The Department of Physics and Materials Science has an excellent international reputation for its research in condensed-matter physics and related areas. Experimental, theoretical, and computational research groups explore the fascinating properties of a large variety of solid, soft and liquid materials and develop materials with novel functionalities. We use the laws of quantum mechanics to understand the atomic structure and the complex physical behaviour of materials. Based on this knowledge, we explore the application of materials in cutting-edge technology. The department has also established strong connections within the University, such as the “physics meets biology” initiative and externally with other national and international research partners.

MEMBERS
- 15 professors and 1 affiliated professor
- 7 research scientists
- 45 post-docs and 45 doctoral candidates
- 15 technical and administrative staff

FUNDING AND COLLABORATIONS
- 50% third-party funding ~ €6.5 million of grants in 2019
- 4 ERC grand holders & 6 FNR ATTRACT fellows since 2010

PUBLICATIONS
- 136 peer-reviewed articles in scientific journals, including 6 articles in Science Advances and 2 Nature Communication
Research areas

The department is structured into topical clusters. Each cluster consists of several research groups. Below are the clusters, laboratories and brief description.

**PHOTOVOLTAICS AND SEMICONDUCTORS**
- Photovoltaics: semiconductor physics, single and tandem solar cells
- Energy Materials: small solar cells and novel semiconductor materials
- Scanning Probe Microscopy: perovskites, surfaces and interfaces of solar materials

**SOFT & LIVING MATTER**
- Physics of Advanced Materials: polymers and nanocomposites
- Experimental Soft Matter Physics: liquid crystals, colloids, and polymers
- Crystals and Nanomaterials
- Physics of Living Matter: biophysics, materials, microbiome, ecology, bio-engineering, modeling

**SPECTROSCOPY OF COMPLEX MATERIALS**
- NanoMagnetism: magnetic small-angle neutron scattering
- Multifunctional Ferroic Materials: functional materials
- Ultra-Fast Spectroscopy: innovative ultrafast systems

**THEORY & MATERIALS MODELLING**
- Complex Systems and Statistical Mechanics: stochastic and quantum thermodynamics
- Theoretical solid state physics: semiconducting and nanostructured materials
- Theory of Mesoscopic systems: quantum mechanical effects
- Theoretical Chemical Physics: complex molecules and materials