Prof. David MECERREYES

POLYMAT
University of the Basque Country
Basque Center for Macromolecular Design & Engineering

http://www.polymat.eu/

IMCN SEMINAR

« Innovative Polymer Electrolytes for Electrochemical Devices »

Tuesday 23 October 2018 – 10:00 am
Auditorium Jean-Baptiste CARNOY (B.059)
Croix du Sud 4, Louvain-La-Neuve

More information: Sophie HERMANS (sophie.hermans@uclouvain.be)
Jean-François GOHY (jean-francois.gohy@uclouvain.be)
Polymer electrolytes can be used in a number of electrochemical devices in different areas such as energy, bioelectronics or optoelectronics. For each different application/device the polymer electrolyte should be tailored to address different targets such as ionic conductivity, electrochemical window, type of ions, adhesion and interface with the electrodes, printability, mechanical properties and so on. Furthermore, new properties such as biodegradability and biocompatibility are searched in new applications such as recyclable electronics or bioelectronics.

In this presentation we will review our recent works in the design of innovative polymer electrolytes. The presentation will include the development of new poly(ionic liquid)s, iongels, hydrogels and polycarbonate polymer electrolytes. Its application in devices will be discussed ranging from organic electrochemical transistors (OECTs), light-emitting electrochemical cells (LEC)s and cutaneous electrodes for electrophysiology.


BIOGRAPHY

Prof. David MECERREYES graduated from the University of the Basque Country (France) in 1994, and obtained the Ph.D. degree in 1998 from University of Liege (Belgium). In 2001 he was awarded with a Ramón y Cajal Fellowship from the Spanish Ministry of Science and Technology (MCYT), being elected as the number #1 proposal in Materials Science.

In January 2011, he took an Ikerbasque Research Professor position at POLYMAT- University of the Basque Country. He is leading a group specialized in polymer chemistry. The laboratory covers a range of research activities between organic and polymer chemistry, electrochemistry, materials science, physical chemistry, supramolecular chemistry and nanomaterials science. The final goal is to synthesize innovative polymeric materials for Emerging Technologies in sectors such as Energy and Environment.

The research projects are oriented towards SUSTAINABLE POLYMER CHEMISTRY including topics such as green organocatalysis, polymer chemical recycling or biodegradable polymers. The main goal is the development of INNOVATIVE POLYMERS such as poly(ionic liquid)s, redox polymers, polymer electrolytes, block copolymers or iongels. The groups is currently developing polymers for emerging technologies such as BIOELECTRONICS, ELECTROCHEMICAL ENERGY STORAGE (BATTERIES), CO2 CAPTURE, NANOMEDICINE OR WATER PURIFICATION.

Website: http://www.polymat.eu/