Supplementary Information

High lithium anodic performance of N-doped porous bio-carbon integrated indium-sulfide thin nano sheets

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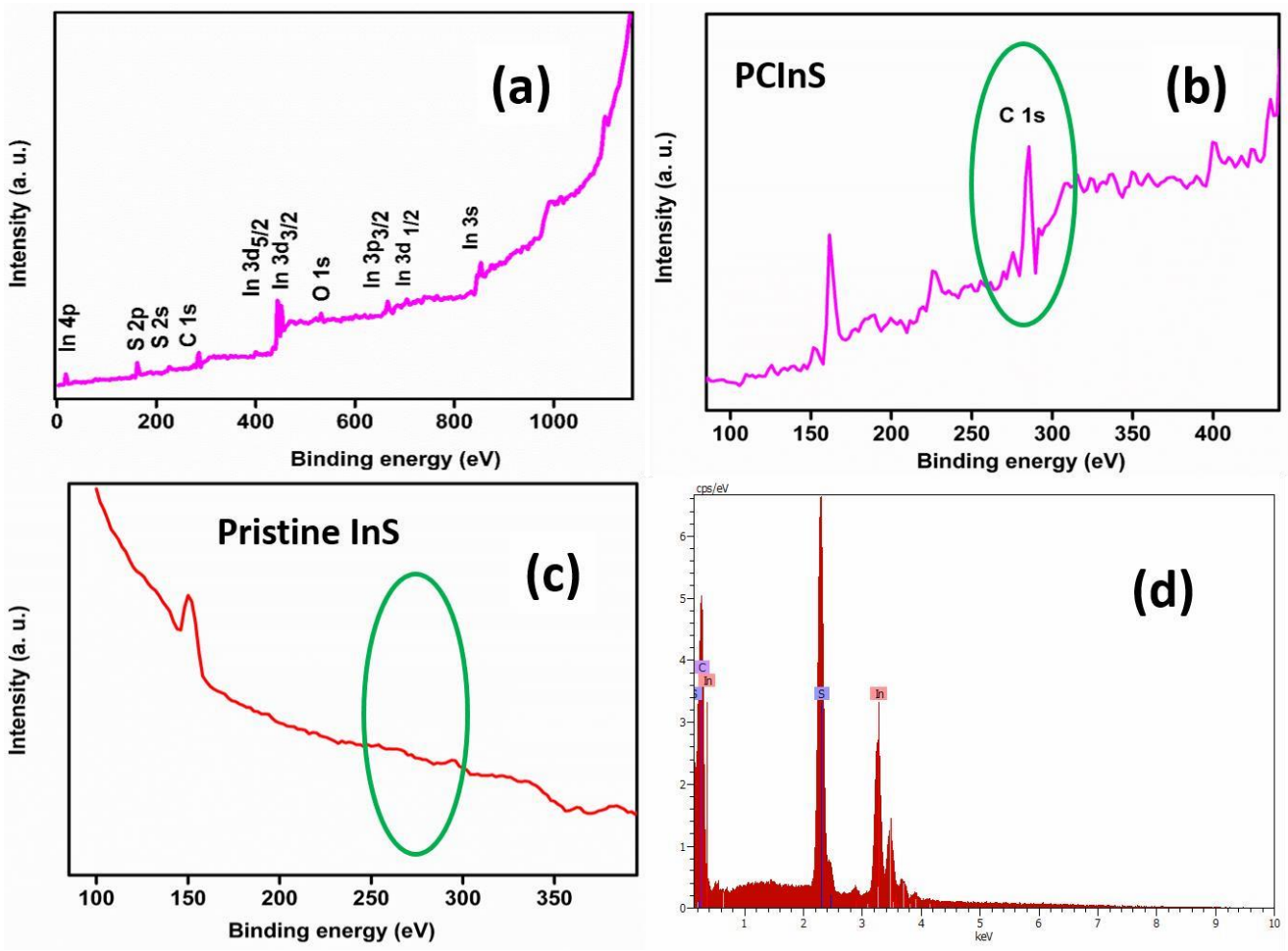

Fig. S1. (**a,d**) XPS survey spectrum and EdaX spectrum of PCInS composite respectively, (**b,c**) expanded view of survey spectrum.

