



**HENRI VAHABI**

*From France to Sweden*



Project: **Engineering of Fire. Thermoplastics, thermoset polymers.**

Research topic: **Engineering**

Swedish Institution: **University of Borås**

French Institution: **University of Lorraine**

Dates of mobility: **27/09/2021 to 30/09/2021**

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



## PRESENTATION

[Henri Vahabi](#) is Associate Professor at the [University of Lorraine](#). His research focus on the thermal degradation, flame retardancy of thermoset, thermoplastics, and development of new flame-retardant systems. He is a committee member of the “[Fire group](#)” of the [Chemical Society of France](#) and has authored over 130 peer-reviewed scientific articles, books, and books’ chapters.

## ACTIVITIES IN SWEDEN

Henri Vahabi did a scientific mobility at the [University of Borås](#), where he had the opportunity to present his current research projects and discovers the ones conducted by [Prof. Skrifvars](#)’ team.

Discussion on potential research topics for initiating various collaborations between French and Swedish laboratories were held on this occasion. More specifically, two projects were discussed:

- The use of modified coffee waste with biobased phosphorus chemicals and their use in a biobased polymer (PLA) as flame retardant. Henri Vahabi’s team will prepare the modified coffee and Prof. Skrifvars’ team will blend this filler with polymer. Then, some parts of characterization (flame retardancy and thermal degradation properties) will be performed in France, and some other properties (mechanical ones) will be performed in Sweden.
- The preparation of modified flax textiles to increase their flame retardancy. The French researchers will prepare the samples and test the flame behaviour, and the Swedish researchers will characterize the final material with specific tests dedicated to textile.