Materials Science

Degree conferred
Scientiarum doctor in scientia materiarum / Doctor of Philosophy in Materials Science (PhD)

Commencement of studies
An application for admission may be submitted at any time.

Regulation
http://studies.unifr.ch/op/Pm-6a (French and German only)

Application procedure
Candidates with Swiss qualifications
https://studies.unifr.ch/op/Ui3b4
Candidates with foreign qualifications
https://studies.unifr.ch/op/2KPbe

Fribourg profile
The Adolphe Merkle Institute (AMI) currently employs around 50 PhD students who work in the five AMI research groups. The working language at the AMI is English and the PhD work comprises a personal research 3-4 year project within one of the research groups. The mentoring staff at AMI is devoted to instilling the doctoral candidates with the desire to perpetuate a tradition of high scientific quality. The state-of-the-art facilities provide students with the potential to acquire a whole range of valuable knowledge and skills over the course of their studies. The quality of the research equipment constitutes one of the major assets of the programme, as the trainees will be given the chance to master a high number of experimental techniques. The combination of interdisciplinary, outstanding infrastructures and educational commitment defines the attractiveness of AMI, making it one of the best places to study soft nanomaterials at the postgraduate level. The institute strives to be a leader in this area and hosts both interdisciplinary, outstanding infrastructures and educational programmes. The quality of the state-of-the-art facilities provide students with the potential to acquire a whole range of valuable knowledge and skills over the course of their studies. The quality of the research equipment constitutes one of the major assets of the programme, as the trainees will be given the chance to master a high number of experimental techniques. The combination of interdisciplinary, outstanding infrastructures and educational commitment defines the attractiveness of AMI, making it one of the best places to study soft nanomaterials at the postgraduate level.

BioNanomaterials
The BioNanomaterials research group is co-led by Prof. Alike Fink and Prof. Barbara Rothen-Rutishauser. Prof. Fink leads the materials science aspect of the group and Prof. Rothen-Rutishauser is responsible for all biological studies. This situation is a fresh, novel, and exciting perspective upon scientific research in an academic setting, enabling the unification of two different scientific backgrounds in order to make a truly strong interdisciplinary research group. The interdisciplinary nature within the BioNanomaterials research group is further expressed by the varying scientific backgrounds of its members, which include chemistry and biochemistry, biology, pharmacy, biomedicine, materials science, and biophysics.

For more information: https://www.ami.swiss/bionanomaterials/en/
materials include plasmonic metals that are structure with the help of polymer self-assembly and bioinspired photonic bandgap materials. The latter is part of the strong focus on bioinspiration focus of the soft matter physics group that also includes surface properties of (nano-) structured materials such as wetting and adhesion, and mechanical properties (e.g. nacre).

For more information: https://www.ami.swiss/physics/en/

Interdisciplinary collaborations between our researchers are the basis for the successful and efficient execution of complex research projects that transcend the boundaries of traditional scientific disciplines.

Open PhD positions will be advertised on the AMI web-page. Unsolicited applications that are not targeting an advertised position will not necessarily receive a response.

Studies organisation

Structure of studies

No ECTS credits can be earned.

Doctoral school

Admission

In order to be admitted to a doctorate the candidate must have been awarded an academic bachelor's and master's degree or an equivalent qualification from a university recognised by the University of Fribourg.

Before applying for a doctorate the candidate must contact a professor who would be willing to supervise the thesis work.

There is no general right to be admitted to a doctorate.

The respective conditions of admission for each doctoral study programme are reserved.

Contact

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Switzerland
http://ami.swiss

Doc- Postdoc-portal

http://www.unifr.ch/phd