Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supporting information

Clarifying the dehydrogenation pathway of catalysed $Li_4(NH_2)_3BH_4$-LiH composite

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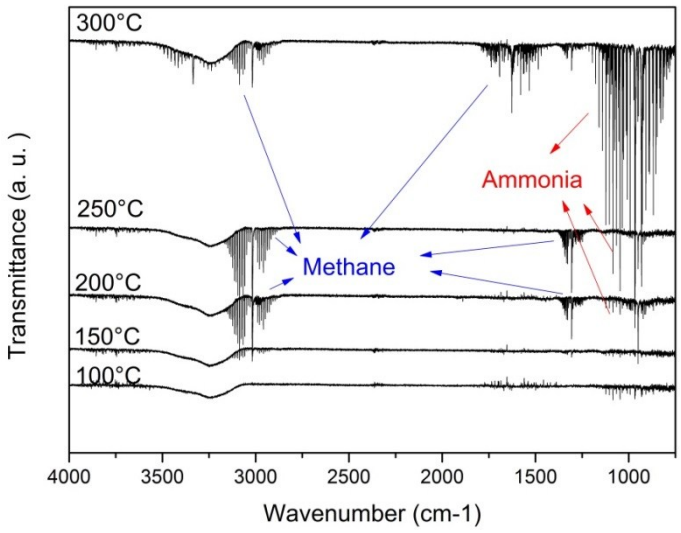

Figure S1: FTIR gas spectra for the $Li_4(NH_2)_3BH_4$-LiH composite.

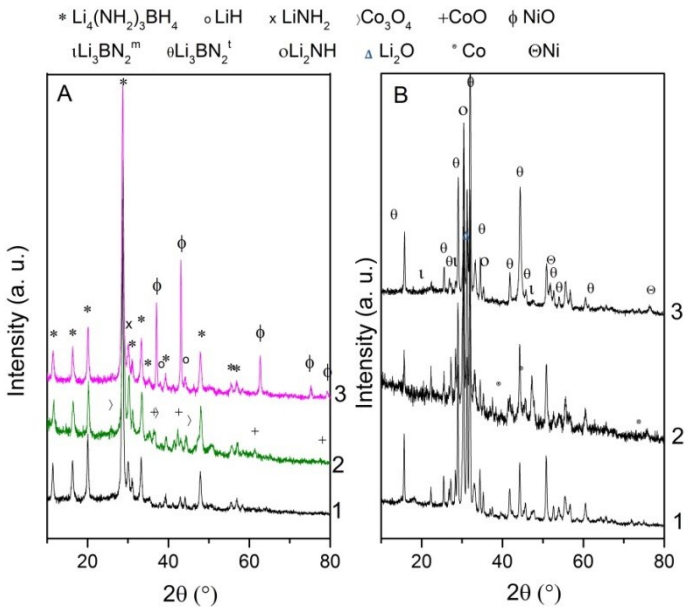

Figure S2: PXRD of samples $Li_4(NH_2)_3BH_4$-LiH (1), $Li_4(NH_2)_3BH_4$-LiH-Co_2O_3 (2) and $Li_4(NH_2)_3BH_4$-LiH-NiO (3) after mechanical milling and dehydrogenation.

