

# M.Sc. Sustainable Materials – Functional Materials

November 2016

UNI  
FREIBURG



Albert-Ludwigs-Universität Freiburg

## Facts and Figures

<b>Duration:</b>	4 semesters
<b>Intake:</b>	Winter semester
<b>Language of instruction:</b>	German and English
<b>Application period:</b>	1 April until 15 July
<b>Fees:</b>	approx. 145 Euro per semester

## How to apply

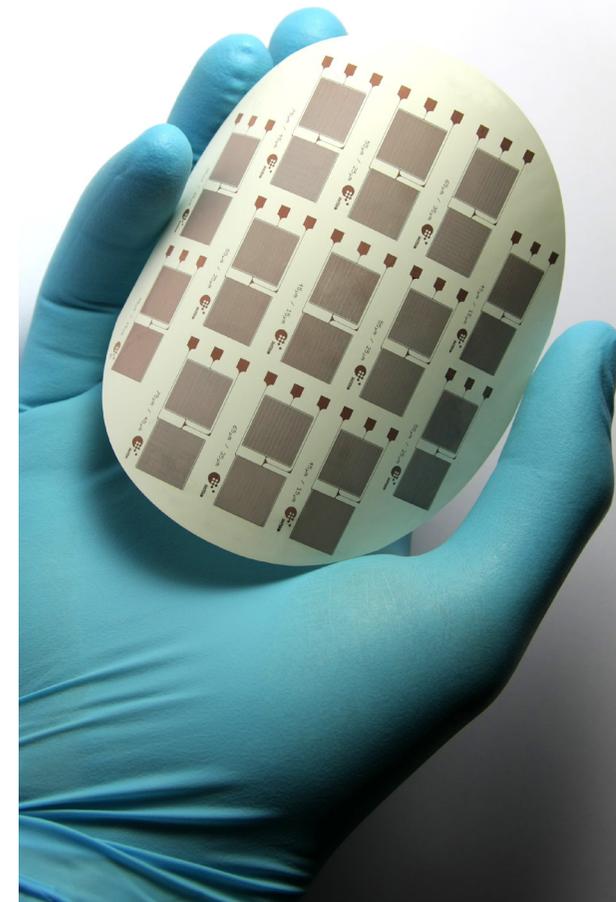
### Please send the following documents by post:

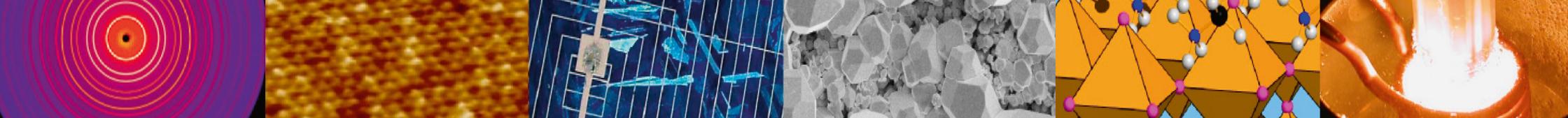
- Filled in application form (online)
- Copies of general qualifications for university entrance
- Transcript of records
- Certificates of German and English language proficiency
- Curriculum vitae
- Letter of intent

**University of Freiburg**  
**Faculty of Chemistry and Pharmacy**  
Albertstraße 21  
79104 Freiburg, Germany

Tel: + 49 761 203-7295  
sustainable\_materials@imtek.uni-freiburg.de

<http://www.cup.uni-freiburg.de/chemie/studium/MScSustainable-Functional>





## The Master's Program

Materials with specific physical and chemical characteristics that make industrial processes more efficient in terms of energy and resource consumption are increasingly important.

The Master's program Sustainable Materials – Functional Materials has been designed for graduates of an undergraduate program in sciences or engineering with a focus on chemistry, physics, material sciences or process engineering. During the two year program, students will learn to synthesize and characterize functional materials in order to design operational systems using these materials. These systems are used in the chemical and automotive industry, in electronics, as well as in life sciences and renewable energies.

## The Curriculum

The curriculum combines courses from the fields of chemistry, material sciences and engineering, reinforced by numerous practical courses. In the first two semesters, students will attend laboratory courses in organic and inorganic functional materials as well as lab courses in material sciences.

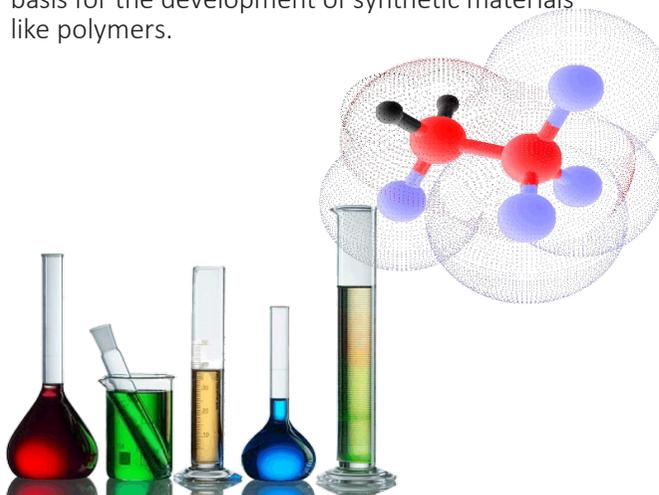
In the so-called supplementary area, students will have the possibility to make up for missing previous knowledge in chemistry or material sciences.

In the elective area, students can shape their individual profile focusing either on chemistry or on engineering.

Master Thesis (30 ECTS)						
Advanced Internship or 2 Concentration Areas (12 ECTS)		Research Internship (12 ECTS)			Sustainability (6 ECTS)	Methods and Concepts (9 ECTS)
Introduction to Sustainable Materials, especially Functional Materials (9 ECTS)	Lectures in Materials Science IMTEK/ Chemistry (6 ECTS)	Laboratory Organic and Inorganic Chemistry (6 ECTS)	Complements Chemistry/ IMTEK (24 ECTS)	Laboratory IMTEK (6 ECTS)		

## Faculty of Chemistry and Pharmacy

The Master's program Sustainable Materials – Functional Materials is offered by the Faculty of Chemistry and Pharmacy in cooperation with the Faculty of Engineering. The university's Faculty of Chemistry and Pharmacy is one of the most important centers for interdisciplinary polymer research. The pioneering research of Freiburg's Nobel laureate Hermann Staudinger in the fields of organic and macromolecular chemistry formed the basis for the development of synthetic materials like polymers.



## Faculty of Engineering

The Faculty of Engineering is a lot younger, but has already acquired an excellent reputation in the first 20 years of its existence, particularly in Microsystems Engineering (IMTEK), Computer Science (IIF) and Sustainable Systems Engineering. The faculty is located on a new campus with state-of-the-art laboratories and seminar rooms.

The cooperation of these two faculties guarantees an excellent environment for such an interdisciplinary study program.

