

Electronic Supplementary information

Synergy of heteroatom (P-F) in nanostructured Sn₃O₄ as an anode for sodium ion battery

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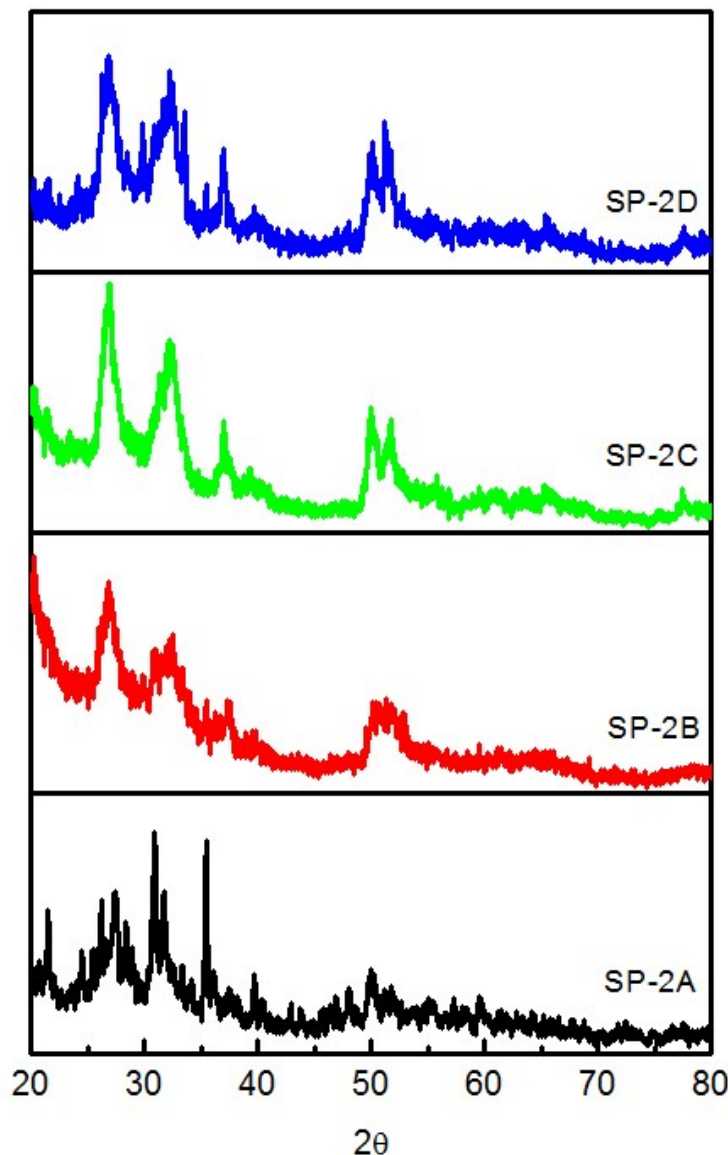


Figure S1: XRD patterns of P@ Sn₃O₄ samples synthesized at (a) SP-2A:150°C, 12h (b) SP-2B:150°C, 24h (c) SP-3A:180°C, 12 hr (d) SP-2D:180°C,24 h

