## **Supplementary information**

## Detailed investigation of a NaTi<sub>2</sub>(PO<sub>4</sub>)<sub>3</sub> anode prepared by

## pyro-synthesis for Na-ion batteries

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Fig. S1. TGA analysis of the intermediate under  $N_2$  at a heating rate of 5 °C min<sup>-1</sup>. (Insets show XRD patterns and FESEM images of the intermediate and final product, respectively.)



Fig. S2. TEM and HRTEM images of p-NTP NPs (a, b and c) and NTP powders (d, e and f),

respectively.



Fig. S3. (a) Nitrogen sorption isotherm and the inset shows pore size distribution of as-prepared samples; (b) Schematic illustration for the penetration of the electrolyte and porosity of NTP powders and p-NTP NPs, respectively.



Fig. S4. TGA analysis of as-prepared materials under air at a heating rate of 5 °C min<sup>-1</sup>.



Fig. S5. XRD patterns of p-NTP NPs and NTP powders before and after the cycles, respectively.



Fig. S6. SEM images of p-NTP NPs (a and b) and NTP powders (c and d) before and after the

cycles, respectively.



Fig. S7. TEM and HRTEM images of p-NTP NPs (a and b, the inset shows Fast Fourier Transforms (FFT) of the HRTEM image) and NTP powders (c and d) after the cycles.