OPEN POST-DOCTORAL POSITION

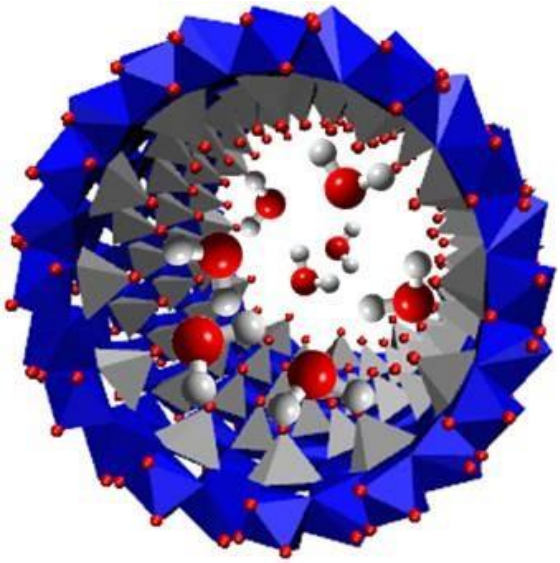
between Laboratoire de Physique des Solides, Orsay and Laboratoire PHENIX, Paris

www.lps.u-psud.fr, www.phenix.cnrs.fr

The position is granted by the Réseau d'Excellence en Solides Poreux de la région Île-de-France (DIM RESPORE).

Contract duration is one year (possibility of renewal for one more year).

The subject of the post-doctoral work is the **'Multiscale dynamics of water in metal-oxide nanochannels'**. The nanochannels used are hydrophilic and hydrophobic imogolite-like nanotubes. Their internal pores offer one of the rare possibility to probe the confined dynamics of water in well-defined geometries and for different interactions with the interface. Such dynamics should be a multiscale process involving an interplay between vicinal interaction with the pore wall and constrained dynamics inside the restricted geometry of the cylindrical pore. The post-doctoral researcher will mainly deal with dynamical experiments at different time scales, namely Time-of-Flight and neutron spin echo experiments (in collaboration with Stéphane Rols from Institut Laue Langevin), which will allow him (her) to probe dynamics inside a correlation time window below the ns, and Nuclear Magnetic Resonance (NMR) Dispersion and bi-dimensional T_2-Δ-T_2 NMR relaxometry, with a special focus on a time window ranging from few ns to 10 μs. The objective is to obtain a consistent set of new data about the multiscale dynamics of water in model nanoporous media (namely, hydrophilic and more hydrophobic nanotubes), and to present a first global picture of the associated phenomena.



Candidates should be experimentalists. Previous experience in inelastic neutron scattering or NMR would be a plus.

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