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(54) Title: **SUPPORTED LEWIS ACID CATALYSTS DERIVED FROM SUPERACIDS USEFUL FOR HYDROCARBON CONVERSION REACTIONS**

## (57) Abstract

A supported Lewis acid catalyst system for catalyzing hydrocarbon conversion reactions including cationic polymerization, alkylation, isomerization and cracking reactions is disclosed, wherein the catalyst system comprises an inorganic oxide support having immobilized thereon at least one strong Lewis acid comprising at least one metal salt of a strong Bronsted acid wherein the metal is selected from the group consisting of aluminum, boron gallium, antimony, tantalum, niobium, yttrium, cobalt, nickel, iron, tin, zinc, magnesium barium strontium, calcium, tungsten, molybdenum and the metals of the lanthanide series and wherein the strong Bronsted acid is selected from the group consisting of mineral and organic acids stronger than 100 % sulfuric acid.

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