

Program:

MacroBio Summer School (22 – 26 September 2014)
Materials and Functions – Featuring the Third Dimension

 **Helmholtz
Graduate School**
Macromolecular Bioscience

Monday 22 September 2014

(Freie Universität Berlin, Takustr. 3, OC Lecture Hall)

IR Techniques in Different Systems

09:15 – 09:30 Opening and Welcome

Prof. Dr. Nan Ma (*Deputy Speaker of the Helmholtz Graduate School for
Macromolecular Bioscience*)

Prof. Dr. Rainer Haag (*Freie Universität Berlin*)

09:30 – 10:20 Presentation: Prof. Dr. Karsten Heyne (*Freie Universität Berlin*)
Ultra-fast IR

10:20 – 11:10 Presentation: Prof. Dr. Gerald Brezesinski
IRRAS to study reactions and interactions at the soft liquid /air interface

11:10 – 11:30 Coffee Break

11:30 – 12:30 Presentations of Students (à 20 min.)

11:30 – 11:50 Wan Yan (*Helmholtz-Zentrum Geesthacht, Institute of Biomaterial Science*)
*Influence of the Applied Programming Strain on the Shape-Memory
Performance of a PCL-PIBMD Multiblock Copolymer*

11:50 – 12:10 Era Kapourani (*Freie Universität Berlin*)
*Dendritic Polyglycerols for the Bioorthogonal Encapsulation of Living Cells
and Labile Macromolecules*

12:10 – 12:30 Dr. Dominic Gröger (*Freie Universität Berlin*)
Target Specific dendritic Polyanions

12:30 – 14:00 Lunch Break

14:00 – 15:40 Presentation: Prof. Dr. Gert von Helden (*Fritz-Haber-Institut, Max-Planck-
Gesellschaft*)

15:40 – 16:00 Coffee Break

16:00 – 17:00 Summary of the Day / Scientific Challenge

Tuesday 23 September 2014

(University of Potsdam, Golm, Building 25, Room F1.01)

LB- Technology

09:15 – 10:15 Welcome and Presentation

Prof. Dr. Svetlana Santer (*University of Potsdam*)
Remote control of stimuli responsive soft nano- objects

10:15 – 10:35 Coffee Break

10:35 – 11:35 Presentation: Prof. Dr. Andreas Taubert (*University of Potsdam*)

11:35 – 12:35 Presentation: Dr. Reinhard Miller (*Max-Planck-Institute of Colloids & Interfaces*)

12:35 – 13:45 Lunch Break

13:45 – 15:45 Presentations of Students (à 20 min.)

13:45 – 14:05 David Feldmann (*University of Potsdam*)
Phototaxis of spherical polymer brushes

14:05 – 14:25 Antonia Menski (*University of Potsdam*)
Eu(III)-doped ceria zirconia nanoparticles for biosensing: Structural investigation using luminescence spectroscopy at T = 4 K

14:25 – 14:45 Falko Rottke (*University of Potsdam/ Helmholtz-Zentrum Geesthacht*)
Evaluation of the Hydrolytic and Enzymatic Degradation of Polymeric Langmuir Films by Establishing Novel Analytical Methods

15:45 – 16:45 Coffee break

16:45 – 17:00 Summary of the Day / Scientific Challenge

Wednesday 24 September 2014

(HZG, HVI Tag, Building D, Lecture Hall)

9:15 – 9:30 Welcome: Prof. Dr. Andreas Lendlein
(*Director of the Institute of Biomaterial Science, Helmholtz-Zentrum Geesthacht*)

9:30 – 10:30 International Guest Speaker: Prof. Dr. Minna Kellomäki
(*Tampere University of Technology*)

10:30 – 11:00 Coffee Break

11:00 – 12:00 Presentation: Dr. Maike Windbergs (*Saarland University*)
Advanced chemical imaging of drug carriers and their uptake into human tissues and cells

12:00 – 14:00 Lunch Break

14:00 – 15:30 Presentations of Students (à 20 min.)

14:00 – 14:20 Fabian Frieß (*Institute of Biomaterial Science, Helmholtz-Zentrum Geesthacht*)

14:20 – 14:40 Nada Charbaji (*Helmholtz Virtual Institute*)

14:40 – 15:00 Xun Xu (*Institute of Biomaterial Science, Helmholtz-Zentrum Geesthacht*)

15:30 – 16:00 Coffee Break

16:00 – 17:00 Summary of the Day / Scientific Challenge

Thursday 25 September 2014

(HZG, Building D, Lecture Hall)

Team Day

09:15 – 13:00 Course I (scientific writing)

13:00 – 14:30 Lunch Break

14:30 – 16:00 Course II

16:00 – 16:30 Coffee Break

16:30 – 17:00 Winning Ceremony (Student Presentation / Scientific Challenge)

17:00 PhD-Barbecue

Friday 26 September 2014

(HZG, Building D, Lecture Hall)

International Day (Team Event)

10:00 – 11:30 International Guest Speaker: Prof. Dr. Peter Ma (*University of Michigan*)
Nanofibrous hollow microspheres self-assembled from star-shaped polymers as injectable cell carriers for knee repair, Nature Materials 10,398–406(2011).

11:30 – 12:00 Coffee Break

12:00 – 16:00 Team Building Event: Geocaching

16:00 – 17:00 Closing Ceremony