

Diquaternary $(\text{CH}_3)_2(\text{C}_2\text{H}_5)\text{N}^+(\text{CH}_2)_n\text{N}^+(\text{C}_2\text{H}_5)(\text{CH}_3)_2$ and $(\text{C}_2\text{H}_5)_2(\text{CH}_3)\text{N}^+(\text{CH}_2)_n\text{N}^+(\text{CH}_3)(\text{C}_2\text{H}_5)_2$ ions with $n = 4-6$ as structure-directing agents in zeolite synthesis

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Recently, we have been involved in one research program to investigate the structure-directing ability of linear diquaternary alkylammonium ions with aliphatic and/or cyclic moieties in zeolite syntheses. In the present study, We have focused on the use of a new series of flexible, linear diquaternary alkylammonium ions $(\text{CH}_3)_2(\text{C}_2\text{H}_5)\text{N}^+(\text{CH}_2)_n\text{N}^+(\text{C}_2\text{H}_5)(\text{CH}_3)_2$ and $(\text{C}_2\text{H}_5)_2(\text{CH}_3)\text{N}^+(\text{CH}_2)_n\text{N}^+(\text{CH}_3)(\text{C}_2\text{H}_5)_2$ ions with $n = 4-6$ as structure-directing agents in the synthesis of this important class of microporous solids. Among the ammonium ions studied here, the Et_4Me_2 -diquat-4 and Et_4Me_2 -diquat-6 ions were found to be new structure-directing agents for the crystallization of MCM-47 and SSZ-16, respectively.