Electronic supplementary information for

## Preparation of 3D nanoporous copper-supported cuprous oxide for high-performance lithium ion battery anode

## Dequan Liu, Zhibo Yang, Peng Wang, Fei Li, Desheng Wang and Deyan $\mathrm{He}^*$

School of Physical Science and Technology, Key Laboratory for Magnetism and Magnetic Materials of the Ministry of Education, Lanzhou University, Lanzhou, 730000, China, *E-mail: hedy@lzu.edu.cn* 



Fig. S1 TEM micrographs of 3D NPCu@Cu<sub>2</sub>O

 $Cu_2O$  film with a thickness about 15 to 20 nm grown on the surface of copper ligaments. The boundary of Cu and  $Cu_2O$  can be clear see in TEM image. The space of 0.18 nm between the neighboring lattice planes belong to the (200) copper lattice plane. The space of 0.30 nm between the neighboring lattice planes belong to the (110)  $Cu_2O$  lattice plane.