

Key role of microscopic structure and graphene sheets-high homogenization in the high rate-capability and cycling stability of Ni-Co LDH

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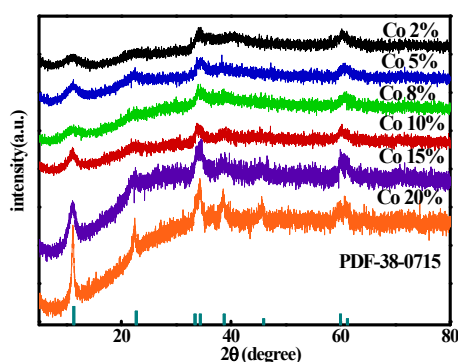


Fig. S1 XRD patterns of Ni-Co LDH samples prepared with different cobalt ions percentages in the absence of PVP and graphene.

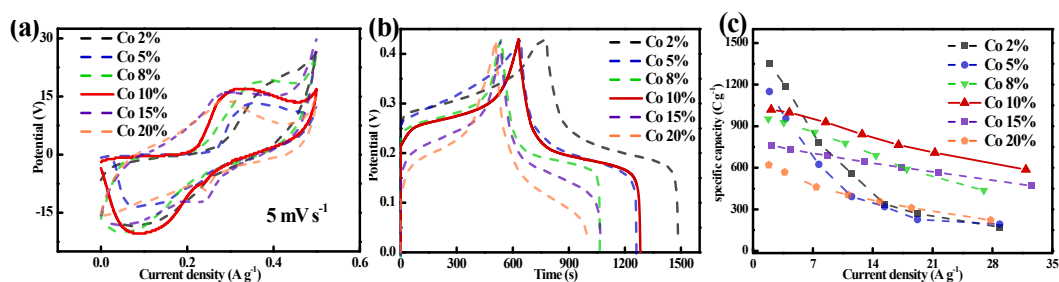


Fig. S2 (a) CV curves at 10 mV s⁻¹ for the Ni-Co LDH samples prepared with different cobalt ions percentages in the absence of PVP and graphene; (b) GCD curves at current density of 2.5 A g⁻¹ for these samples; (c) curves of specific capacity vs. current density for these Ni-Co LDH samples.

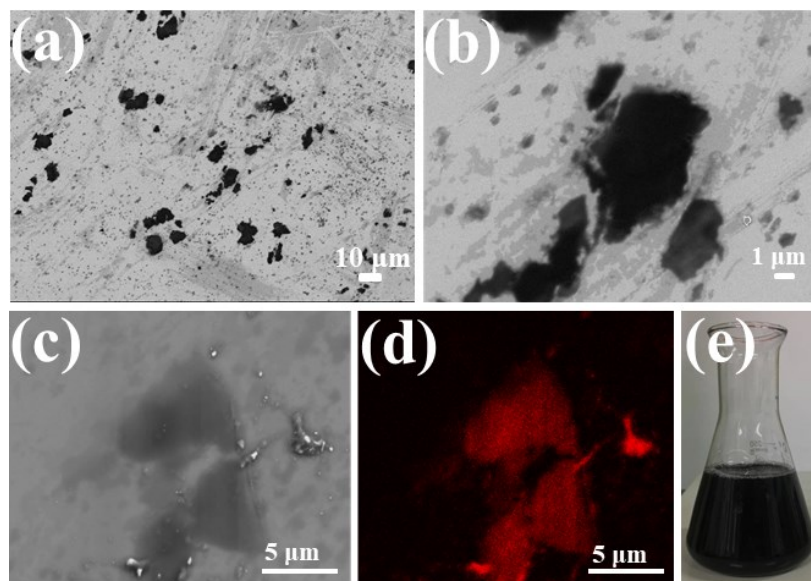


Fig. S3 (a-c) FE-SEM images of graphene and (d) EDS carbon elemental mapping of graphene; (e) optical image of graphene suspension.

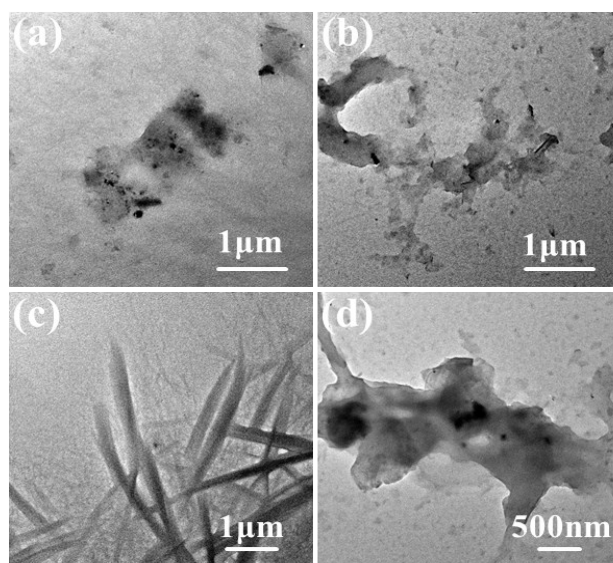


Fig. S4 (a-d) TEM images of graphene.

