

Supporting Information of

Facile regeneration of lithium borohydride from anhydrous lithium metaborate using magnesium hydride

Yongyang Zhu,^{*a, b} Mili Liu,^d Jianding Li,^{*c} Weiwei Zeng,^{a, b} Liming Zeng,^{a, b}

Daifeng Wu,^{a, b} Qing Zhou,^{a, b} Renheng Tang,^{a, b} Fangming Xiao^{a, b}

a: Institute of Resources Utilization and Rare Earth Development, Key Laboratory of Separation and Comprehensive Utilization of Rare Metals, Guangdong Academy of Sciences, Guangzhou, 510650, People's Republic of China.

b: Institute of Resources Utilization and Rare Earth Development, Guangdong Provincial Key Laboratory of Rare Earth Development and Application, Guangdong Academy of Sciences, Guangzhou, 510650, People's Republic of China.

c: Huzhou Key Laboratory of Materials for Energy Conversion and Storage, School of Science, Huzhou University, Huzhou 313000, People's Republic of China

d: School of Materials Science and Engineering, Guangdong Provincial Key Laboratory of Advanced Energy Storage Materials, South China University of Technology, Guangzhou, 510641, People's Republic of China.

* Author to whom correspondence should be addressed.

Yongyang Zhu, E-mail address: yongyangzhu2016@163.com Tel: 86-20-61086469,
Fax: 86-20-61086469; Jianding Li, E-mail address: jiandingli@zjhu.edu.cn

Table of Contents

Table of Contents	S-2
Supplementary Data	S-3
Figure S1	S-3
Figure S2	S-4
Figure S3	S-5

Supplementary Data

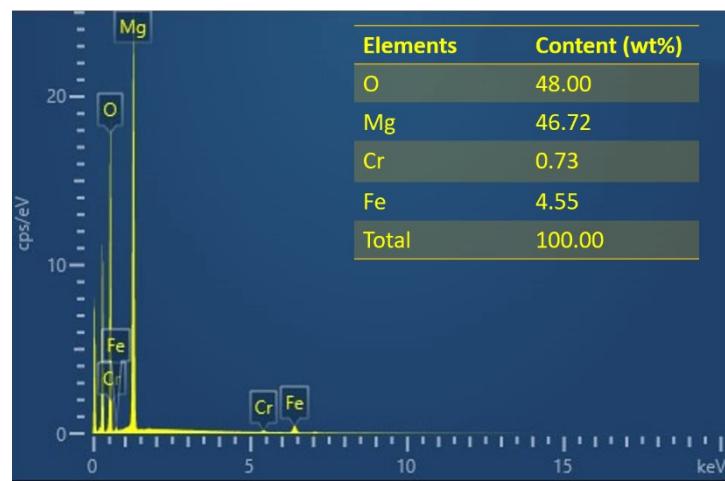


Fig. S1 EDX spectra of the products obtained via ball milling a mixture of MgH_2 and LiBO_2 in 2:1 molar ratio for 20 h at 1000 CPM.

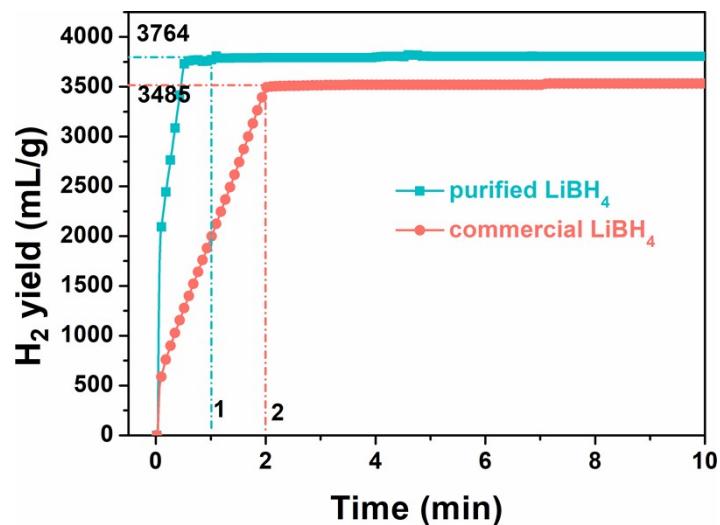


Fig. S2 Hydrolysis curve of the regenerated LiBH₄ and commercial LiBH₄ in 0.5 wt% CoCl₂ aqueous solution.

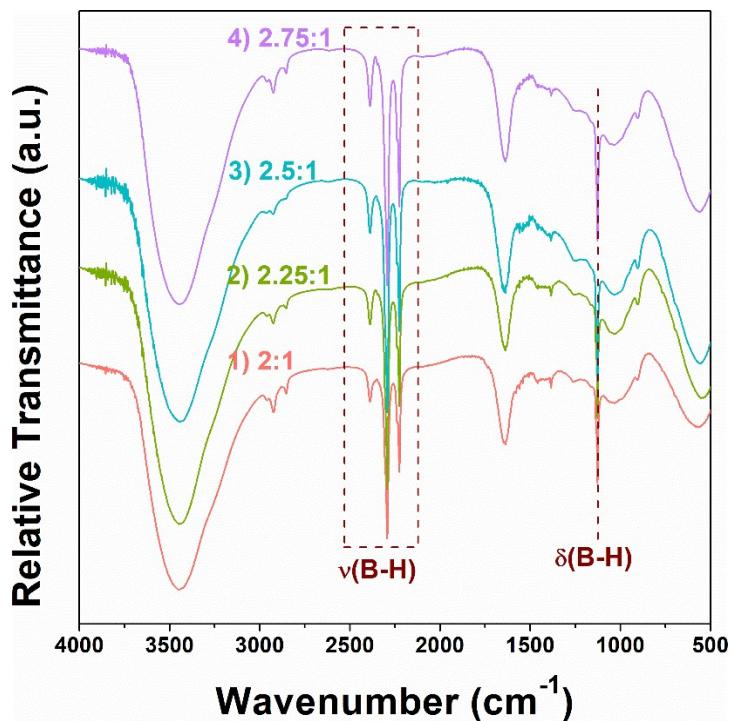


Fig. S3 FTIR spectra of products obtained after ball milling MgH₂ and LiBO₂ in different molar ratios for 20 h at 1000 CPM under ambient conditions.