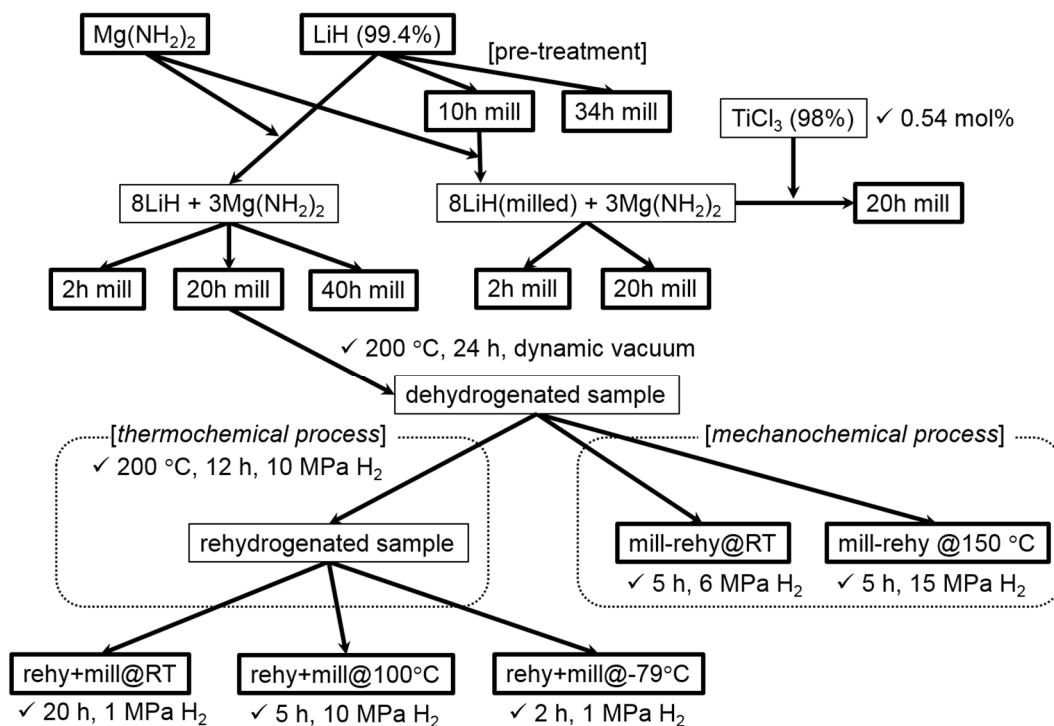
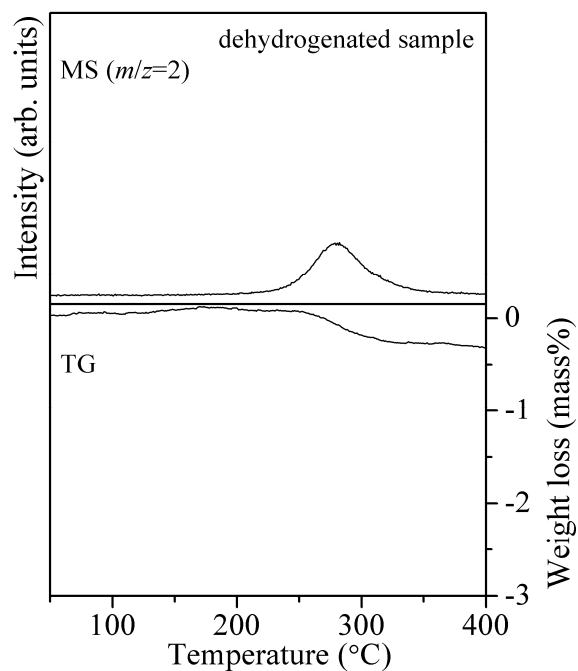


## Supplementary Materials



**Figure S1.** Flowchart for the sample preparation.



**Figure S2.** TG-MS profiles of the  $8\text{LiH}-3\text{Mg}(\text{NH}_2)_2$  samples after the dehydrogenation at 200 °C under dynamic vacuum condition for 24 h.