Electronic Supplementary Material (ESI) for New Journal of Chemistry. This journal is © The Royal Society of Chemistry and the Centre National de la Recherche Scientifique 2019

> Electronic Supplementary Material (ESI) for New Journal of Chemistry. This journal is © The Royal Society of Chemistry 2019

Effect of ceria loading on Zr-pillared clay catalysts for selective catalytic reduction of NO with NH₃

Jin Cheng^a, Qing Ye^{a*}, Changkun Zheng^a, Shuiyuan Cheng^a, Tianfang Kang^a, Hongxing Dai^{b*}

^a Key Laboratory of Beijing on Regional Air Pollution Control, Department of Environmental

Science, College of Environmental and Energy Engineering, Beijing University of Technology,

Beijing 100124, China

^b Beijing Key Laboratory for Green Catalysis and Separation, Key Laboratory of Beijing on Regional Air Pollution Control, Key Laboratory of Advanced Functional Materials, Education Ministry of China, and Laboratory of Catalysis Chemistry and Nanoscience, Department of Chemistry and Chemical Engineering, College of Environmental and Energy Engineering, Beijing University of Technology, Beijing 100124, China



Fig. S1. NO conversion as a function of reaction time over $5CeO_2/Zr$ -PILC samples in the presence and absence of SO₂ at 300 °C. Reaction conditions: [NO] = 1000 ppm, [NH₃] = 1100 ppm, [O₂] = 4 vol%, [H₂O] = 5 or 6 vol%, [SO₂] = 300 ppm (when used) , N₂ as balance gas, and space velocity = 100,000 mL/(g h).



Fig.S2. NH₃ conversion in the oxidation of NH₃ over (c) $2.5CeO_2/Zr$ -PILC, (d) $5CeO_2/Zr$ -PILC and (e) 7.4CeO₂/Zr-PILC. Reaction conditions: [NH₃] = 1100 ppm, [O₂] = 4 vol%, N₂ as balance gas, and space velocity = 100,000 mL/(g h).



Fig.S3. XRD patterns of Zr-PILC