catalysts

MDPI

Supporting Information: In situ DRIFTS investigation on CeO_x catalyst supported by fly-ash-made porous cordierite ceramics for low-temperature NH_3-SCR of NO_x

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1. XRD results

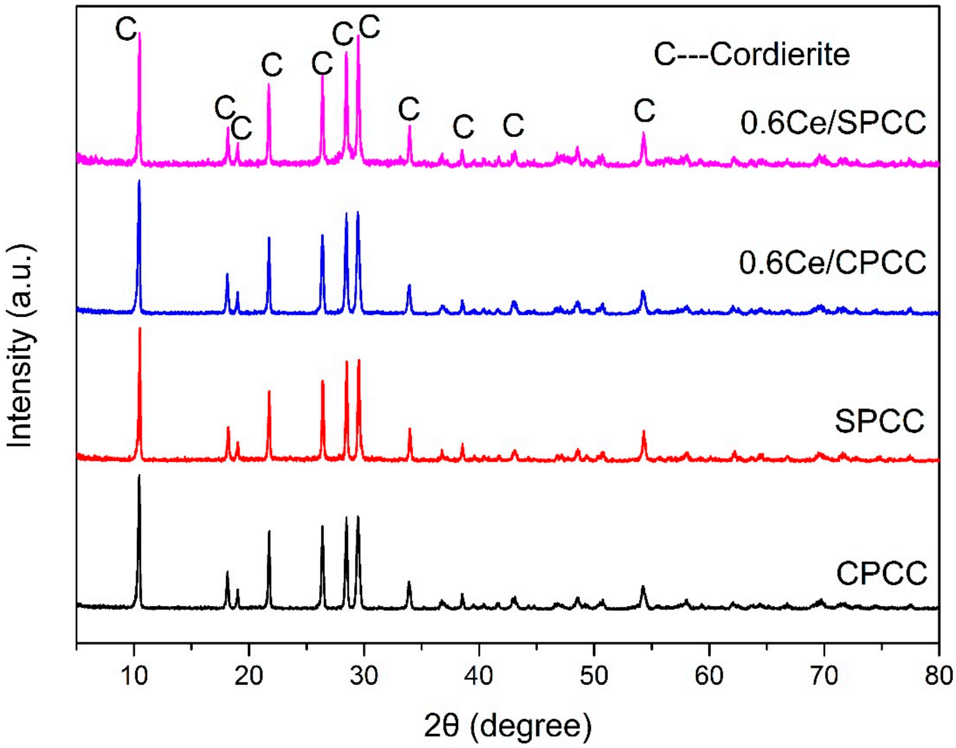

Figure S1. XRD results of the catalyst supports and composites

2. BET analysis

Textural characteristics of 0.6Ce/CPCC and 0.6Ce/SPCC were measured by N_2-physisorption experiment and the results are shown in Figure S2. Typical IV isotherms with hysteresis loops can be obviously found on both graphs, indicating that mesoporous structures exist in both catalysts. Textural data of the supports and the as-prepared samples are summarized in Table S1. Though the specific surface area of SPCC is smaller than that of CPCC, 0.6Ce/SPCC has a larger specific surface area than 0.6Ce/CPCC. This phenomenon can be well explained by the better CeO_x particle dispersion on the surface of SPCC supports. As is known to all, large surface area can provide more adsorption sites, leading to the better performance of SCR activities.

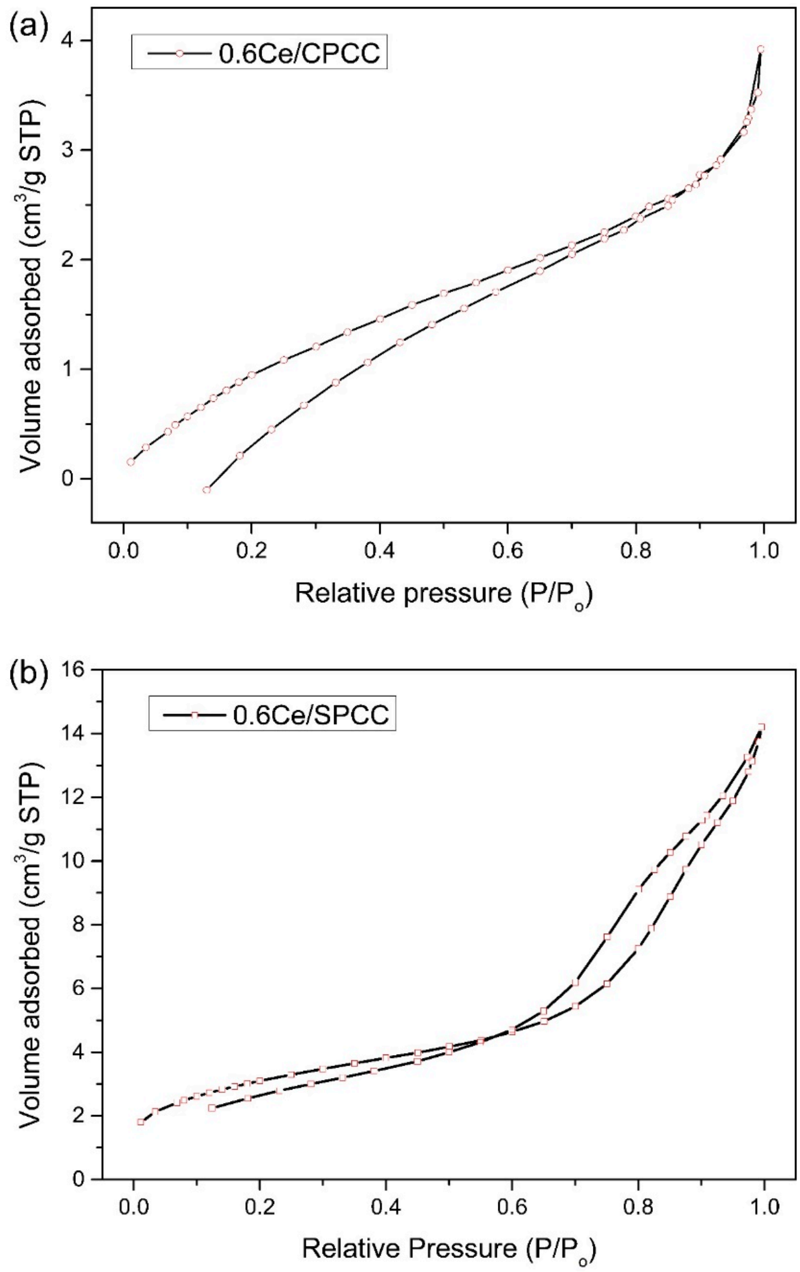

Figure S2. N_2-physisorption isotherms of (**a**) 0.6Ce/CPCC and (**b**) 0.6Ce/SPCC.

Table S1. Textural data of the supports and the catalyst composites.

Sample	BET Surface Area (m^2/g)	Total Pore Volume (cm^3/g)	Average Pore Diameter (nm)
CPCC	5.20	0.004	3.54
SPCC	1.98	0.003	6.81
0.6Ce/CPCC	5.29	0.005	3.85
0.6Ce/SPCC	10.91	0.022	8.06