Modulbezeichnung: **Theory of catalytical processes (IntCat-3A)** **5 ECTS**
(Theory of catalytical processes)

Modulverantwortliche/r: Jörg Libuda
Lehrende: Bernd Meyer

Startsemester: WS 2021/2022	Dauer: 1 semester	Turnus: jährlich (WS)
Präsenzzeit: 45 Std.	Eigenstudium: 105 Std.	Sprache: Englisch

Lehrveranstaltungen:
Theory of Catalytic Processes (WS 2021/2022, Vorlesung mit Übung, 3 SWS, Bernd Meyer)

Inhalt:
The module focuses on physical, chemical or technological aspects of modification, manipulation and characterization of interfaces. These aspects relate to the research of ideal model systems (surfaces and adsorbates on single crystal surfaces) or real systems, in which the interface plays a crucial role for the respective properties. In all cases, the local electronic and chemical interactions at the interface affect the geometric structure (e.g. adsorption geometry) and consequently the chemical and physical properties.

Lernziele und Kompetenzen:
Students
- deepen their knowledge in experimental methods and theoretical aspects to describe and characterize interface phenomena
- are able to perform experiments independently and to analyse the data
- are familiar with the model-type description of experimental data

Verwendbarkeit des Moduls / Einpassung in den Musterstudienplan:
Das Modul ist im Kontext der folgenden Studienfächer/Vertiefungsrichtungen verwendbar:

[1] **Chemistry (Master of Science): ab 1. Semester**
(Po-Vers. 2020w | NatFak | Chemistry (Master of Science) | Ergänzende Wahlpflichtmodule | Advances in Interface Research and Catalysis A | Theory of Catalytic Processes)

[2] **Chemistry (Master of Science): ab 1. Semester**
(Po-Vers. 2020w | NatFak | Chemistry (Master of Science) | Wahlmodule | Theory of Catalytic Processes)

[3] **Molecular Science (Master of Science): ab 1. Semester**
(Po-Vers. 2020w | NatFak | Molecular Science (Master of Science) | Compulsory elective module | Advances in Interfaces and Catalysis | Theory of Catalytic Processes)

[4] **Molecular Science (Master of Science): ab 1. Semester**
(Po-Vers. 2020w | NatFak | Molecular Science (Master of Science) | Elective modules | Theory of Catalytic Processes)

Studien-/Prüfungsleistungen:
Theory of Catalytic Processes (Prüfungsnummer: 65311)
(englische Bezeichnung: Theory of catalytical processes)
Prüfungsleistung, mündliche Prüfung, Dauer (in Minuten): 20
Anteil an der Berechnung der Modulnote: 100%
weitere Erläuterungen:
O20 (PL): Oral examination (20 minutes) or alternative examination according FAU Corona Statutes!
Prüfungssprache: Englisch

Erstablegung: WS 2021/2022, 1. Wdh.: WS 2021/2022
1. Prüfer: Bernd Meyer

Organisatorisches:
Please note:
- students have to register for the module examination on MeinCampus (check registration periods)!

- registration/further information via StudOn

Bemerkungen:

Module compability:

- within the Compulsory Elective Module **Advances in Interfaces and Catalysis A (IntCat-3A)** (20 ECTS)!
- module can also be taken as part of the elective module (5 ECTS, not graded)!
- **MSc Molecular NANO Science students** have to attend the module **Advances in Interfaces and Catalysis A** (IntCat-3A) / **MSc Chemistry student** can choose between the module **Advances in Interfaces and Catalysis A** (IntCat-3A) and the module **Nanostructured Materials and Interfaces B** (IntCat-3B) of Prof. Bachmann