

A new experience in clustering teams of physicists: *Triangle de la Physique* in the south of Paris

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an Advanced Research Cluster in Physics

from basic to applied (*optics, lasers, nanosciences, condensed matter, statistical physics, complexity...*) of more than **1000 permanent physicists** (researchers, professors and engineers...) attached to **40 laboratories**.

Our goals

- △ Improve the **international global visibility and attractiveness** of a critical number of expert and recognized physicists working on top level equipment, gathered on a restricted geographic area (south of Paris) but belonging to different science organizations, universities and engineering schools;
- △ Create a new dynamics among the scientific population to **generate ambitious and innovative projects**, transgressing the administrative affiliations;
- △ Promote a world-wide recognized **scientific label**.

Our tools

To foster international attractiveness:

- △ grants for consolidated **senior chairs**
S. Svensson, 2007, University of Uppsala, Sweden
Lev Ioffe, 2007, Rutgers University, USA
Jörg Wrachtrup, 2008, University of Stuttgart, Germany
Léon Sanche, 2009, University of Sherbrooke, Canada
- △ grants for welcoming visiting foreign professors and researchers, as well as post-doctoral (about and Ph.D. positions)
- △ support for sabbatical visits of French staff and of students into foreign labs

To promote emerging novel research themes:

- △ grants for consolidated **junior chairs** with equipment and running costs
Corinna Kollath, 2007; **Laurie Calvet**, 2008; **Viatcheslav Kokoouline**, 2008; **Andrea Fioretti**, 2009; **Mikhail Zvonarev**, 2009
- △ support for hiring dedicated post-docs (57 in 3 years) and Ph. D. students

To upgrade the common scientific and technical substrate of equipment:

- △ finance priority common equipment for experiments and computing, to be shared by several users
Appeal (2007), **FemtoArpes** (2008), **Frachet** (2009)

To encourage diffusion towards the socio-economical neighbourhood:

- △ select and promote a few proposals for transfer of technology, for innovation in education and teaching

Our scientific themes

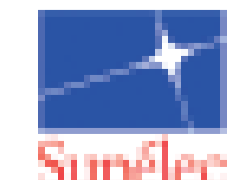
Federative Themes...

1. Coherence and quantum entanglement: from atoms to mesoscopic systems
2. Matter out of equilibrium: from molecules to nanoparticles
3. Complex matter: systems, materials and dynamics
4. Strongly correlated materials
5. Spintronics
6. Extreme light pole
7. Nanophotonics

... relying on a common substrate of:

