

Fig. S1 XRD patterns (a) and FTIR spectra (b) of the two materials extracted from the working electrodes that underwent 1000 and 2000 charge-discharge cycles, respectively.



Fig. S2 XRD patterns (a) and FTIR spectra (b) of the Ni(OH)₂ samples originating from the $Ni_3(NO_3)_2(OH)_4$ samples prepared respectively at 20 and 40 min.