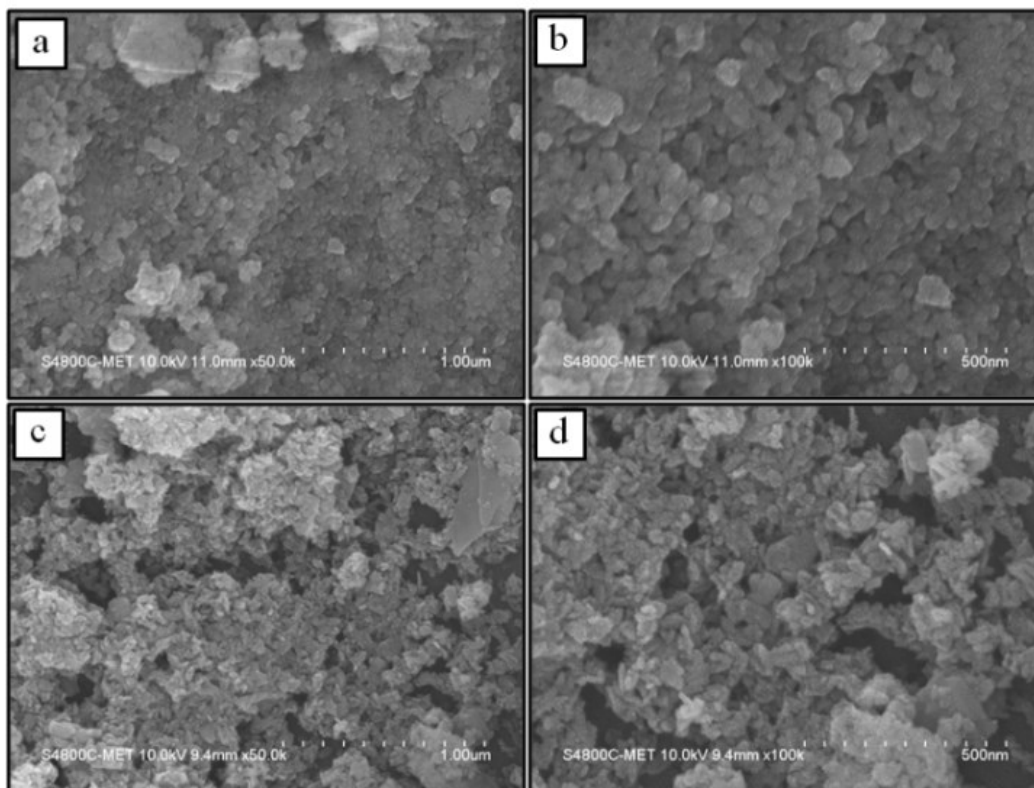
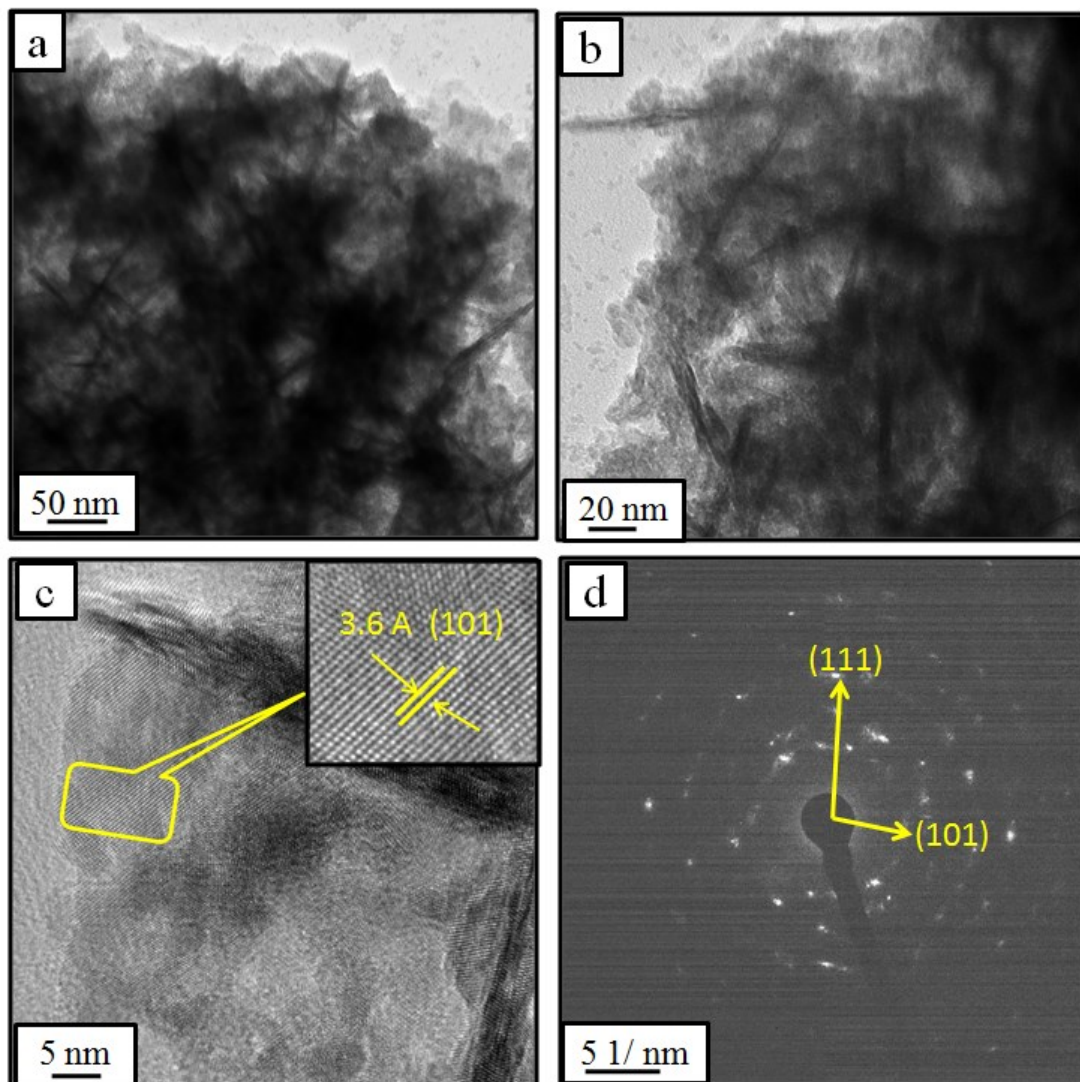
