

A B S T R A C TDEFECT-RICH CRYSTALLINE (METALLO)SILICATES AND
PROCESS FOR PREPARING SUCH (METALLO)SILICATES

Crystalline microporous (metallo)silicates having a maximum M/Si molar ratio of 0.03, wherein M represents at least one of Al, Fe, B, Ga, or Ti, containing less than 1%wt of organic template (originated) material and having a Relative Defect Retention (RDR)-value of 0.1-1, wherein the RDR-value is defined as $(C - C^*) / (i - C^*)$, wherein C represents the percentage of defects present, C^* represents the percentage of defects retained when subjecting the corresponding at least 1 %wt of organic template (originated) material containing crystalline (metallo)silicate to a standard calcination treatment in air at a temperature of 550 °C for a period of 4 hours, wherein i represents the percentage of defects initially present in the uncalcined corresponding organic template containing (metallo)silicate, and wherein $i > C^*$. Such (metallo)silicates are prepared by subjecting the uncalcined corresponding organic template containing (metallo)silicate to a heat treatment which is carried out in the presence of oxygen at a temperature of 400-600 °C and a pressure of at most 100 mbar for at least 1 hour.