

Syllabus
5th Semester
Structure of Matter I
Molecular Physics
WS 07/08

Modul EP5

L Structure of Matter I (Molecular Physics)

Mo 11.00 - 12.30, SR 224

We 11.00 - 12.30, SR 225

E Molecular Physics by Dr Carsten Selle (selle@physik.uni-leipzig.de)

We 13.30 - 15.00, SR 225

Literature:

Peter Atkins, Julio de Paula, “Physical Chemistry”, Oxford Press

Content:

1. Thermodynamics and Statistical Physics, Basics (Chapt. 1-5,)
2. Physical transformations of pure substances
3. Simple mixtures
4. Phase Diagrams
5. Chemical equilibrium
6. Quantum Theory and Atomic Structure, Basics (Chapt. 11-13, 19, 20)
7. Molecular Structure
8. Molecular Symmetry
9. Spectroscopy (Chapt. 16-18)
10. Molecular Interactions
11. Macromolecules and Aggregates
12. Molecules in Motion
13. The Rates of Chemical Reactions

Requirements:

- 50 % of homework
- final exam¹

¹ test exam before Christmas, will impact grade if it is an improvement