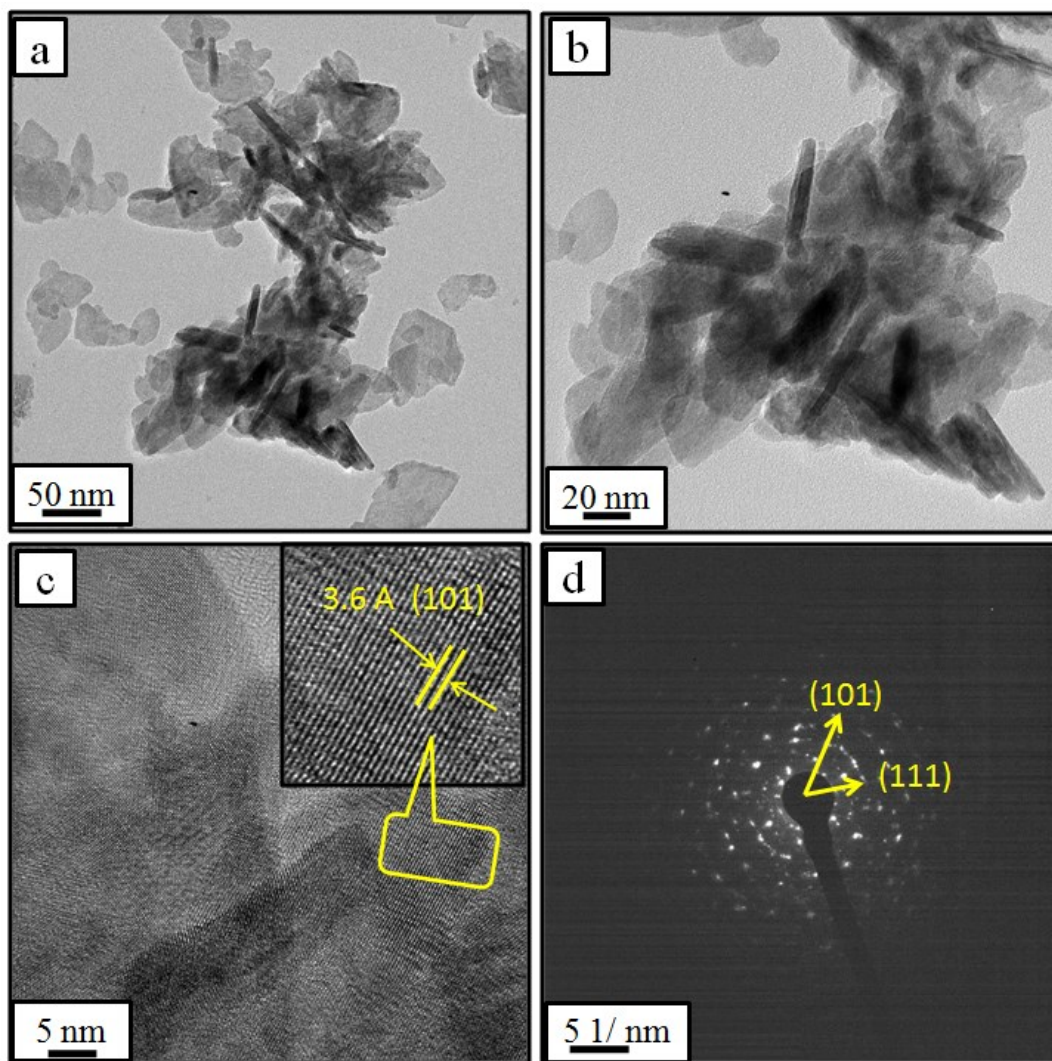


