BS	01.09.2015–31.08.2019	Academisch Ziekenhuis Leiden - Leids Universitair Medisch Centrum, Leiden, Netherlands Ludger Ltd, Abingdon, UK Genos Doo Za Vjestacenje I Analiz, Osijek, Croatia Centre National de la Recherche Scientifique, Paris, France Stichting VU.VUMC, Amsterdam Alma Mater Studiorum - Universita de Bologna, Italien Nova ID FCT - Associacao Para A Inovacao e Desenvolvimento Da DCF, Caparica, Portugal

EU	A training network for the rational design of the next generation of well-defined glycoconjugate vaccines	Prof. Seeberger BS	01.11.2015–31.10.2019	Novartis Vaccines and Diagnostics S.R.L., Siena, Italien Instituto De D Medicina Molecular, Lissabon, Portugal Universita Degli Studi Di Milano, Italien Universiteit Leiden, Niederlande Asociacion Centro de Investigacion Cooperativa en Biomateilales - CIC biomaGUNE, Spanien Centre National de la Recherche Scientifique, Paris, France The University of Manchester, UK Sveiciliste U Rijeci, Medicinski Fakultet, Rijeka, Kroatien Ludwig-Maximilians Universität, München Glycouniverse GmbH & Co. KGAA, Berlin
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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	Grundlegende Untersuchungen zu strukturellen Ordnungsübergängen in Materialien im Kontext der Biomineralisation	Prof. Fratzl BM	01.01.2012–31.12.2016	Weizmann Institute of Science, Israel DIP Grant

DFG

Zuwendungs- geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
DFG	Hygroskopische Eigenschaften von natürlichen Oligosacchariden; Modellentwicklung und Test für die Wechselwirkungen mit Wasser	Dr. Grafmüller TH	01.11.2012–30.10.2015	
DFG	Stochastic processing of mRNA and tRNA by ribosomes during translational elongati	Prof. Lipowsky TH	01.07.2012–11.06.2015	
DFG	Stochastic modelling of protein synthesis by ribosomes	Prof. Lipowsky TH	12.06.2015–11.06.2018	
DFG	Materials World Network: Structural design and micromechanical properties of mechanotransducing biological materials	Dr. Politi BM	01.12.2012–31.11.2015	
DFG	Mechanische Anpassung von Biomaterialien durch Protein-Metall-Komplexe	Dr. Harrington BM	01.01.2014–31.12.2016	
DFG Emmy-Noether- Programm	Targeting C-type lectins on dendritic cells using carbohydrate-analogs for the specific delivery of tumor vaccines	Dr. Rademacher BS	01.06.2012–31.10.2016	
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 Universitiy
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 Ceramidspezies auf die Nanostruktur und die Dynamik von Stratum corneum Lipidmodellsystemen	Prof. Brezesinski 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	Graduiertenkolleg "1524"	Dr. 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

Zuwendungsgeber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
DFG	eScience-konforme Standards für die Morphologie	Prof. Fratzl BM	01.09.2014–30.08.2017	Zoologisches Forschungsmuseum Alexander Koenig (ZFMK) Leibniz-Zentrum für Biodiversität der Tiere (ZFMK) Museum für Naturkunde Leibniz-Institut für Evolutions- und Biodiversitätsforschung Universität Rostock Rheinische Friedrich-Wilhelms-Universität Bonn
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	Selbsteilende 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. Weigl TH	01.10.2014–30.06.2018	Freie Universität Berlin
DFG	Untersuchung des Ablaufes der Kalzit-biomineralisation 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–	(MPI KOLL ist Koordinator, 7 Teilprojekte am Institut) 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

