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Abstract

CeO_2 modified V_2O_5/AC catalysts (V-Ce/AC) were synthesized by an ultrasound-assisted impregnation method, and were employed to remove elemental mercury (Hg^0) from simulated coal combustion flue gas at low temperature (100-200 °C). The effects of several operation conditions, including the loading of CeO_2, reaction temperature, the role of O_2 and stability of the catalysts were all investigated, respectively. The results showed that 1V-8Ce/AC catalysts had the highest catalytic activity with 98.3 % Hg^0 removal efficiency at 150℃. There was synergistic effect on Hg^0 oxidation when V_2O_5 and CeO_2 combined. Characterization

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