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Solvothermal synthesis of well-designed ceria-tin-titanium catalysts with enhanced catalytic performance for wide temperature NH₃-SCR reaction

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Graphical Abstract

In this paper, Sn modified ceria-titanium catalysts were prepared by solvent thermal synthesis method and optimized of the metal oxide structure, the strengthened synergistic effect of metal particles, following redox equilibrium: $2\text{Ce}^{4+} + \text{Sn}^{2+} \leftrightarrow 2\text{Ce}^{3+} + \text{Sn}^{4+}$, improving the SCR performance and H₂O/SO₂ durability.

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