Zuwendungs- geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
DFG	Gottfried Wilhelm Leibniz-Programm	Prof. Fratzl Dr. Dunlop Dr. Wagermaier Dr. Dean BM	01.09.2010–31.08.2017	5 Subprojekte am Institut
DFG	Exzellenzcluster UniCat: Unifying Concepts in Catalysis Humboldt-Universität Berlin	Prof. Möhwald GF Prof. Antonietti KC	01.01.2008–31.12.2010 01.11.2012–31.10.2017	Technische Universität Berlin Freie Universität Berlin Universität Potsdam Fritz-Haber-Institut der Max-Planck-Gesellschaft Berlin
DFG	Synthese pflanzlicher Kohlenhydrate und ihre Anwendung in der Biologie	Dr. Pfrengle BS	15.12.2014–14.12.2017	
DFG	ERA_Chemistry_Biomimetische Bindung und Organisation von Magnetit-Nanopartikeln	Dr. Faivre BM	23.02.2015–22.02.2018	
DFG	Aufklärung der Mechanismen der Chitin-Faser-Orientierung in Arthropodenkutikula	Dr. Politi BM	09.07.2015–08.07.2018	Technische Universität Dresden Hochschule Bremen
DFG	Die Funktion des Osteozytennetzwerks und dessen Einfluss auf das Knochenmaterial	Dr. Weinkamer BM	10.08.2015–09.08.2018	
DFG	Die Funktion des Osteozytennetzwerks und dessen Einfluss auf das Knochenmaterial	Dr. Wagermaier BM	10.08.2015–09.08.2018	
DFG	Empirisches Verständnis von Glykosylierungsreaktionen	Prof. Seeberger BS	02.07.2015–01.07.2018	
DFG	Strukturelle Glykobiologie der Wechselwirkungen von Viren mit bakteriellen Polysacchariden	Dr. Neu BS	03.09.2015–02.09.2018	
DFG	Strukturelle Flexibilität des optischen Designs der Arthropodencornea	Dr. Politi BM	12.11.2015–11.11.2018	Humboldt Universität Berlin
DFG	Multifunktionelle geschichtete Magnetit Komposite	Dr. Faivre BM	16.12.2015–15.12.2017	Universität Konstanz Universität Erlangen Forschungszentrum Jülich GmbH

Supranationale Einrichtungen

Zuwendungs- geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
ESA/ESTEC	Topical Team: Foam and Emulsion Technologies- Concerted Action Team (FETCAT)	Dr. Miller 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 University of Manchester Institute of Science and Technology, Großbritannien Institute of Food Research, Norwich, Großbritannien Norwegian University of Science and Technology, Trondheim, Norwegen St. Petersburg State University, Russland Université d'Orsay et CNRS, Frankreich Université de Marne La Vallée, Frankreich Unilever, Großbritannien Norsk Hydro ASA, Norwegen IPF, Dresden
ESA/ESTEC	FOR ESA-MAP Soft Matter Dynamics	Dr. Miller BM		Deutsches Zentrum für Luft- und Raumfahrt, Köln Université Paris-Sud Le Centre National de la Recherche Scientifique, Paris University of Liege, Belgien Aberystwyth University, Ceredigion, UK TeclisParc de Chancolan, Frankreich Trinity College, Dublin, Irland Universität Düsseldorf University Twente, Niederlande University of Rennes 1, Frankreich Universität Erlangen Duke University, Durham, UK CNR, Padova, Italien Research Committee AUTH, Thessaloniki, Griechenland IFP Energies nouvelles, Frankreich Loufakis Chemicals S.A., Griechenland Nestlé S.A., Vevey, Schweiz University of Pennsylvania, USA Moscow State University, Russland ESPCI Paris

Supranationale Einrichtungen

Zuwendungsgeber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
HFSP Research Grant		Dr. Dean BM	01.09.2013–31.08.2015	Wyss Institut - Harvard University, USA Konrad-Zuse-Zentrum für Informationstechnik Berlin (ZIB)
Royal Society of Chemistry	Researcher Mobilty Grant	Dr. Fellingner KC	25.04.2016–06.06.2016	

Stiftungen

Körper-Stiftung	Körper-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
Lundbeck Foundation	Improved mechanical functionality of chitin based biological materials by inorganic fortification	Prof. Fratzl Dr. Leemreize BM	01.03.2015–29.02.2016	
Lundbeck Foundation	Improved mechanical functionality of chitin based biological materials by inorganic fortification	Prof. Fratzl Dr. Leemreize BM	01.03.2016–31.01.2017	
Böhringer Ingelheim Stiftung	Fragment-based design of targeted delivery vehicles: High specificity through low affinity heteromultivalent interactions	Dr. Rademacher BS	01.11.2016–31.10.2017	
DARPA	Radial Approach to the Automated Synthesis of Small Molecules	Dr. Gilmore BS	01.09.2016–31.08.2017	

Sonstige deutsche Forschungsfinanzierer

DAAD	Projektbezogener Personenaustausch mit der China	Prof. Brezesinski GF	2014–2015	Shanghai Institute of Applied Physics, China Jiangnan University, Wuxi, China
		Prof. Seeberger BS	2014	
DAAD	Projektbezogener Personenaustausch mit Polen	Prof. Brezesinski GF	2014–2015	Warsaw University of Technology, Poland

