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(54) **Title:** MFI ALUMINOSILICATE MOLECULAR SIEVES AND METHODS FOR USING SAME FOR XYLENE ISOMERIZATION

(57) **Abstract:** MFI aluminosilicate molecular sieve catalysts are prepared from tetra-functional orthosilicates [e.g., Si(OR₁)(OR₂)(OR₃)(OR₄), wherein R₁R₂R₃R₄ is each independently a C₁₋₁₀alkyl or aryl.] as the silicon source. Such catalysts are useful for hydrocarbon conversion reactions including isomerization of xylenes in C₈ aromatics feed stocks to produce p-xylene. Advantageously, it has been found that the MFI aluminosilicate molecular sieve catalysts of the invention are more selective than conventional commercial MFI catalysts, resulting in reduced formation of transmethylation byproducts (C₇ and C₉ aromatics) while simultaneously providing a high degree of xylene isomerization.

