PhD position

Title	**3D polymer-derived non-oxide ceramic membranes for wastewater treatment**
Head	Dr. Chrystelle Salameh
Laboratory	European Institute of Membranes (IEM), University of Montpellier, France
Contact	chrystelle.salameh@enscm.fr, +33-4-67-14-91-44

Key-words: Polymer-derived ceramics, 3D printing, membranes, water treatment

Project description:

A PhD position is available in the group of PNM-DM3 at IEM under the supervision of Dr Chrystelle Salameh. Our research aims at fabricating new designs and compositions of polymer-derived ceramics and studying their properties in the fields of membrane separation and energy. The main goal of this PhD will be to develop novel non-oxide ceramic porous membranes with rational designs for the treatment of wastewater as well as complex fluids with oil/water mixtures. The PhD candidate will i) synthesize and design 3D non-oxide membranes by combining novel chemistry for the preceramic precursors with additive manufacturing and ii) assess the membrane performance towards oil/water separation. The project is supported by the Agence Nationale de la Recherche ANR under the JCJC program. The position is available as early as September 2021.

Profile of the applicants:

We are looking for bright and motivated candidates interested in the membrane field! The objective of this thesis is to explore the structure-property relationship of preceramic polymers and their printability towards the elaboration of 3D polymer-derived membranes. Successful applicants should be able to conduct rapid research in a team-oriented environment and have good oral and written communication skills. They should have experience in the synthesis and characterization of materials and *ideally* in membranes. Knowledge of 3D printing and of polymers chemistry is desired but not required. Interested persons must submit a brief cover letter, a CV, as well as the names and contact details of three referees to Dr. Chrystelle Salameh by email: chrystelle.salameh@enscm.fr.

Our laboratory:

The research will be carried at the European Institute of Membranes (Institut Européen des Membranes, IEM, CNRS UMR5635, UM, ENSCM) at the University of Montpellier. IEM is a world-leading institute in the field of membrane science with excellent technical support and in-house facilities for the fabrication and characterization of membranes. The institute is affiliated to the University of Montpellier, and member of the Pôle Chimie Balard, Institut Carnot Chimie Balard and Labex CheMiSyst. Our group possess dedicated state-of-the-art facilities to successfully lead the project.

Contact information:

Chrystelle SALAMEH, PhD
Assistant Professor
Phone: +33-4-67-14-91-44
Ecole Nationale Supérieure de Chimie de Montpellier (ENSCM)
Institut Européen des Membranes (IEMM, ENSCM UM CNRS UMR5635)
Place Eugène Bataillon
34095 MONTPELLIER Cedex 5, France
ORCID : 0000-0002-8188-6637