Electronic Supplementary Information

Fabrication of La_2NiO_4 Nanoparticles as an Efficient Bifunctional Cathode Catalyst for Rechargeable Lithium-Oxygen Batteries

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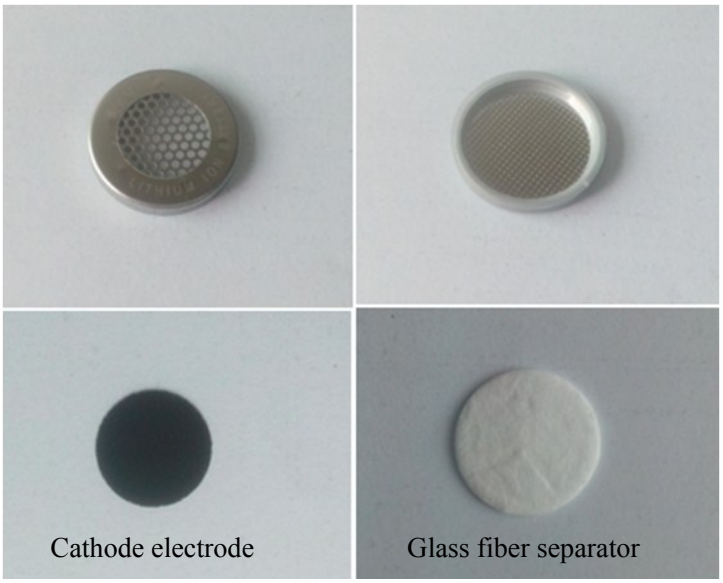

Fig. S1The components images of 2032® coin-type cells

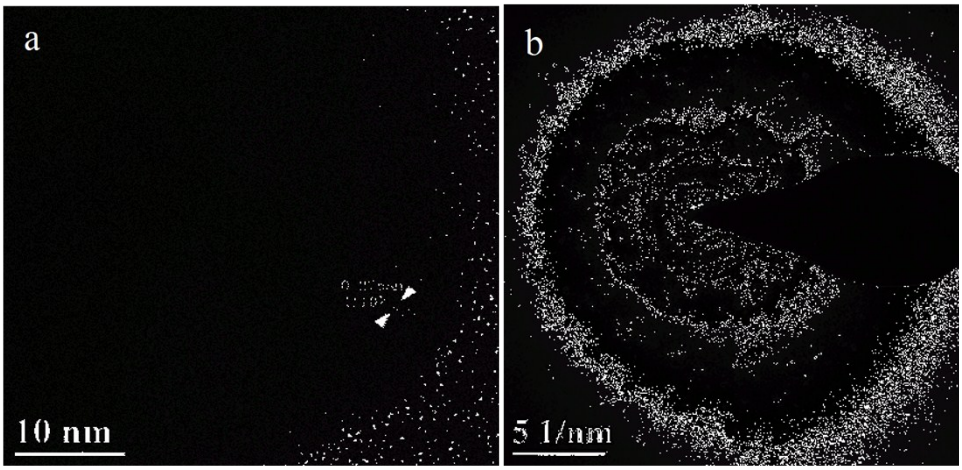

Fig. S2 HRTEM images of Pechini-LNO particles (a) and corresponding to select area electron diffraction (SAED) patterns (b)

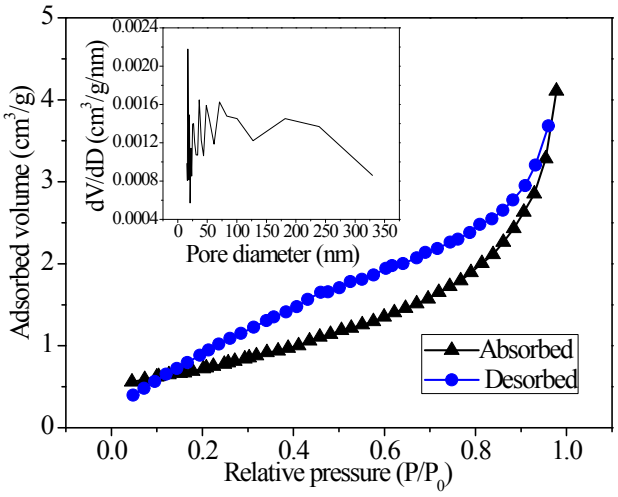

Fig. S3 Nitrogen adsorption-desorption isotherms and pore size distribution (inset) of Pechini-LNO particles

