



Physics, characterizations and applications of functional oxide nanostructures

Lecturer: Prof. Bertrand Vilquin (Ecole Centrale de Lyon, France)

Course description:

The field of functional oxide nanostructures took off at the end of the 1990's and is now growing at an exponential pace. Major breakthroughs over the last 10 years include the advent of multiferroics and the discovery of several unexpected phases at oxide interfaces, such as the two-dimensional electron gas at the LaAlO₃/SrTiO₃ interface.

Novel physical phenomena have also been revealed in ultrathin films of ferroelectric or correlated electron systems, as well as giant responses and phase transitions induced by light or electric field, with potential for innovative devices.

Keywords:

OXIDE ELECTRONICS

MULTIFERROICS

FERROELECTRICS

SUPERCONDUCTORS

OXIDE INTERFACES

TUNNELING

MEMRISTORS

Short course on smart materials and structures (piezoelectrics, shape memory alloy, MR, auxetics) and nanostructures variants (from grapheme to ZnO, BN and GaN systems)

| TERMINY WYKLADÓW | | | |
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| Data | Dzień tygodnia | Godzina | Sala |
| 2013-12-12 | czwartek | 15-18 | 3/10 Centrum Nanotechnologii |
| 2013-12-13 | piątek | 14-17 | 3/10 Centrum Nanotechnologii |
| 2013-12-17 | wtorek | 14-17 | 3/14 Centrum Nanotechnologii |
| 2013-12-18 | środa | 14-17 | 3/14 Centrum Nanotechnologii |
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