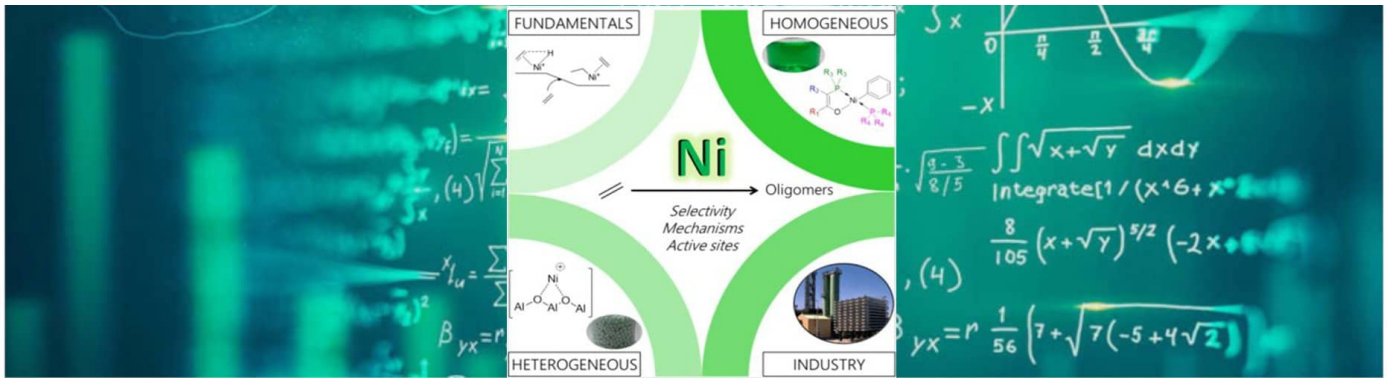

Written on 24 November 2020

3 minutes of reading

News

Fundamental Research

Responsible oil and gas

Petrochemicals

Chemical sciences

Catalysis and reaction kinetics

A review relating to olefin oligomerization has been published in the Chemical Reviews journal. A first for IFPEN, and an original contribution on the part of the scientists who shared their solid expertise acquired in the field during the course of their research.

The review authors, who specialize in “Catalysis, Biocatalysis and Separation” and “Process Modeling and Design”, are major contributors **in the field of olefin oligomerization for the refining and petrochemicals sectors**. They focused on the design and development of new catalysts (homogeneous and heterogeneous), as well as their implementation within the context of innovative processes. Their work thus concerned **the entire process**, from fundamental research through to industrial applications.

The skills and expertise stemming from this research **underpin the originality of this 64-page review** focusing on nickel-catalyzed olefin oligomerization.

While the discovery of this field dates back to the 1950s, numerous scientific challenges still need to be overcome. The review focuses **on the last ten years from an abundance of literature on the subject** covering homogeneous catalysis based on Ni complexes, heterogeneous catalysis and more exotic supported and multiphase catalysis implementation methods.

The review also covers **fundamental approaches relating to the understanding of mechanisms and active species as well as their applications**, incorporating patent literature, industrial applications and the technological challenges to be overcome.

Lastly, it offers the potential to **create bridges between different approaches** and different disciplines and address **key scientific questions** concerning olefin oligomerization.

Nickel Catalyzed Olefin Oligomerization and Dimerization

Contact

Hélène Olivier-Bourbigou

“Fundamental Research” program manager

helene.olivier-bourbigou@ifpen.fr

A publication in Chemical reviews, a first for IFPEN!
24 November 2020

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