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(54) Title: MOLECULAR SIEVE SSZ-91 WITH HIERARCHICAL POROSITY, METHODS FOR PREPARING, AND USES THEREOF

(57) Abstract: Disclosed are crystalline mesoporous molecular sieves based on molecular sieve SSZ-91, methods for making mesoporous SSZ-91, and use of mesoporous SSZ-91 in hydroconversion applications. Mesoporous molecular sieve SSZ-91 is characterized as: having a low degree of faulting, having a low aspect ratio that inhibits hydrocracking as compared to conventional ZSM-48 materials having an aspect ratio of greater than 8, being substantially phase pure, and having a total pore volume (measured at P/P₀ of 0.95) in the mesopore diameter range is at least about 0.2 cc/g and wherein the micropore volume is at least 0.05 cc/g.

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