Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

Supporting Information

for

In situ monitoring of TiO_2(B)/anatase nanoparticles formation and application in Li-ion and Na-ion batteries

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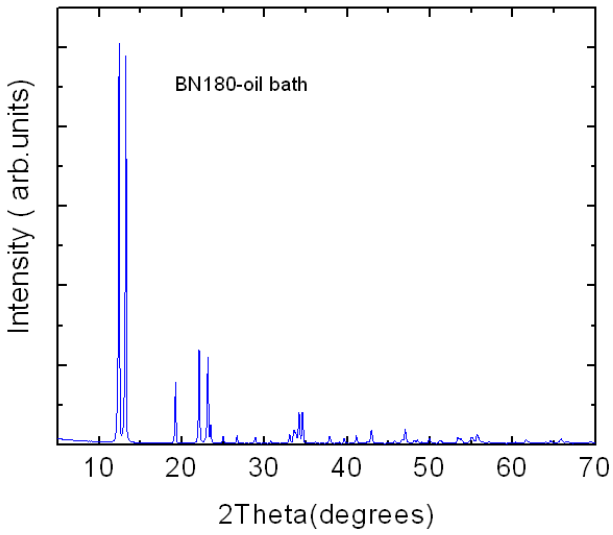
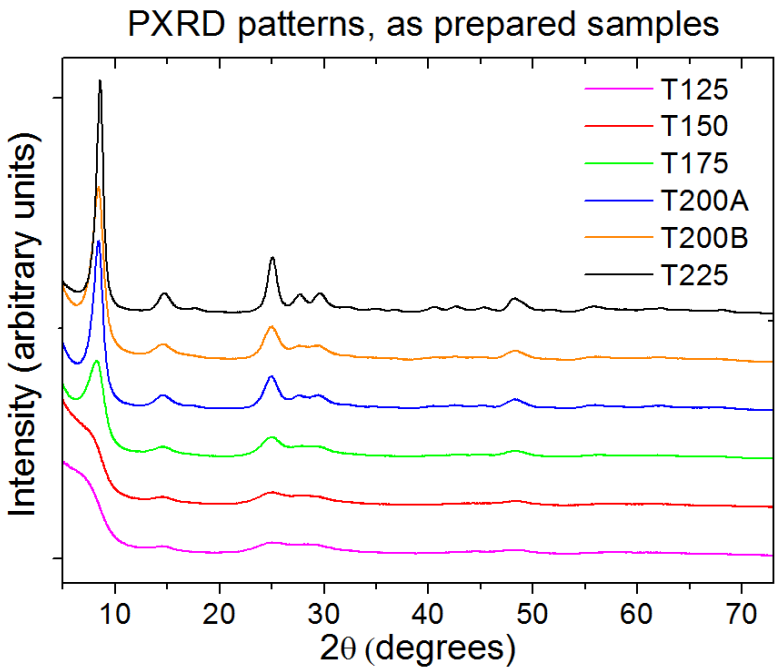
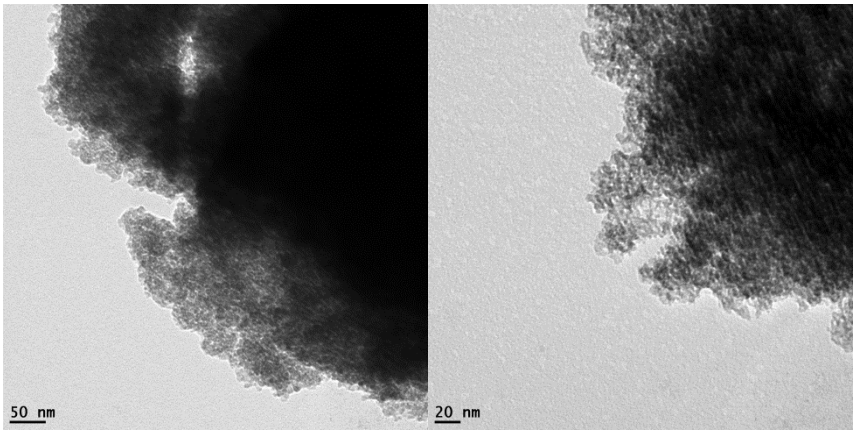
1. PXRD of sample without NH_4OH
2. Full PXRD of temperature series
3. Additional TEM pictures
4. Photo of samples
5. TG/DTA measurements
6. IR-spectra of as-prepared samples
7. Additional electrochemical properties of Na-cells



S.I. 1 PXRD of sample with no addition of NH_4OH – probably large crystallites of a Ti-organic compound.

