



### Details

Start : February 1st or March 1st, 2007 ( 18 months)  
University : Paris Sud-Orsay University (91-France)  
Laboratory : ICMMO – LEMHE, UMR 8182 -CNRS  
Director : Pr J.J. Girerd

### *"Synthesis of $ABO_3$ perovskites by MOCVD using organometallic precursors"*

#### Research project:

The proposed subject is a part of a common research project financed by the French Research ministry (ANR-CAMINO).

Designed for electronic applications,  $ABO_3$  perovskites will be deposited in an industrial MOCVD reactor using new organometallic precursors. Thin films will be compared in term of chemistry, structural and electric characteristics with respect to deposition parameters. The study will also focus on the precursor's choice and the post-treatment conditions (temperature, oxygen partial pressure, ...).

Thin films deposited on flat surfaces will be characterized by usual techniques such as SEM, FEG-SEM, grazing DRX, XPS, and FTIR.

Electrical characterization will be hold by our colleagues of the project (LAAS-Toulouse).

#### Profile:

PhD in Material Science and Engineering in the field of "thin films" using chemical process (CVD, PACVD, sol gel, ...).

Knowledges in precursor's chemistry.

As the films will be characterized in a chemical and structural point of view, grazing DRX, chemical environment by FTIR and XPS should have be practiced.

#### Application and contact:

PhD in Material Science and Engineering supported before December 30th, 2006.

Send (e-mail) to the project manager (see below) a CV (2-3 pages with programme, summarized by thesis, publications, references) and letter in support of application.

