Catalytic Effect of Nitrogen-Doped Graphene and Carbon Nanotubes Additives on Hydrogen Storage Properties of Sodium Alanate

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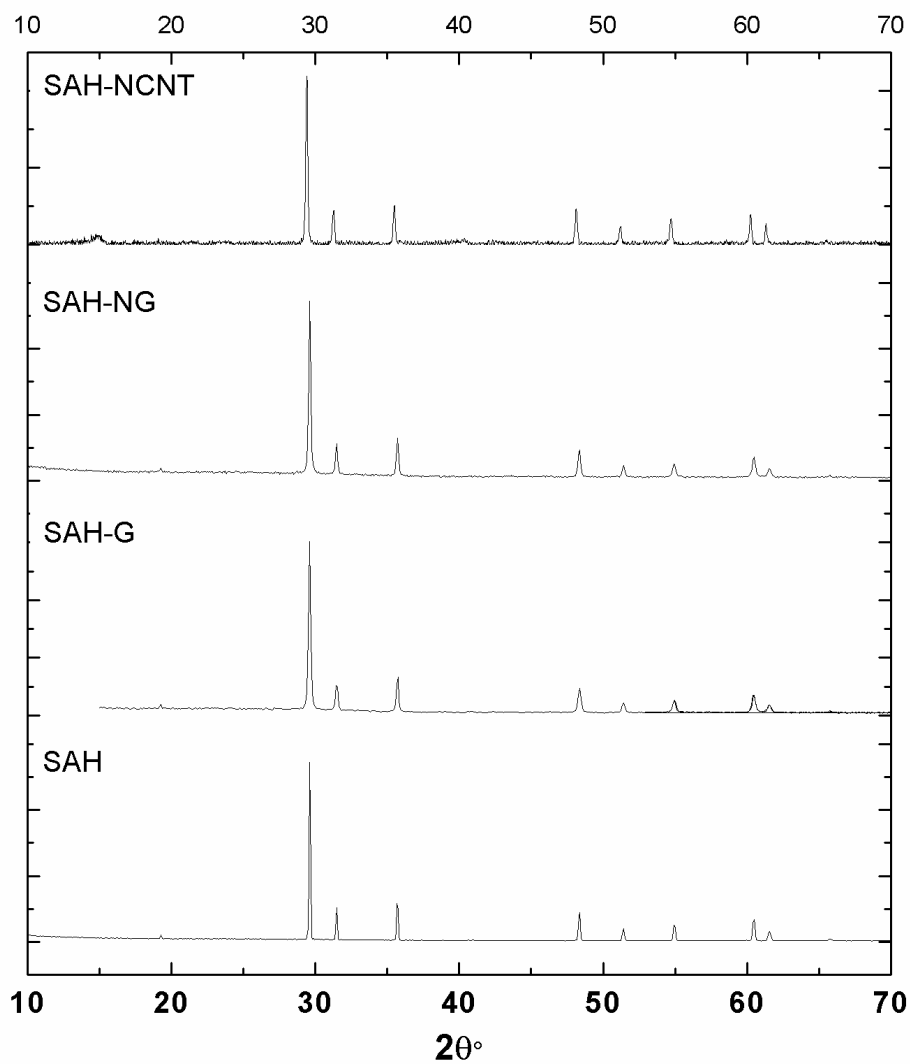
