Supplementary information

Calcium hydride with aluminium for thermochemical energy storage applications

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**Figure S1.** XRD pattern of CaH$_2$-Al$_2$ after PCI analysis (> 5 cycles) left in the desorbed state.

Markers: * CaAl$_2$; ○ Amorphous hump due to poly(methylmethacrylate) (PMMA) airtight dome used to prevent oxygen/moisture contamination during data collection. $\lambda = 1.79$ Å.