

PhD CIFRE Grant

Dispersion and Solidification of a Coated Catalyst Layer for Polymer Electrolyte Membrane Fuel Cell (PEMFC) Application

INSA/IMP (Villeurbanne, 69) and Symbio (Vénissieux – St Fons, 69)

Context and mission:

Welcome to Symbio, we are one of the future major actors of the clean mobility, zero emission!

Our company creates hydrogen systems which are incorporated on different types of vehicles (cars, trucks, boats...). We are now expanding our activities and we are in a hyper-growth phase!

Established in 2010, Symbio is now a joint venture 50/50 between Michelin and Faurecia. Thanks to our collaborators, we are developing our activities in a highly competitive environment.

Indeed, the management in our company is based on three points: trust, engagement, and proximity.

Today we are offering a PhD position to tackle the understanding of the catalytic layer formation in Membrane Electrode Assembly (MEA). The work will first focus on the formulation and the characterization of inks containing all the components (heterogeneous catalyst, ionomer, solvents). The coating on several substrates (polymer membrane, or on the gas diffusion layer) will be then studied. The study of the structuration during the drying is expected. Finally, the electrochemical performance of the MEA will be studied electrochemically at Symbio Research Center.

Required skills: The applicants should be graduated of a Master Degree (or Engineering degree) in Soft Matter/Physico-Chemistry or Polymer Science.

Curiosity, rigour, autonomy, anticipation, spirit of initiative, teamwork skills are highly recommended. English in oral and written communication is a must to interact with an international Symbio Team.

Localisation: 85% Laboratoire IMP (UMR 5223), Université Lyon 1 in Villeurbanne, 15% Symbio in Vénissieux & St Fons

Contract: Cifre convention will be applied for contract and salary for 36 months

Application: Candidates should provide a CV, a letter of motivation and reference letters if possible.

Deadline application: 31/08/2022

Contact: Douriya.khedaoui@symbio.one

Websites:

<http://www.imp-umr5223.fr/>

<https://www.symbio.one/>