† Electronic Supplementary Information (ESI) available:

Effect of LiCl presence on the hydrogen storage performance of the $Mg(NH_2)_2$-2LiH composite

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Supporting information

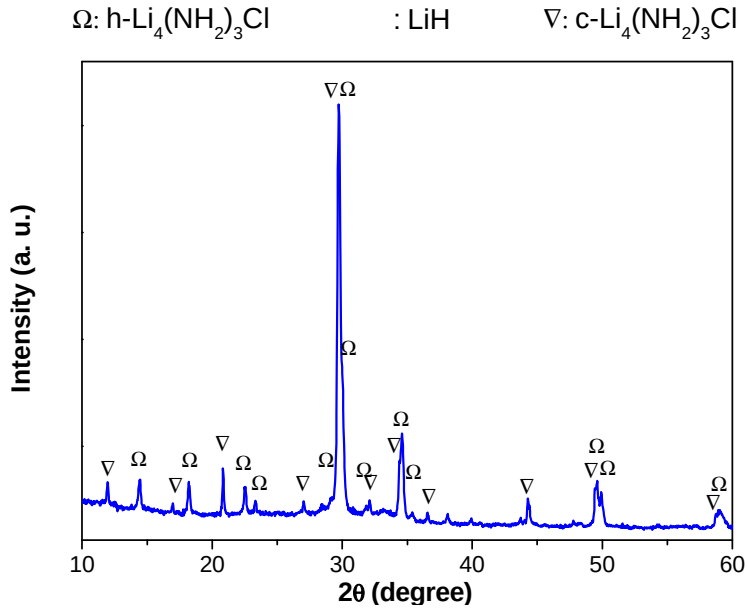

Figure S1: XRPD patterns of the LCLH sample after submitted to thermal treatment at 200 °C for 0.5 h under 6 MPa of H_2.

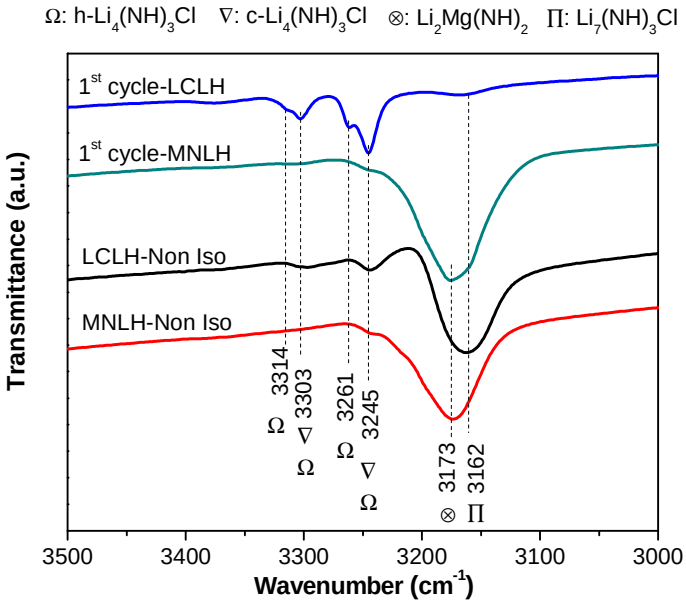

Figure S2. FTIR spectra of the samples LCLH-tt and MNLH-5tt after Isothermal hydrogen desorption (1st cycle-LCLH and 1st Cycle-MNLH) at 200 °C and Non-isothermal hydrogen desorption (LCLH-Non Iso and MNLH-Non Iso) at 300 °C.

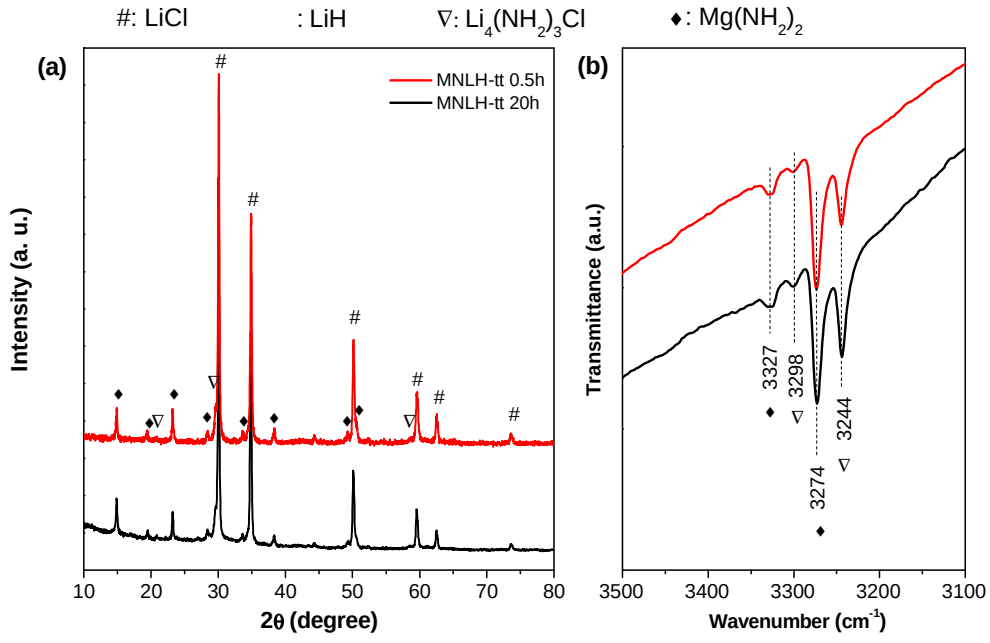

Figure S3: (a) XRPD patterns and (b) FTIR spectra of the MNLH-5 sample after submitted to thermal treatment at 200 °C for different time (0.5 h and 20 h) under 6 MPa of H_2.