

Supplementary Information

Table S1 The main chemical composition of red mud.

Samples (%)	Fe ₂ O ₃	Al ₂ O ₃	SiO ₂	TiO ₂	Na ₂ O	CaO	K ₂ O	Other
RM	45.06	27.68	11.12	7.23	7.21	0.82	0.05	0.83
ARM	66.47	16.47	4.35	11.33	0.11	0.08	0.05	1.14

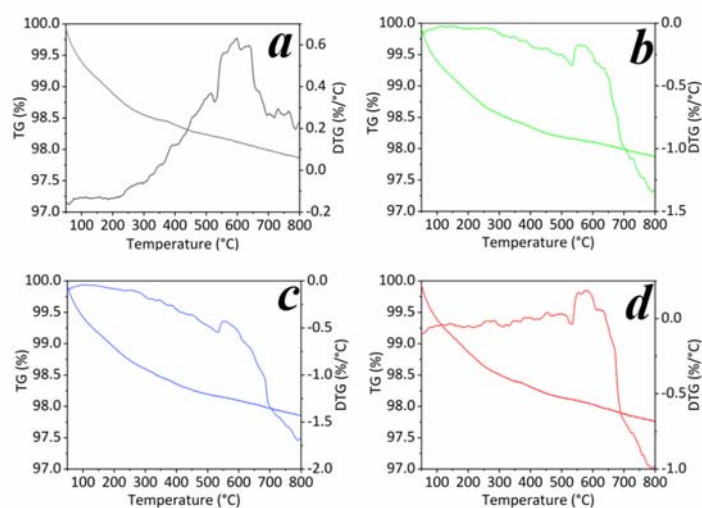


Fig. S1 TG/DTG curves of the monolithic honeycomb catalysts. a: MHRM; b: MHRM-AC1; c: MHRM-AC3; d:

MHRM-AC5.

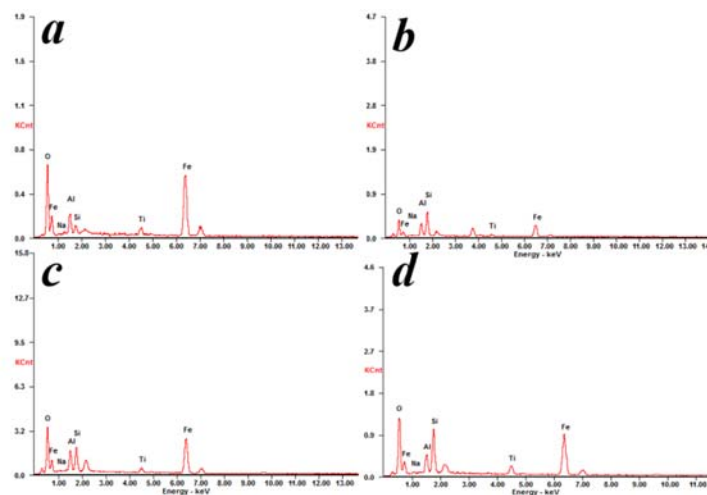


Fig. S2 EDS spectra of the monolithic honeycomb catalysts. a: MHRM; b: MHRM-AC1; c: MHRM-AC3; d: MHRM-AC5.

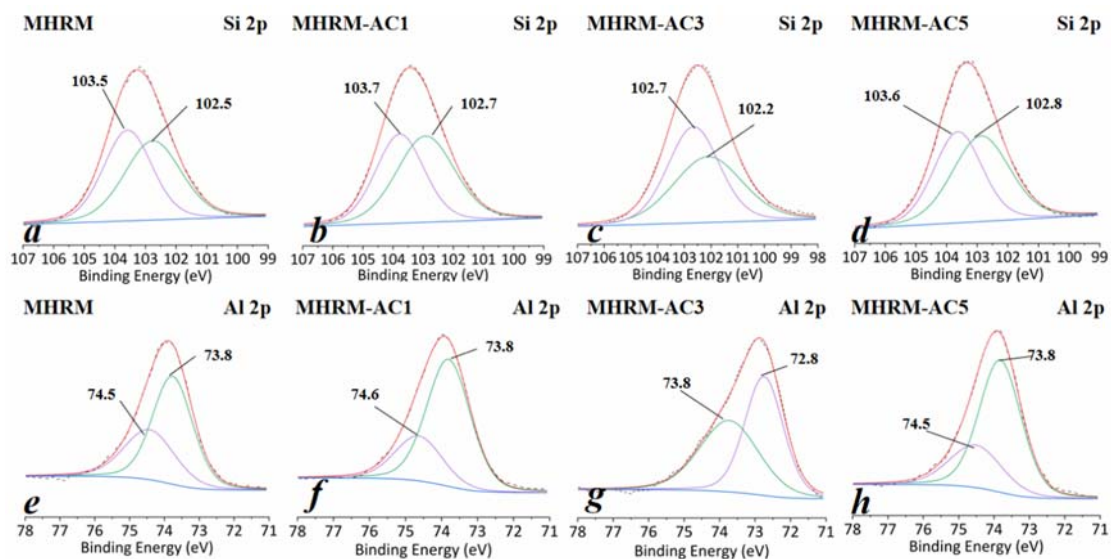


Fig. S3 XPS spectra of the monolithic honeycomb catalysts over the spectral regions of Si 2p and Al 2p.