

Electronic Supplementary Information

Confined NaAlH₄ Nanoparticles inside CeO₂ Hollow Nanotubes towards Enhanced

Hydrogen Storage

Qili Gao,^a Guanglin Xia^{*b} and Xuebin Yu^{*a}

a. Department of Materials Science, Fudan University, Shanghai 200433 , China.

b. Institute for Superconducting and Electronic Materials, University of Wollongong,
North Wollongong, NSW 2522, Australia.

*Corresponding authors: yuxuebin@fudan.edu.cn, guanglin@uow.edu.au

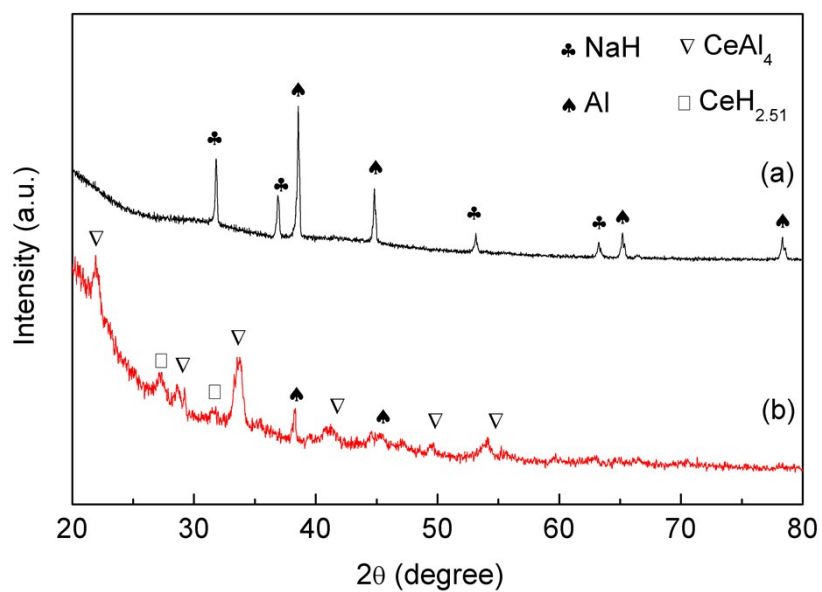


Fig. S1. XRD patterns of the dehydrogenated bulk NaAlH_4 (a), and the milled $\text{NaAlH}_4/\text{CeO}_2$ (b) at 350 °C.

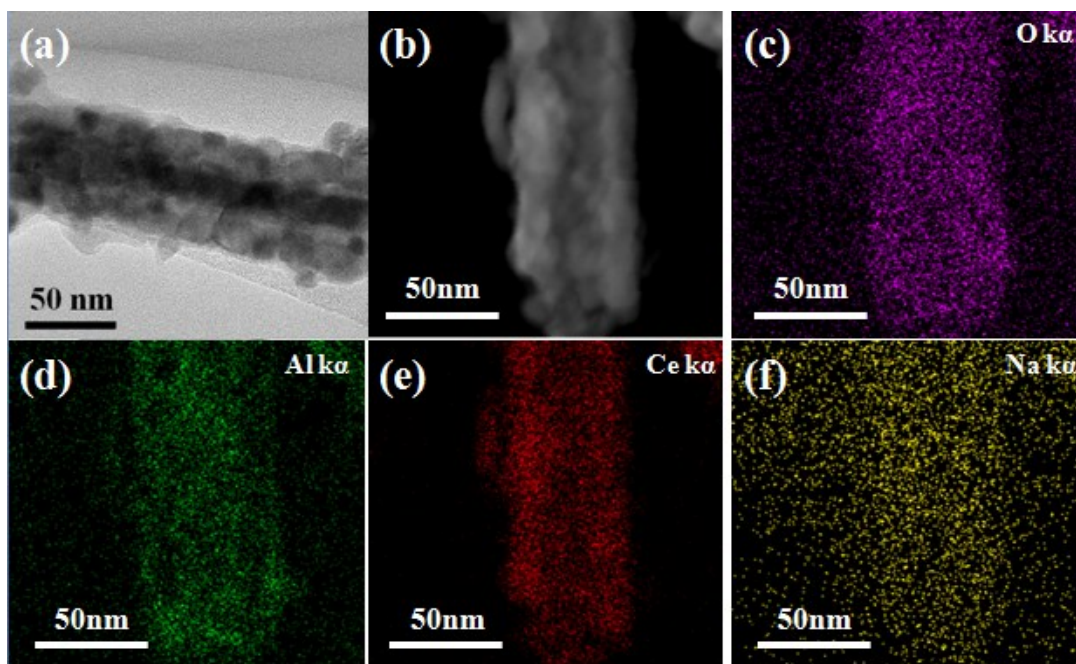


Fig. S2. TEM images of $\text{NaAlH}_4@\text{CeO}_2$ after the dehydrogenation (a, b), and the corresponding EDS maps of (c) O, (d) Al, (e) Ce, and (f) Na elements for image (b).