Sonstige deutsche Forschungsfinanzierer

Zuwendungs- geber	Thema	Projektleiter	Bewilligungszeitraum	Zusammenarbeit mit
DAAD	Projektbezogener Personenaustausch mit Hong Kong	Dr. Yuan KC	2014–2015	The Hong Kong Polytechnic University
DAAD	Projektbezogener Personenaustausch mit Portugal	Prof. Brezesinski BS	2015	Universidade do Minho, Braga, Portugal
DAAD	Projektbezogener Personenaustausch mit Portugal	Dr. Kolarich BS	2016–2017	Institute of Molecular Pathology and Imm, Portugal
DAAD	Projektbezogener Personenaustausch mit China	Dr. Yuan KC	2015–2016	Zhe Jiang University, China

Ausgewählte Veranstaltungen

Selected Events

2015

- **21.-23. April Nanobrücken**
MPI of Colloids and Interfaces
- **23. April Girls' Day**
Max Planck Campus, Potsdam Golm Science Park
- **5. June Alumni Meeting**
MPI of Colloids and Interfaces
- **6.-10. July 6th Bubble and Drop Interfaces (B&D2015)**
MPI of Colloids and Interfaces
- **21. September Dedication Extension Building**
MPI of Colloids and Interfaces
- **28.-29. September 21st Ostwald-Kolloquium**
MPI of Colloids and Interfaces
- **4. December Biomolecular Systems Day**
MPI of Colloids and Interfaces
- **7.-9. December Multiscale Motility of Biomolecular Machines**
Harnack-Haus, Berlin
- **8.-11. December ILMAT III**
Harnack-Haus, Berlin

2016

- **22.-25. February Euro Bio-inspired - International School and Conference on Biological Materials Science**
Kongresshotel Potsdam
- **28. April Girls' Day**
Max Planck Campus, Potsdam Golm Science Park
- **26. May Interfacing Interfacial Science**
MPI of Colloids and Interfaces
- **27. May Alumni Meeting**
MPI of Colloids and Interfaces
- **5.-7. September Biomembrane Days 2016**
MPI of Colloids and Interfaces

Wissenschaftliche Abschlüsse

Scientific Degrees

Bachelor Theses

Department of Biomaterials

2015

Latza, V.: Synthese eines Dioligospiroketalstabs. Universität Potsdam.

Department of Biomolecular Systems

2016

Heine, D.: Glycomic Characterisation of the von Willebrand factor. Universität Düsseldorf (2016).

Miedbrodt, J.: Evaluierung der Lektinspezifität für die selektive Glykopeptidanreicherung. Freie Universität Berlin.

Hilgert, L.F.: Evaluating the role of SPPL3 on the protein N-glycome. Freie Universität Berlin.

Killian, L.M.: Screening and identification of novel ligands for the C-type lectin receptor human Langerin. Freie Universität Berlin.

Diploma Theses

Master Theses

Department of Biomaterials

2015

Günther, E.: Probing the intracellular chemistry of magnetotactic bacteria using fluorescence microscopy. Universität Potsdam.

Huss, J.: The material design behind serotiny: A comparative study of two Banksia species along a climatic gradient in Western Australia. Universität Freiburg.

Schiro, Gabriele: Influence of redox potential on the biomineralization prozess in Magnetospirillum magneticum utilizing a bioreactor. Universität Freiburg.

2016

Tunn, I.: Characterization of metal-binding synthetic coiled coil peptides. Universität Potsdam.

Department of Biomolecular Systems

2015

De Kruijff, G.: Development of a new protecting group strategy for the automated solid-phase synthesis of plant oligosaccharides. Universität Mainz.

Molavi, N.: Fragment evolution of thiazolo pyrimidines as murine Langerin inhibitors. Freie Universität Berlin.

2016

Baukmann, H.: Potentially allosteric modulators of the C-type lectin DC-SIGN identified by Fragment-based screening. Universität zu Lübeck.

Georgieva, E.: Structural Characterization of DC-SIGN via Molecular Dynamics and Mutagenic Studies. Freie Universität Berlin.

Schmidt, H.: Biochemical and Cellular Characterization of the Human C-Type Lectin Receptor Langerin. Freie Universität Berlin.

Matic, A.: Synthesis of Glycosyl Fluorides for the Enzymatic Synthesis of Xylans. Freie Universität Berlin.

Department of Colloid Chemistry

2015

Tröger-Müller, S.: Synthesis and Application of Sustainable Ionic Liquids. Universität Potsdam.

