



UNIVERSITÄT
BAYREUTH



Elitenetzwerk
Bayern



Advanced Module M055

Bioinspired Materials & Biofabrication

Part I. Seminar

March 12, 2020, University of Bayreuth

Part II. Visit of research facilities and the KeyLab *Adaptive Biomanufacturing* of the Bavarian Polymer Institute

March 12, 2020, University of Bayreuth

Part III. Conference „5th Bioinspired Materials 2020“

March 16-19, 2020, Irsee Monastery

Part IV. Meet the International Speakers

March 16-19, 2020, Irsee Monastery

Module Coordination

Prof. Thomas Scheibel and Prof. Leonid Ionov

Summer term 2020

"Bioinspired Materials & Biofabrication" is a conference module in SS 2020 within the Elite Study Program "Macromolecular Science". The 5th Bioinspired Materials 2020 is a biennial international Symposium on the design of functional materials and systems inspired by principles found in living nature. The main aim is to establish an international and interdisciplinary forum for scientists from a variety of fields including biology, chemistry, materials science and engineering, physics and medicine to discuss current cutting-edge research and to identify future research directions in the field of bioinspired materials. Main topics include the formation of hierarchical structures and the properties of complex-shaped biological materials. The transfer of biological principles onto adaptive and autonomous functional materials and systems made of organic and/or inorganic components represents a further main area. Beside synthesis and formation, the conference topics also include research on the functional and mechanical materials properties, the interaction of bioinspired materials with living environments, e.g. tissues and organs, and applications related to medical aspects. A topical focus will be covering biofabrication.

The module consists of four elements: (i) a seminar with students' contributions, (ii) visit of research facilities and the KeyLab Adaptive Biomanufacturing of the Bavarian Polymer Institute, (iii) the conference „5th Bioinspired Materials 2020" and (iv) meet the international speakers.

Part I: Seminar with students' contributions

Thursday 12, 2020, TAO S140/141, University of Bayreuth

In order to prepare for 5th *Bioinspired Materials 2020*, each participating students will select one conference speaker of the topical focus Biofabrication and will prepare a short presentation (15 minutes + 5 minutes discussion). Talks and discussions will be held in English. The presentation should introduce the speaker in the following manner:

- 1) Curriculum vitae
- 2) University and department
- 3) Research activities
- 4) Presentation of one or two recent papers

The seminar includes a presentation of one of the organizers of the 5th *Bioinspired Materials 2020* to give insight in the organization of an international conference.

14:00	Behind the scenes: Conference organization	Prof. Thomas Scheibel
14:30	Presentation about Prof. Marcy Zenobi-Wong	Christian Goldhahn
14:50	Presentation about Prof. Silvia Vignolini	Mara Klärner
15:10	Presentation about Prof. Thomas Schimmel	Nadine Rassmann

Part II. Visit of research facilities and the KeyLab Adaptive Biomanufacturing of the Bavarian Polymer Institute

15:30, March 12, 2020, University of Bayreuth

The students will have the opportunity to visit research facilities.

Part III: Conference „5th Bioinspired Materials 2020”

March 16-19, 2020, Irsee Monastery

The students will attend at the *5th Bioinspired Materials 2020*.

<https://bioinspired2020.dgm.de/home/>

Part IV. Meet the International Speakers

March 16-19, 2020, Irsee Monastery

The students will have the opportunity to get in direct contact with the conference speakers of the *5th Bioinspired Materials 2020* in the frame of a “Meet the International Speakers” session. Here, the students have the opportunity to further build up their scientific network.

The students will also have the opportunity to meet the international speakers during the conference dinner.