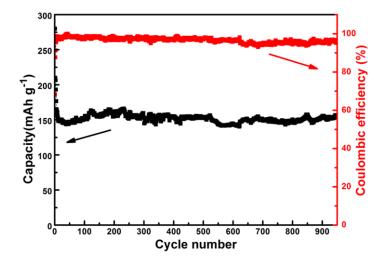
## **Electronic Supplementary Information**

## for

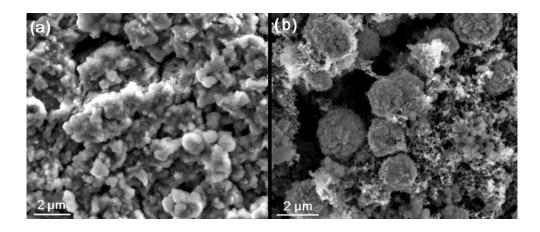
## Graphene aerogel supported Fe<sub>5</sub>(PO<sub>4</sub>)<sub>4</sub>(OH)<sub>3</sub>•2H<sub>2</sub>O microspheres as high performance cathode for lithium ion batteries



**Fig. S1** Cycling performance of GA/IHPDs hybrids at a current density of 50 mA  $g^{-1}$  and the corresponding Coulombic efficiency.

Samples	IHPDs-Before	GA/IHPDs-Before	IHPDs-After	GA/IHPDs-After
$R_{s}(\Omega)$	3.4	4.1	23.9	6.7
$R_{ct}(\Omega)$	53.9	117.7	280.1	91.3
CPE (µF)	1.95	3.06	2.23	0.81

 Table S1 Kinetic parameters of IHPDs and GA/IHPDs electrodes



**Fig. S2** Representative SEM images of IHPDs (a) and GA/IHPDs hybrids (b) cathode after 140 discharge–charge cycles.