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(54) **Title:** HYDROCRACKING CATALYSTS CONTAINING STABILIZED AGGREGATES OF SMALL CRYSTALLITES OF ZEOLITE Y AND ASSOCIATED HYDROCARBON CONVERSION PROCESSES

(57) **Abstract:** This invention relates to hydrocracking catalysts utilizing stabilized aggregates of small primary crystallites of zeolite Y that are clustered into larger secondary particles. At least 80% of the secondary particles may comprise at least 5 primary crystallites. The size of the primary crystallites may be at most about 0.5 micron, or at most about 0.3 micron, and the size of the secondary particles may be at least about 0.8 micron, or at least about 1.0 μm . The silica to alumina ratio of the resulting stabilized aggregated Y zeolite may be 4: 1 or more. This invention also relates to the use of such catalysts in hydrocracking processes for the conversion of heavy oils into lighter fuel products. The invention is particularly suited for the selective production of diesel range products from gas oil range feedstock materials under hydrocracking conditions.