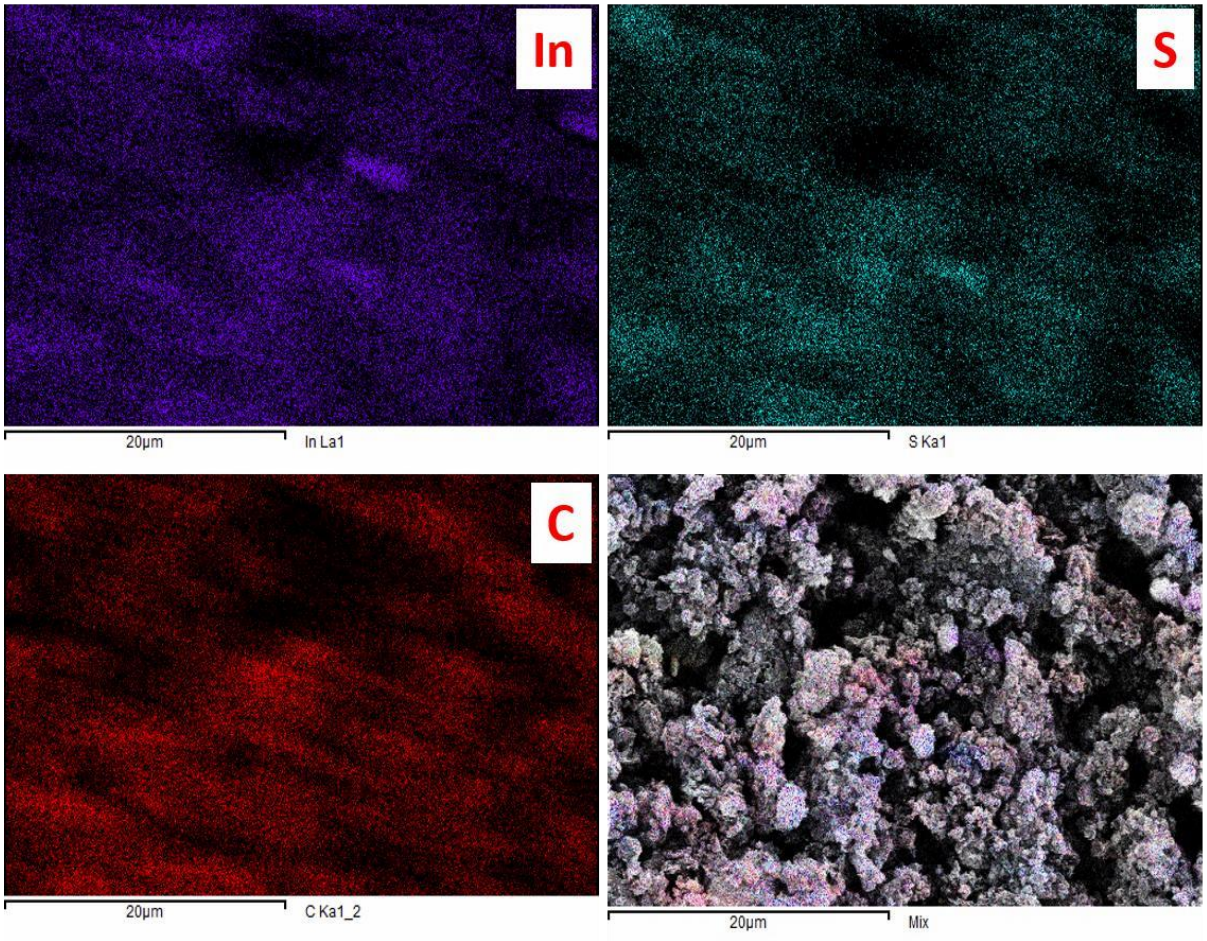

Fig. S2. EDS mapping of PCInS composite (In, blue), (S, dark Teal) (C, red) and mixed composite.

