

Module: Solids and Interfaces			
University/department/institute: Freie Universität Berlin/Department of Biology, Chemistry and Pharmacy/Institute of Chemistry and Biochemistry			
Responsible for the module: module lecturers			
Admission requirements: none			
Qualification aims: The students have deepened their knowledge of the chemistry of solids and interfaces and can apply it in a range of (new) contexts. They are familiar with the methods of structure examination of solids and interfaces and can estimate the methods' applicability and limitations. They can solve problem sets independently and in a team.			
Content: Bond types and bond energies of solids; systematics and determination of crystal structures, crystals and crystal lattices; mathematical principles of structure determination; electrical conductivity and electron theory of metals (band model); specific heat and lattice oscillation phenomena; surfaces; surface crystallography; thermodynamics and kinetics of surface processes			
Teaching and learning units	Attendance (Semester hours per week = SH)	Forms of active participation	Study time (hours)
Lecture	2	-	Attendance L 30 Preparation and follow-up L 30 Attendance T 30
Tutorial	2	Solving problem sets, contributing to discussions	Preparation and follow-up T 30 Examination preparation, examination 30
Language of instruction		German or English	
Compulsory regular attendance		Attendance recommended	
Study time, total hours		150 hours	5 CP
Duration of module		One semester	
Module offered		Every other semester	
Application		Master's program in Chemistry	