



CORRAL

European Union Small Focused Research Project (FP7-NMP-2007-SMALL-1)

POST-DOCTORATE PROPOSAL

CORRAL is a Collaborative Project between 15 industrial and academic Participants supported by the 7th Framework Programme of the European Union. Its aim is to develop high density defect-free ultra-thin sealing coatings with excellent barrier properties and improved corrosion resistance. Their successful functioning will be provided by the synergy of the coating "perfect" morphology and its complex structural design, tailored at the nanoscale. The study will be focused on development of novel nanostructured coating systems, such as nanoscale multilayers, mixed and composite coatings. These impermeable sealing layers must be able to block the ion exchange between the substrate material and an aggressive environment, thus offering an efficient protection against corrosion over a long term. The technological objective of CORRAL is to develop a coating technology capable to deposit defect-free ultra-thin coatings on engineering surface at an industrial scale. The scientific objective of CORRAL is to develop a new nanoscale corrosion protection approach based on sealing coatings. To achieve this aim the CNRS as a Participant is able to offer an exciting opportunity to post-doctoral researchers.

A position, for a period of 12 months, will be held in the **Laboratory of Physical Chemistry of Surfaces, ENSC-Paris, ParisTech (France), Dir. Philippe Marcus** (www.enscp.fr). Surface analytical techniques (XPS, ToF-SIMS, AFM/STM) and electrochemical techniques (voltammetry, EIS) will be applied to characterize a selected number of systems and to develop a model for the nanoscale performance of corrosion protection by ultra-thin sealing coatings.

The post is open to those under 35 years of age. Prior experience in corrosion science and surface analytical methods is required. The post will be awarded to the successful applicant according to the local conditions and salary scales of the CNRS. For information please e-mail the contact shown below.

Starting date: January 2009

To apply send CV and covering letter to philippe-marcus@enscp.fr; vincent-maurice@enscp.fr; jolanta-swiatowska@enscp.fr