Electronic Supplementary Information for

3D porous micro/nanostructured interconnected metal/metal oxide electrodes for high-rate lithium storage

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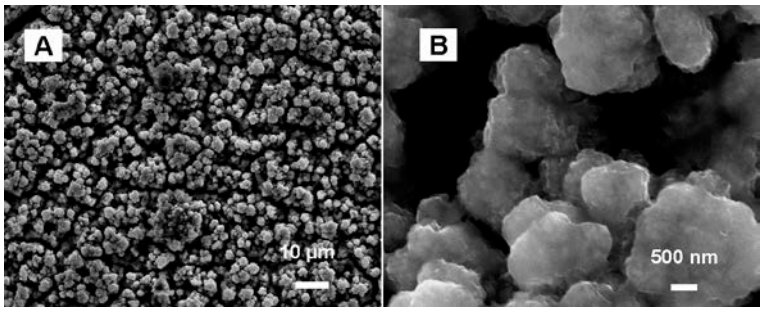

Fig. S1 (A-B) SEM images of 3D PMNI Ni/NiO after 100 cycles at 1*C* (718 $mA \cdot g^{-1}$) rate.

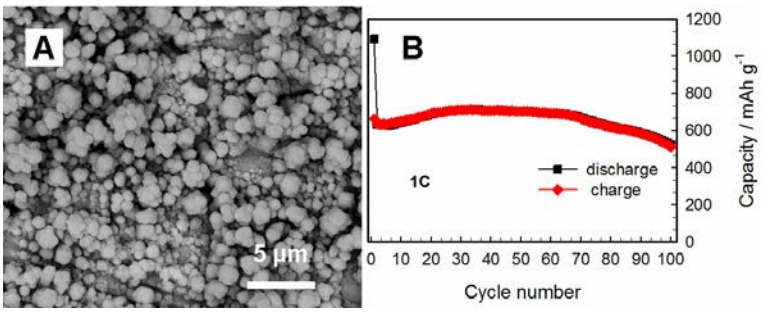

Fig. S2 (A) SEM image and (B) cycling performance of Ni/NiO obtained by heating porous Ni (under the current density of $2A \cdot cm^{-2}$ for 20 s in 0.02 M $NiCl_2$ and 1.0 M NH_4Cl solutions) at 450°C for 2 h.

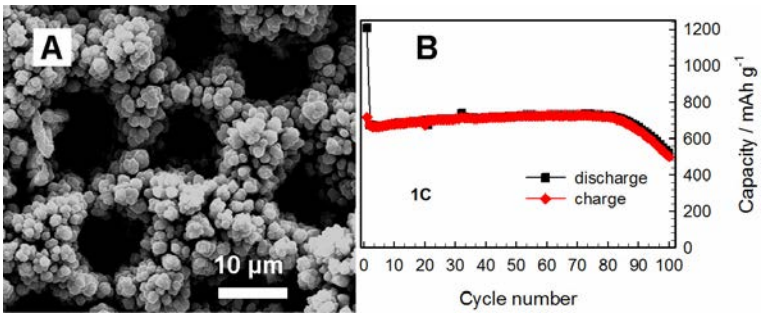

Fig. S3 (A) SEM image and (B) cycling performance of 3D Ni/NiO obtained by heating porous Ni (under the current density of $4A \cdot cm^{-2}$ for 20 s in 0.05 M $NiCl_2$ and 1.0 M NH_4Cl solutions) at 450°C for 2 h.

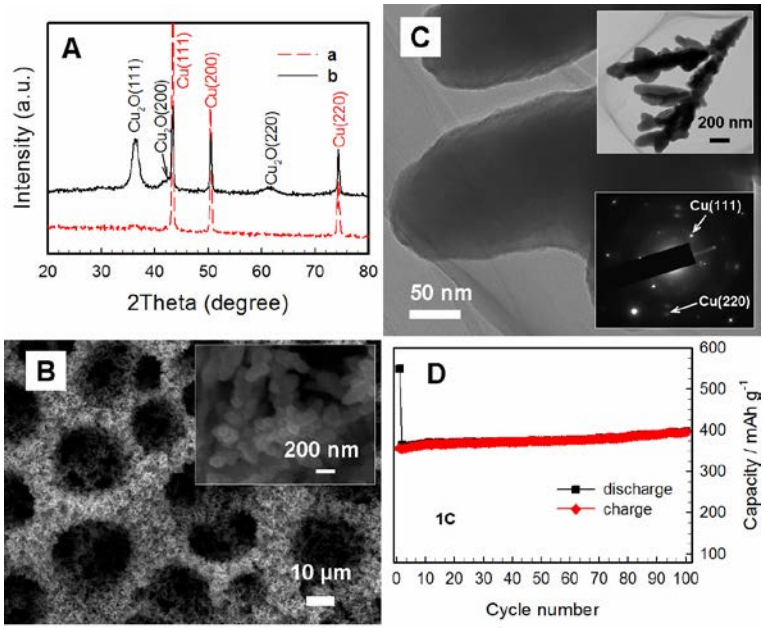

Fig. S4 (A) XRD pattern, (B) SEM and (C) TEM images of 3D porous Cu, and (D) cycling performance of 3D PMNI Cu/Cu_2O at 1*C* ($375\ mA \cdot g^{-1}$) rate.

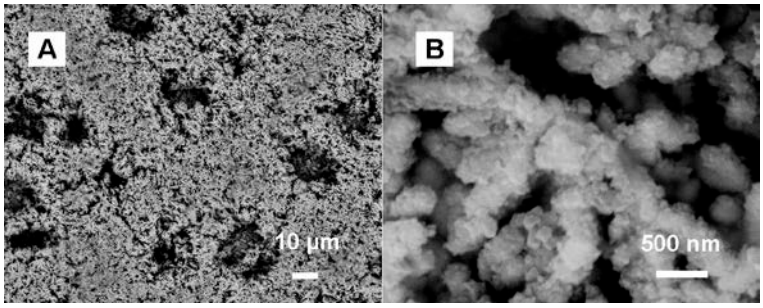

Fig. S5 (A-B) SEM images of 3D PMNI Cu/Cu_2O after 100 cycles at 1*C* rate.