

Written on 01 December 2016

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News

Fundamental Research

Renewable energies | Bio-based chemistry | Sustainable mobility | Environmental Analysis of Transport | Responsible oil and gas

Analysis and characterization | Microfluidics

Special issue: **Publications by young researchers**

This edition takes a look back at key results obtained by young researchers, PhD students and post-doctoral researchers, who have contributed to IFP Energies nouvelles' fundamental research. After a very full scientific career, I find it genuinely satisfying to note that this foundation is still full of life in order to provide new material for innovation. This also reflects the scientific vibrancy of our researchers, including highly committed supervisors and subject promoters, who are responsible for capitalizing on our results and maintaining fruitful relationships with our academic partners.

It is also a special pleasure for me to congratulate **Kim Larmier, winner of the 2016 Yves Chauvin Prize**, for his exemplary **demonstration of the predictive power of ab initio calculation, combined with micro-kinetic modeling**, in an entirely ground-breaking multiscale approach linking the detailed small-scale description of active catalytic sites and the performance of a bio-based petrochemical process.

The search for a Grail so close to my heart has thus not only been passed on, but has already started to produce great results. Our readers will also appreciate the wealth of other results presented in this edition, which meet the challenges of an IFPEN which is striving, now more than ever, to forge the energy of our future.

Hervé Toulhoat, Executive Vice-President, Scientific Management

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Summary:

- **Kim Larmier**: 2016 Yves Chauvin thesis prize
- Complex reactions? **Supercritical microfluidics** to the rescue! Thesis by Bruno Pinho Da Silva
- Have we solved the mystery of the **sedimentary "black boxes"**? Thesis by Vincent Crombez
- Urban Traffic: **Green lights for eco-travel**. Thesis by Giovanni De Nunzio
- **Characterizing foams using microfluidics**. Post-doctoral work by Cyril Micheau
- **Combining models for better separation**. Thesis by Leonel Fangueiro Gomes

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