

## Supplementary Information

### Carbon hybridized halloysite nanotubes for high-performance hydrogen storage capacities

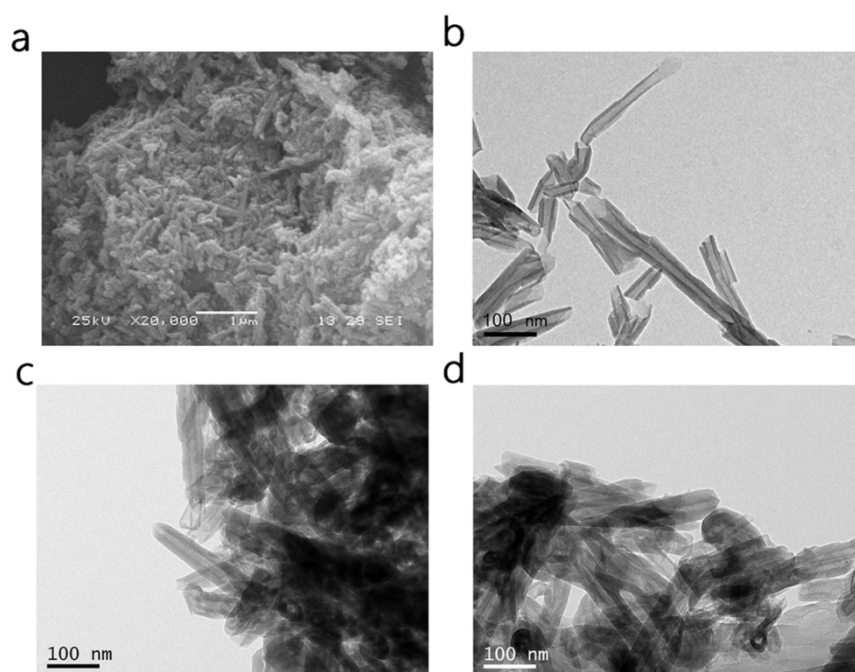
Jiao Jin<sup>+</sup>, Liangjie Fu<sup>+</sup>, Huaming Yang<sup>\*</sup>, Jing Ouyang<sup>\*</sup>

*Centre for Mineral Materials, School of Minerals Processing and Bioengineering, Central South University, Changsha 410083, China*

*\* Corresponding author, [E-mail:hmyang@csu.edu.cn](mailto:hmyang@csu.edu.cn), [jingouyang@csu.edu.cn](mailto:jingouyang@csu.edu.cn); Tel: +86-731-88830549,*