Wissenschaftliche Abschlüsse

Scientific Degrees

PhD Theses

Department of Biomaterials

2015

- Aido, M.: The influence of age and mechanical loading on bone structure and mechanical properties. TU Berlin.
- Birkhold, A.: A 4D Imaging Approach to Monitor Bone Remodeling. TU Berlin.
- Bortel, E.: Maturation of murine long bones: a high resolution micro-computed tomography study. TU Berlin.
- Pinchasik, B.-E.: Manipulation of Microbubbles Inspired by Bubble Use in Nature. Universität Potsdam.
- Razi, H.: An In Silico Study of Age-related Changes in the Mechanical Regulation of Bone Adaptation. TU Berlin.
- Repp, F.: Computational Analysis of Dynamic Bone Structure and Processes - Osteocyte Networks & Healing. HU Berlin
- Roschger, A.: Quantitative Analysis of Local Mineral Content and Composition During Bone Growth and Remodeling. HU Berlin.
- Schmitt, C.: The Role of Protein Metal Complexes in the Mechanics of Mytilus californianus Byssal Threads. Universität Potsdam.
- Schütz, R.: The Temple Scroll and the Structural Properties of Collagen. TU Berlin.
- Timofeeva, N.: Effect of ions and amino-acid sequence on collagen structure – a molecular dynamics study. Universität Potsdam.
- Turcaud, S.: Some Patterns of Shape Change controlled by Eigenstrain Architectures. Université Grenoble Alpes, France.
- Widdrat, M.: Formation and Alteration of Magnetite Nanoparticles. Universität Potsdam.

2016

- Bayerlein, B.: The Role of Organic Interfaces in the Formation and the Mechanical Performance of the Prismatic Layer of the Bivalve Shell Pinna Nobilis. TU Berlin.
- Forien, J.-B.: Hierarchy of microstructural features as the origin of fracture resistance in dentine. TU Berlin.
- Olszewska, A.: Forming magnetic chain with the help of biological organisms. Universität Potsdam.
- Reinecke, A.: Impact of Protein Structure on the Mechanics and Assembly of Mytilus Byssal Threads. Universität Potsdam.
- Schmidt, I.: Structure and Properties of Calcium Carbonate Microlens Arrays. TU Berlin.
- Seidt, B.: Structural and mechanical characterization of bio-inspired hybrid materials by multi-scale analysis. TU Berlin.
- Zou, Z.: Formation and Stability of Amorphous Calcium Carbonate. TU Berlin.

Department of Biomolecular Systems

2015

- Hütter, J.: Carbohydrate-mediated cell targeting and the role of C-type lectin receptors in autoimmunity. Freie Universität Berlin.
- Matthies, St.: Total Synthesis of Complex Biomolecules: De Novo Synthesis of Legionaminic Acids and Continuous Flow Glycosylation. Freie Universität Berlin.
- Reinhardt, A.: Immunological Relevance of Conserved Lipopolysaccharide Inner Core Structures of Pathogenic Gram-Negative Bacteria. Freie Universität Berlin.
- Monnanda, B. P.: Host Responses to Presentation of Particulate Virulence Factors of Bacteria and Parasites. Freie Universität Berlin.

Schumann, B.: Synthesis and Immunological Evaluation of Oligosaccharide-Antigens as Vaccine Candidates for Streptococcus pneumoniae Serotypes 1 and 8. Freie Universität Berlin.

2016

Weishaupt, M.: Automated Solid-Phase Synthesis of Carbohydrate Antigens. Freie Universität Berlin.

Johannssen, T.: Identification and characterization of C-type lectin receptors in infection and autoimmunity. Freie Universität Berlin.

Bröcker, F.: Towards vaccines and therapeutic antibodies against Clostridium difficile based on synthetic glycans. Freie Universität Berlin.

Möginger, U.: Glycomics and Glycoproteomics of Natural and Synthetic Glycoproteins. Freie Universität Berlin.

Hinneburg, H.: Development of highly sensitive and selective applications for glycoproteomics and clinical glycomics. Freie Universität Berlin.

Alagesan, K.: The Mass Spectrometry Toolkit for Glycoprotein Characterisation: Development of Novel Analytical Methods and Technologies for Glycomics and Glycoproteomics.

Hanske, J.: Investigation of the Structural Basis of Ligand Recognition of the C-Type Lectin Receptor Langerin. Freie Universität Berlin.

Aretz, J.: Fragment-based Design of Novel Lectin Ligands. Freie Universität Berlin.

