CBH Graduate School
Université Grenoble Alpes

Université Grenoble Alpes

CHEMISTRY

BIOLOGY

SyMMES
SYSTÈMES MOLÉCULAIRES ET NANOMATÉRIAUX POUR L'ÉNERGIE ET LA SANTÉ

MOLECULAR SYSTEMS AND NANOMATERIALS FOR ENERGY AND HEALTH

UMR-E 5819

Molecular and materials chemistry | *Surface functionalization* | *Advanced characterization* | *Toxicology* | *Biosensors* | *Energy technologies* | *Health*

KEY FIGURES:

38
permanent researchers and lecturers

19
engineers and administrative staff

40
PhD students and postdoctoral researchers

90
publications per year (on average)

30
patents over the last 5 years

OVERVIEW

The *Molecular Systems and nanoMaterials for Energy and Health laboratory* (*SyMMES*) combines multidisciplinary expertise in physics, chemistry, and biology to address societal challenges related to energy, human health, and information/communication technologies. SyMMES focuses on the design, synthesis, and study of innovative and original functional architectures and materials.

RESEARCH TOPICS

- **Toxicology and chemobiology to understand interactions between toxins and living organisms, and to propose new therapeutic and diagnostic tools.**
- **Biosensors and biochips for analyzing interactions from the molecular level to complex cellular systems.**
- **Emerging molecules and materials with tunable properties to tackle future energy, environmental, and technological challenges.**
- **Advanced operando characterizations using major instruments and electron paramagnetic resonance.**

https://www.symmes.fr/