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(54) Title: ZEOLITE CATALYST AND METHOD OF PREPARING AND USE OF ZEOLITE CATALYST

(57) Abstract: A zeolite catalyst is prepared by treating a zeolite with a phosphorus compound to form a phosphorus-treated zeolite. The phosphorus-treated zeolite is heated to a temperature of about 3000C or higher and combined with an inorganic oxide binder material to form a zeolite-binder mixture. The zeolite-binder mixture is heated to a temperature of about 4000C or higher to form a bound zeolite catalyst. The bound zeolite may exhibit at least two 31P MAS NMR peaks with maxima at from about 0 to about -55 ppm, with at least one peak having a maximum at from about -40 to about -50 ppm. Zeolites containing 10-oxygen ring pores that have been prepared in such a way may be used in aromatic . alkylation by contacting the bound zeolite catalyst with an aromatic alkylation feed of an aromatic compound and an alkylating agent under reaction conditions suitable for aromatic alkylation.

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