

عنوان مقاله:

Hydrogen Production from Steam Reforming of Methanol: Influence of Al-Precursor in Combustion Synthesis of CuO/ZnO/CeO₂/Al₂O₃ Nanocatalyst

محل انتشار:

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خلاصه مقاله:

Producing hydrogen rich feed via steam methanol reforming was successfully achieved over CuO/ZnO/CeO₂/Al₂O₃ nanocatalysts. Various methods used to improve catalytic performance of SRM catalysts. Fuel content plays a key role in combustion synthesis method as a novel process preparing nanosized mixed oxides. Studying influence of Al precursor, two CuO/ZnO/CeO₂/Al₂O₃ (45/45/5/10 %wt) catalysts were synthesized via urea nitrate combustion synthesis method. Once boehmite (AlOOH) used as Al precursor and once Al(NO₃)₃·9H₂O. XRD analysis confirmed the crystalline phases beside crystalline size reduction and improved dispersion can be seen in EDX dot-mapping analysis in sample with aluminium nitrate precursor. Improved catalytic performance can also be seen for the same sample.

کلمات کلیدی:

CuO/ZnO/CeO₂/Al₂O₃, Methanol, Hydrogen, Precursor

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