Department of Colloid Chemistry

2015

Ambrogj, M.: Application of Poly(Ionic Liquid)s for Functional Carbons. Universität Potsdam.

Chen, Z.: Novel Strategies to Improve (Photo)catalytic Performance of Carbon Nitride-based Composites. Universität Potsdam.

Fettkenhauer, C.: Ionothermale Synthese funktioneller Kohlenstoffnitride. Universität Potsdam.

Grygiel, K.: Poly(Ionic Liquid) Stabilizers and New Synthetic Approaches. Universität Potsdam.

Kirchhecker, S.: Renewable Imidazolium Zwitterions as Platform Molecules for the Synthesis of Ionic Liquids and Materials. Universität Potsdam.

Molinari, V.: Ni-based materials for the catalytic conversion of lignocellulosic biomass into valuable products. Universität Potsdam.

Schwarz, D.: Nanoporous Melamine Resin Materials: Synthetic Strategies, Shape Control And Adsorption Properties. Universität Potsdam.

Secker, C.: Polypeptoid Block Copolymers: Synthesis, Modification, and Structure Formation. Universität Potsdam.

2016

Ledendecker, M.: En route towards advanced catalyst materials for the electrocatalytic water splitting reaction: Mechanistic insights into the formation of metal carbides, phosphides, sulfides and nitrides. Universität Potsdam.

Pampel, J.: Ionothermal Carbon Materials: Advanced Synthesis and Electrochemical Applications. Universität Potsdam.

Täuber, K.: Porous Membranes from Imidazolium- and Pyridinium-based Poly(ionic liquid)s with Targeted Properties. Universität Potsdam.

Steeple, E.: Amino acid-derived imidazolium salts: platform molecules for N-heterocyclic carbene metal complexes and organosilica materials. Universität Potsdam.

Department of Theory & Bio-Systems

2015

Faber, M.: Folding Dynamics of RNA Secondary Structures. A structure based approach. Universität Potsdam.

Rudorf, S.: Protein Synthesis by Ribosomes. Universität Potsdam.

2016

Agudo, J.: Effects of Bilayer Asymmetry on Nanotube Formation and Particle Engulfment by Biomembranes and Vesicles". TU Berlin.

Sin, C.: Post transcriptional mechanisms in gene expression control. Universität Potsdam.

Steinkühler, J.: Partitioning of membrane components in adhering vesicles. TU Berlin.

Habilitations

2015

Yuan, J.: Poly(Ionic Liquids): Innovative Polyelectrolytes for Materials Applications. Universität Potsdam.

2016

Dunlop, J. W. C.: The physics of shape changes in biology. Universität Potsdam.

Personalien

Appointments and Honors

Ehrungen/Mitgliedschaften/Honorarprofessuren Honors/Memberships/Honorary Professorships

2015

- Prof. Dr. Markus Antonietti:** Director of the Department of Colloid Chemistry was elected Foreign Member of the Royal Swedish Academy of Engineering Sciences (IVA)
- Prof. Peter Fratzl:** Director of the Department of Biomaterials, became member of the Academy of Sciences and Literature, Mainz
- Prof. Dr. Peter H. Seeberger:** Director of the Department of Biomolecular Systems received the Humanity in Science Award
- Dr. Nina Fechler:** Group Leader in the Department of Colloid Chemistry, received the 9th Potsdam young scientist award
- Dr. Jiayin Yuan:** Group Leader in the Department of Colloid Chemistry, has been awarded a Dr. Hermann Schnell Fellowship of the GDCh (Gesellschaft Deutscher Chemiker; German Chemical Society)

2016

- Prof. Dr. Markus Antonietti:** Director of the Department of Colloid Chemistry received the Humboldt-Gay Lussac Award of the French Academy of Sciences
- Prof. Dr. Markus Antonietti:** Director of the Department of Colloid Chemistry received the Liebig Medal of the German Chemical Society
- Dr. Admir Masic:** Independent Researcher in the Department of Biomaterials, received the 2016 Gold WITec Paper Award
- Dr. Christoph Rademacher:** Group Leader in the Department of Biomolecular Systems, received an ERC Starting Grant of the European Research Council
- Dr. Sophia Rudolf:** Group Leader in the Department of Theory & Bio-Systems, received the Michelson Award 2016 of the University Potsdam
- Dr. Jiayin Yuan:** Group Leader in the Department of Colloid Chemistry, has been awarded the Dozentenpreis from the Fund of Chemical Industry
- Vaxxilon:** founded by the Max Planck Society together with the Swiss biotech company Actelion Ltd., named „Science Start-Up of the Year 2016“ (Falling Walls Venture science competition).

