Modulbezeichnung:	**Solar Energy Conversion (EnMat-2)** (Solar Energy Conversion)	**5 ECTS**
Modulverantwortliche/r:	Dirk M. Guldi	
Lehrende:	Dirk M. Guldi	

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

Lehrveranstaltungen:

Solar Energy Conversion (2V + 1S):

Solar Energy Conversion (WS 2021/2022, Vorlesung mit Übung, 3 SWS, Dirk M. Guldi)

Inhalt:

- Demand and supply of energy
- Solar cells:

1. Silicon solar cells
2. dye-sensitized solar cells
3. organic solar cells
4. perovskite solar cells
5. singlet fission

- Fundamentals of Electron Transfer
- Photosynthesis: natural photosynthesis, artificial photosynthesis

Lernziele und Kompetenzen:

The students ...

- are familiar with the fundamentals and modern applications in solar energy research and applications
- understand design principles in solar energy devices and can transfer this knowledge to related topics
- can present, communicate and discuss scientific results with experts in English.

Studien-/Prüfungsleistungen:

Solar Energy Conversion (Prüfungsnummer: 65431)
Prüfungsleistung, Klausur, Dauer (in Minuten): 60
Anteil an der Berechnung der Modulnote: 100%
weitere Erläuterungen:
W60(PL): written examination (60 min) or alternative examination according FAU Corona Statutes!
Prüfungssprache: Englisch

Erstablegung: WS 2021/2022, 1. Wdh.: WS 2021/2022
1. Prüfer: Dirk M. Guldi

Organisatorisches:

Please note:

- "Solar Energy Conversion" will be taught only in winter term.
- Students have to register for the module (check registration periods)!
- Registration/further information via StudON

Bemerkungen:

- Within the Compulsory Elective Module "Advances in Energy Materials" MSc Chemistry and Molecular Science
- Module can be taken as part of the Elective Module, too!