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Deoxygenation and cracking of Free Fatty Acids over Acidic Catalysts by Single Step Conversion for the Production of Diesel Fuel and Fuel Blends

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The paper is devoted to the 75th birthday of Prof. Dr. Jacques Vedrine and in recognition of his tremendous work for the catalysis community and Applied Catalysis, Elsevier.

This paper is also devoted to the 70th birthday of Dr. John Armor and in recognition of his outstanding work and contributions to the catalysis community.

Highlights

► 2nd generation biofuel by deoxygenation and hydrocracking of oleic acid ►
Pd based catalysts with different number and strength of Brønsted acidic sites
► Quantitative conversion of oleic acid and between 60 % and 90 % product
selectivity ► Product mixture with similar distillation curve (DIN 51 751) as
conventional diesel

Graphical abstract

Abstract

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