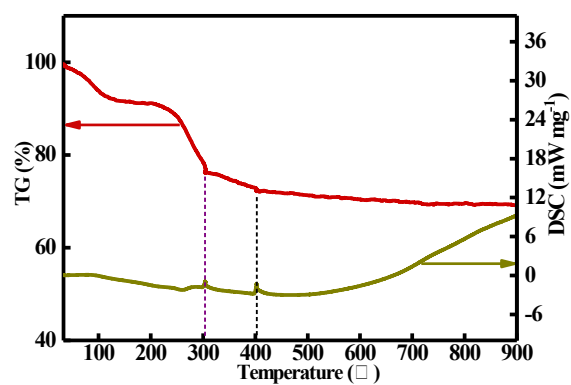


Fig. S5 TG/DSC curves of sample PVP/G Ni-Co LDH.

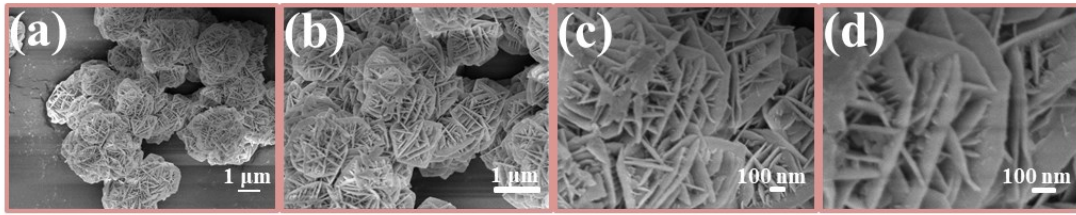


Fig. S6 (a-d) FE-SEM images of sample Non-HSM-PVP/G Ni-Co LDH.

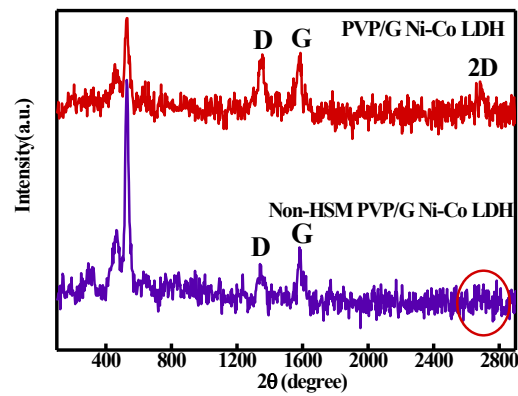


Fig. S7 Micro-Raman spectra of samples PVP/G Ni-Co LDH and Non-HSM-PVP/G Ni-Co LDH.

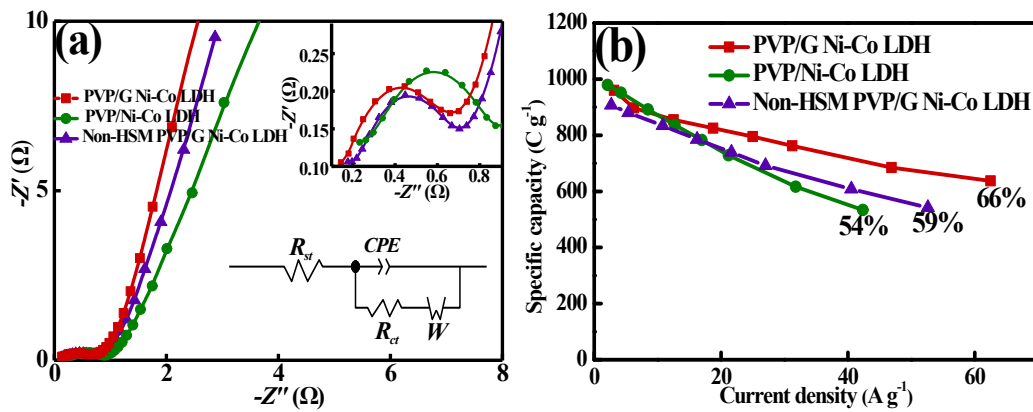


Fig. S8 (a) Nyquist plots and (b) curves of specific capacity vs. current density for samples PVP/Ni-Co LDH, PVP/G Ni-Co LDH and Non-HSM PVP/G Ni-Co LDH.