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**Unravelling the Effect of Carbon Nanotubes Oxidation on Solid State Decomposition of Ammonia
Borane/Carbon Nanotubes Composites**

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Figure S1: Survey spectra XPS spectra of xCNTs.

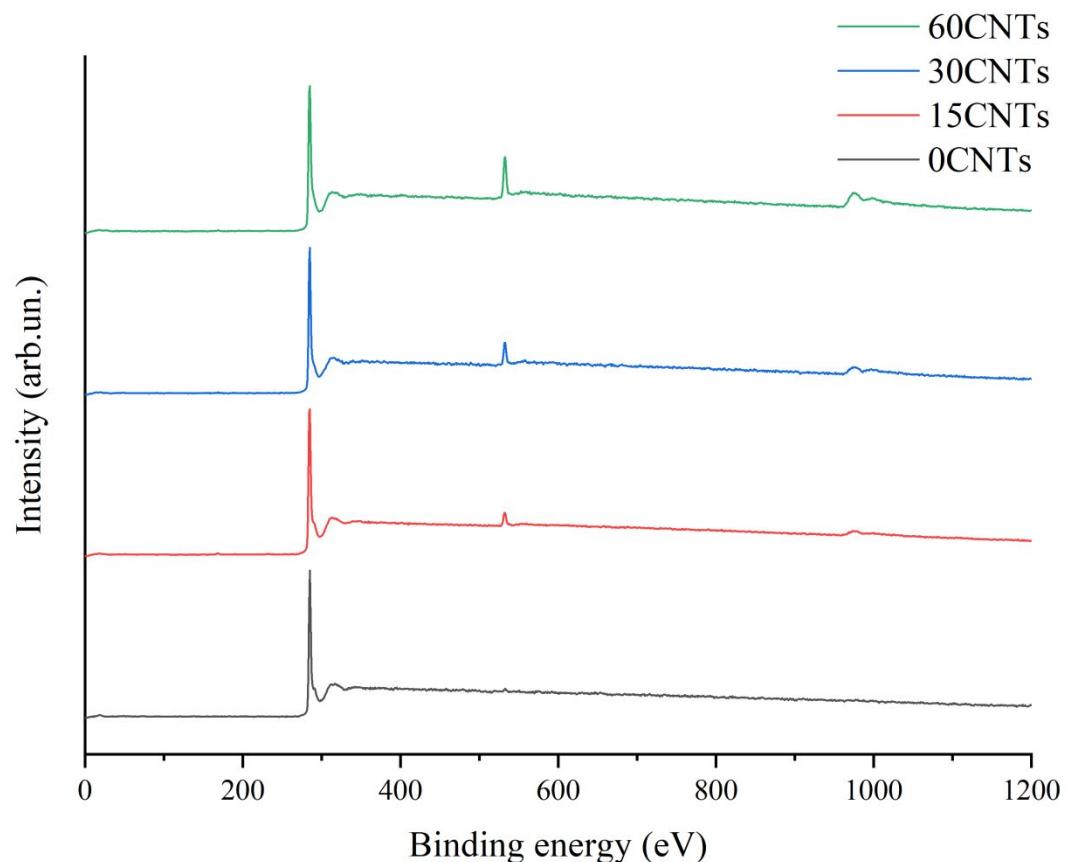


Figure S2: Fitted spectra XPS spectra of C 1s of a)0CNTs, b)15CNTs, c)30CNTs and d)60CNTs and O 1s of e)0CNTs, f)15CNTs, g)30CNTa and h)60CNTs.