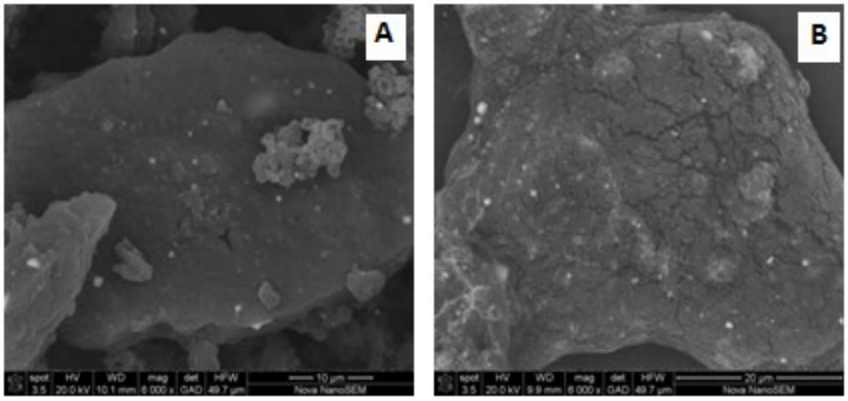

Figure S3: SEM images of ball milled samples $Li_4(NH_2)_3BH_4$-LiH-Co_2O_3 (A) and $Li_4(NH_2)_3BH_4$-LiH-NiO (B).

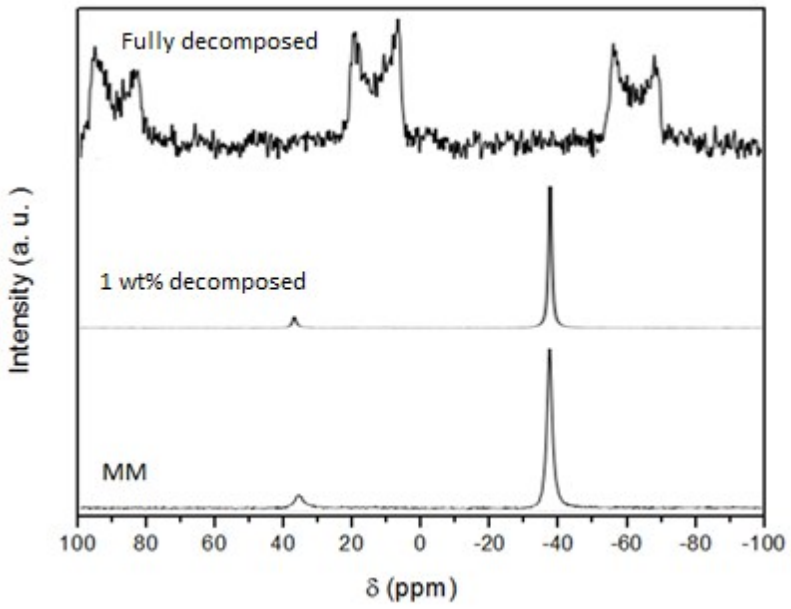

Figure S4: NMR spectra of the $Li_4(NH_2)_3BH_4$-LiH-NiO sample at different stages of dehydrogenation.

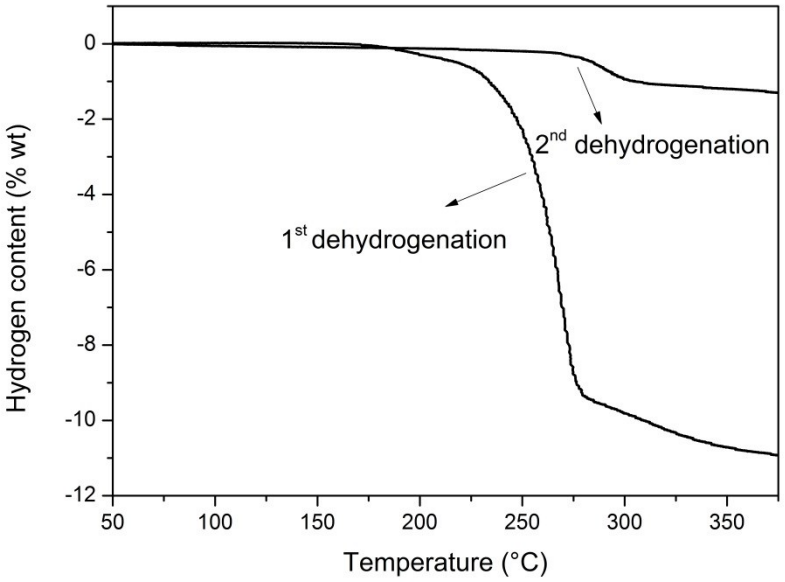

Figure S5: First and second dehydrogenation curve for the $Li_4(NH_2)_3BH_4$-LiH-NiO sample.