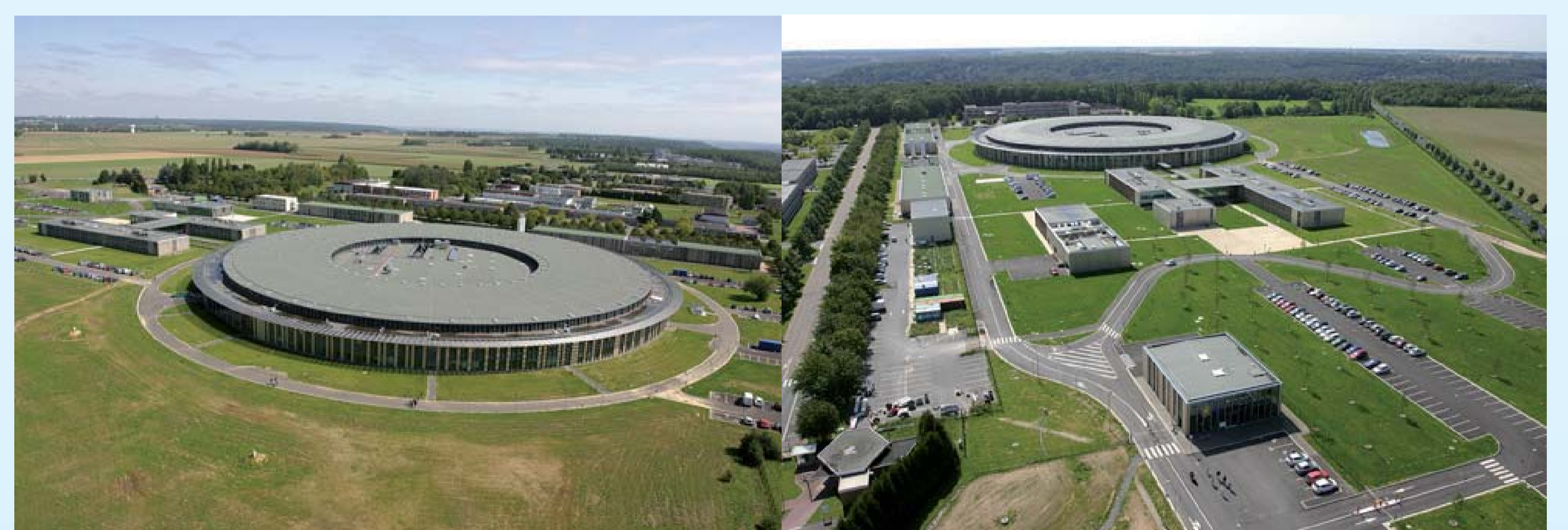
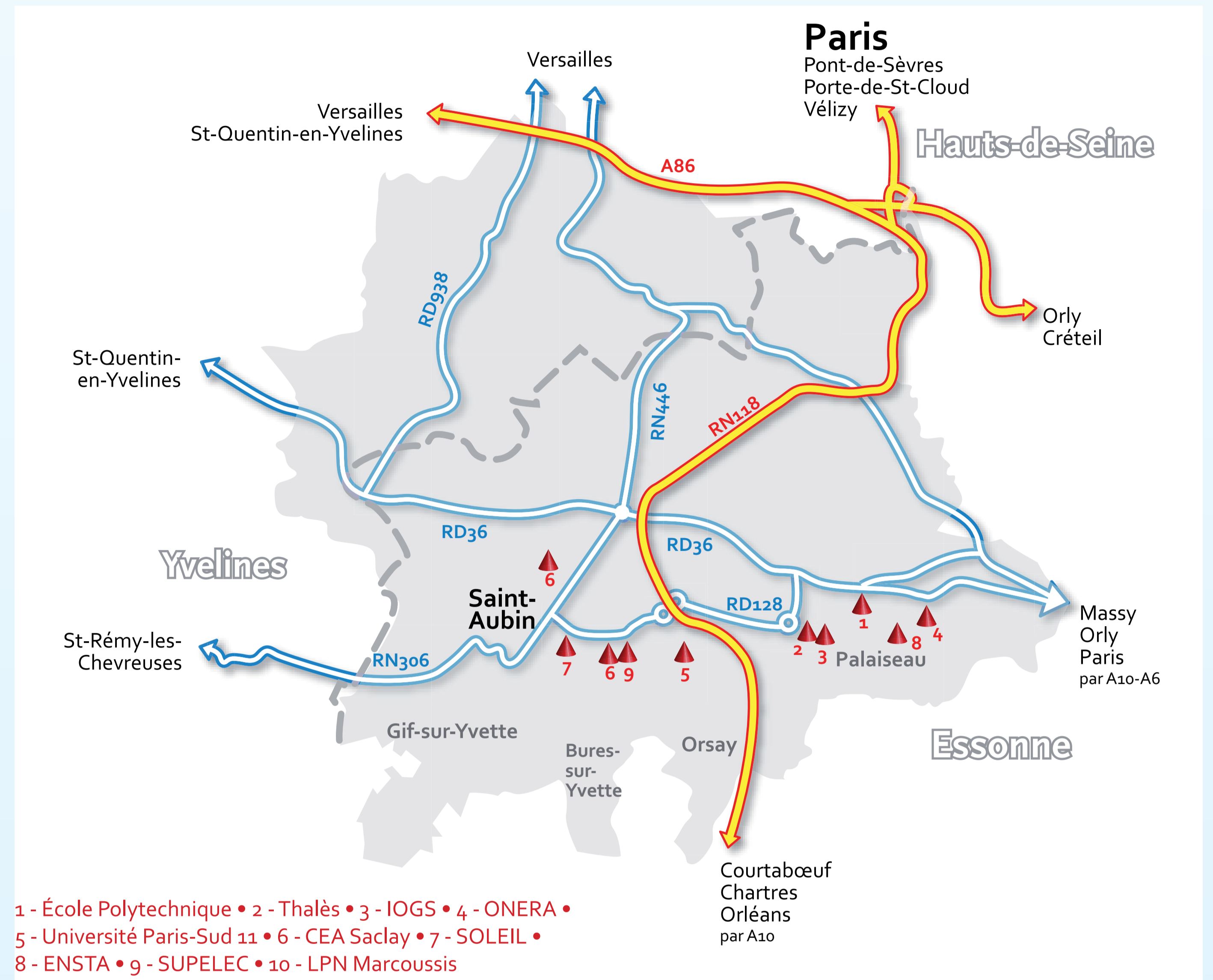
- A. Instrumentation at its limits
- B. Theory from statistical physics to ab initio modelization
- C. Synthesis of new objects for study
- D. Innovation and transfer of technology