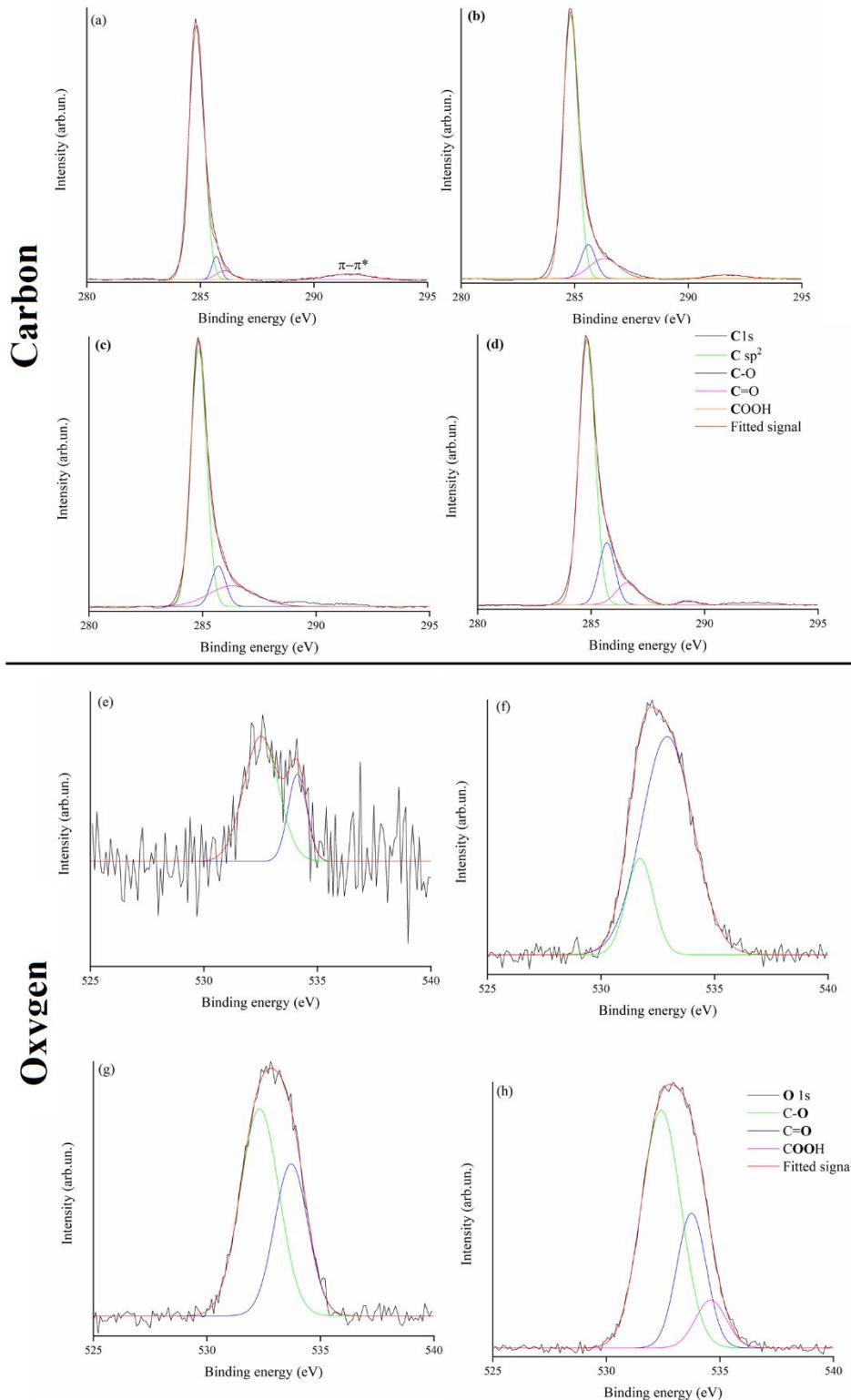


Figure S3: Fitted Raman spectra of xCNTS in the range from 500 cm^{-1} up to 4000 cm^{-1} .

