



# Science@ifpen

Written on 01 March 2016



15 minutes of reading



News

Fundamental Research

Analysis and characterization

Chemical analysis

Structural analysis and Imaging

Mechanical and thermal testing

Microfluidics

High-throughput experimentation (HTE)



sis

Molecular characterization of liquid and gas systems, assay of

**species in ultra-trace conditions, representation of nano-organized complex fluids on different scales, description of material textures from the nanometric to the millimetric scale,**

**characterization of systems in representative operating conditions:** the **Physics and Analysis Division** is focusing on all these issues, and more, to support IFPEN's innovation projects.

Its researchers work to develop cutting-edge methods and techniques, particularly as part of pivotal academic partnerships. Their nationally and internationally recognized expertise covers an exceptionally broad spectrum of matter states, giving them access to detailed physicochemical descriptions and the properties of numerous systems of interest. They make a major contribution to IFPEN's scientific influence, with more than 20 papers published every year in high-impact journals. This issue presents just a few of these papers.

I hope you enjoy reading it.

**Cécile Barrère-Tricca, Head of the Physics and Analysis Division**

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### Summary:

- **Mercury in refineries** plummets
  - **Biobased pyrolysis oils:** separating into fractions to more accurately decipher their composition
  - **MRI:** for good impregnation in live conditions
  - **Liquid chromatography** takes on a new dimension
  - A voyage through a **porous nanometric network**
  - **CT scanning of foam injection** in fractured cores
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