

**Syllabus**  
**Structure of Matter I**  
**Molecular Physics**  
**WS 06/07**

L Structure of Matter I (Molecular Physics):

Mo 9.15 – 10.45 h. SR 224 Käs, J.

Mo 11.00 – 12.30 h. SR 224 Käs, J.

E Structure of Matter I:

We 13.30 – 15.00 h. SR 225 Schmiedel, H.

Literature:

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

Content:

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

Requirements:

- 70 % of homework
- test exam before Christmas, will impact grade if it is an improvement
- final exam