ABSTRACT

The present invention discloses a Beta molecular sieve catalyst and a preparation method therefor and a use thereof. The catalyst comprises a Beta molecular sieve connected with a bis-silyl group, the catalyst having a static water initial contact angle of 140-165° and a static water adsorption amount of 130-170 mg/g. When used in the reaction for preparing an alkyl aromatic hydrocarbon by the alkylation of an aromatic hydrocarbon and an olefin, the catalyst has not only good activity and alkyl aromatic hydrocarbon selectivity, but also good water resistance and alkaline impurity resistance.

Figure 1