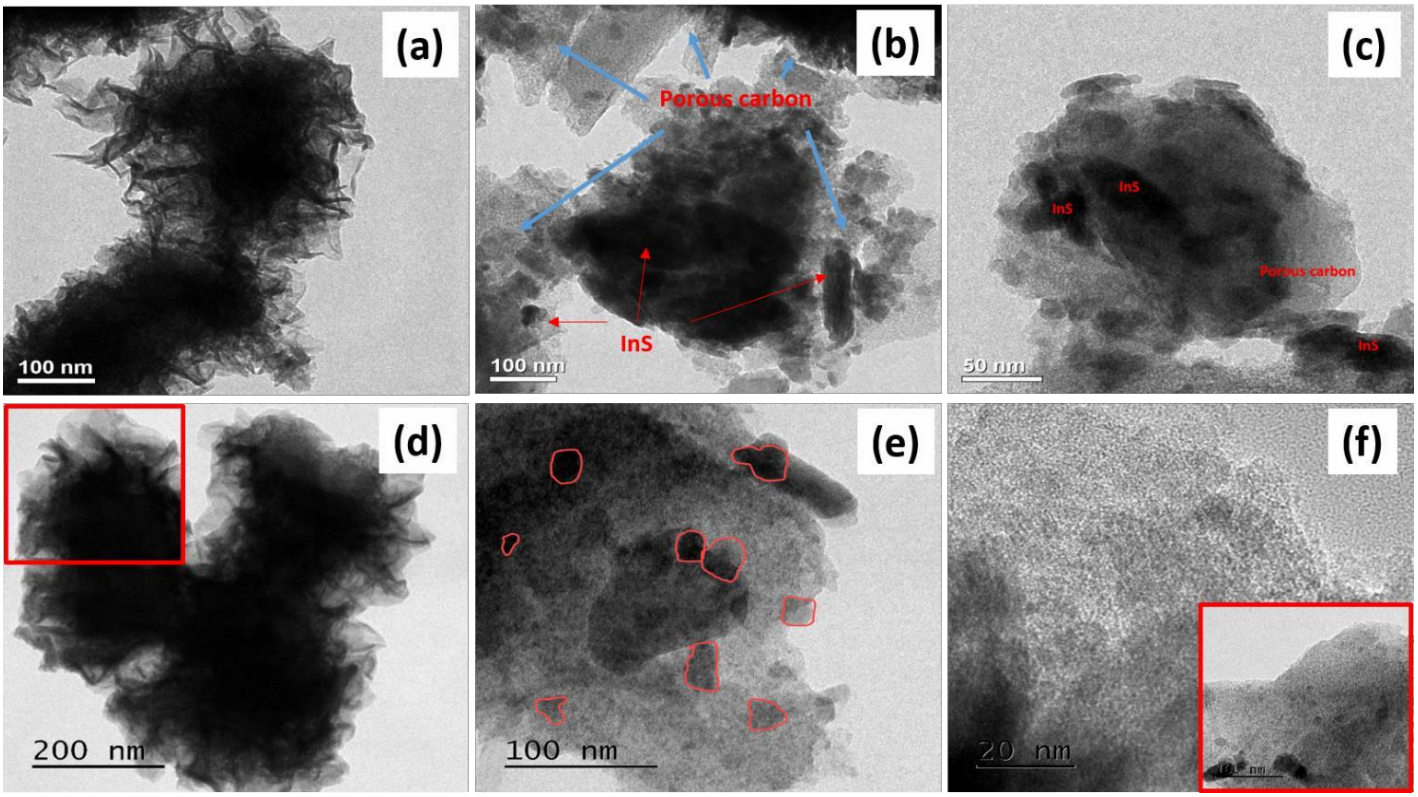

Fig. S3. TEM images pristine InS (**a**) and porous carbon wrapped InS pedals (**b,c**), HR-TEM images of pristine InS (**d**) and porous carbon integrated indium sulfide (ie. PCInS) (**e,f**); (inset: high magnification)

