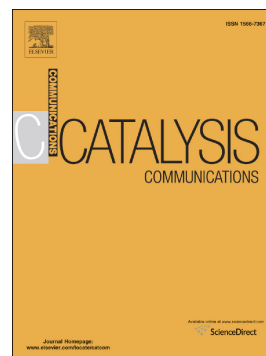


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## Influence of sodium impurities on the properties of CeO<sub>2</sub>/CuO for carbon monoxide oxidation in a hydrogen-rich stream

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### Abstract

Sodium is typically employed as component of bases or salts for precipitating metals during preparation of oxide catalysts. It is normally eliminated during rinsing of the solid precursors. The present work shows however that standard rinsing of the solid precursor of an inverse CeO<sub>2</sub>/CuO with water at 25 °C is ineffective for eliminating sodium from the catalyst. Post-treatment with water at 45 °C allows the practical elimination of sodium. ICP-AES chemical analysis, S<sub>BET</sub> measurement, XRD and high resolution TEM are employed for characterization. The consequence of sodium presence is an important decrease in the CO-PROX activity, as supported by *operando*-DRIFTS.

**Keywords:** ceria-copper catalysts; interfaces; sodium impurities; rinsing; CO-PROX.

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