



Written on 25 June 2021



2 minutes of reading



News

Fundamental Research

Analysis and characterization

Chemical analysis



The French Society of Mass Spectrometry has awarded its 2021 thesis

prize to Julie Guillemant, who worked in the "Physics and Analysis" research department at IFPEN, for her work on the "chemometric exploitation of molecular analysis data (FT-ICR/MS) of gas oils (GO) and vacuum gas oils (VGO) for the research for reactivity descriptors".

The objective was to **develop a methodology for characterizing complex mixtures at the molecular level**, such as heavy oil cuts, by combining the power of very high-resolution mass spectrometry (FT-ICR/MS) and **the exploration of data through chemometric approaches**. This methodology will both improve the understanding of the transformation mechanisms of heavy cuts in refining processes and make the kinetic modelling of these processes increasingly precise and predictive.

This thesis, defended in September 2020, was supervised at IFPEN by Jean-François Joly, co-sponsored by Alexandra Berlioz-Barbier and Luis Pereira de Oliveira, and overseen by Florian Albrieux, Marion Lacoue-Nègre and Ludovic Duponchel (LASIR, Lille). The virtual award ceremony was held on 24 June.

## YOU MAY ALSO BE INTERESTED IN

[A new reaction scheme to optimize the production of biobased butadiene](#)

[IFPEN sheds light on the genesis of deposit formation in fuels](#)

[Lasers to optimize the dual-fuel engines of tomorrow](#)

[SFSM thesis prize awarded to Julie Guillemant](#)

25 June 2021

Link to the web page :