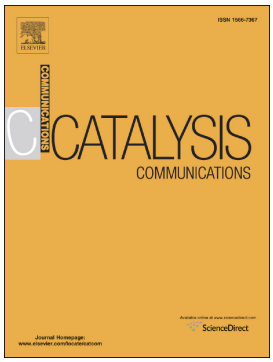

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Synthesis and Characterization of Mesoporous Supports Doped with NiW/Ga_x for Hydrodesulfurization of DBT

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Abstract

Mesoporous materials (HMS-Ti, SBA-15, and MCM-41) doped with variable gallium loadings served as supports to three sets of NiW catalysts in order to hydrodesulfurize the dibenzothiophene (DBT). The resulting materials were physically characterized by several techniques. The catalytic activity results showed that the materials containing 1.5 wt. % of Ga loading perform the highest DBT conversions when the NiW is supported on HMS-Ti, SBA-15, and MCM-41. The NiW/MCM-41/$Ga_{1.5}$ sample catalyst is more promising for hydrodesulfurization reaction than its HMS-Ti and SBA-15 counterparts and references.

Keywords: *Hydrodesulfurization; Dibenzothiophene; HMS-Ti; SBA-15; MCM-41; Gallium.*

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