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Figure S1. Typical AFM image of the  $Nb_2O_5$  nanosheet spread on a Si wafer



Figure S2. Typical XPS  $Nb_{3d5/2}$  core level spectra of bare NCM electrodes (black) and  $Nb_2O_5$  nanosheet coated NCM electrodes (blue)



**Figure S3.** Changes in XPS  $Nb_{3d5/2}$  core level spectra of NCM electrodes with different  $Nb_2O_5$  nanosheet coating conditions as a function of Ar-sputtering times: (a) bare NCM, (b) 0.1wt%, (c) 0.5wt%, (d) 1 wt%.



Figure S4. FT-IR spectra of bare (black) and  $Nb_2O_5$  nanosheet coated (blue) NCM electrodes after 100th cycles



Figure S5. XPS  $O_{1s}$  core level profiles of bare (a) and  $Nb_2O_5$  nanosheet coated (b) NCM electrodes after 100th cycles.