## Supporting material (ESI) for PCCP

## **First-Principles Study of the Formation and Migration of Native**

## **Defects in LiNH<sub>2</sub>BH<sub>3</sub>**

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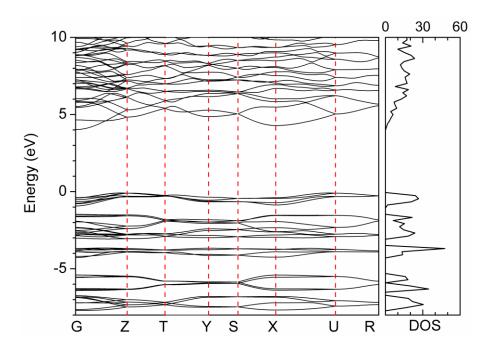


Figure S1. The left panel contains the calculated band structure of the ground state of LiNH<sub>2</sub>BH<sub>3</sub>. The right panel is the complete electron density of states, in arbitrary units.

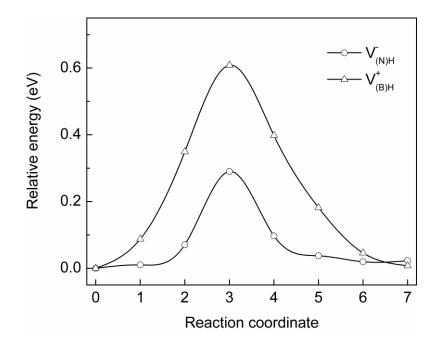


Figure S2. The energy profiles for the migration of  $V^+_{(B)H}$  and  $V^-_{(N)H}$ .

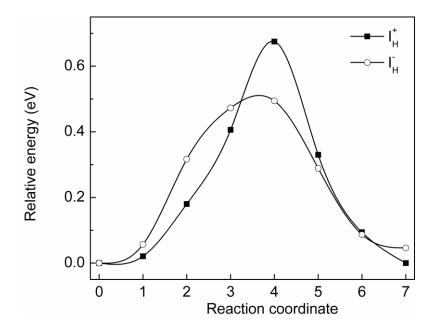


Figure S3. The energy profiles for the migration of  $I_{H}^{+}$  and  $I_{H}^{-}$ .

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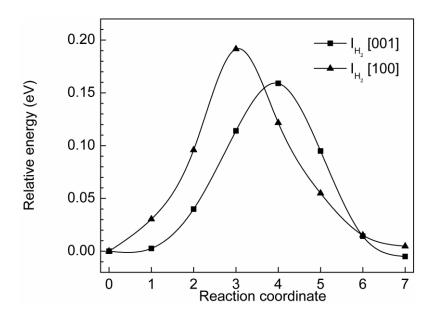


Figure S4. The energy profiles for the migration of neutral  $H_2$  interstitial along [100]

and [001] direction.

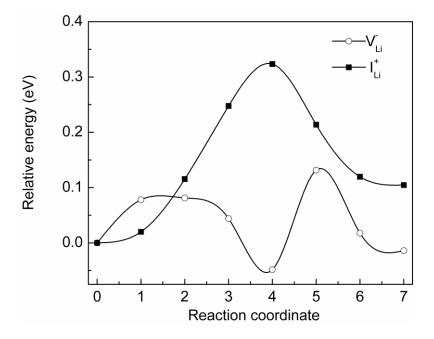


Figure S5. The energy profiles for the migration of  $I_{Li}^+$  and  $V_{Li}^-$ .