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## Producing hydrocarbons for green diesel and jet fuel formulation from palm kernel fat over Pd/C

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Drop-in fuels have attracted great interest for automotive and aeronautical use. In this work, bio-hydrocarbons were obtained from palm kernel oil (palmist oil) within the distillation range of diesel and jet fuel. Green fuels were produced through the hydrodeoxygenation of palmist fat and its hydrolyzed product by using Pd/C as a catalyst. The process is efficient for hydrodeoxygenation with conversions of up to 96% after 5 hours of reaction at 10 bar of H<sub>2</sub> pressures and 30°C, which are mild conditions compared with the majority of the processes described in the literature. The hydroprocessing products were analyzed by infrared spectroscopy, nuclear magnetic resonance, thermal analysis and gas chromatography-mass spectrometry. The freezing temperatures of the biofuels were determined by DSC. Up to 5% deoxygenation products can be used in commercial jet fuel without compromising the cold fuel properties.

### Biography

CRISTIANE ALMEIDA SCALDAFERRI, Ph.D student at Federal University of Minas Gerais. Master's degree in Chemistry from Federal University of Minas Gerais (2015). Bachelor's in Chemistry from Federal University of Minas Gerais (2012). Has experience in Chemistry, acting on the following subjects: Biofuels, Biomass and Heterogeneous Catalysis.

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