

Electronic Supplementary Information

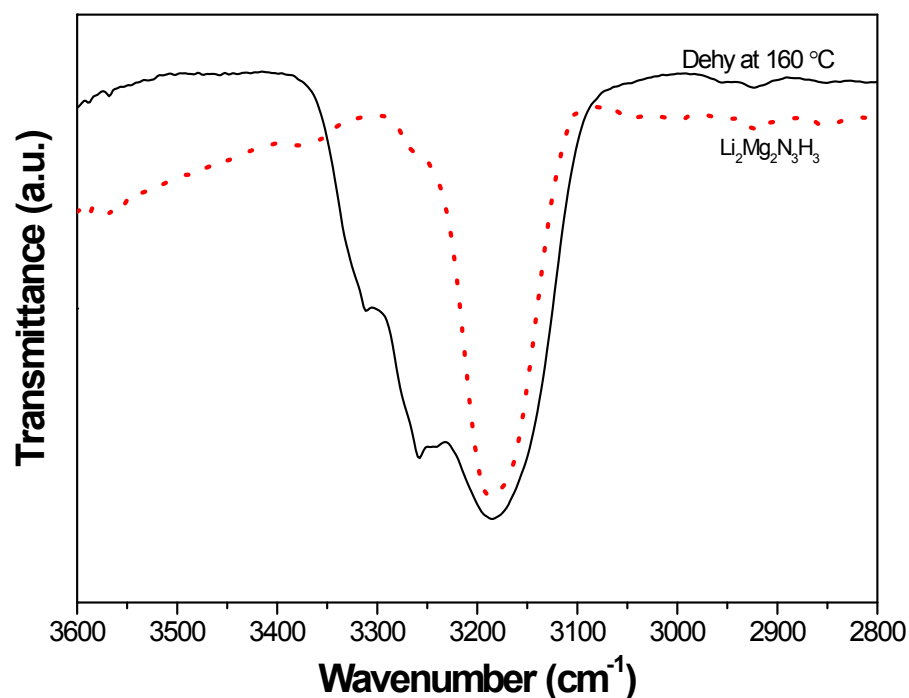


Figure S1 Comparison of the FTIR spectra for the Li₂Mg₂N₃H₃ sample and the dehydrogenated Mg(NH₂)₂-2LiH-0.07KOH sample

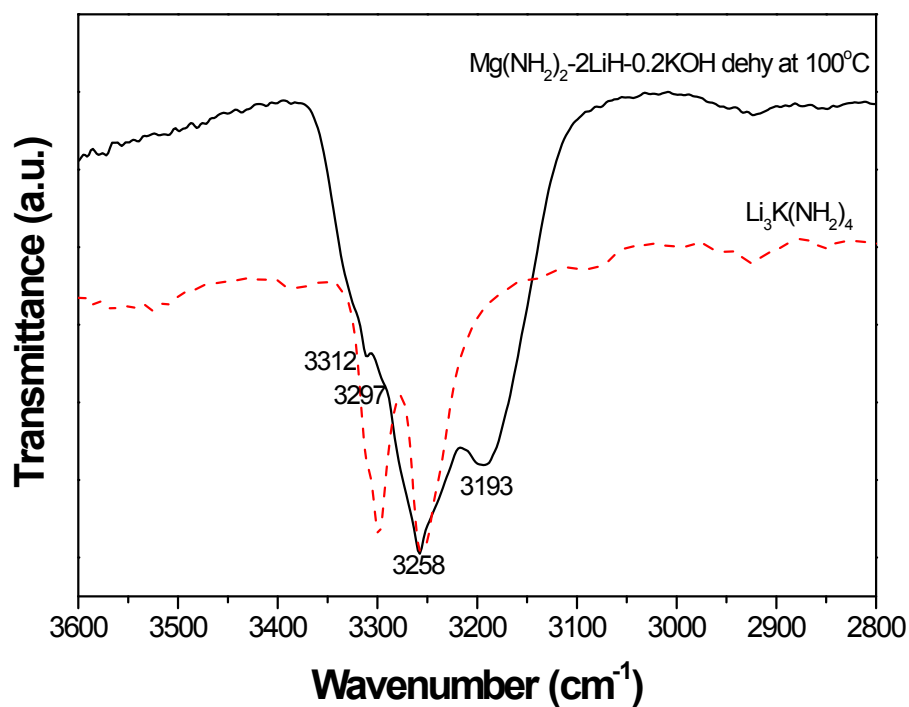


Figure S2 Comparison of the FTIR spectra for the Li₃K(NH₂)₄ sample and the dehydrogenated Mg(NH₂)₂-2LiH-0.2KOH sample

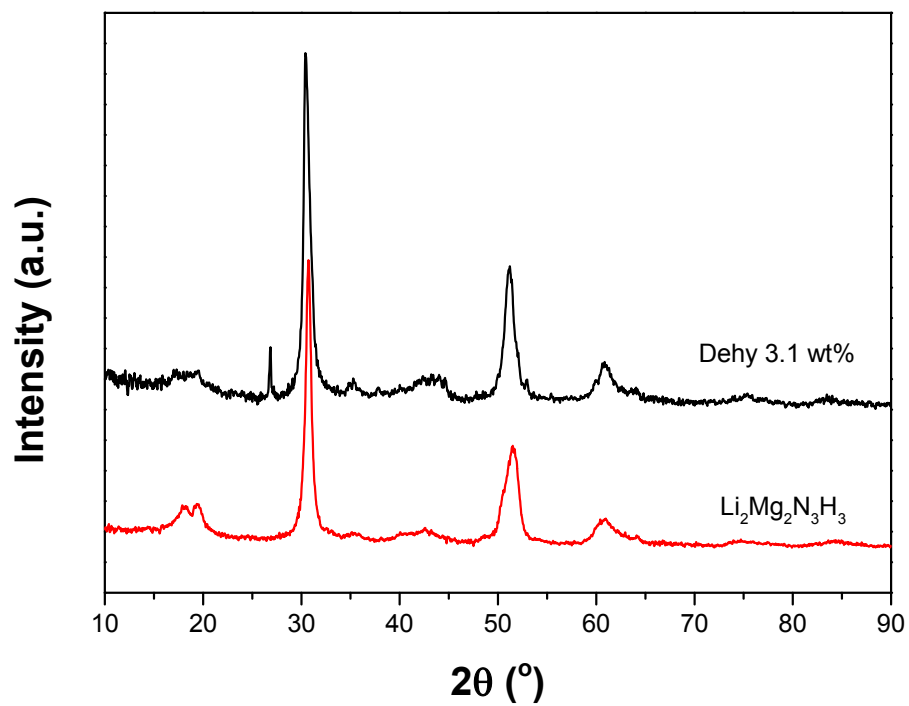


Figure S3 Comparison of the XRD patterns for the $\text{Mg}(\text{NH}_2)_2\text{-}2\text{LiH}\text{-}0.07\text{KOH}$ sample after a 3.1 wt% hydrogen release and the $\text{Li}_2\text{Mg}_2\text{N}_3\text{H}_3$ sample