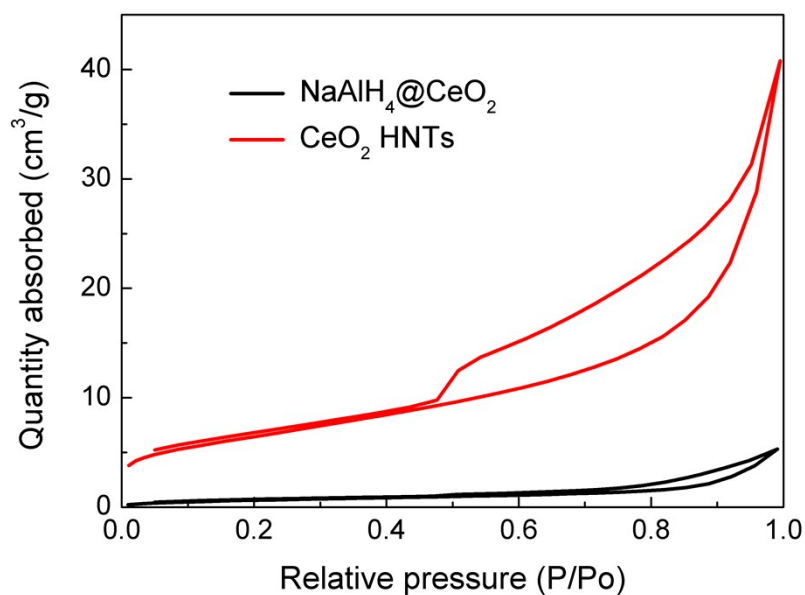


Fig. S3. N_2 absorption-desorption isotherms at 77 K for as-prepared CeO_2 HNTs and $\text{NaAlH}_4@\text{CeO}_2$.

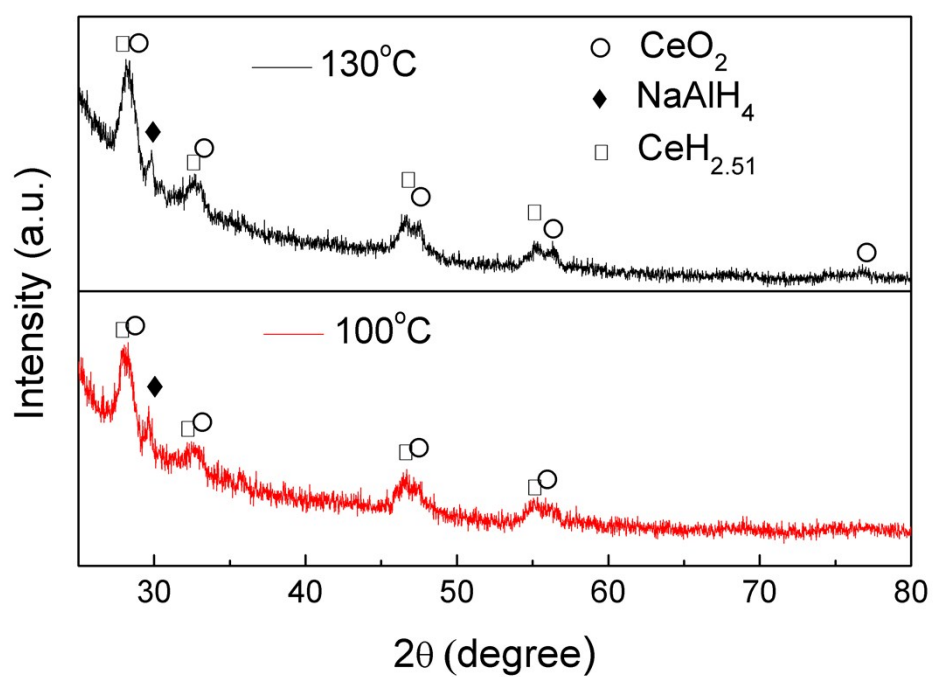


Fig. S4. XRD patterns of the dehydrogenated NaAlH₄@CeO₂ at 100 °C and 130 °C.