

Advanced Science Seminar

Dynamic Framework Materials

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All meetings will be done in person in room 2S02, seminar room Materials Synthesis Group in S-Building, MPI-IS, Heisenbergstraße 3 70569 Stuttgart. Only if well-reasoned, participation can take place online via <https://unistuttgart.webex.com/meet/seminarraum-2s02>



For registration within our subgroup, please send an email to Dr. Krause.

Discussion and distribution of topics, finalizing of further schedule: 11th of October 2023, 9 am – 11 am, presentations need to be given until Nov 30th 2023.

Your performance will be evaluated based on a presentation of 30 min (in the form of a PowerPoint presentation with a size of approximately 15-25 slides) followed by a scientific and general discussion of 15 min.

In this Advanced Science Seminar, the students are meant to develop deeper insights into the field dynamic framework materials and methodologies to study these materials. **For your presentation, you will have to explain the basics of each and every material/method in detail, explaining the underlying concept and approach based on selected examples. If you select a topic that focuses on a class of materials, you should provide an outline of 1-2 applications of such materials with respect to the underlying dynamic properties. If you select an experimental topic then you should outline the range of information and potential classes of other materials that can be investigated with the method. Your presentation should cover at least detailed aspects of 3 publications.** Overall this will require a collection of research articles to be done by yourself and a selection to be done together with Dr. Krause.

Topic 1: In situ Diffraction

Topic 2: In situ Spectroscopy

Topic 3: Flexible Metal-Organic Frameworks

Topic 4: Flexible Covalent Organic Frameworks

Topic 5: Dynamic Zeolites

Topic 6: Robust Dynamics in Framework Materials