

## The MC2 group at CEMES-CNRS

### **"National Center for Scientific Research" (CNRS), Toulouse, France**

#### **Post-doctoral position "in situ TEM characterization of nanoplasticity using a piezo-actuated nanoindenter and CS-corrected dark field holography"**

Announcement date: 18 January 2010

- \* MC2 group at CEMES-CNRS, Toulouse, France (CEMES is a laboratory of the French "National Center for Scientific Research" -CNRS)
- \* 12 months period (possibility of renewal for a second year)
- \* starting February-March, 2010
- \* position financed by the ANR project "HD Strain" (Dark field holography strain mapping in the TEM)
- \* salary: 2100 € per month

We are looking for a candidate with a strong background in transmission electron microscopy (TEM) and mechanical properties of crystals. The overall aim of this work is to develop original experiments of in situ TEM, mainly to deform nanostructures.

Two new tools have been developed for that purpose and should be extensively used for that purpose:

- Dark field holography, which is a TEM technique able to map strains and potentials to the picometre scale (Nature 453, 1086-1089 *Nanoscale holographic interferometry for strain measurements in electronic devices*)
- A nanoindenter-electrical biasing TEM holder has recently arrived at the CEMES. This holder, fabricated by Nanofactory AB is the first of its kind for FEI microscopes as it possesses a double tilt frame, able to compensate for slight crystallographic misalignments in the sample.

Applications:

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