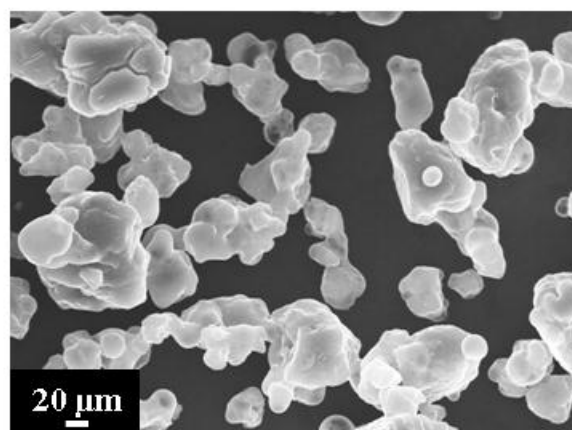Figure S1. X-ray diffraction patterns of Sodium Aluminum hydride (SAH) and SAH-C composites (C = CNT, G, NCNT and NG)

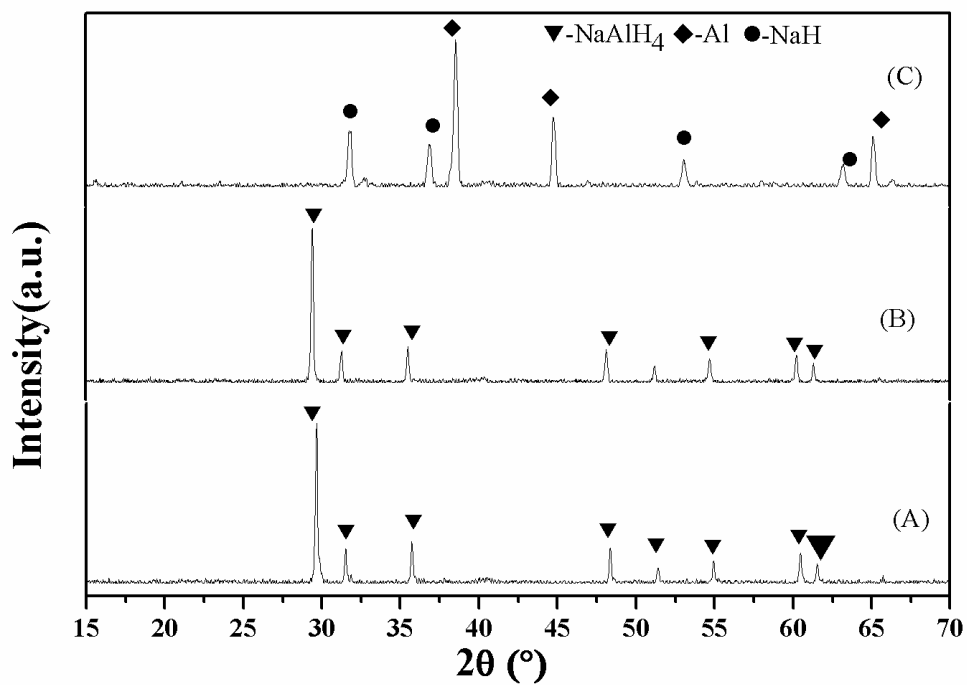