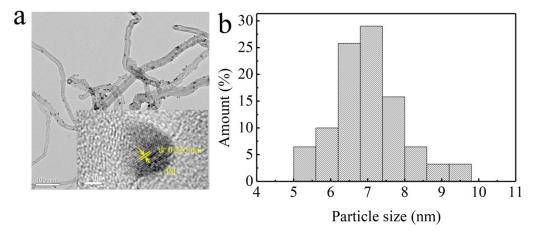
## **Electronic Supplementary Information for**

## Enhanced electrochemical performance of Li-O<sub>2</sub> battery based on modifying the solid-state air cathode with Pd catalyst

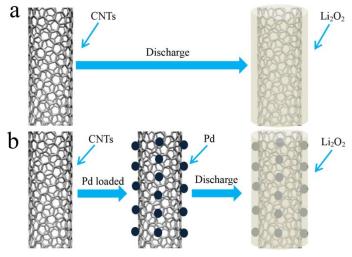
Xiaofei Wang,<sup>a</sup> Shengrong Cai,<sup>a</sup> Ding Zhu<sup>b</sup> and Yungui Chen\*a

(a College of Materials Science and Engineering, Sichuan University, Chengdu 610065, China b Institute of New Energy and Low-Carbon Technology, Sichuan University, Chengdu 610065, China)

Tel.: +86 28 85407335; Fax: +86 28 85466916. E-mail: ygchen60@aliyun.com



**Fig. S1** (a) TEM image of the CNTs@Pd (inset shows HRTEM image of a single Pd particle. (b) The histogram image of the distribution of Pd particle size.



**Fig. S2** Schematic diagram of the depositing of Li<sub>2</sub>O<sub>2</sub> in CNTs (a) and the depositing of Pd nanoparticles on CNTs and the corresponding depositing of Li<sub>2</sub>O<sub>2</sub> in CNTs@Pd (b).

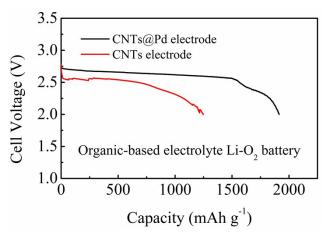


Fig. S3 Discharge profiles of the CNTs@Pd and CNTs electrodes at 100 mA  $\rm g^{-1}$ .