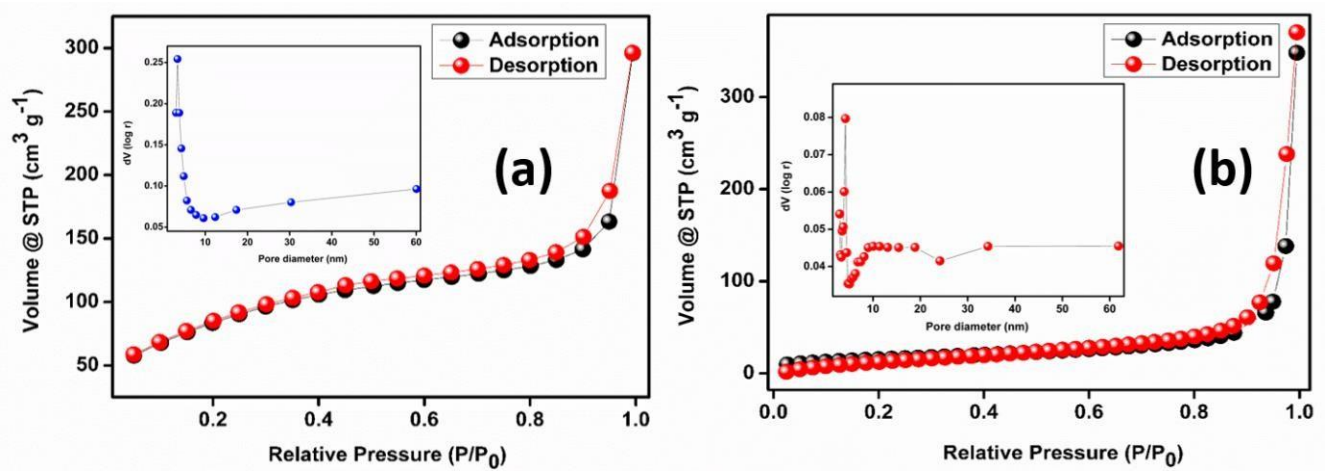

Fig. S4. (**a, b**) Isotherm profiles for pristine InS and PCInS composite materials. (inset: pore size distribution)

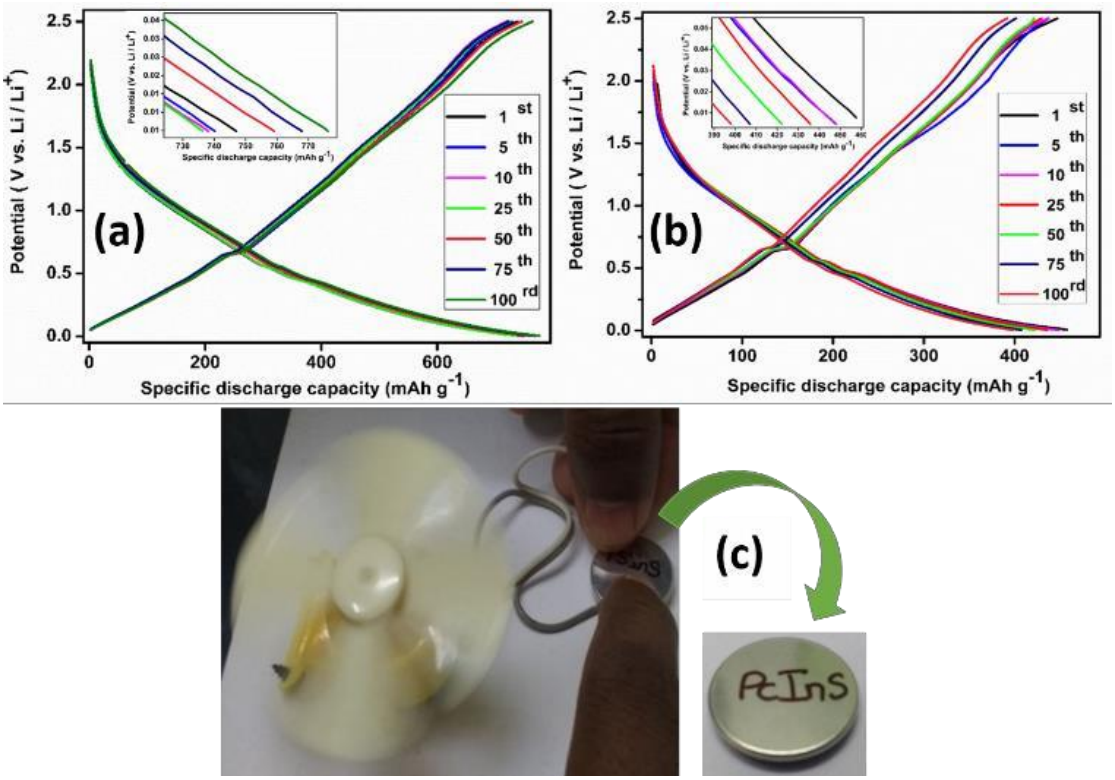

Fig. S5. (**a, b**) Selected cycling profile for PCInS composite and pristine InS material at current density of 0.5 A g^{-1} respectively, (**c**) Real time application of PCInS composite anode material containing Li-ion half-cell.