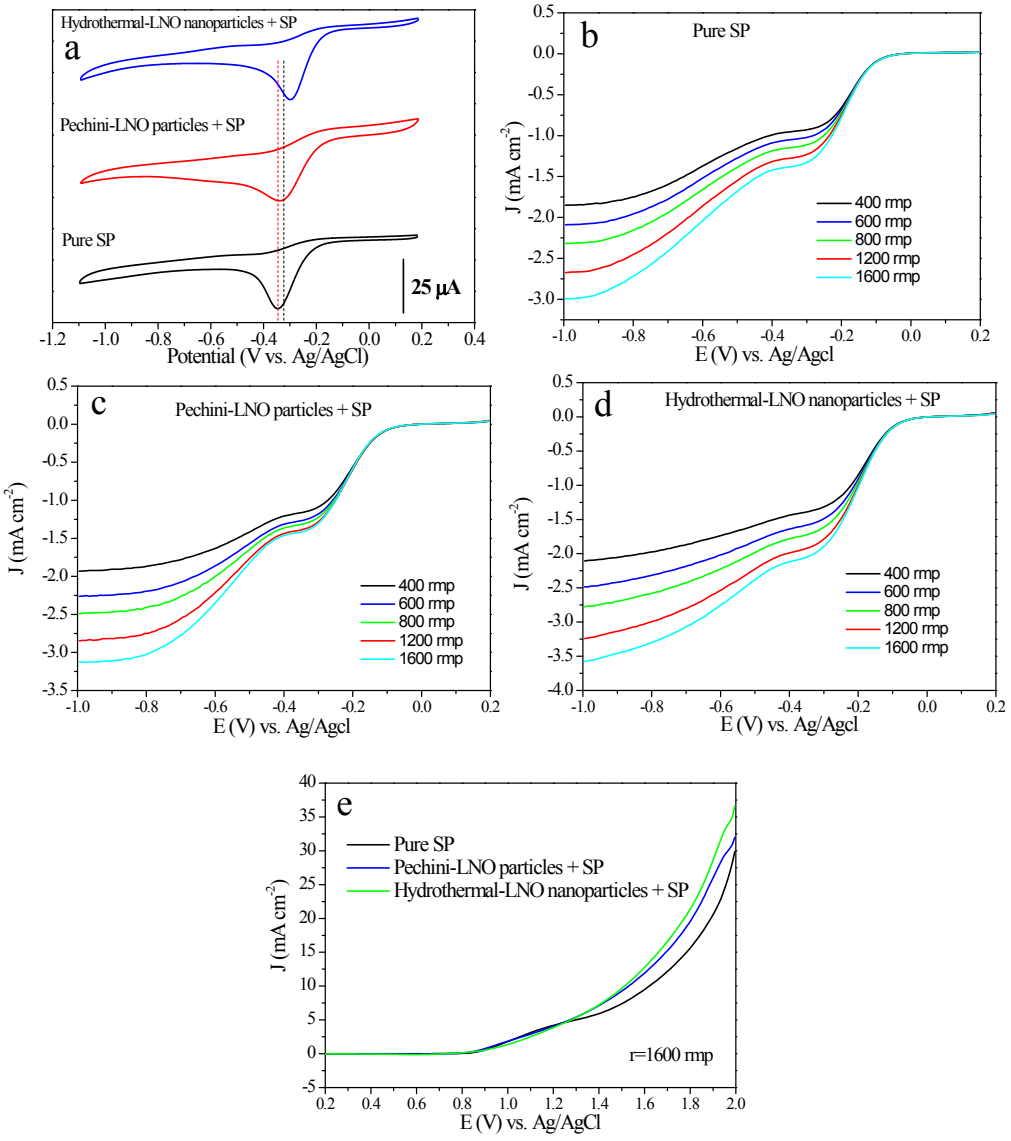

Fig.S4 CV curves of pure SP, Pechini-LNO particles + SP and hydrothermal-LNO nanoparticles + SP electrode (a). ORR polarization curves of pure SP, Pechini-LNO particles + SP and hydrothermal-LNO nanoparticles + SP electrode (b-d). OER polarization curves of pure SP, Pechini-LNO particles + SP, hydrothermal-LNO nanoparticles + SP on glassy carbon electrode at 1600-rmp rotation rates (e).

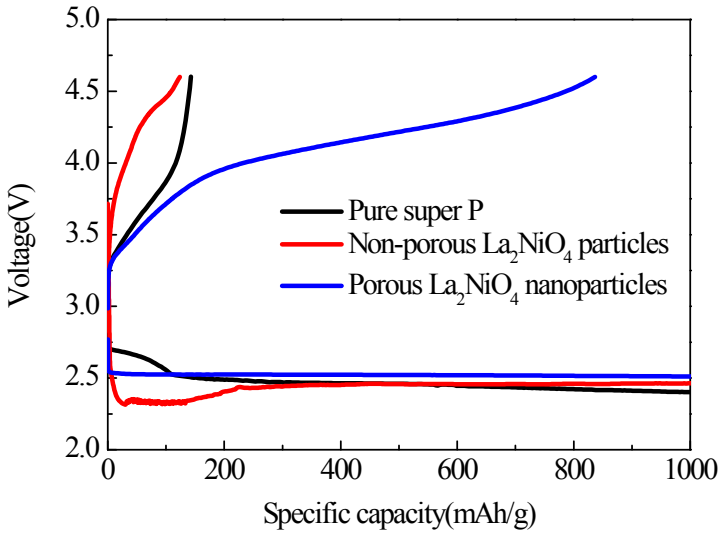

Fig. S5 The initial discharge-charge profile lithium-oxygen battery cells with pure SP, Pechini-LNO particles + SP and hydrothermal-LNO nanoparticles + SP electrodes at current density of 0.16 mA cm^{-2} (capacity were limited to 1000mAh g^{-1}).