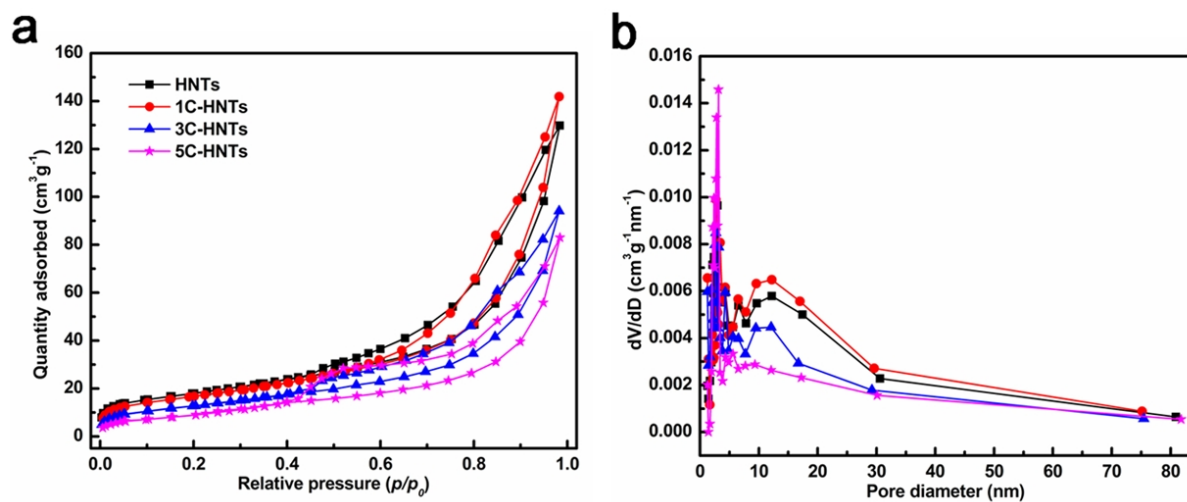
*Fax: +86-731-88710804*

*<sup>+</sup> These authors contributed equally to this work*

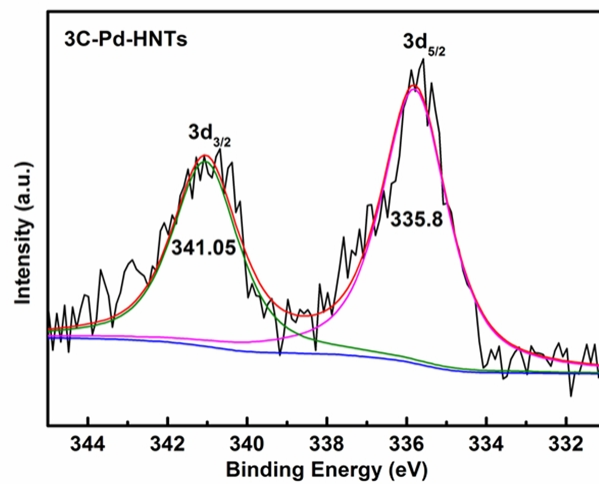
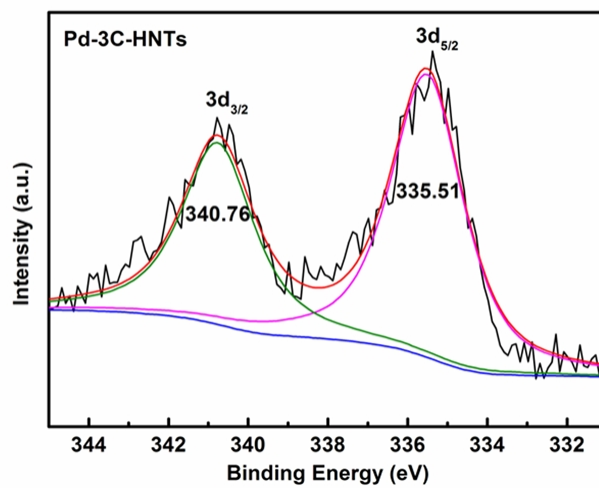
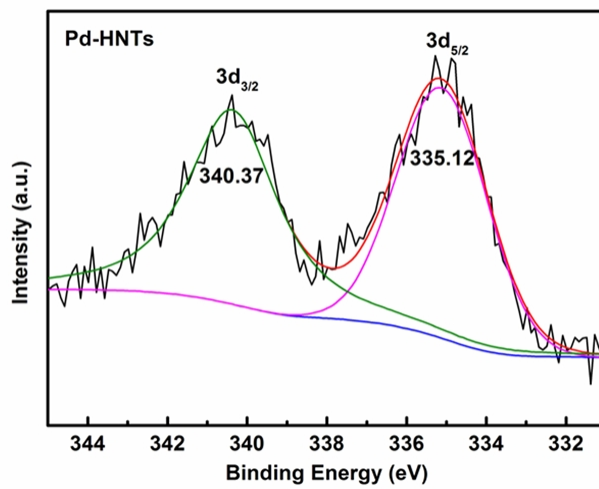


**Figure S1** Morphologies of the samples. (a) SEM images of HNTs; TEM images of (b) HNTs, (c)

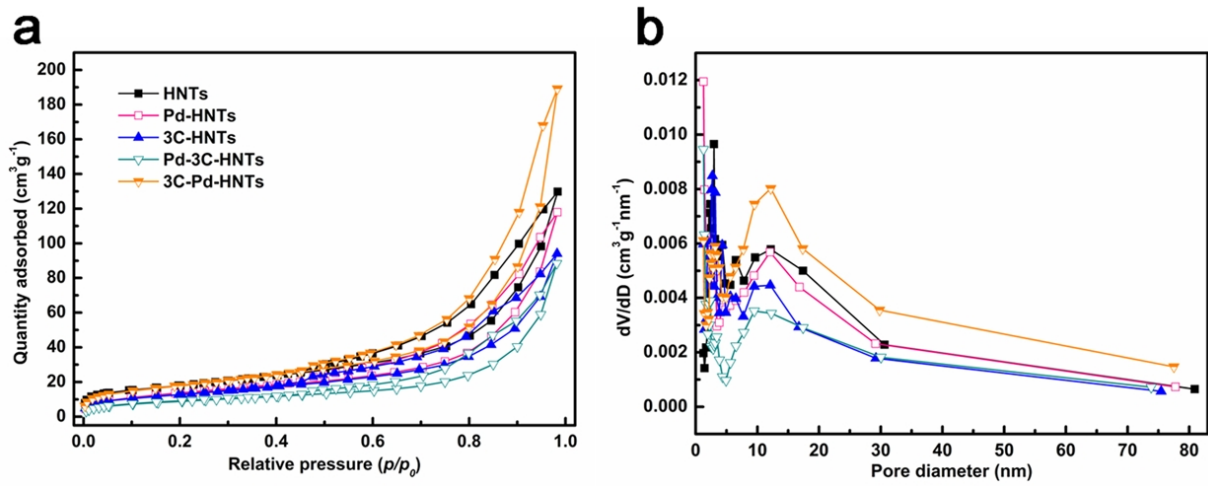
1C-HNTs and (d) 3C-HNTs.



**Figure S2 Porous textures of the samples.** (a) Nitrogen adsorption-desorption isotherms and (b) pore size distributions of HNTs, 1C-HNTs, 3C-HNTs and 5C-HNTs.



**Figure S3 Pd 3d XPS spectra analysis of the samples.**



**Figure S4 Porous textures of the samples.** (a) Nitrogen adsorption-desorption isotherms and (b) pore size distributions of HNTs, Pd-HNTs, 3C-HNTs, Pd-3C-HNTs, and 3C-Pd-HNTs.