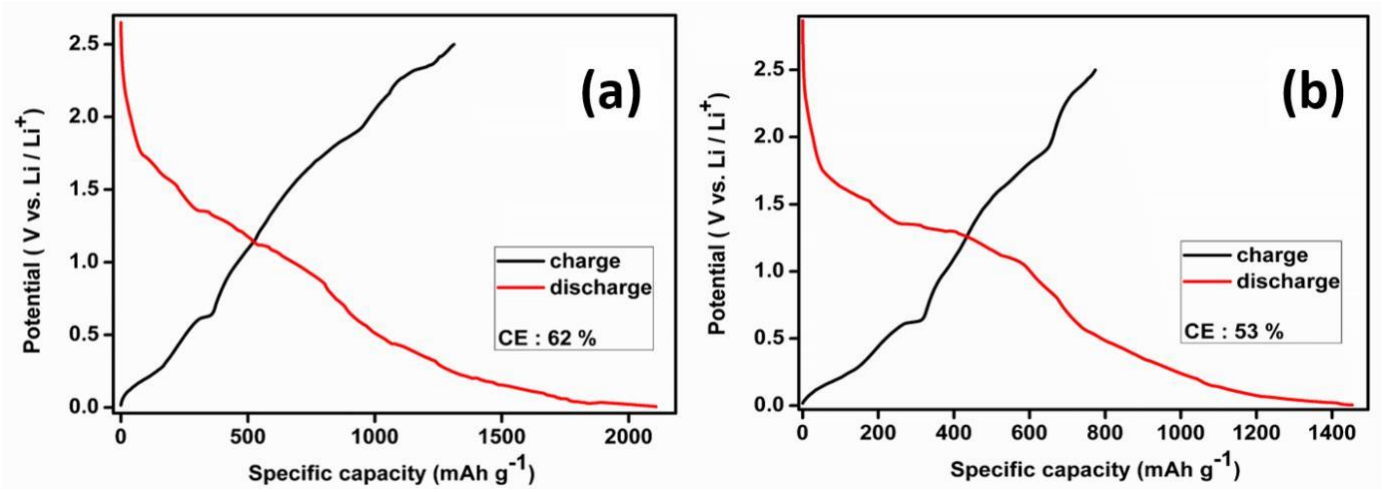

Fig. S6. (**a**, **b**) formation cycles for PCInS and Pristine InS material

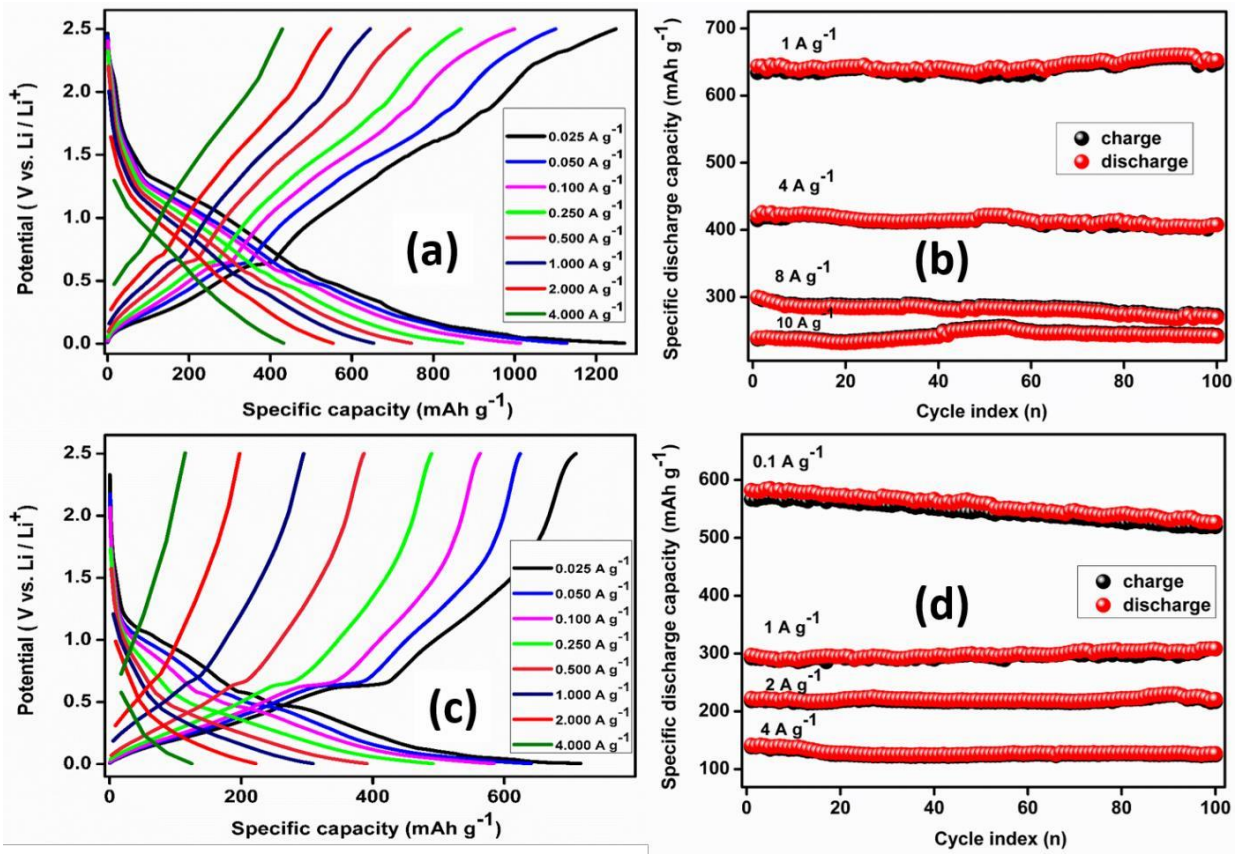

Fig. S7**.** (**a**, **b**) and (**c**, **d**) cycling profile at different current densities