عنوان مقاله:

Characterization and Catalytic Activity of CeO2/Al2O3 Nano-catalyst on VOC Abatement

محل انتشار:

ششمین کنگره بین المللی مهندسی شیمی (سال: 1388)

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خلاصه مقاله:

CeO2/Al2O3 nano-catalyst with different loading was synthesized via wet impregnation method for abatement of VOCs. Techniques like XRD, SEM, BET and FTIR were used to characterize the nano-catalyst. SEM images confirm that this catalyst has shown nano particles less than 100 nm and the extent of nano ceria content increases as the ceria loading is increased. The XRD patterns show broad peaks representing very fine particles of the synthesized catalyst. This nano-catalyst even with ceria loading of 30%, still provide large surface area, presenting a high activity towards catalytic reactions like total oxidation of toluene. This feature is addressed with activity measurement for removal of toluene from polluted air, since nearly 100% of removal is achieved.

کلمات کلیدی:

Cerium Oxide, CeO2/Al2O3, Nano-Catalyst, Total Oxidation, Nanocomposite