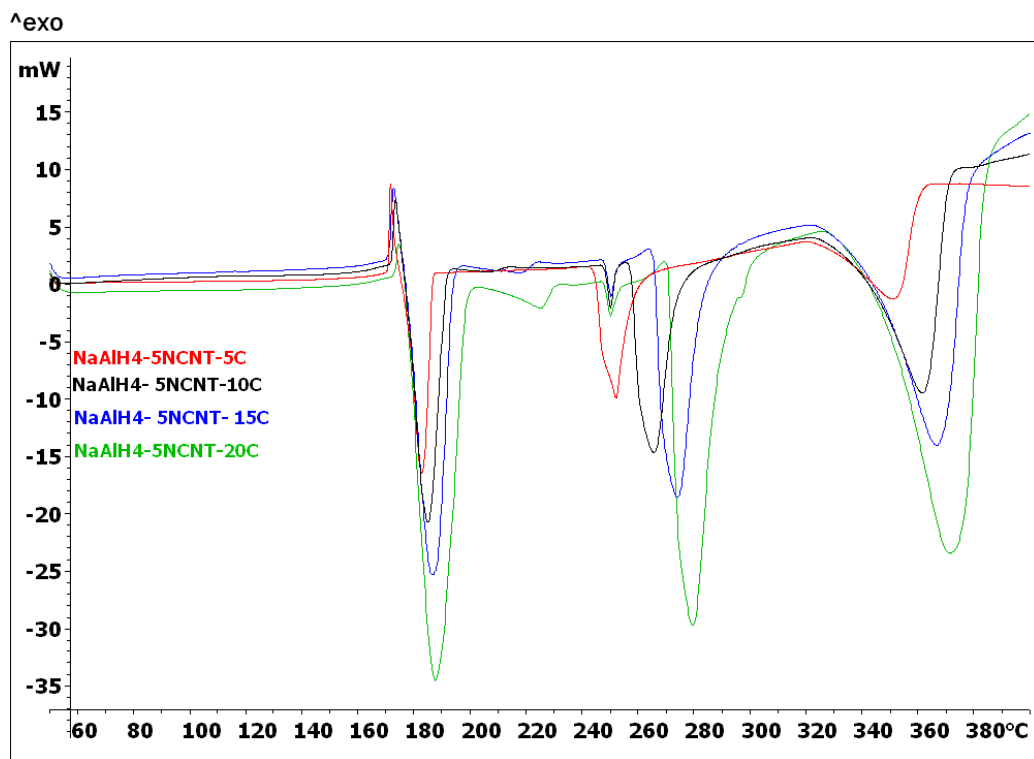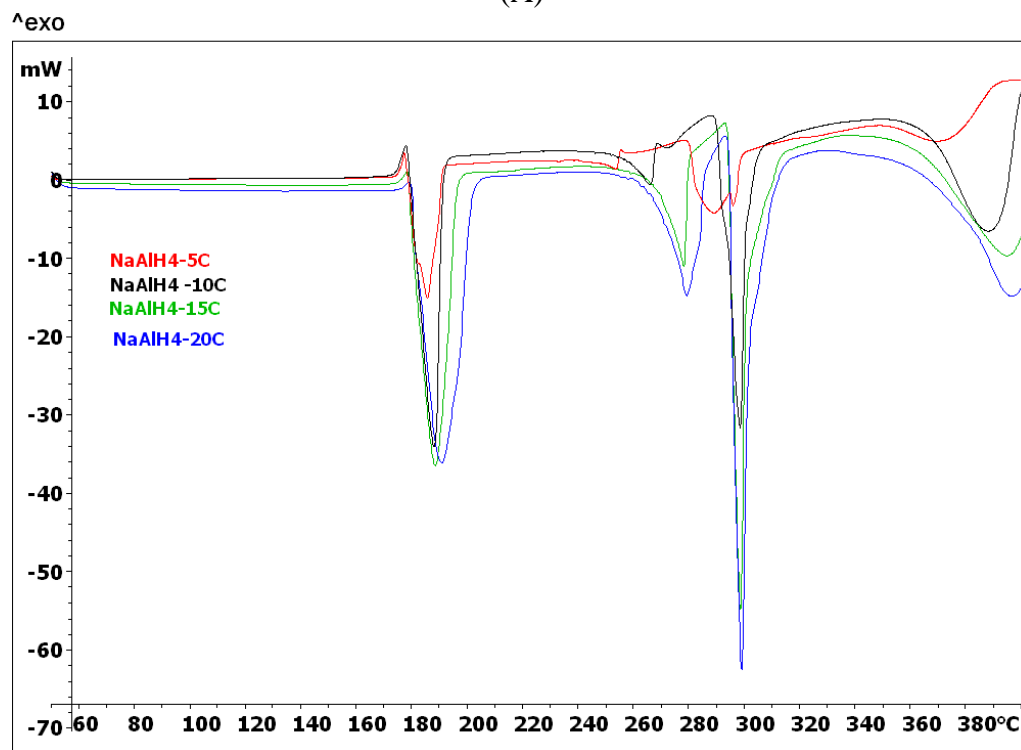Figure S2. SEM image of pure Sodium Aluminum hydride (SAH)

Figure S3. X-ray diffraction patterns of (A) SAH (B) SAH-NG and (C) SAH-NG decomposed at 220 °C.

