**Promotional effect of Ba additives on MnCeOx/TiO2 catalyst for NH3-SCR of NO at low temperature**

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**Fig. S1** Stability test of 3BaMnCeOx/TiO2catalyst at 200 °C. Reaction conditions: [NO] = [NH3] = 900 ppm, [O2] = 10%, with N2 balance; GHSV = 12800 h-1

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**Fig. S2** SEM of MnCeOx/TiO2 (a), 3BaMnCeOx/TiO2 (b), TEM images of MnCeOx/TiO2(c), 3BaMnCeOx/TiO2 (d), and HRTEM images of MnCeOx/TiO2 (e), 3BaMnCeOx/TiO2 (f)

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**Fig. S3** (a) N2 adsorption-desorption isotherms of different catalysts. (b) BJH pore distribution curves of different catalysts.

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**Fig. S4** (a) Mn 2*p*; (b)Ce 3*d*; (c) O 1*s* and (d) Ti 2*p* XPS high-resolution scan spectra of different catalysts.



**Fig. S5** The proposed promotion route of BaMnCeOx/TiO2catalysts.