

<b>Modulbezeichnung:</b> Physical chemistry (CM3-PC) (Physical chemistry)	<b>15 ECTS</b>	
Modulverantwortliche/r:	Dirk Guldi	
Lehrende:	Carola Kryschi, Thomas Drewello, Guido Sauer, Jörg Libuda, Dirk Guldi	
Startsemester: WS 2018/2019	Dauer: 2 Semester	Turnus: halbjährlich (WS+SS)
Präsenzzeit: 225 Std.	Eigenstudium: 225 Std.	Sprache: Englisch

#### Lehrveranstaltungen:

##### **A: Advanced Physical Chemistry I - Interface Science and Catalysis**

Advanced Physical Chemistry I - Interface Science and Catalysis (WS 2018/2019, Vorlesung, 2 SWS, Jörg Libuda)

Advanced Physical Chemistry I - Seminar Interface Science and Catalysis (WS 2018/2019, Seminar, 1 SWS, Jörg Libuda)

##### **B: Advanced Physical Chemistry II - Applied spectroscopy**

Advanced Physical Chemistry II - Applied Spectroscopy (SS 2019, Vorlesung, 2 SWS, Thomas Drewello et al.)

Advanced Physical Chemistry II - Seminar Applied Spectroscopy (SS 2019, Seminar, 1 SWS, Thomas Drewello et al.)

##### **C: Advanced Physical Chemistry - Laboratory course**

Attendance in lab course is compulsory!

Advanced Physical Chemistry - Lab Course (WS 2018/2019, Praktikum, 9 SWS, Guido Sauer et al.)

Advanced Physical Chemistry - Lab Course (SS 2019, Praktikum, 9 SWS, Guido Sauer et al.)

#### Empfohlene Voraussetzungen:

- Erfolgreicher Abschluss des Moduls CK3

#### Inhalt:

- introduction to the current topics of research in the field of physical chemistry
- developing the basics of physical chemistry at the level of a scientifically oriented Master's program
- deepening of knowledge in the specialized field of the lecturers involved in this module to the limit of current knowledge
- experimental studies on selected chapters of physical chemistry at an advanced level

#### Lernziele und Kompetenzen:

Students

- apply fundamental knowledge of physical chemistry to particular topics in research
- develop model-like descriptions for complex physicochemical systems and model experimental data
- discover various modern experimental equipment and devices techniques and apply them systematically in practice
- perform experiments/measurements and interpret results independently
- evaluate the basic safety matters in handling hazardous materials and operating complex.

#### Literatur:

P. Atkins, J. De Paula, Atkins' Physical Chemistry, 10th edition, Oxford University Press, Oxford, 2014;

Literature references provided in the guidelines of each experiment

#### Organisatorisches:

Module frequency: **A.** winter term, **B.** summer term, **C.** winter and summer term

#### Bemerkungen:

Module compatibility: M.Sc. Chemie / M.Sc. Molecular Science (Elective module)