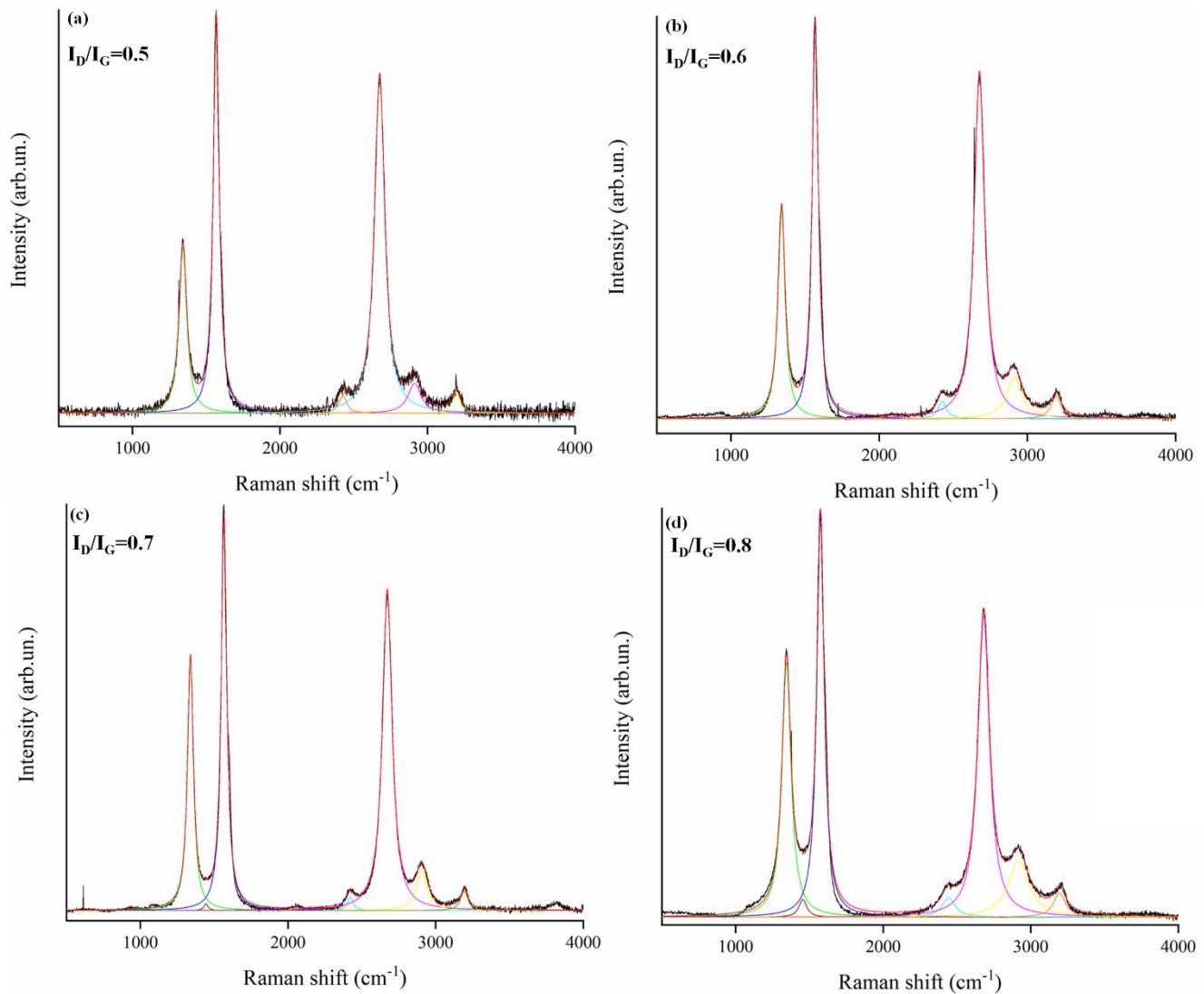


Figure S4: TGA curves of xCNTs in nitrogen from 30°C up top 900°C.

