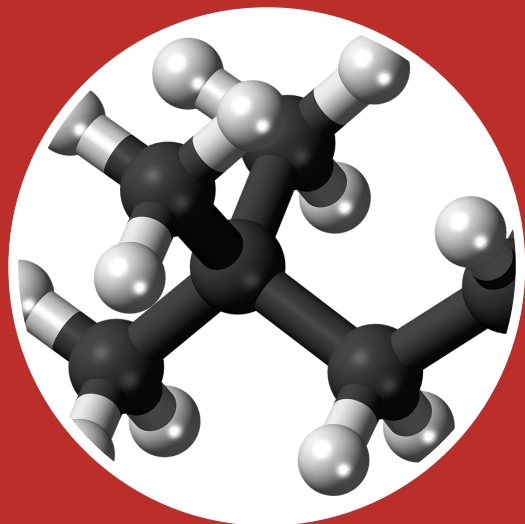


NEW COMPOSITE MATERIAL

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The invention refers to a new composite material for heterogeneous catalysis, a process widely used in chemical industry for the preparation of a wide range of products. Based on either Titania and Aquivion® or superacid perfluorosulfonated resins (PFSA), the composition allows to reduce environmental impact and obtain better results in terms of efficiency and selectivity of the reaction.

Protection: Italy

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INVENTION

Within the acid catalysis field, the given invention provides a new composite material based on either Titania and Aquivion® or PFSA, used as a precursor or catalysis support. The material is characterized by the strong acidity properties of Aquivion® and the controlled morphology of the Titania. The formula helps to overcome the issue arising around superacid solid catalysts. It is known they are not suitable for a heterogeneous catalysis during gas phase reaction, such as for example the catalytic dehydration of ethanol in order to obtain ethylene. Being ethylene widely used in the chemical industry, the patented reaction causes a strong interest, as it allows to obtain the compound from sources other than fossil sources.

ADVANTAGES

- Good surface area and porosity;
- Excellent acid catalytic activity in reaction in the gas phase;
- Excellent performance of the solid composition.

APPLICATIONS

In the chemical industry, to:

- Dehydrate alcohols such as, in particular, ethanol;
- Obtain ethylene.

CONTACTS

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