Support

Faculties and Doctoral schools

University of Strasbourg

University Haute-Alsace

Doctoral schools of the University of Strasbourg and University Haute-Alsace

Associated research institutes

Campus of Cronenbourg

Medecine and pharmacy campuses

Campus of Mulhouse

More than 75 industrial partners, among which

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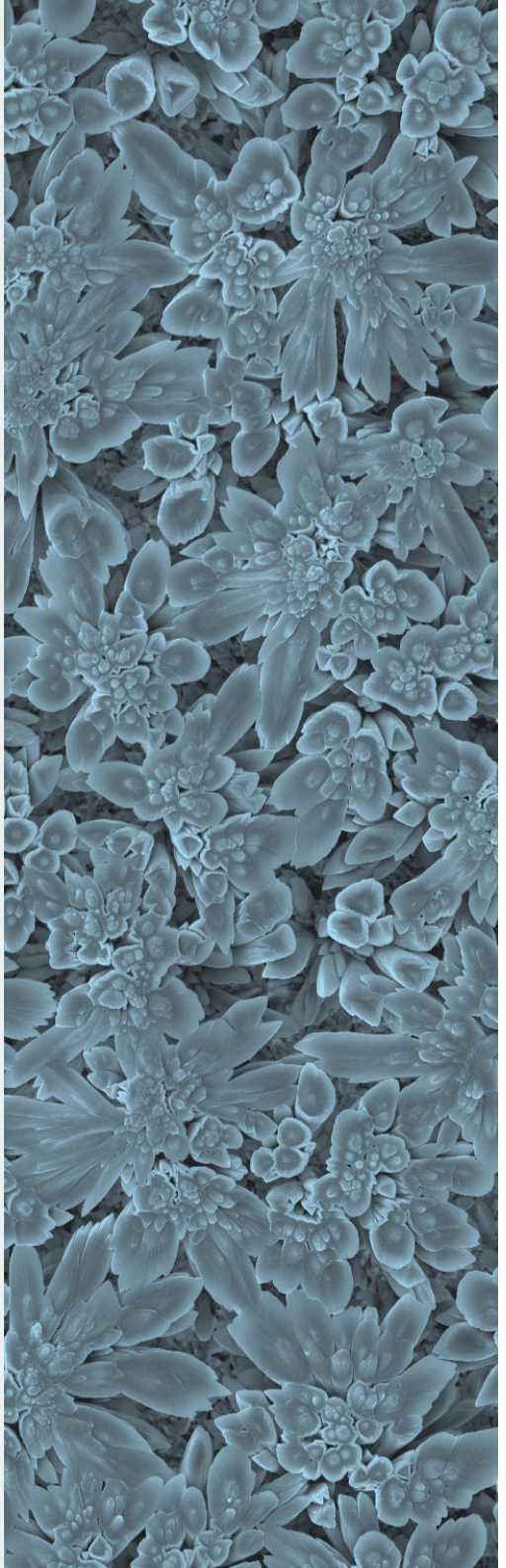
more info on hifunmat.unistra.fr

Hierarchical & Functional Materials for health, environment & energy | HiFunMat

The **Interdisciplinary thematic** institutes of the **University** of Strasbourg & CTC & **Inserm** funded under the **Excellence Initiative** program



Hierarchical & Functional Materials for health, environment & energy | HiFunMat

The **Interdisciplinary thematic** institutes of the **University** of Strasbourg & CTC & **Inserm** funded under the **Excellence Initiative** program

ITI HiFunMat, an excellence cluster of the Universities of Strasbourg & Mulhouse (FR), offers to Master students a supplementary training in materials science across physics, chemistry and engineering.

The ITI HiFunMat Graduate School is based on 3 Master programs and includes 3 Faculties and 2 Engineering Schools.

The graduate school has the ambition to educate the new generation of scientists, sought after by industrial & academic research facilities, to push forward the development of next generation materials. Thus creating favorable conditions to strengthen (international) exchanges with leading research labs and industries.

Graduate School

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Our label

The HiFunMat label consist of training, complementary to the 3 Master programs, on skills essential in materials science and common to all 'HiFunMat' research fields, to meet the strong demand in academia & industry for leading scientists with a solid background in materials science. This training comprises **18 additional ECTS** (~100h) of training (**English** as teaching language) across chemistry, physics, biology and advanced materials. Training involves **lectures and seminars**, hands-on **laboratory experience**, and a **summer school**. Students will have the opportunity to design their own curriculum and to gain rich experiences in various technical and soft skills (expressed as a personal and unique portfolio of competences), on which to build their future careers. Moreover, the **contact with industrials** will be fostered by different activities. At the end, students will have a strong network in academia & industry.

