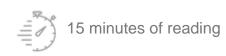




Written on 01 May 2014





News

Fundamental Research

Renewable energies | Biofuels and e-fuels | Sustainable mobility | Electrified Mobility

Responsible oil and gas | Enhanced oil recovery (EOR)

Analysis and characterization

Microfluidics



Identifying interactions within complex systems in order to describe

phenomena and understand reaction mechanisms so that they can be more selective: these are the objectives of IFPEN's Applied Chemistry and Physical Chemistry Division. The understanding and tools thus developed are essential in order to help forward the R&D projects in many fields, ranging from **transport** and **traditional refining to bioprocesses and upstream production and exploration**. The key to success is found in a **multiscale approach** that is applied both inmodeling and experimentation.

Our researcher's expertise in the fields of thermodynamics, physical chemistry of complex fluids, biotechnology, electrochemistry and materials is widely recognized both nationally and internationally. They make a significant contribution to firmly establish IFPEN's scientific position, with around 45 publications per year in high-impact journals. The number of publications and citations is among the best in each of their fields: molecular modeling, oil emulsions, electrochemistry of CO₂ and fungal cellulases. The examples that follow illustrate the scientific quality of the research.

We hope that you enjoy this issue,

Véronique Ruffier-Meray, Director of the Applied Chemistry and Physical Chemistry Division

Summary:

- Oxygen in equations
- More **sugar** thanks to enzymes
- No low-salt diet for refractory steels
- Better management of batteries aging
- Microfluidics, macroadvantages!
- EOR and the water cycle: towards better treatments



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