

[WS 2021/2022](#)

ELEMENTS OF MICROSTRUCTURE (EOM)

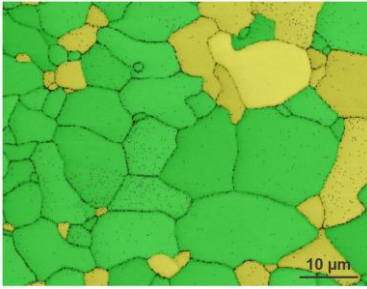
Day and Time:
Wednesdays 14:00-16:00

Teachers

Hongcai Wang (HW) and Gunther Eggeler (GE)

Teaching Assistants

Alex Asabre (AA) and Catalina Pineda Heresi (CPH)



Due to the current COVID-19 regulations, **all lectures will take place in person and parallel online.** If you would like to take part in this course, you can find all information in the Moodle system:

Course-ID: 440402, password: EoM2122

This course which is presented jointly by Dr.-Ing. Hongcai Wang and Prof. Dr.-Ing. Gunther Eggeler introduces the basic elements which are needed to understand the formation and evolution of microstructures of engineering materials. It is targeted towards students of the Master Course "Materials Science and Simulation". It is open to all other students, postdocs and guests who are interested in these basic concepts. Lectures and course materials are in English. Please register for the course in the RUB Moodle system (Moodle: Elements of microstructure ([440402-WiSe21/22](#))) to receive the latest information or contact the course assistants, MSc. Alex Asabre (alex.asabre@rub.de) and MSc. Catalina Pineda Heresi (sara.pinedaheresi@rub.de).

Schedule

- 13. October: Overview and Solid-state basics (HW)
- 20. October: Point defects and dislocations (GE)
- 27. October: Interfaces (HW)
- 03. November: Exercise I (AA, HW)
- 10. November: Diffusion (GE)
- 17. November: Thermodynamic Concepts (GE)
- 24. November: Phases, Compounds and Phase Diagrams (HW)
- 01. December: Solidification (HW)
- 08. December: Exercise II (CPH, HW)
- 15. December: Precipitation in the solid state (HW)

WINTER BREAK

- 12. January: Solid state transformations (GE)
- 19. January: Shape memory alloys (GE)
- 26. January: Exercise III (AA, HW)