

Characterization of Catalysts Pt / γ -Al₂O₃ Prepared by Incipient Wetness Impregnation Method

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ABSTRACT

A platinum catalyst supported on gamma alumina was prepared by incipient wetness impregnation method, using as a precursor Platinum II acetylacetonate salt, because the precursor salt is soluble in water, a variant of the method, consisting of a milling is applied and physical mixing boehmite precursor salt with platinum, once the homogeneous physical mixture drops of a solution of nitric acid 1:16 dissolved in water was added, this was achieved by modifying the surface pH of the boehmite and achieve impregnation salt. They were anchored platinum particles by a controlled, to obtain oxides of platinum calcination method finally the metal oxide catalysts were reduced by exposure to a flow of hydrogen at 400°C, obtaining as a product a Pt / γ -Al₂O₃ can accelerate and direct the hydrodeoxygenation reaction of oxygenated organic compounds for converting a first generation biodiesel on a second generation biodiesel. The catalysts were characterized by Raman spectroscopy, X-ray diffraction, scanning electron microscopy, IR analysis and EDS. With the interpretation of the results the effectiveness of the process of preparation and the catalytic action to direct and accelerate ensures hydrodeoxygenation reaction.

Keywords: Pt/ γ -Al₂O₃; biodiesel, oxygenated organic compounds.

