



LAURENT RUBATAT

From France to Sweden



Project: **Multi-scale morphology of soft matter**

Research topic: **Physics**

Swedish Institution: **Uppsala University / Lund University / KTH**

French Institution: **University of Pau**

Dates of mobility: **18/08/2014 to 22/08/2014**

Program: **SFVE-A (ex-TOR)**



PRESENTATION

[Laurent Rubatat](#) is Associate Professor at the Laboratory of the Physics and Chemistry of Polymers ([PCM](#)) and the [IPREM](#) institute of the [University of Pau](#). He obtained his PhD at [CEA-Grenoble](#) in 2003 and was habilitated in 2013. His research focuses on the correlation between the multi-scale morphology of soft matter and its properties, such as ion and electron conductivities, rheology, adhesion and wettability. Ongoing research addresses the control of hierarchical and dynamical structuring of polymer materials using block copolymers self-assembly for fuel cell and battery applications or through a bio-mimetic approach, by means of scattering and microscopy techniques.

ACTIVITIES IN SWEDEN

Rubatat visited the [Ångström Laboratory](#) at [Uppsala University](#), where he held a seminar and discussed with [Adrian Rennie](#), [Vassilios Kapaklis](#) and [Christer Elvingson](#). They planned a possible collaboration on soft-condensed matter. He visited the [Advanced Battery Centre](#) and [Kristina Edström](#) and [Torbjörn Gustafsson](#). They discussed experimental approaches to battery electrodes and electrolyte characterization by means of diffraction and spectroscopy. He exchanged views with [Daniel Brandell](#) on molecular dynamics simulations, with [Tim Bowden](#) on polyelectrolyte synthesis, and with [Jöns Hilborn](#), [Dmitri Ossipov](#) ([GU](#)) and [Oomen Varghese](#) on biobased and synthetic polymers. He then travelled to the [Department of Chemistry](#) at [Lund University](#), where he held an informal seminar to the [Patric Jannasch](#) group. They discussed polymer synthesis for fuel cell ion exchange membranes. Finally, he visited the Royal Institute of Technology ([KTH](#)), the [School of Engineering Sciences in Chemistry, Biotechnology and Health](#) and the [Glycoscience division](#), where he met with [Vincent Bulone](#) and [Qi Zhou](#), discussing i.a. biomass valorization. He then visited the [Applied Electrochemistry division](#) and the [Fiber and Polymer Technology Department](#), where he met with [Rakel Wreland Lindström](#), [Carina Lagergren](#), [Göran Lindberg](#), [Istvan Furo](#), [Minna Hakkarainen](#) and [Ulf Gedde](#).