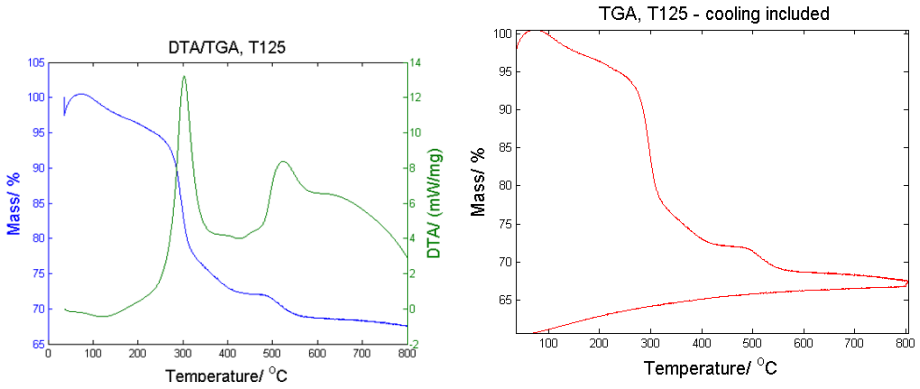


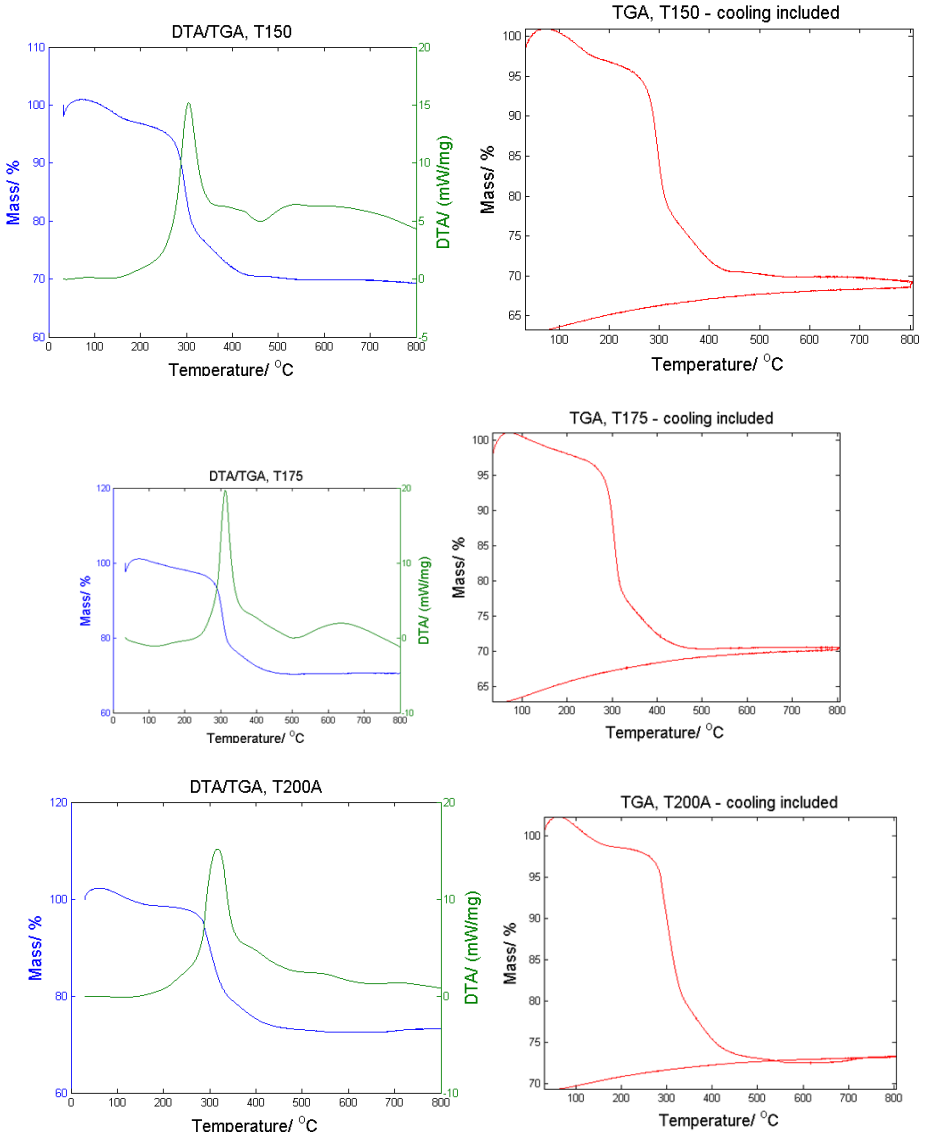
S.I.2 PXRD of temperature series including low angle reflections



