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**Modulbezeichnung:** **Molecular Nanoscience - Lab (Nano-Lab)** **10 ECTS**  
 (Molecular Nanoscience - Lab)

Modulverantwortliche/r: Rainer Fink  
 Lehrende: Dozenten der beteiligten Fachgebiete

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Startsemester: WS 2021/2022	Dauer: 1 Semester	Turnus: halbjährlich (WS+SS)
Präsenzzeit: 225 Std.	Eigenstudium: 75 Std.	Sprache: Englisch

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**Lehrveranstaltungen:**

- Time and place upon individual assignments with contact persons (see list of experiments)
  - A valid laboratory insurance is mandatory for participation in the lab course - see: [www.laborversicherung.de](http://www.laborversicherung.de)
- Molecular Nanoscience - Lab (WS 2021/2022, Praktikum, 7 SWS, Rainer Fink et al.)

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**Inhalt:**

Research practicals in selected modern fields of molecular nanoscience:  
 Topics according to an annually updated list of experiments, which includes molecule or nanoparticle synthesis, spectroscopic and microscopic analysis, thin-film and device preparation, characterization

**Lernziele und Kompetenzen:**

The students are capable ...

- to use their theoretical and practical background to plan and perform advanced research experiments under supervision of experienced scientists
- to synthesize nanoscaled materials
- to interpret spectroscopic or microscopic data taking advantage of modern research tools
- to provide a state-of-the-art documentation and discussion of their experimental results
- to present, communicate and discuss scientific results in scientific english.

**Literatur:**

Lecture notes from the various course lectures in „Molecular Nanoscience“ (see module descriptions "Molecular Nanoscience-I" and "Molecular Nanoscience-II")

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**Verwendbarkeit des Moduls / Einpassung in den Musterstudienplan:**

Das Modul ist im Kontext der folgenden Studienfächer/Vertiefungsrichtungen verwendbar:

[1] **Molecular Science (Master of Science): ab 1. Semester**

(Po-Vers. 2020w | NatFak | Molecular Science (Master of Science) | MoSc Module NANO | Studienrichtung Molecular Nanoscience | Molecular Nanoscience - Lab)

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**Studien-/Prüfungsleistungen:**

Molecular Nanoscience - Lab (Prüfungsnummer: 30731)  
 Prüfungsleistung, Praktikumsleistung  
 Anteil an der Berechnung der Modulnote: 100%  
 weitere Erläuterungen:  
 Graded Lab Protocol of 30 - 50 pages (plus raw data documentation)  
 Prüfungssprache: Englisch

Erstablesung: WS 2021/2022, 1. Wdh.: SS 2022  
 1. Prüfer: Rainer Fink

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**Organisatorisches:**

**Please note:**

- Lab course is held as an in-class-course!
- Lab course can be chosen in winter or summer term
- Time and place by appointment (in one of the involved working groups of Inorganic chemistry)
- Students have to register for the module examination (check registration periods)!
- Registration/docket/further information via StudOn!

**Bemerkungen:**

Module compatibility:

- Molecular Nanoscience-lab is within the **Core module "Molecular Nanoscience"** in the M.Sc. Molecular Nano Science