Our founders:

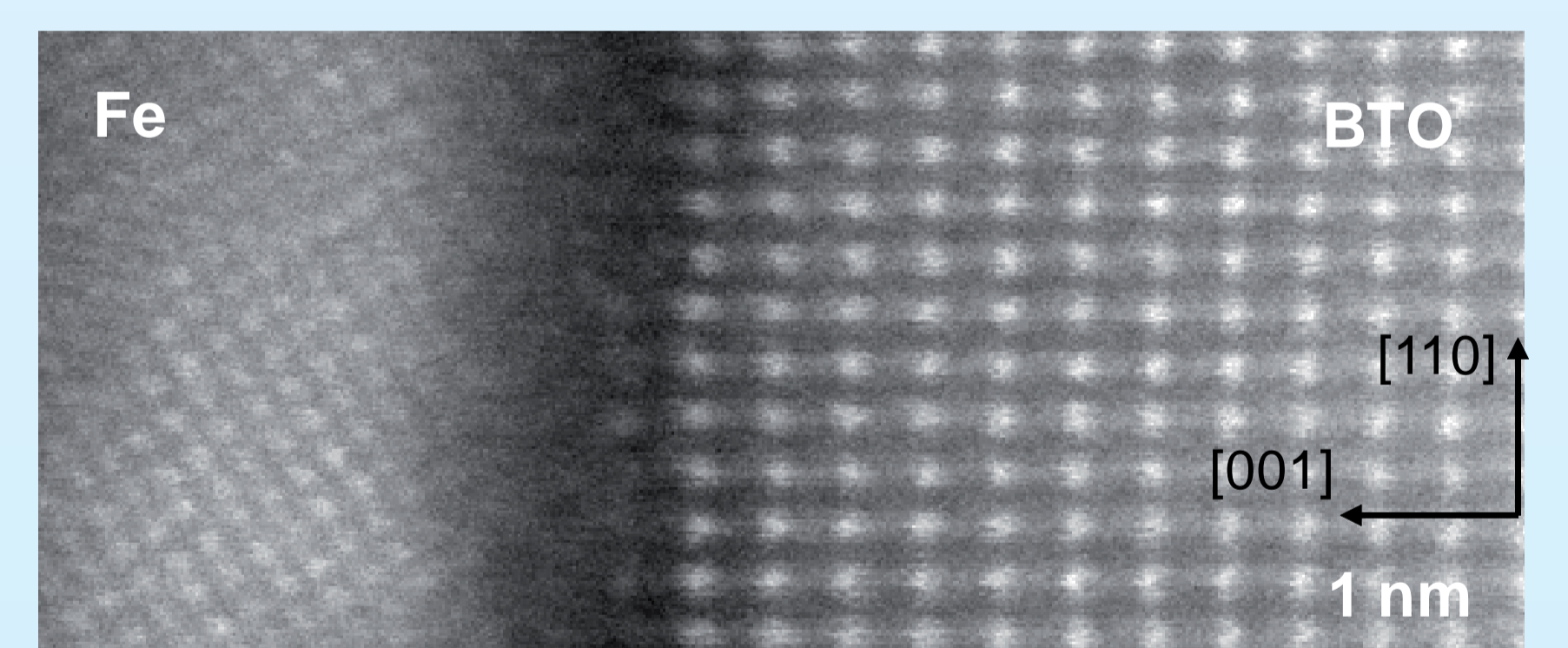
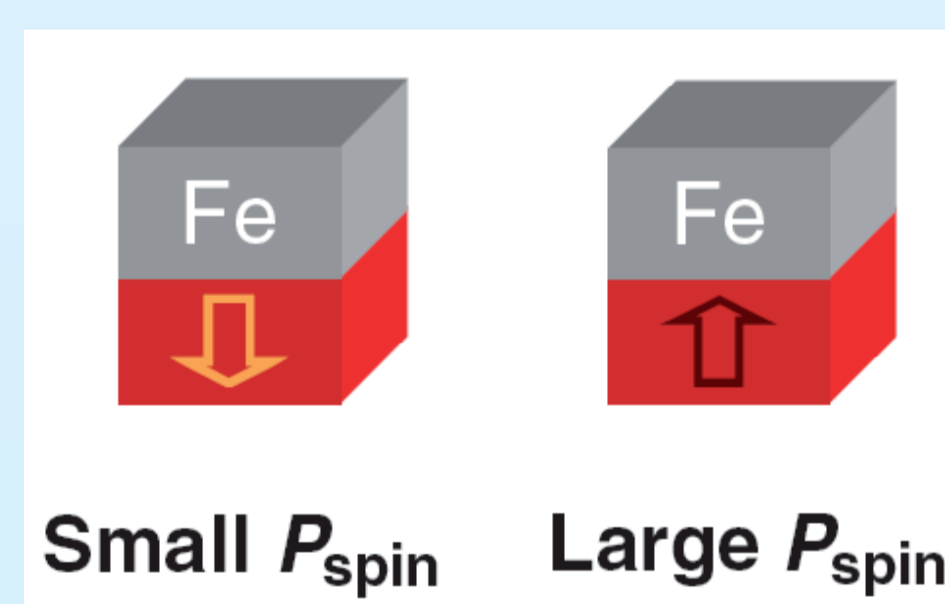