and steady state cycling at high current densities for PCInS and pristine InS material respectively.

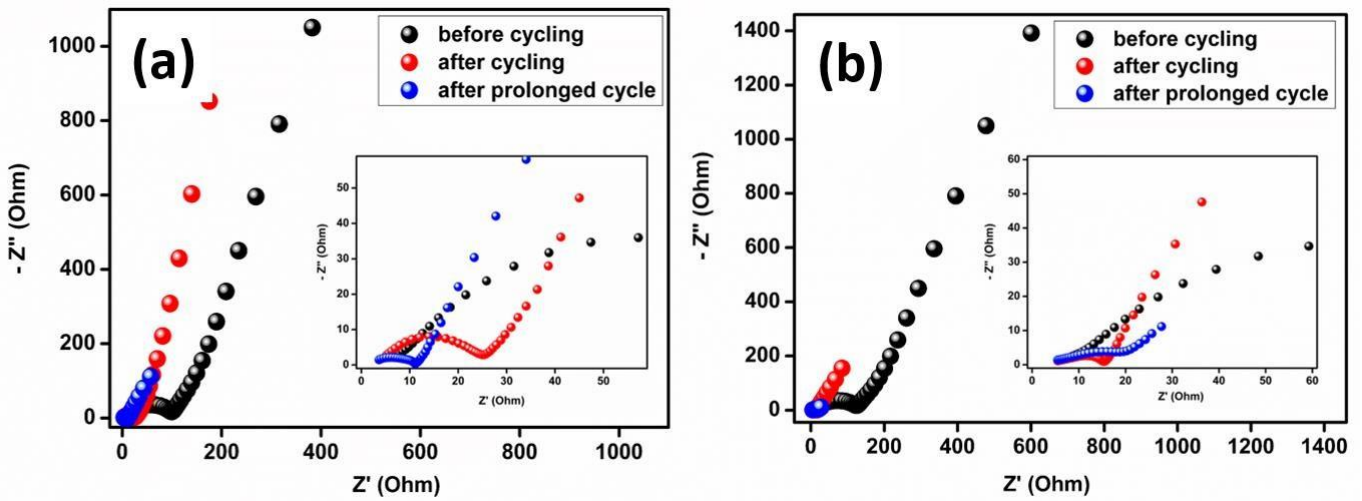

Fig. S8. (**a**, **b**) EIS study of PCInS composite and pristine InS before and after cycling respectively.