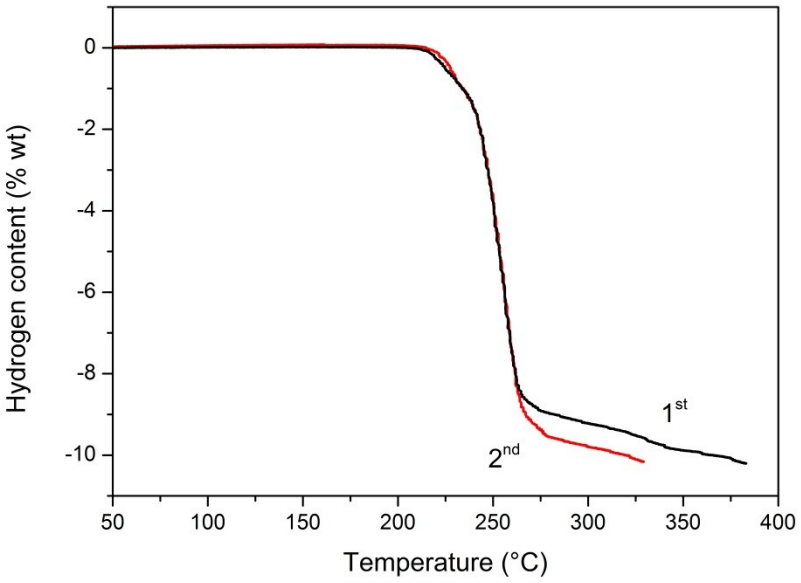

Figure S6: Comparison between two dehydrogenation runs after different times for sample $Li_4(NH_2)_3BH_4$-NiO.

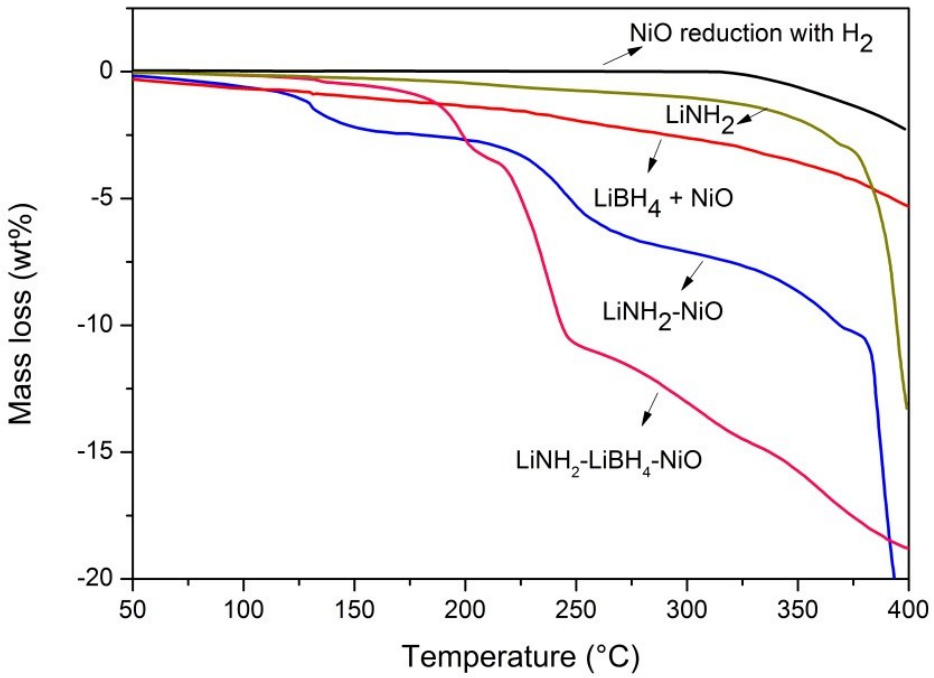

Figure S7: Additional thermogravimetric (TG) measurements.