



HENRI VAHABI

From France to Sweden



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

Research topic: **Engineering**

Swedish Institution: **Stockholm University**

French Institution: **University of Lorraine**

Dates of mobility: **19/04/2022 to 22/04/2022**

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

During his stay in Stockholm, Henri Vahabi met [Dr Mika Siponnen](#) and his research group at [Stockholm University](#). The latter are specialized in the development of lignin-based functional materials for sustainable applications. Their expertise in lignin’s chemistry will help Henri Vahabi to develop new bio-based functional materials for sustainable application and new bio-based flame retardants in order to improve polymers’ fire behavior.

Henri Vahabi held a seminar at Stockholm University, entitled “Engineering of Fire: from thermoplastics to thermoset polymers”. His visit permitted to initiate a research collaboration between University of Lorraine and Stockholm University. A research collaboration has been discussed: Dr Mika Siponnen’s team will prepare 3 types of lignin modified with different phosphorus chemicals, before sending them to Henri Vahabi’s laboratory in France. Here, the French researchers will incorporate the lignins in PLA and PHB to evaluate their flame retardancy and thermal degradations properties. PHD students and Dr Mika Siponnen’s research mobilities have also been discussed to organize a future visit at University of Lorraine.