

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

Modulverantwortliche/r: Rainer Fink

Lehrende: Dozenten der beteiligten Fachgebiete

|                             |                       |                              |
|-----------------------------|-----------------------|------------------------------|
| Startsemester: WS 2020/2021 | Dauer: 1 Semester     | Turnus: halbjährlich (WS+SS) |
| Präsenzzeit: 225 Std.       | Eigenstudium: 75 Std. | Sprache: Englisch            |

#### 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 2020/2021, Praktikum, 15 SWS, Rainer Fink et al.)

#### 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")

#### 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) | MolSc Module NANO | Studienrichtung Molecular Nanoscience | Molecular Nanoscience - Lab)

#### 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 2020/2021, 1. Wdh.: SS 2021

1. Prüfer: Rainer Fink (070741)

#### 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