Advanced Science Seminar
Bioinspired Materials and Systems

Within the scope of the seminar, students would not only get an overview on the advantages, fabrication and potential applications of bioinspired materials, but also acquire the skill of planning and presenting a scientific talk. The preliminary meeting and seminars will be held in-person.

Preliminary meeting
20th October 2021, 9:00 AM - 11:00 AM
Venue: Lecture hall 2R4, Heisenbergstraße 3, 70569 Stuttgart

Seminar Meetings
Wednesdays, 9:00 AM - 1:00 PM
Venue: Lecture hall 2R4, Heisenbergstraße 3, 70569 Stuttgart

Doodle link for topic registration: https://doodle.com/poll/2b7hw8fcftsfcy9x?utm_source=poll&utm_medium=link
Seminar topics

The topics will be assigned on a “first come-first serve” basis. Please use the doodle link to choose your desired topic. References to the relevant literature are attached.

1. Bioinspired structural design of advanced stimuli responsive materials as actuators for small-scale robotics
   *Zhao et al., NPG Asia Materials, 2018, 10, 1-22.*

2. Fabrication and application of micro/nanoscale motors

3. Hierarchically structured inverse opals as porous materials with functional properties

4. How to produce magnetotactic microalgae?

5. Membrane materials for water purification: design, development and application

Institute for Materials Science

Prof. Dr. Joachim Bill
+49 0711 685 61948
bill@imw.uni-stuttgart.de
Seminar topics

The topics will be assigned on a “first come-first serve” basis. Please use the doodle link to choose your desired topic. References to the relevant literature are attached.

6. Nanogenerators: molecular motors for macroscopic materials?

7. The good virus: virus-based sensors

8. Wastewater cleaning using microalgae