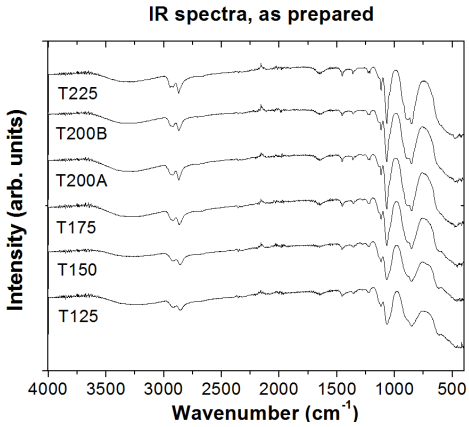
S.I.3. TEM pictures of ***Left:*** T225-300 and ***Right:*** T225-350.

S.I.4. Photos of samples ***Left:*** as prepared T225 dried at 150°C. ***Middle:*** The T225 sample heated to 600°C in air. ***Right:*** the T225 sample with added NaOH heated to 800 °C in oxygen-deficient atmosphere during in situ diffraction.

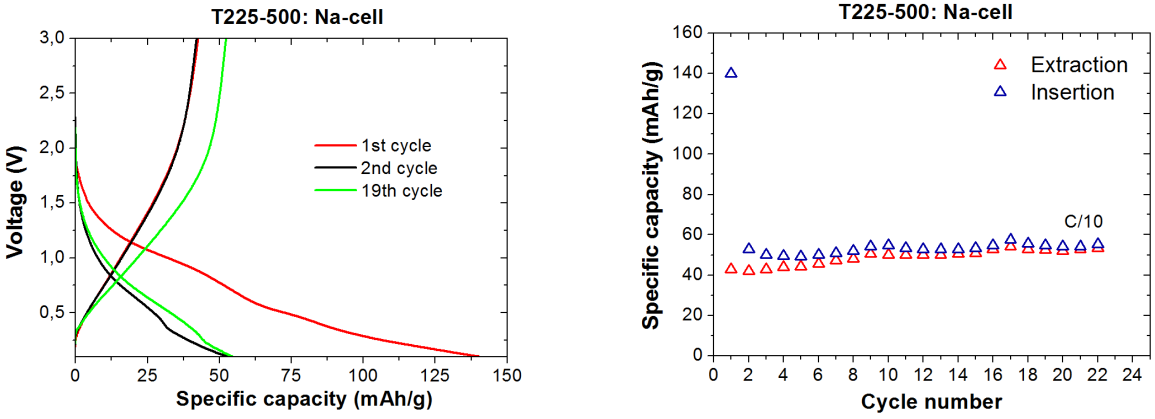




S.I.5. TG/DTA measurements on samples T-125 to T-200.



S.I.6. IR-spectra of as-prepared samples



S.I. 7 Electrochemical performance of Na-cells with the working electrode made from the T225-500 sample.