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(54) Title: SYNTHESIS OF HIGH ACTIVITY LARGE CRYSTAL ZSM-5

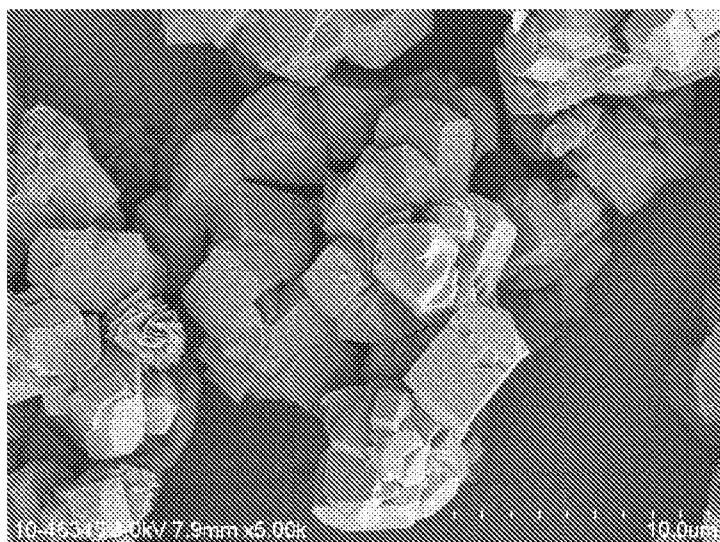


Figure 5

(57) Abstract: In a process for preparing a high activity, large crystal ZSM-5 type zeolite in the absence of a template, a reaction mixture can be prepared comprising water, a silica source having a surface area less than 150 m²/g, an alumina source, seeds, a source of an oxide of an alkali metal, M, and a source of gluconic acid or salt thereof, Q, wherein the mixture has a SiO₂/Al₂O₃ molar ratio ≤40. The reaction mixture can be heated to a crystallization temperature from about 100°C to 200°C for a time sufficient for crystals of ZSM-5 to form. Crystals of ZSM-5 can then be recovered from the reaction mixture which crystals can have a SiO₂/Al₂O₃ molar ratio ≤40 and a majority of which crystals can have at least one crystalline dimension of at least about 2 μm.