(A)

(B)

Figure S4. DSC traces of (A) SAH-NCNT (B) SAH with heating rates of 5, 10, 15 and 20 °C/min in Ar flow with the flow rate of 40 ml/min
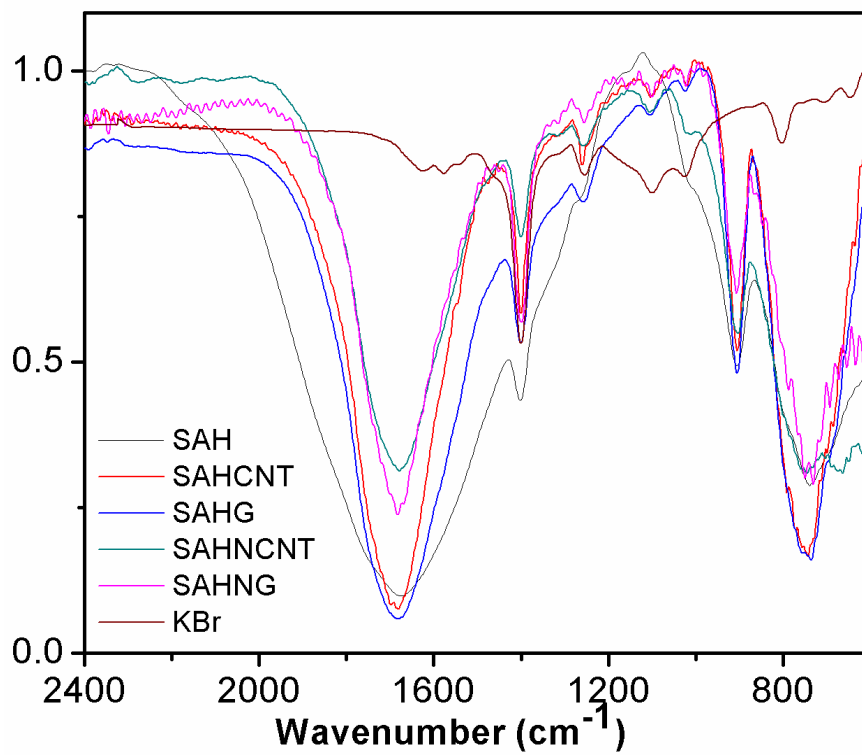
Figure S5. IR spectra of SAH and SAH-C composites in the frequency range of 2400 – 1200 cm^{-1} (peak at 1400 cm^{-1} is due to the impurity from KBr , pure KBr IR spectrum included for comparison)
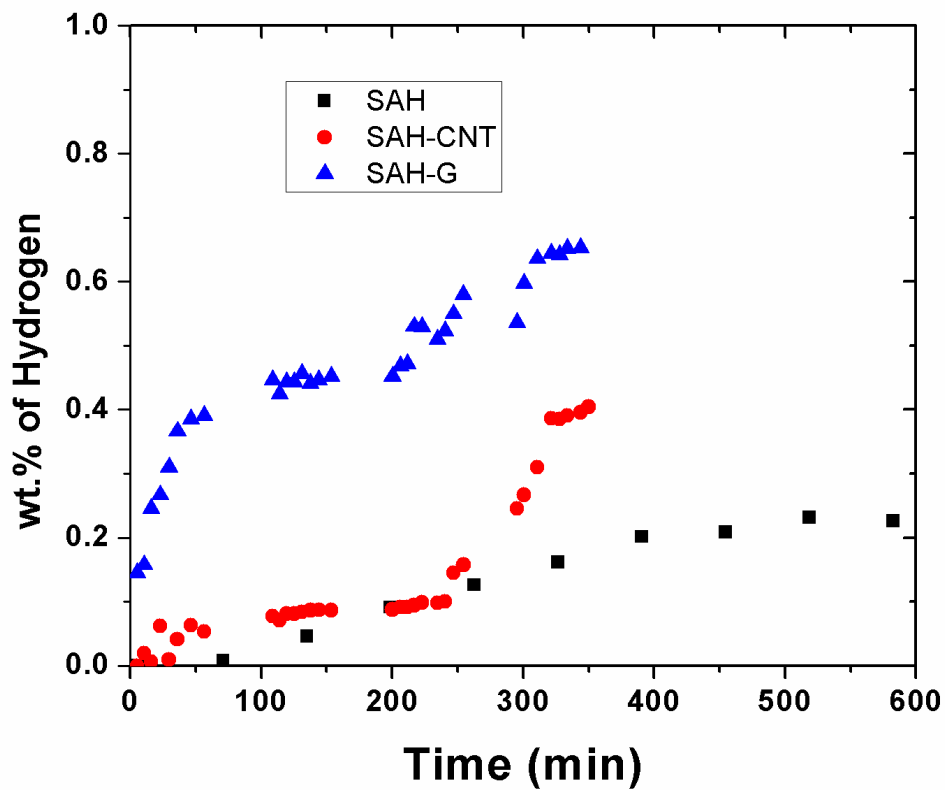
Figure S6. Rehydrogenation curves for SAH, SAH-NCNT, SAH-G @ 180 °C and 65 bar pressure.