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Synthesis and characterization of solids with strong basic properties applied as catalysts in the synthesis of pseudoionone**Rodrigo Rodolfo Gonzalez Jimenez**

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The fine chemistry is dedicated to the production of compounds of high added value, usually these compounds are obtained by organic reactions in liquid phase that is used as homogeneous catalysts acids and mineral bases, which generates problems of environmental, contamination and make difficult recovery of the final product. An important group of such compounds are α , β -unsaturated aldehydes and ketones such as the pseudoionone (6,10-dimethyl-3,5,7-undeca-trien-2-one), which is used as a raw material for synthesise ionones of cosmetic and pharmaceutical interest. An alternative way of carrying out these processes is by the use of solid catalysts which do not generate the aforementioned drawbacks. In the present work, results obtained are presented using metallic oxides mixed with strong basic properties ($\text{MgO-Al}_2\text{O}_3$, $\text{CaO-Al}_2\text{O}_3$, SrOAl_2O_3 , $\text{MgO-CaO-Al}_2\text{O}_3$) are reported as possible catalysts in the synthesis reaction of Pseudoionone. These oxides were obtained from air calcination of hydrotalcite. The precursors were characterized by the techniques of nitrogen physisorption, EDS, DRX, SEM as well as by DTP of CO_2 and NH_3 . The activity of the synthesized oxides was tested in the aldol condensation reaction between citral and acetone, under reflux conditions at 80 °C and over a period of 72 hours. The reaction mixture was analyzed at different times by GCMS technique. Under the selected reaction conditions, the highest yield of pseudoionone was 83%, resulting in retinol and retinal byproducts (10 and 2%, respectively).

Biography

Rodrigo Rodolfo Gonzalez Jimenez is a graduate from School of Chemical Engineering and completed his Masters in semiconductor devices from BUAP University, Mexico. He is presently a PhD student of Chemical Sciences (Area of Catalysis).

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