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Research fields

→ **Field 1:** Design and synthesis of elementary molecular building blocks

→ **Field 2:** Development of finely controlled surfaces to obtain adaptable and reversible properties

→ **Field 3:** Development of hierarchically structured materials, with fine control at different scales

→ **Field 4:** Development of new strategies for shaping, modifying and characterizing materials by various types of radiation

→ **Field 5:** Design of new biomimetic, biodegradable, active, self-healing, responsive, life-like materials

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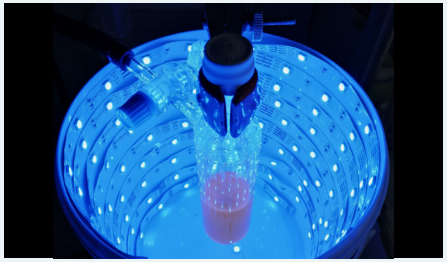
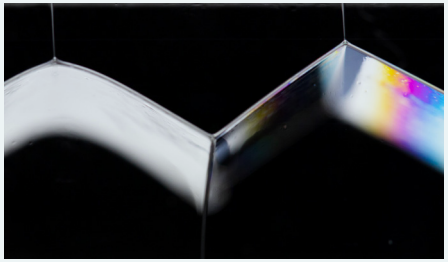
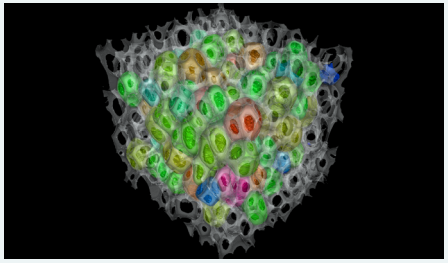
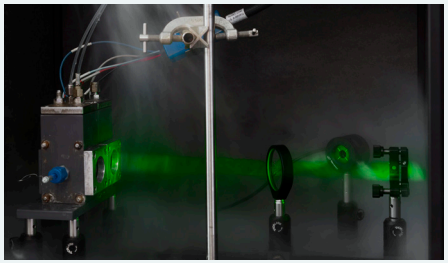
more info on iti-hifunmat.unistra.fr

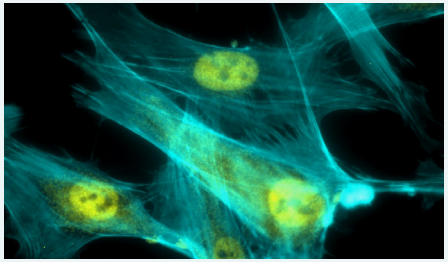
2 years **M.Sc. Degree** with **HiFunMat label** centered around the theme of sustainable hierarchical and functional materials with applications in health, environment and energy











Program

- M.Sc. Degree+ HiFunMat label
- Strong education – research link
- Large scientific and industrial network
- Multidisciplinary program
- Strong interaction with industry
- Focus on soft skills

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1st year

→ **Introductory course**

Interdisciplinary training on characterization methods for polymers, small molecules and composite materials

→ **HiFunMat labeled elective courses**

Elective courses, labeled by HiFunMat, can be chosen from the three Master programs

→ **Concepts and methods course**

Hands-on laboratory experience : lectures, practical courses including peer-to-peer learning modules, research facility and industrial site visits

→ **6 Weeks internship in a HiFunMat laboratory**

Possibility of collaborating in inter-laboratory multidisciplinary projects

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2nd year

→ **Advanced course**

High-level interdisciplinary training on a theme crossing the 5 HiFunMat research fields.

→ **HiFunMat labeled elective courses**

Elective courses, labeled by HiFunMat, can be chosen from the three Master programs

→ **Research and professional development**

Personal & professional development : hot-topic seminars, summer school, networking, meetings with industrials, good scientific practice, soft skills, intercultural aspects

→ **6 Months research or industry internship**

Possibility of collaborating in inter-laboratory multidisciplinary projects

Apply now

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Our offer:

- €600,- / month scholarships for all students (10 students in M1, 13 students in M2)
- 100 hours (18 ECTS) of additional training
- Involvement of researchers, technicians and engineers + Mentor program

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Admission criteria:

- To be admitted by one of the following Master programs:
  - → M.Sc. Chemistry (UFR de chimie, UHA, ECPM, ENSCMu)
  - → M.Sc. Materials science and engineering (UFR P&I, UHA)
  - → M.Sc. Physics (UFR P&I)
- Proficient in English (B2 level)
- Students will be selected for an interview based on grades and motivation

Application process

1) Choose and apply to a M.Sc. degree from the 3 support M.Sc. programs via Campus France and / or eCandidat

2) Consult the application procedure to the ITI HiFunMat Graduate School on our website

3) Fill in the online application form