

C’Nano GSO
Aquitaine, Midi-Pyrénées, Languedoc-Roussillon
A single network for three regions promoting
Nanoscience and Nanotechnology in the South-West of France

J.-P. Aimé, C. Bernard*, X. Bouju**, J.-L. Sauvajol****

** C’Nano GSO, CPMOH, Université Bordeaux I
 351 cours de la Libération, 33405 Talence Cedex, France*

jp.aime@cnanogso.org

*** C’Nano GSO, CEMES-CNRS
 29 rue Jeanne Marvig, 31055 Toulouse Cedex 4, France*

**** C’Nano GSO, LCVN, Université Montpellier 2
 Place Eugène Bataillon, 34095 Montpellier Cedex 5, France*

French C’Nano networks are recent regional initiatives that bring together the scientific community active in nanoscience and nanotechnology. They include a large number of researchers, professors and research engineers that advance on the same front with the knowledge and skills essential for development of nanotechnology (4100 full-time equivalents, permanent and non-permanent). [C’Nano GSO](#) (South West of France, red on the map) gathers together three regions: Aquitaine (Bordeaux), Midi-Pyrénées (Toulouse) and Languedoc-Roussillon (Montpellier), and is part of the network across France (see map below): C’Nano NO (North West, green), C’Nano IdF (Ile de France, blue), C’Nano GE (East, yellow) and C’Nano RA (Rhône-Alpes, orange).



As many networks focused on the development of nanoscience and nanotechnology (see for instance the recent report from National Nanoscience Initiative in USA), C’Nano GSO acts on three main fields: fundamental research, teaching and training, transfer and reinforcing partnerships with company. In more details the following list of goals:

- Promote activities on nanoscience and nanotechnology throughout the French South-West area ;
- Promote the emergence of unifying themes;
- Share tools and equipment performance;
- Build partnerships with national regions and European countries;
- Develop effective partnerships with industry;
- Participate to training at any level;
- Keep inform general public on developments in nanoscience and nanotechnology.

The most prominent research themes in the South West are:

- *Nanomaterials and molecules*

Metallic nanoparticles, quantum wells and dots, self-assembled systems, organic nano-fibres, carbon nanotubes, bio-inspired materials, molecular motors, supramolecular biocomplexes, molecular machines

- *Near field techniques, spectroscopy and imaging on nano-objects*

STM, AFM, Raman spectroscopy, photothermal and femto-second spectroscopy, near-field optics, plasmonics

- *Nano-probes, nano-manipulation and nano-machines, nanomechanics*

Nano-bio-sensors, nanofluidics, MEMS-NEMS (Micro-Nano-Electro-Mechanical Systems)

As part of its training component, the C'Nano GSO is building an inter-regional Master (MSc) degree between the three regions constituting the GSO (Aquitaine, Midi-Pyrénées and Languedoc-Roussillon). This MSc degree will be devoted to nanoscience and nanotechnology. A working group has been created to define the body of an education for physicists, chemists and biologists.

The working group seeks to an action towards our Spanish colleagues to share a MSc “nano” with Spain. The action is supported both by the Spanish and France agencies.

Through partnerships with industry, C'Nano GSO is working in close collaboration with a Transregional Collective Action Nanomaterials, called [ACT Nano](#). This action has been set up by the French industrial agency to speed up the dissemination of technology “nanomaterials” in the industrial fabric and its acquisition by small-scale businesses. ACT Nano completes C'Nano providing a transfer dimension and technological research partnership with small-scale businesses in the field of nanomaterials.

C'Nano GSO seeks to improve partnerships between France, Spain and Portugal based on strong scientific links between European South-West countries and C'Nano GSO. Next to the special C'Nano GSO session at the 2008 NanoSpain conference (Braga, Portugal, 14-18 Avril), will take place a Franco-Spanish conference in November 2008 (November, 3rd-6th, in Bordeaux, France) to launch collaborations between Spain and C'Nano GSO. Moreover, the goal of the inter-regional MSc degree dedicated to nanoscience and nanotechnology is to be extended to Spain to share training and teaching capacities.

<http://www.cnanogso.org>

