

**UMR7610 - CHIMIE DES POLYMÈRES**  
**LABORATOIRE DE CHIMIE MACROMOLÉCULAIRE**

Dr Laurent BOUTEILLER  
Chargé de Recherche CNRS

Post-doc position available:

**Synthesis of ultra-microporous polymeric materials**

We are looking for a chemist with strong experience in organic synthesis, supramolecular chemistry or material chemistry. Expertise in characterization of microporosity will be appreciated but is not fundamental.

The aim of this project is to synthesize organic polymer-based materials with cylindrical porosities of diameter perfectly controlled in the range of 5 to 10 Å: "plastic zeolites". The characteristics expected for such materials are: (1) selective interactions with molecular guests (as in the case of inorganic zeolites), and (2) polymer-like processing and (mechanical...) properties. To reach this goal, a self-assembly process yielding tubular structures will be used (L. Bouteiller et al *J. Am. Chem. Soc.* **127**, 8893, 2005). The project consists in synthesizing the organic building blocks, in directing the self-assembly process, and in characterizing the obtained porosities. It will be implemented in collaboration with the Laboratoire de Chimie Organique (Bruno Andrioletti) concerning the synthesis and the Laboratoire Systèmes Interfaciaux à l'Echelle Nanométrique (Jean-Luc Bonardet) for the characterization of microporosity.

The position is for 12 months starting in September or October 2006.