Ruf an eine Universität

Appointments

2015

- Dr. Stefan Klumpp:** Group Leader in the Department of Theory & Bio-Systems, accepted a position as W2 Professor for Theoretical Biophysics at the Georg-August-University Göttingen.
- Dr. Bernd Lepenies:** Group Leader in the Department of Biomolecular Systems, accepted a position as W2 Professor for Infection Immunology at the University of Veterinary Hannover, Germany.
- Dr. Admir Masic:** Group Leader in the Department of Biomaterials, accepted a position as Assistant Professor at the Massachusetts Institute of Technology, Department of Civil and Environmental Engineering.

2016

- Dr. Daniel Kolarich:** Group Leader in the Department of Biomolecular Systems, accepted a position as Associated Professor at Griffith University, Australia
- Dr. Menny Shalom:** Group Leader in the Department of Colloid Chemistry, accepted a position as Professor for Physical Chemistry and Nanotechnology at the Ben Gurion University, Israel

Publications

Biomaterialien 2015

Journal Article

Achrai, B.; Bar-On, B.; Wagner, H. D.: Bending mechanics of the red-eared slider turtle carapace [Corr. vol 30, pg 223, 2014]. *Journal of the Mechanical Behavior of Biomedical Materials* 50, p. 311 - 311 (2015)

Aidarova, S. B.; Sharipova, A. A.; Tleuova, A. B.; Bekturganova, N. E.; Grigoriev, D. O.; Miller, R.: Optimization of polymerization process conditions during development of micro- and nanocapsules of hydrophobic agents based on Pickering emulsions. *Chemical Bulletin of Kazakh National University* 79 (3), pp. 59 - 64 (2015)

Aido, M.; Kerschnitzki, M.; Hörth, R. M.; Checa, S.; Spevak, L.; Boskey, A. L.; Fratzl, P.; Duda, G. N.; Wagermaier, W.; Willie, B. M.: Effect of in vivo loading on bone composition varies with animal age. *Experimental Gerontology* 63, pp. 48 - 58 (2015)

Akiva, A.; Malkinson, G.; Masic, A.; Kerschnitzki, M.; Bennet, M.; Fratzl, P.; Addadi, L.; Weiner, S.; Yaniv, K.: On the pathway of mineral deposition in larval zebrafish caudal fin bone. *Bone* 75, pp. 192 - 200 (2015)

Amornkitbamrung, L.; Mohan, T.; Hribernik, S.; Reichel, V.; Faivre, D.; Gregorova, A.; Engel, P.; Kargl, R.; Ribitsch, V.: Polysaccharide stabilized nanoparticles for deacidification and strengthening of paper. *RSC Advances* 5 (42), pp. 32950 - 32961 (2015)

Atkins, A.; Reznikov, N.; Ofer, L.; Masic, A.; Weiner, S.; Shahar, R.: The three-dimensional structure of anosteocytic lamellated bone of fish. *Acta Biomaterialia* 13, pp. 311 - 323 (2015)

Baidukova, O.; Möhwald, H.; Mazheika, A. S.; Sviridov, D. V.; Palamarciuc, T.; Weber, B.; Cherepanov, P. V.; Andreeva, D. V.; Skorb, E. V.: Sonogenerated metal-hydrogen sponges for reactive hard templating. *Chemical Communications* 51 (36), pp. 7606 - 7609 (2015)

Bar-On, B.; Bayerlein, B.; Blumtritt, H.; Zlotnikov, I.: Dynamic Response of a Single Interface in a Biocomposite Structure. *Physical Review Letters* 115 (23), 238001 (2015)

Baumgartner, J.; Faivre, D.: Iron solubility, colloids and their impact on iron (oxyhydr)oxide formation from solution. *Earth-Science Reviews* 150, pp. 520 - 530 (2015)

Bennet, M.; Bertinetti, L.; Neely, R. K.; Schertel, A.; Körnig, A.; Flors, C.; Müller, F. D.; Schüler, D.; Klumpp, S.; Faivre, D.: Biologically controlled synthesis and assembly of magnetite nanoparticles. *Faraday Discussions* 181, pp. 71 - 83 (2015)

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. *Philosophical Magazine* 95 (16-18), 920544, pp. 1992 - 1998 (2015)

