Supplementary information

Detailed investigation of a NaTi$_2$(PO$_4$)$_3$ anode prepared by pyro-synthesis for Na-ion batteries

Yubin Niu,$^{a,b}$ Maowen Xu,$^{a,b,*}$ Yan Zhang,$^{a,b}$ Jin Han,$^{a,b}$ Yan Wang$^{a,b}$ and Chang Ming Li$^{a,b,c,*}$

Fig. S1. TGA analysis of the intermediate under N$_2$ at a heating rate of 5 °C min$^{-1}$. (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⁻¹.

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.