

Immediate opening: Postdoctoral fellowship in the field of polymer synthesis towards fabrication of flexible electrochemical/transistor-based sensors

With the foundation of our international associated laboratory, SENERGYLAB, between LPPI Laboratory (CY Cergy Paris Université, France) and SensorLab (University of the Western Cape, South Africa), we are seeking a postdoctoral researcher who will support our activities in the synthesis and characterization of polymeric ionic liquids (PILs) towards application in electrochemical and/or transistor-based sensors.

This position is located at LPPI Laboratory in Neuville sur Oise, France

The research will be focused in mastering the synthesis of new families of PIL-based ionoelastomer as well as classical ones, especially anionic and/or redox-active PILs (*e.g.* poly(bis(trifluoromethane)sulfonimide), poly(2-Acrylamido-2-methylpropane sulfonic acid), poly(viologene-based IL), poly(Poly(3,4-ethylenedioxythiophene)-based IL), etc.) by using three main paths: (1) chemical/ (2) electrochemical polymerization from monomers and (3) post-functionalization of commercially available polymer. Synthesized materials will be then applied in different electrochemical systems, including electrochemical and/or transistor-based sensors for healthcare and environment purposes.

The selected candidate is expected to be involved with other polymer synthesis and electrochemistry projects in the lab. The research will be complemented by collaboration with different electrochemists and polymer scientists.

Major duties and responsibilities:

Synthesis and characterization of new families of monomer

Design, synthesis and characterization of pre-defined polymer using different polymerization techniques (radical polymerization, SI-ATRP, electropolymerization)

Post-functionalization of polymers

Electrochemical characterization of prepared polymer for electrochemical sensing applications

Actively participate in presenting and reporting results to different international collaborator and publishing results in peer-reviewed journals

Required qualifications

A Ph.D in Polymer Science, Materials Science or a related field within the last 5 years

Expertise and skills in organic synthesis, polymer synthesis and characterization

Ability to work independently and in an international team environment

Good communication skills (both oral and written)

Preferred qualifications

Experience with mechanical, viscoelastic characterization of polymer

Knowledge and experience in electrochemistry of polymer

Experience in handling poly(ionic liquid) synthesis and characterization

Required documents: Cover letter, Curriculum Vitae (including publication list) with contact information of at least 2 references

Position term: 12 months (full time)

Gross Monthly Salary: ~ 3000 – 3300 euros depending on profile

Mobility: possibility for oral presentation at conferences and a short visit at SensorLab (University of Western Cape, South Africa)

If you are interested in applying for this position, please email to Cedric Plesse, Giao Nguyen and Thuan Pham (thuan-nguyen.pham-truong@cyu.fr)