



Science@ifpen

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15 minutes of reading



News

Fundamental Research

Climate, environment and circular economy

CO₂ capture, utilization and storage

Renewable energies

Biofuels and e-fuels

Responsible oil and gas

Fuels



"Catalysis" and "separation" are key skills for environmentally friendly innovation in the

refining and chemicals sectors. The combination of **catalytic** steps and **separation of products** leads to the development of innovative, more energy efficient processes with better yields and limits the production of **by-products**. This has a major impact if we consider that 80% of the products we use have undergone one or more catalysis and/or separation steps at some point in their manufacture.

Thanks to its expertise in these fields, IFPEN has become an internationally renowned player: it is consistently one of the world's top publishers and patent filers in the areas of **catalysis by sulfides** or **zeolites synthesis**, for example. It thereby makes an active contribution to the development of processes in new fields, such as **biofuels**, **bio-sourced chemistry** or **CO₂ capture**. This influence is illustrated in this issue of Science@ifpen through a selection of

news items taken from recent publications that are the fruit of collaboration with academic partners.

We hope that you enjoy this issue.

Denis Guillaume, Director, Catalysis and Separation Division

Summary:

- Chemistry goes down to the woods
 - **Amines** are experiencing high throughput screening
 - **MOFs**: a building kit
 - Quantum calculation to break the **code of catalysts**
 - **Iron** is best
 - **Syngas** purified on **Zinc**
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