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Title: Hydrotalcite-derived cobalt-aluminum mixed oxide catalysts for toluene combustion

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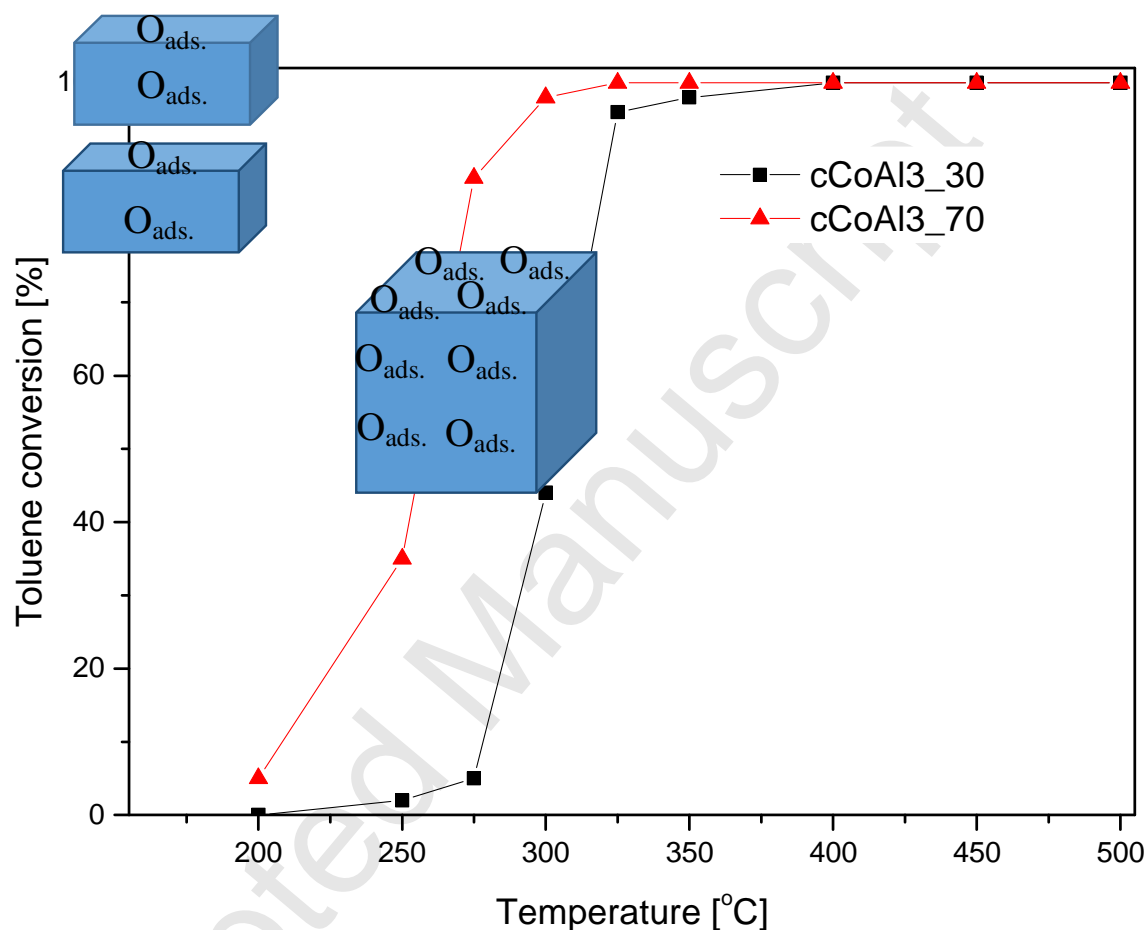
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Crystallinity of CoAl₃ HT-like compounds increases with coprecipitation temperature. After calcination CoAl₃HTlcs with larger crystallites form low crystalline spinels. The surface of Co₃O₄ or Co₂AlO₄ spinels is enriched in aluminum. CoAl₃ spinel is the most efficient catalyst in toluene combustion with T₅₀=257°C. Catalytic activity results from the high lattice/adsorbed, electrophilic oxygen ratio.

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