Selenium Heteroatom-doped Mesoporous Carbon as Efficient Air-breathing Electrode for Rechargeable Lithium-Oxygen Battery

Vaithiyanathan Sankar Devi and Perumal Elumalai*

Electrochemical Energy Storage Lab, Department of Green Energy Technology, Madanjeet School of Green Energy Technologies, Pondicherry University, Puducherry-605014, India.

Fig. S1 (a) XPS survey spectrum and (b-d) Deconvoluted scan-profiles of B 1s, C 1s, and N 1s peaks recorded for the boron-doped carbon derived from the spent disposable papercups.
Fig. S2 (a) XPS survey spectrum and (b-d) Deconvoluted scan-profiles of C 1s, N 1s and O 1s peaks recorded for the nitrogen-doped carbon derived from the spent disposable papercups.
Fig. S3 (a) Electrode-speed dependent LSV profiles of the boron-doped carbon electrocatalyst at a scan rate of 10 mV s\(^{-1}\), (b) K-L plots at different potentials constructed from the LSV plots of the boron-doped carbon electrocatalyst.
Fig. S4 (a) Electrode-speed dependent LSV profiles of the nitrogen-doped carbon electrocatalyst at a scan rate of 10 mV s⁻¹. (b) K-L plots at different potentials constructed from the LSV plots of the nitrogen-doped carbon electrocatalyst.