Bertinetti, L.; Masic, A.; Schütz, R.; Barbeta, A.; Seidt, B.; Wagermaier, W.; Fratzl, P.: Osmotically driven tensile stress in collagen-based mineralized tissues. *Journal of the Mechanical Behavior of Biomedical Materials* 52 (Special Issue: Collagen mechanics), pp. 14

Birkhold, A. I.; Razi, H.; Weinkamer, R.; Duda, G. N.; Checa, S.; Willie, B. M.: Monitoring in vivo (re)modeling: A computational approach using 4D microCT data to quantify bone surface movements. *Bone* 75, pp. 210 - 221 (2015)

Bortel, E.; Duda, G. N.; Mundlos, S.; Willie, B. M.; Fratzl, P.; Zaslansky, P.: Long bone maturation is driven by pore closing: A quantitative tomography investigation of structural formation in young C57BL/6 mice. *Acta Biomaterialia* 22, pp. 92 - 102 (2015)

Bortel, E.; Duda, G. N.; Mundlos, S.; Willie, B. M.; Fratzl, P.; Zaslansky, P.: High resolution 3D laboratory x-ray tomography data of femora from young, 1-14 day old C57BL/6 mice. *Data in Brief* 4, pp. 32 - 33 (2015)

Bykov, A. G.; Loglio, G.; Miller, R.; Noskov, B. A.: Dilational surface elasticity of monolayers of charged polystyrene nano- and microparticles at liquid/fluid interfaces. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 485, pp. 42 - 48 (2015)

Cherepanov, P. V.; Melnyk, I.; Skorb, E. V.; Fratzl, P.; Avadhut, Y. S.; Senker, J.; Leppert, L. et al.: The use of ultrasonic cavitation for near-surface structuring of robust and low-cost AlNi catalysts for hydrogen production. *Green Chemistry* 17, pp. 2745 - 2749 (2015)

Cipitria, A.; Wagermaier, W.; Zaslansky, P.; Schell, H.; Reichert, J. C.; Fratzl, P.; Hutmacher, D. W.; Duda, G. N.: BMP delivery complements the guiding effect of scaffold architecture without altering bone microstructure in critical-sized long bone defects: A multiscale analysis. *Acta Biomaterialia* 23, pp. 282 - 294 (2015)

Cramer, A. D.; Gambinossi, F.; Wischerhoff, E.; Laschewsky, A.; Miller, R.; Ferri, J. K.: Flexible thermoresponsive nanomembranes at the aqueous-air interface. *Chemical Communications* 51 (5), pp. 877 - 880 (2015)

Cui, Q.; Xia, B.; Mitzscherling, S.; Masic, A.; Li, L.; Bargheer, M.; Möhwald, H.: Preparation of gold nanostars and their study in selective catalytic reactions. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 465, pp. 20 - 25 (2015)

Dan, A.; Gochev, G.; Miller, R.: Tensiometry and dilational rheology of mixed γ -lactoglobulin/ionic surfactant adsorption layers at water/air and water/hexane interfaces. *Journal of Colloid and Interface Science* 449, pp. 383 - 391 (2015)

Das, S.; Miller, D. R.; Kaufman, Y.; Rodriguez, N. R. M.; Pallaoro, A.; Harrington, M. J.; Glylys, M.; Israelachvili, J. N.; Waite, J. H.: Tough Coating Proteins: Subtle Sequence Variation Modulates Cohesion. *Biomacromolecules* 16 (3), pp. 1002 - 1008 (2015)

Davidov, G.; Müller, F. D.; Baumgartner, J.; Bitton, R.; Faivre, D.; Schüler, D.; Zarivach, R.: Crystal structure of the magnetobacterial protein MtxA C-terminal domain reveals a new sequence-structure relationship. *Frontiers in Molecular Biosciences* 2, 25 (2015)

Dean, M. N.; Ekstrom, L.; Monson-Orran, E.; Ballantyne, J.; Witten, P. E.; Riley, C.; Habraken, W.; Omelon, S.: Mineral homeostasis and regulation of mineralization processes in the skeletons of sharks, rays and relatives (Elasmobranchii). *Seminars in Cell & Developmental Biology* 46, pp. 51 - 67 (2015)

Degtyar, E.; Mlynarczyk, B.; Fratzl, P.; Harrington, M. J.: Recombinant engineering of reversible cross-links into a resilient biopolymer. *Polymer* 69, pp. 255 - 263 (2015)