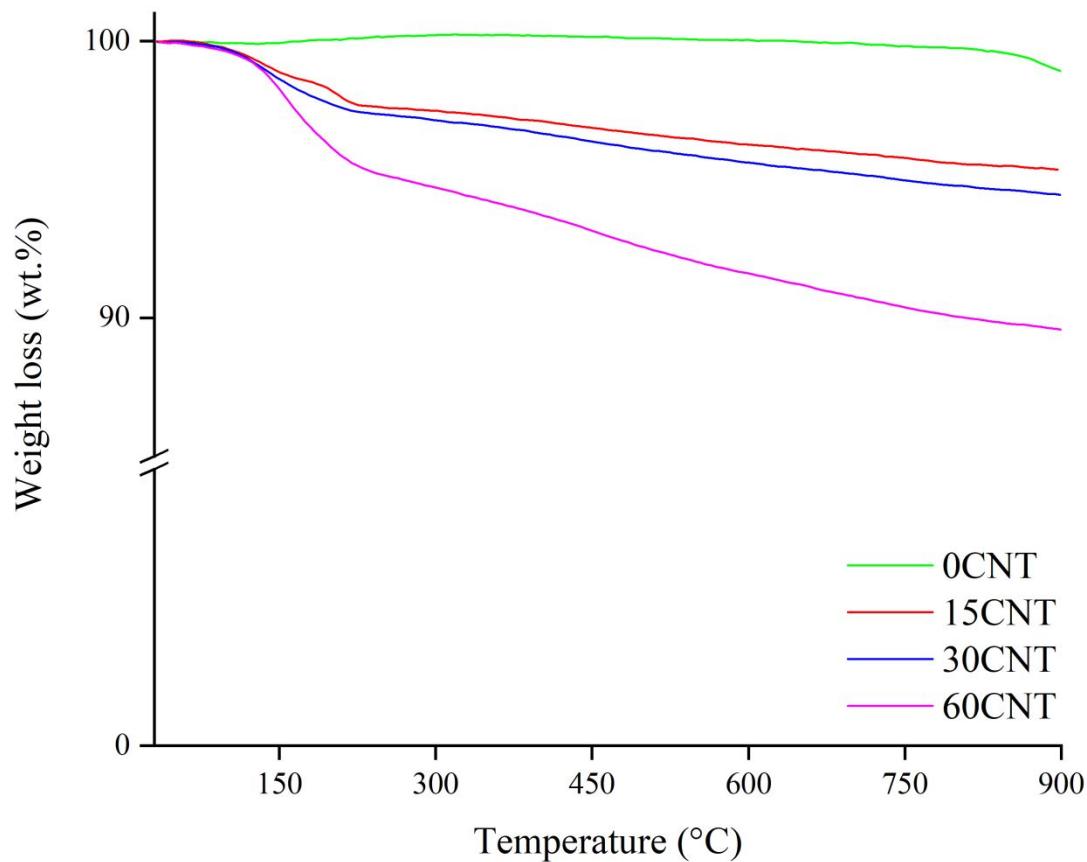


Figure S5: FT-IR (ATR mode) spectra of AB@xCNTS in the range from 500 cm^{-1} up to 4000 cm^{-1} with a ratio of xCNTs/AB ratio of a) 0.1 and b) 1.

