



Elite Study Program - Macromolecular Science

Advanced Module

3rd Workshop on

Recent Advances in Polymer Science

with the

Department of Polymer Science and Engineering

Zhejiang University

Hangzhou, PRC

Module Coordination:

Prof. Hans-Werner Schmidt

Prof. Andreas Greiner

Prof. Zhi-Kang Xu

Prof. Ji Jian

Summer term 2017

This advanced module within the Elite Study Program "Macromolecular Science" is on "**Recent Advances in Polymer Science**" and covers special aspects of polymer materials and introduces the students particularly to polymer science in China. The module is carried out with faculty members of the Department of Polymer Science and Engineering from Zhejiang University in Hangzhou, China.

The module consists of four elements: (i) a workshop in cooperation with the Department of Polymer Science and Engineering, Zhejiang University, Hangzhou, (ii) a poster introduction and discussion by the ENB students, and (iii) participation of selected contributions by Chinese Speakers at the Bayreuth Polymer Symposium 2017 (iv) a discussion about the Zhejiang University and the research system in China.

I. Workshop

Wednesday, September 20th, 10:00 – 17:30, Polymer Nanostructures building (PNS)

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| 10:00 | Welcome and Opening – Presentation of the Profile Area Polymer and Colloid Science at the University of Bayreuth
<i>Prof. Hans-Werner Schmidt</i> |
| 10:20 | Presentation of the Department of Polymer Science and Engineering Zhejiang University
<i>Prof. Dr. Zhi-Kang Xu, Director of Department of Polymer Science and Engineering</i> |
| 10:40 | Surface engineering of Biomaterials via layer-by-layer assemble
<i>Prof. Ji Jian, Zhejiang University</i> |
| 11:00 | Open-cell polymeric sponges
<i>Prof. Seema Agarwal, University Bayreuth</i> |
| 11:20 | Macro-assembly of Graphene
<i>Prof. Chao Gao, Zhejiang University</i> |
| 11:40 | Advanced Polymer Materials for Photovoltaics, Bioelectronics and Batteries
<i>Prof. Mukundan Thelakkat, University Bayreuth</i> |
| 12:00 | Understanding Order-Disorder Transitions in pi-conjugated polymers
<i>Prof. Anna Köhler, University Bayreuth</i> |
| 12:30 | Lunch at PNS |
| 13:30 | Polydopamine-based Coatings for the Surfaces and Interfaces of Nanofiltration Membranes
<i>Prof. Zhi-Kang Xu, Zhejiang University</i> |
| 13:50 | Thermal Transport in Colloidal Matter
<i>Prof. Markus Retsch, University Bayreuth</i> |

- 14:10 **Polymer constructed by formation of different carbon-carbon bonds**
Prof. Qi Wang, Zhejiang University
- 14:30 **Structure, Disorder and Function in Flexible Metal-Organic Frameworks**
Prof. Jürgen Senker, University Bayreuth
- 14:50 **Processing of tough physical hydrogels and programmed deformations of patterned hydrogels**
Prof. Zi Liang Wu, Zhejiang University
- 15:10 **Introduction to posters** by ENB PhD students of different research groups at the University of Bayreuth
- Poster discussion** with coffee break
- 16:20 **Perfectly Alternating and Regioselective Copolymerization of COS and Epoxides by Organic Lewis Pairs**
Prof. Xing-Hong Zhang, Zhejiang University
- 16:40 **Physical tools for the characterization of biopolymers and soft substrates for cell studies**
Prof. Holger Kress, University Bayreuth
- 17:00 **Mechanical property of substrate for improving endothelial cell functionality**
Prof. Ke-Feng Ren, Zhejiang University
- 19:00 **Dinner** at “Liebesbier“

II. Poster introduction and discussion

Wednesday, September 20th, 15:10 – 16:30, Polymer Nanostructures building (PNS)

The students have the opportunity to present their latest research results in form of a poster presentation. Prior to the poster discussion, each student will shortly introduce his poster in the frame of an oral short presentation (3 minutes each, maximum 3 slides).

Alternatively, the students can give a short introduction of one of the Chinese lecturers in the frame of a presentation (15 min + 5 min discussion) in the course of a students' seminar that will be arranged on request after the workshop.

III. Participation at the Bayreuth Polymer Symposium

The ENB participants have to attend at the Bayreuth Polymer Symposium.

IV. Research system and research institutions in China

Monday, September 18th, 12:45 – 14:00, Lunchmeeting, PNS seminar room

This part of the module includes an introduction into polymer science at Chinese Universities, particularly the Department of Polymer Science and Engineering, Zhejiang University.