



HELENA KAPER

From France to Sweden



Project: **Ionic and electronic conductors as catalysts in oxidation reactions**

Research topic: **Chemistry**

Swedish Institution: **Stockholm University / Luleå University of Technology**

French Institution: **Saint-Gobain Research Provence Cavailon**

Dates of mobility: **15/02/2016 to 21/02/2016**

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



PRESENTATION

[Helena Kaper](#) is a French National Scientific Research Center ([CNRS](#)) Researcher at the joint laboratory CNRS-Saint-Gobain [C.R.E.E.](#) (Center of Research and European Studies) in Cavailon. She obtained her PhD in Chemistry from the [Max Planck Institute of Colloids and Interfaces](#) in Potsdam. Her areas of interest are heterogeneous catalysis, and characterization and synthesis of mesoporous materials and nanomaterials.

ACTIVITIES IN SWEDEN

Helena Kaper started her mobility by visiting [Prof. Lennart Bergström](#) at the [Department of Materials and Environmental Chemistry](#) of [Stockholm University](#), with the aim to exchange on research topics of the Swedish and French laboratories. They discussed shaping cellulose by freeze casting and iron oxide materials. A research visit by Prof. Bergström to the C.R.E.E. was envisaged.

Subsequently, she visited [Luleå University of Technology](#) and [Prof. Jonas Hedlund](#) at the Laboratory of [Chemical Engineering](#) under the [Department of Civil, Environmental and Natural Resources Engineering](#), with whom a longer research visit and collaboration in Luleå was planned. Kaper presented her research to Prof. Hedlund and [Assc. Prof. Johanne Mouzon](#). Zeolite synthesis and zeolite application in membranes were discussed. They also inspected the high-resolution [Magellan 400 XHR-SEM](#) allowing among others the observation of coking phenomena on zeolites at nanoscale. Regarding catalytic test reaction, the lab also focuses on methanol synthesis from biosources (e.g., gasification of black liquor from pulp mills).

They talked about possible collaborations, one of which was the exploitation of novel zeolites developed at Luleå in the context of the catalytic tests used in France (i.e., broaden the use of zeolites in catalysis combining zeolites with oxides studied in France). Future exchanges and joint publications were envisaged.