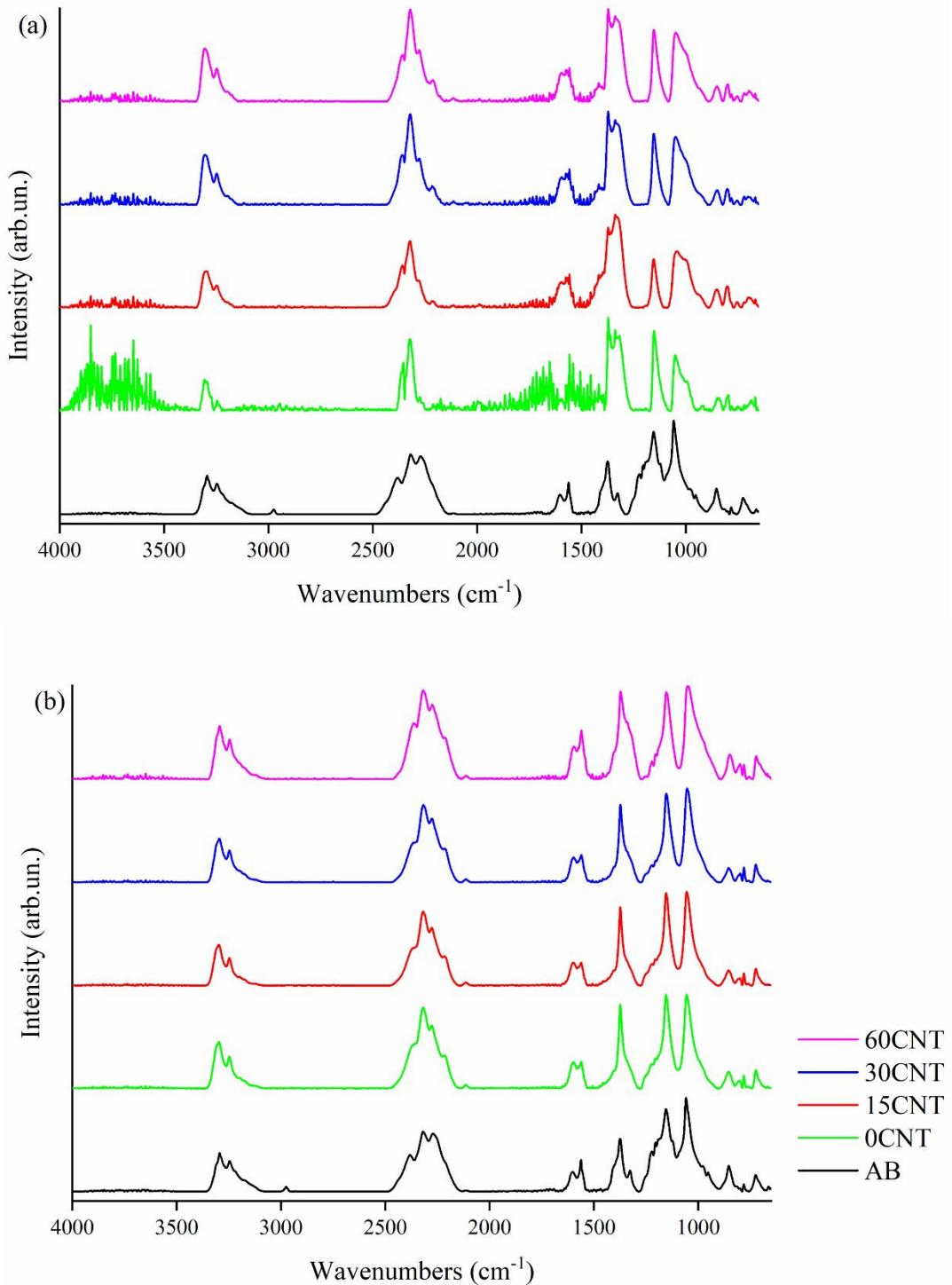


Figure S6: Kissinger plots for non-isothermal DSC runs at heating rates of 2, 5, and 10 °C min⁻¹ and activation energies of a) AB@xCNTs (xCNTs/AB ratio of 0.1) and b) AB@xCNTs (xCNTs/AB ratio of 1).

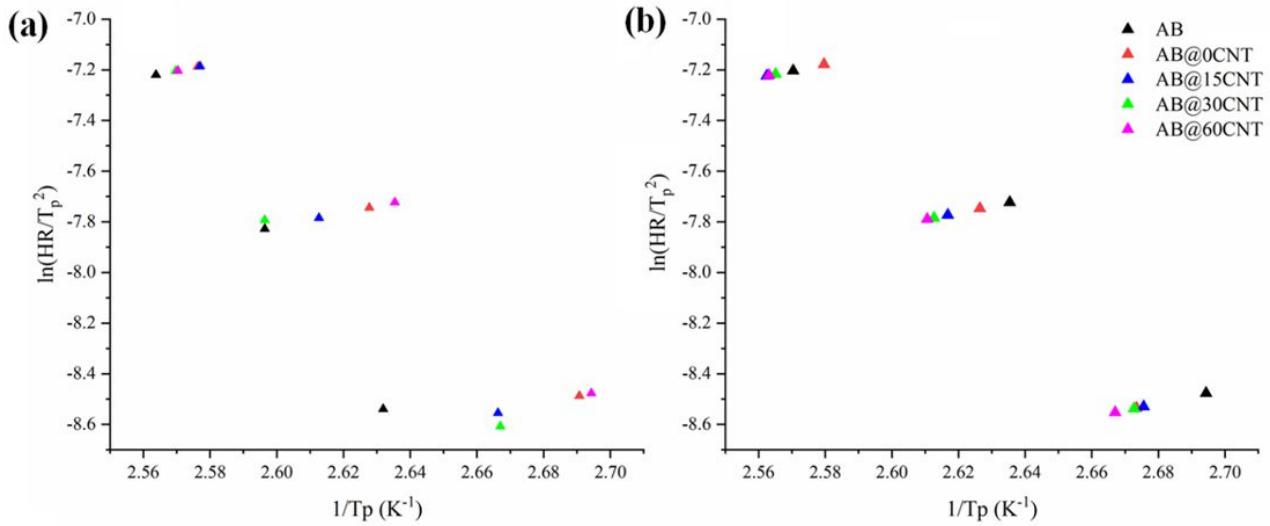


Figure S7: TGA curves of a) AB@xCNTs (xCNTs/AB ratio of 0.1) and b) AB@xCNTs (xCNTs/Ab ratio of 1)

