Introduction

The Helmholtz Graduate School for Macromolecular Bioscience – a cooperation between the Institute of Biomaterial Science of the Helmholtz-Zentrum Geesthacht, Freie Universität Berlin and University of Potsdam – is pleased to announce its Summer School 2017. This year the Summer School will be located at the University of Potsdam - Campus Golm. The Summer School targets junior researchers of the cooperating institutions. Participants have the chance to learn about the recent progress of macromolecular biomaterials and to get insights into selected topics of the Graduate School’s multidisciplinary research fields.

Piloting approaches in modern medical therapies often require innovative multifunctional biomaterials. The Summer School 2017 concentrates on the design and synthesis of polymer-based functional materials and strategies to increase the number of functions implemented into these materials. Multifunctionality of polymers is one of the preconditions to control regenerative processes, ideally to achieve full tissue restoration. Other aspects of the program are functionalization of polymer-based materials by polymer processing or evaluation of functions like the compatibility of the newly developed materials within biological environments. Within this context, the Summer School will also enlighten the complex interface processes that are crucial to design biomaterials for future applications in medicine and biotechnology.
SUMMER SCHOOL 2017 HELMHOLTZ GRADUATE SCHOOL FOR MACROMOLECULAR BIOSCIENCENeed Help Reaching the Lecture Hall
University of Potsdam, Campus Golm
House 25, Großer Chemiehörsaal F 0.01,
Karl-Liebknecht Str. 24-25, 14476 Potsdam

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How to reach the lecture hall
Directions via S-Bahn or regional train from Berlin
(S7, RE1, RE7, RB 20, RB 21) to Potsdam Hbf continue to Golm via regional train (RB20, RB21, RB22)
or bus (605, 606)

Program
Monday, 18 Sept 2017
09:00-09:15 Opening and Welcome: Prof. Nan Ma
Spokesperson, MacBio Graduate School
09:15-10:00 Keynote: Prof. Mitsuhiro Ebara
International Center for Materials Nanoarchitectonics (MANA) and National Institute for Materials Science (NIMS), Tsukuba (Japan)
Shape-memory Cell Culture Platform for Mechanochemistry
10:00-10:10 Keynote: Prof. Jun Wang
South China University of Technology and University of Science and Technology of China
Development of CLAN Nanomedicine for Nucleic Acid Delivery
10:45-11:15 Coffee Break
11:15-12:00 Prof. Michael U. Kumke
University of Potsdam, Institute of Chemistry Lanthanides - Luminescence and Life Science Applications
12:00-12:45 Dr. med. univ. Markus Reithaler
Chantil, Department of Cardiology and Helmholtz-Zentrum Geesthacht, Institute of Biomaterial Science Innovative Transcatheter Therapies in Structural Heart Diseases
12:45-13:45 Lunch Break
13:45-14:15 Johan Bäckemo-Johansson
Helmholtz-Zentrum Geesthacht, Institute of Biomaterial Science Shear-induced Platelet Adhesion and Activation in a Dynamic Multiwell-plate System
14:15-14:45 Antonia Menski
University of Potsdam, Institute of Chemistry Europium as Luminescence Probe in Potential Bioorthogonal Materials
14:45-15:15 Marcus Lindner
Freie Universität Berlin, Institute of Chemistry and Biochemistry Combined 3D-Printing and Cell Sheet Engineering Approach Towards an in vitro Kidney Model
15:15-15:45 Coffee Break
15:45-16:30 Poster Session
Tuesday, 19 Sept 2017
09:00-09:15 Introduction: Dr. habil. Burkhard Schulz
Deputy Spokesperson, MacBio Graduate School
09:15-10:00 Keynote: Dr. Julien Gautrot
Queen Mary University of London (UK), School of Engineering and Materials Science Mechanism of Cell Sensing of the Nanoscale Physical Properties of Biomaterials
10:00-10:10 Keynote: Prof. Jianping Fu
University of Michigan, Dept. of Mechanical and Biomedical Engineering, Medical School Cell and Developmental Biology and Michigan Center for Integrative Research in Critical Care (USA) Synthetic Human Embryo: Crazy Hype or Promising Hope?
10:45-11:15 Coffee Break
11:15-12:00 Prof. Nan Ma
Free Universität Berlin, Institute of Chemistry and Biochemistry and Helmholtz-Zentrum Geesthacht, Institute of Biomaterial Science Engineering Stem Cell Niches (ibc)
12:00-12:45 Prof. Katja Hanack
University of Potsdam, Institute of Biochemistry and Biology Humoral Immune Response and Antibody Generation
12:45-13:45 Lunch Break
13:45-14:15 Robert Engel
University of Potsdam, Institute of Biochemistry and Biology The Influence of ECM Proteins on Dendritic Cell Maturation
14:15-14:45 Rotsiniaina Randriantsilefiosa
Freie Universität Berlin, Institute of Chemistry and Biochemistry Bioactive Hydrogel Arrays for High-throughput Detection of Antibodies
14:45-15:15 Joachim Jelken
University of Potsdam, Institute of Physics Biocompatible Membranes with Reversible Tunable Pore Size
15:15-15:45 Networking / Get-Together
15:45-16:30 Poster Session

Wednesday, 20 Sept 2017
Scientific Symposium in Honor of Dr. habil. Burkhard Schulz
Functional Surfaces by Chemical Modification and Supramolecular Structureization
09:00-09:45 Introductions: Prof. Andreas Lendlein
Deputy Spokesperson, MacroBio Graduate School and Prof. Marc Behl
Deputy Director, Helmholtz-Zentrum Geesthacht, Institute of Biomaterial Science
09:45-10:30 Prof. Marià Jesús Vicent Dócón
Polymer Therapeutics Laboratory (Spain) Polymer Therapeutics as Nanosized Medicines
10:30-11:15 Prof. Ludovico Valli
University of Salento (Italy), Dept. of Biological and Environmental Sciences & Technologies (DiSTeBA) Development of CLAN Nanomedicine for Nucleic Acid Delivery

11:15-12:00 Prof. Michael U. Kumke
University of Potsdam, Institute of Chemistry Lanthanides - Luminescence and Life Science Applications
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