GEMAC LABORATORY IN A NUTSHELL

The Group for the Study of Condensed Matter (*Groupe d'étude de la matière condensée*, GEMaC) is a mixed unit of Versailles Saint-Quentin University (UVSQ) and the National Centre for Scientific Research (CNRS), and is part of the Institute of Physics (CNRS) and of the University Paris-Saclay. The research unit has been created in 2006 and is fully located on the science campus in Versailles since 2011.

Research in GEMaC is mainly experimental and concerns condensed matter physics, with in perspective applications for information storage and processing, and energy saving.

Various thematics are studied in GEMaC: diamond for electronics, semiconductor nanostructures based on zinc oxide, multifunctional magnetic oxides, phase transitions in molecular solids and quantum nanophotonics

Preparation of materials based on various epitaxial methods occur in a clean room, which is one of the main specificities of GEMaC, leading to realisation of thin layers,

nanostructures and nanowires. Physical, structural, analytical, transport, magnetic and optical properties are investigated with various equipment, most of the time at the nanometer scale.

Overview

University faculty: Faculty of Science
Department : Physics department
CNRS unit : INP - INC

Doctoral school : Interfaces (11 HDR)

Disciplinary categories : materials, structure and solid state physics / molecular physics, plasma, optics
Keywords : growth, semiconductors, nanophotonics, magnetism, photocommutation

Manpower 01/01/2020 :
Researchers: 5
Professors and assistant professors: 10
Emerita: 2
CNRS engineers and administrative staff: 15
University engineers and administrative staff: 2
Post-docs: 4
PhD students: 8
Visitors: 2

GEMaC and University Paris-Saclay

As part of University Paris-Saclay, we are involved in:

- the Physics Graduate School (principal)
- the Chemistry Graduate School (secondary)
- the Light Science Institute
- the Labex NanoSaclay
- the Labex Charm3at

» the Strategic Research Initiative "quantum engineering in University Paris-Saclay" (IQUPS)