

Energy and Materials Physics (M.Sc.)

The master's degree program in energy and materials physics offers the unique possibility of a broad thematic and content-depth training in materials physics and materials chemistry of renewable energy technologies. Special study focuses on photovoltaics, batteries, fuel cells and solid-state sensors and the necessary solid state physics basics. Involvement in research projects within research internships and the thesis are preparing for activities in industrial and academic research. Materials science, economics and legal studies content with close reference to the core issue of energy broaden the training and qualifying students for a variety of activities in industry and government. The solid-state physics expertise at the Technical University of Clausthal in combination with the capabilities of the Energy Research Centre Niedersachsen (EFZN) and the Fraunhofer Heinrich Hertz Institute in neighboring Goslar and the new Clausthaler Centre for Materials Engineering (CZM) make ideal prerequisites for a versatile, research-driven studies.

Curriculum

- Solid state physics
- Semiconductors and energy functional interfaces
- Photovoltaics
- Fuel cells and chemical energy storage
- Batteries
- Solid state sensors
- Nanostructures and nano materials
- Materials for energy technology
- Management
- Energy Law, Energy and Environmental Economics
- Research internships
- 6 months master's thesis

Academic Advisor

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Language of instruction:

German and English