Supporting Information

MOF-derived crumpled-sheet-assembled perforated carbon cuboids as highly effective cathode active material for ultra-high energy density Li-ion hybrid electrochemical capacitors (Li-HEC))

Abhik Banerjee,[a] Kush Kumar Upadhyay,[a] Dhanya Puthusseri,[a] Vachiappan Aravindan,[b] Srinivasan Madhavi,[b,c*] and Satishchandra Ogale[a,*]*

Supporting Information S1

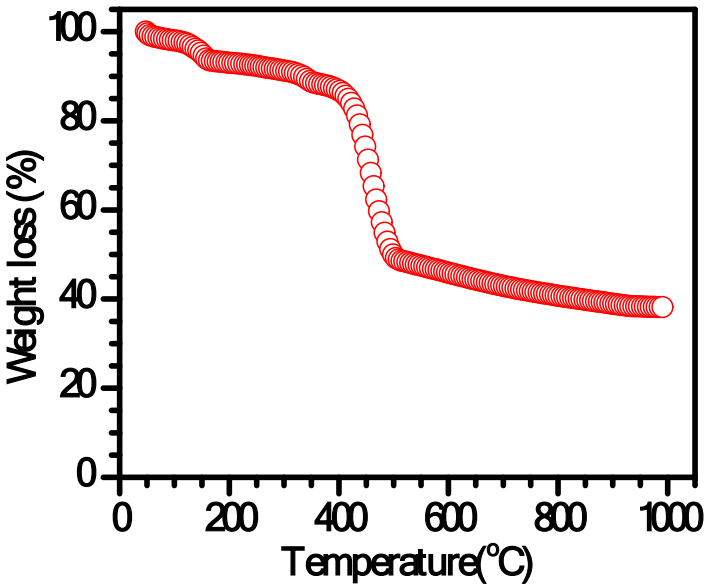

Figure S1. Thermo-gravimetric curves for MOF-5 in Ar flow at 5 ^{o}C min^{-1}

Supporting Information S2

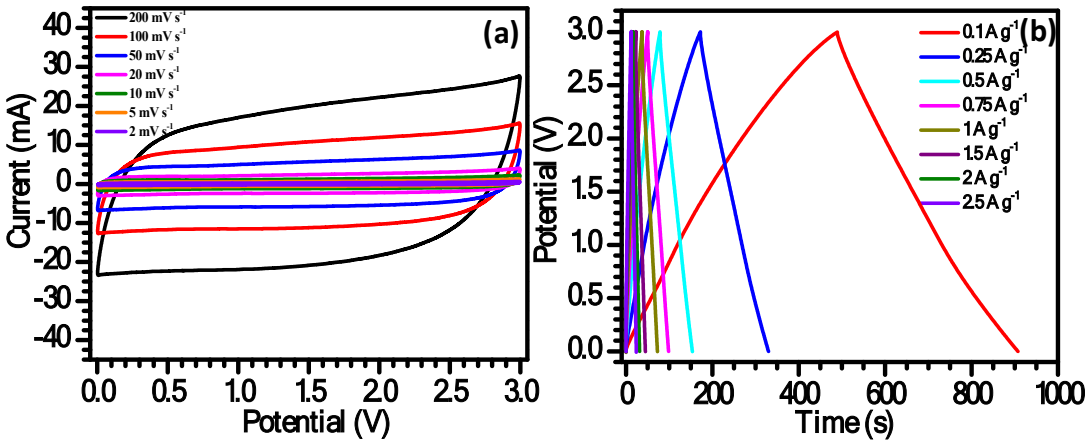

Figure S2. (a) Cyclic voltammogram of MOF-DC based symmetric supercapacitor in the presence of 1 M $LiPF_6$ in EC/DMC solution tested between 0-3 V at various scan rates. Each electrode is composed on 4 mg active mass loading over stainless steel substrate, and (b) Typical galvanostatic charge-discharge profiles of MOF-DC/MOF-DC symmetric supercapacitor cycled at various current densities. The applied current density is based on total active mass loading (4+4=8 mg), for example 1 A g^{-1} corresponds to the applied current of 8 mA.

Supporting Information S3

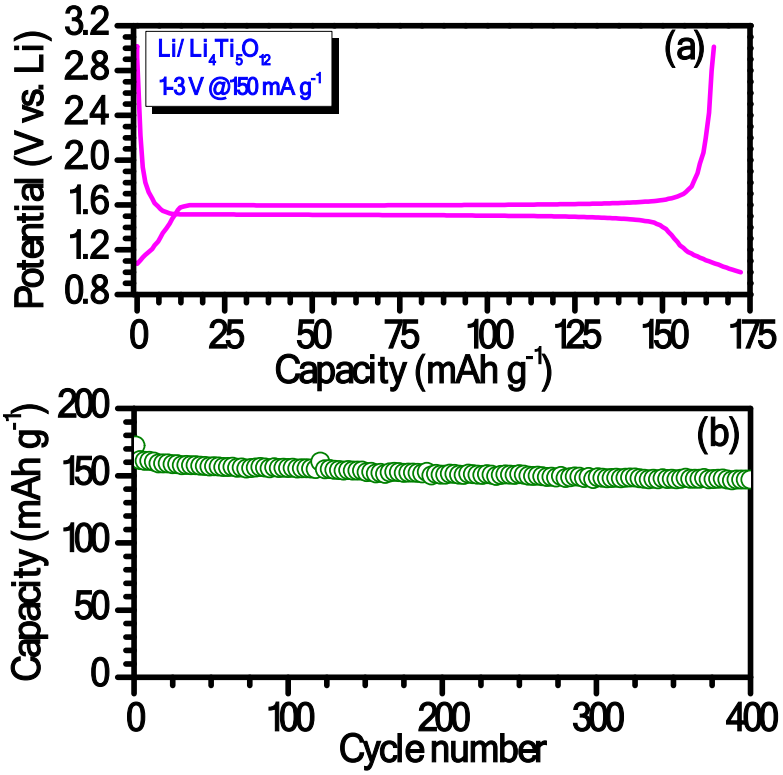

Figure S3 (a) Galvanostatic charge-discharge curves of $Li/Li_4Ti_5O_{12}$ (Sigma-Aldrich, USA) half-cells cycled between 1-3 V at constant current density of 150 mA g^{-1}, and (b) Plot of discharge capacity *vs.* cycle number.