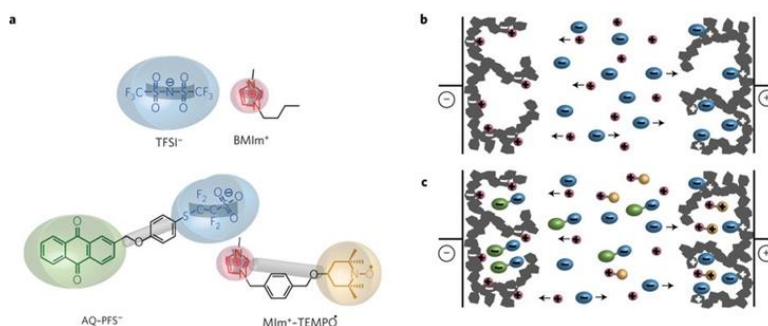




Ph.D. Offer

## New energy storage systems based on redox ionic liquids and conducting polymers

Topics about energy are in constant evolution, they are the subject of considerable media coverage, and are at the center of political, economic and ecological debates. In this thesis, we propose to develop new supercapacitors with increased energy storage capacities. The originality of the subject is to combine the properties of organic conductive polymers with those of new ionic liquids carrying redox functions in order to increase storage capacities in supercapacitors. The thesis will include a part of materials development and an in-depth study of material transport and charge transfer mechanisms using advanced electrochemical techniques. Understanding these mechanisms will help to optimize the properties of these supercapacitors.



**Keywords:** supercapacitor, ionic liquids, scanning electrochemical microscopy, conducting polymers

**Applicant profile:** Background in physical chemistry, electrochemistry, materials science.

**Financial support:** Expected fellowship from the Ministry of Research.

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