<http://www.triangledelaphysique.com>
contact@triangledelaphysique.fr

Our partners:  

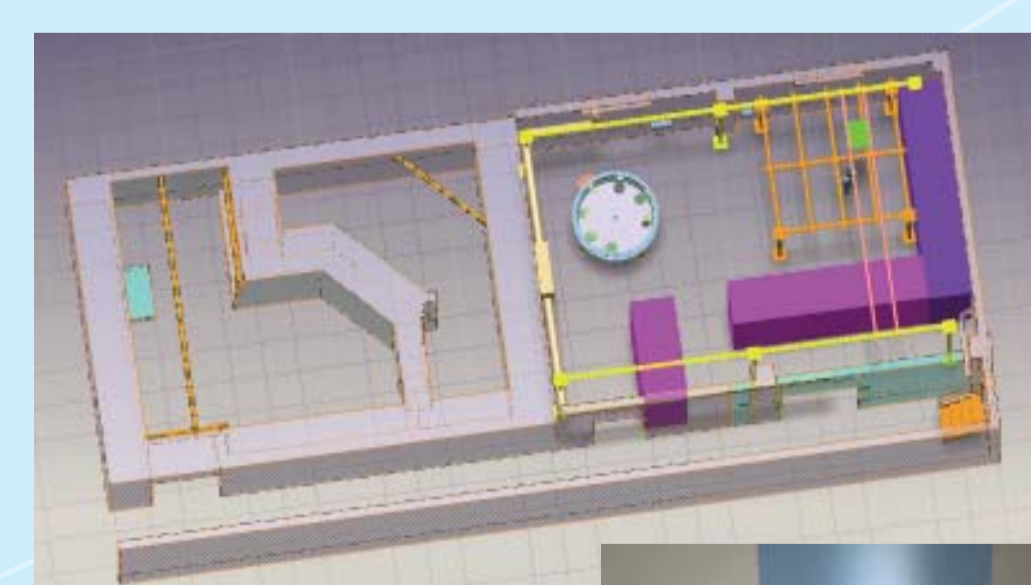
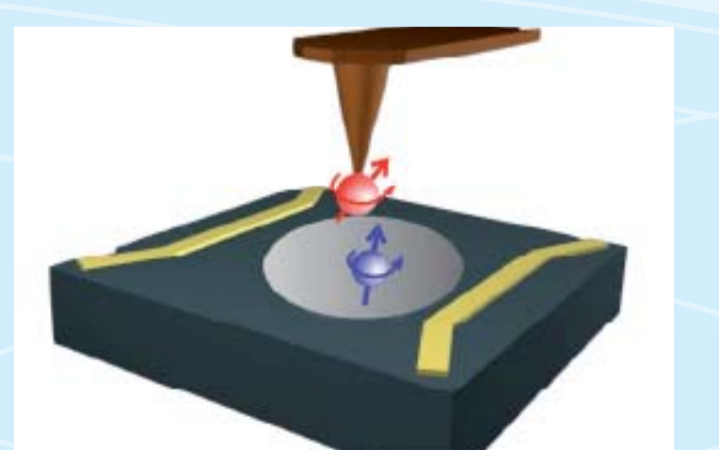


Synchrotron SOLEIL



Scheme of electrical control of spin polarization at a Fe/BaTiO₃ interface and atomically resolved image of its structure
OxiSpintronics project 2008, see Ferroelectric control of spin polarization by V. Garcia et al. Science 327 (2010) 1106

Magnetic probe using the echo of spin of a center colored in a nanocrystal of diamond
B-Diamant project, 2008 Senior Chair J. Wrachtrup



A targeted joint project to promote the use in physics, chemistry and biology, of short electron pulses generated by ultra-short laser beams. Perform advanced experiments in radiolysis and in radiotherapy.
Appeal project, 2007

