

In 2004, I got two master theses: Chemical Engineering & Fine Chemistry (INSA Rouen) and Risk management of chemical hazards (University of Rouen). In 2005, I worked for nine months at Åbo Akademi University (Finland) on an industrial project (Kemira company). After this project, I started my doctoral thesis in joint-degree between Åbo Akademi University (Finland) and INSA Rouen on “Catalytic synthesis and decomposition of peroxycarboxylic acids” under the supervision of Prof. Tapio Salmi. In 2009, I got my Ph.D. degree with honor from both institutes and the European label. From 2009 to 2010, I continued as a junior researcher at Åbo Akademi University and focused my research on kinetic modeling on the continuous reactor.

I was appointed Assistant-Professor at INSA Rouen in 2010 in the department “Risk management.” In 2015, I defended my Habilitation (University of Rouen) and became Associate-Professor. In 2015, I was also appointed *Docent in chemical process technology, especially new concepts chemical in reaction engineering, modelling of chemical reactors and safety aspects* at Åbo Akademi University. This position was renewed for life in 2020.

The aim of my group is to understand the reactivity of complex chemical systems: develop robust and reliable kinetic models in different thermal modes. We are using different calorimeters (RC1, C80, ARSST, etc), process intensification systems (micro-reactor, microwave irradiation) and statistical methods (Bayesian inferences, cross-validation, etc).

We have developed original approaches based on structure-reactivity and non-isothermal mode to develop robust and reliable kinetic models.

The following research activities are investigated:

- Risk assessment for the valorization of biomass processes
- Kinetic modeling of complex reaction system
- Microwave irradiation for the valorization of vegetable oil
- Microreactor for the valorization of 2nd generation biomass
- Structure-reactivity