

Supporting information

Separation and characterization of the active species in Ti-doped NaAlH_4

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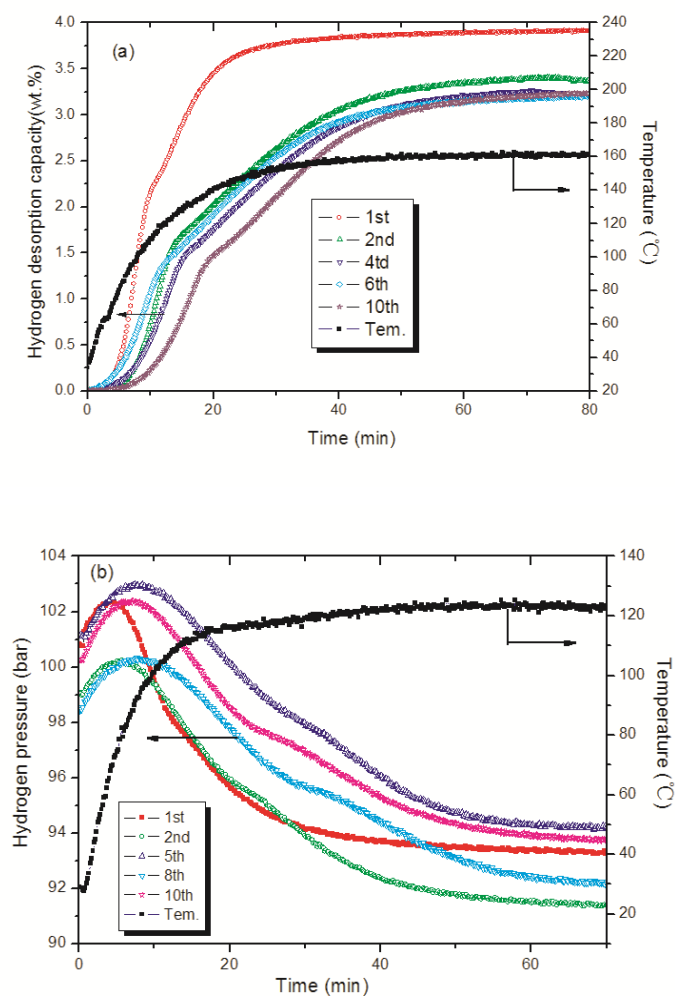


Fig.S1 (a) hydrogen desorption and (b) hydrogen absorption curves of NaAlH_4 with 10mol% TiF_3 during ten cycles

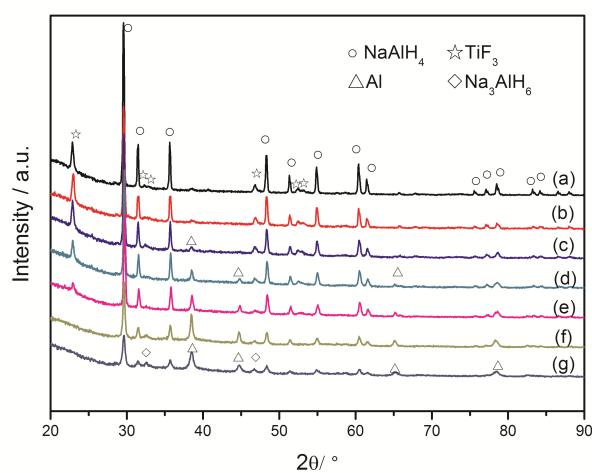


Fig.S2 XRD patterns for NaAlH_4 with 10mol% TiF_3 after ball milling at different times, (a) 0 min, (b) 15min, (c) 30min, (d) 60min, (e) 90min, (f) 180min, (g) 300min

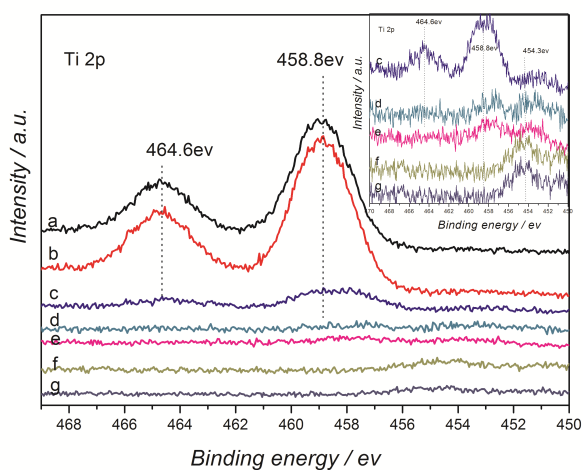


Fig.S3 XPS spectra for NaAlH_4 with 10mol% TiF_3 after ball milling at different times, (a) 0 min, (b) 15min, (c) 30min, (d) 60min, (e) 90min, (f) 180min, (g) 300min, the inset shows the magnification of XPS spectra

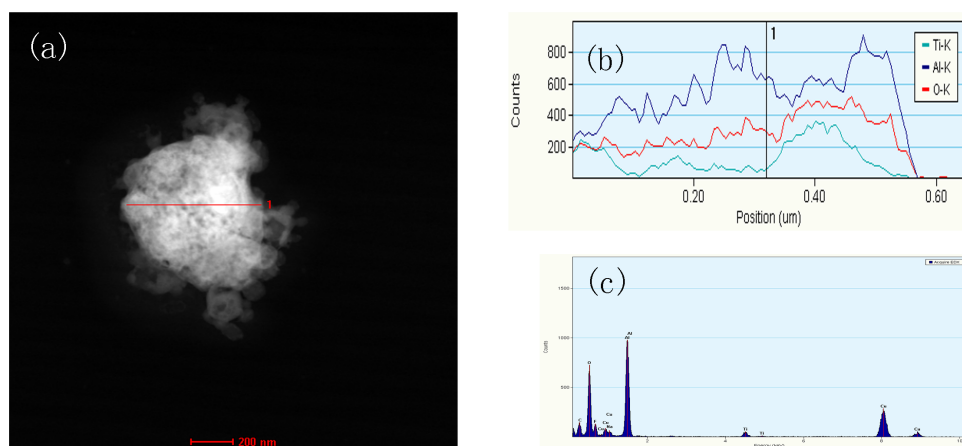


Fig. S4 Energy-dispersive X-ray spectroscopy (EDX) line analyses for Al-Ti-m