Publications

- Dukhin, S. S.; Kovalchuk, V. I.; Gochev, G.; Lotfi, M.; Krzan, M.; Malysa, K.; Miller, R.: Dynamics of Rear Stagnant Cap formation at the surface of spherical bubbles rising in surfactant solutions at large Reynolds numbers under conditions of small Marangoni number and slow sorption kinetics. *Advances in Colloid and Interface Science* 222, pp. 260 - 274 (2015)
- Dunlop, J. W. C.; Fratzl, P.: Making a tooth mimic. *Nature Materials* 14 (11), pp. 1082 - 1083 (2015)
- Enke, M.; Bode, S.; Vitz, J.; Schacher, F. H.; Harrington, M. J.; Hager, M. D.; Schubert, U. S.: Self-healing response in supramolecular polymers based on reversible zinc-histidine interactions. *Polymer* 69, pp. 274 - 282 (2015)
- Erko, M.; Younes-Metzler, O.; Rack, A.; Zaslansky, P.; Young, S. L.; Milliron, G.; Chyashvichyus, M.; Barth, F. G.; Fratzl, P.; Tsukruk, V. et al.: Micro- and nano-structural details of a spider's filter for substrate vibrations: relevance for low-frequency signal transmission. *Interface : Journal of the Royal Society* 12 (104), 20141111 (2015)
- Fainerman, V. B.; Aksenenko, E. V.; Lylyk, S. V.; Lotfi, M.; Miller, R.: Adsorption of Proteins at the Solution/Air Interface Influenced by Added Nonionic Surfactants at Very Low Concentrations for Both Components. 3. Dilational Surface Rheology *The Journal of Physical Chemistry B* 119 (9), pp. 3768 - 3775 (2015)
- Fainerman, V. B.; Aksenenko, E. V.; Miller, R.: Influence of alkane and perfluorocarbon vapors on adsorbed surface layers and spread insoluble monolayers of surfactants, proteins and lipids. *Advances in Colloid and Interface Science* (2015)
- Faivre, D.; Baumgartner, J.: The combination of random mutagenesis and sequencing highlight the role of unexpected genes in an intractable organism. *PLoS Genetics* (2015)
- Faivre, D.; Ukmar-Godec, T.: From Bacteria to Mollusks: The Principles Underlying the Biomineralization of Iron Oxide Materials. *Angewandte Chemie International Edition* 54 (16), pp. 4728 - 4747 (2015)
- Faivre, D.: Formation of magnetic nanoparticle chains in bacterial systems. *MRS Bulletin* 40 (6), pp. 509 - 515 (2015)
- Fantazzini, P.; Mengoli, S.; Pasquini, L.; Bortolotti, V.; Brizi, L.; Mariani, M.; Giosia, M. D.; Fermani, S.; Capaccioni, B.; Caroselli, E. et al.: Gains and losses of coral skeletal porosity changes with ocean acidification acclimation. *Nature Communications* 6, 7785 (2015)
- Fausser, H.; Uhlig, M.; Miller, R.; von Klitzing, R.: Surface Adsorption of Oppositely Charged SDS: C12TAB Mixtures and the Relation to Foam Film Formation and Stability. *The Journal of Physical Chemistry B* 119, pp. 12877 - 12886 (2015)
- Fischer, F. D.; Zickler, G. A.; Dunlop, J. W. C.; Fratzl, P.: Tissue growth controlled by geometric boundary conditions: a simple model recapitulating aspects of callus formation and bone healing. *Journal of the Royal Society Interface* 12 (107), 20150108 (2015)
- Forien, J.-B.; Fleck, C.; Cloetens, P.; Duda, G.; Fratzl, P.; Zolotoyabko, E.; Zaslansky, P.: Compressive Residual Strains in Mineral Nanoparticles as a Possible Origin of Enhanced Crack Resistance in Human Tooth Dentin. *Nano Letters* 15 (6), pp. 3729 - 3734 (2015)
- Fratzl, P.: Imaging techniques: Extra dimension for bone analysis. *Nature* 527 (7578), pp. 308 - 309 (2015)
- Fratzl-Zelman, N.; Schmidt, I.; Roschger, P.; Roschger, A.; Glorieux, F. H.; Klaushofer, K.; Wagermaier, W.; Rauch, F.; Fratzl, P.: Unique micro- and nano-scale mineralization pattern of human osteogenesis imperfecta type VI bone. *Bone* 73, pp. 233 - 241 (2015)
- Gochev, G.: Thin liquid films stabilized by polymers and polymer/surfactant mixtures. *Current Opinion in Colloid & Interface Science* 20 (2), pp. 115 - 123 (2015)
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