Figure S2: FESEM images of Sn₃O₄ samples at 150°C 24 h (a, b) SP-0@150 (c,d) SP-2@150 at low and high magnifications



FigureS3: FETEM images of SP-0@150 at low and high magnifications



FigureS4: FETEM images of SP-0@180 at low and high magnifications

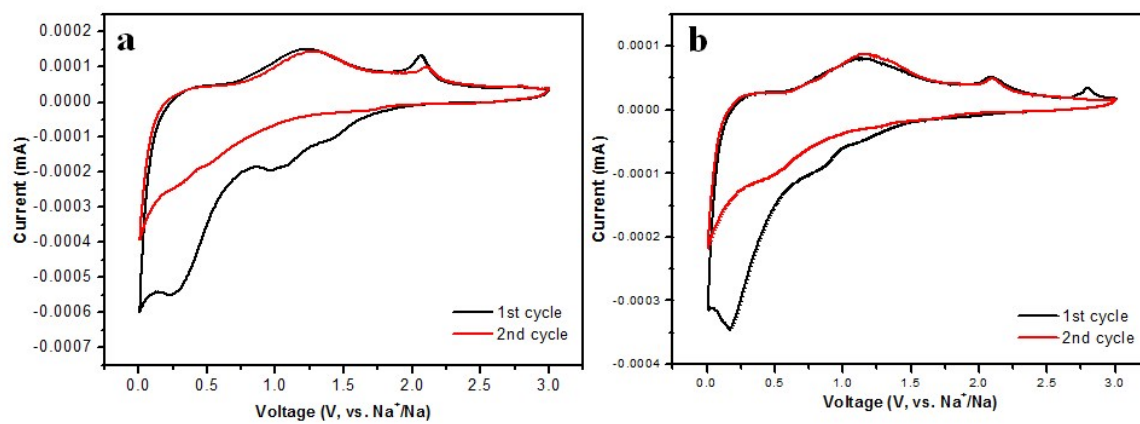


Figure S5: Cyclic Voltammetry curves of (a) SP-0@150 and (b) SP-2@150 at a scan rate of 0.1 mVs^{-1}

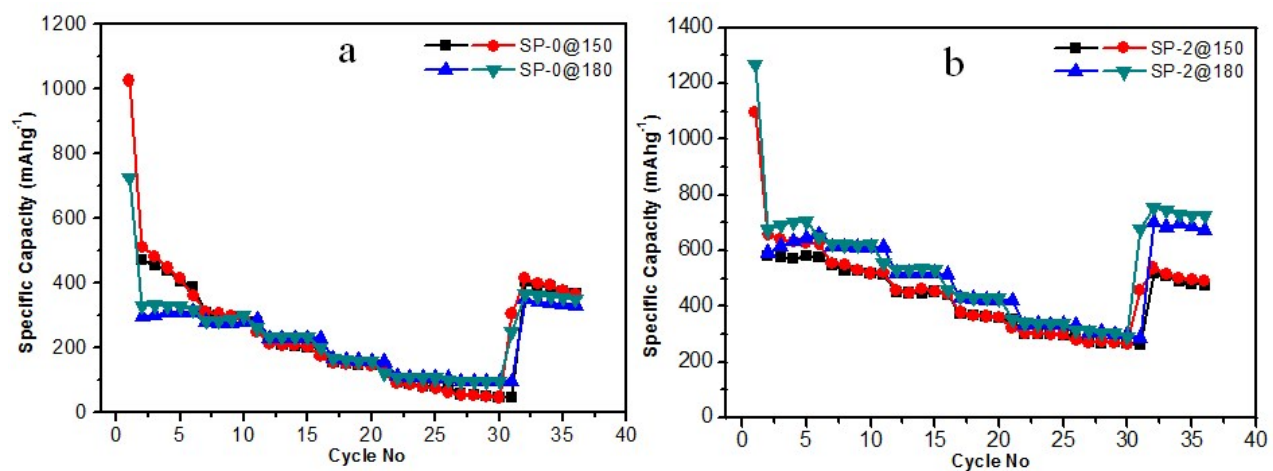


Figure S6: The rate performance at different current densities of (a) pristine Sn₃O₄ (SP-0) (b) P-F@Sn₃O₄ (SP-2)