



CMD2020GEFES mini-colloquium

Nano-Engineering of Functional Oxides: Synthesis, Functional Properties and Applications

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Complex oxides have the chemical and structural flexibility to exhibit, even combine, multiple exciting phenomena such as magnetism, ferroelectricity, multiferroicity, superconductivity, ionic conductivity, etc. due to an unparalleled correlation between charge, spin and lattice. Based on this, the proposed Mini-colloquium is devoted to experimental and theoretical studies of functional oxide thin films and heterostructures. It includes the study of the influence of epitaxial strain, of the oxide physicochemical properties as well as the role of defects, quality of interface and possible boundary effects between substrate and film. The Mini-colloquium also focuses on exploiting new materials and heterostructures low-dimensionality or interface effects to engineer the materials potential applications, revisiting the progress made, discussing the present state of the subject, and speculating about future prospects and technological potential of these exciting materials on this subject.

Invited speakers:

- Regina Dittman, Peter Grünberg Institute - Jülich Forschungszentrum (Germany)
- Jean-Marc Triscone, University of Geneva (Switzerland)
- Verónica Salgueiriño - Universidad de Vigo (Spain)
- Carlos Hernández García - Universidad de Salamanca (Spain)