Supplementary Information

Structural evolution and sulfuration of nickel cobalt hydroxide from

2D to 1D on 3D diatomite for supercapcitors

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Fig. S1 SEM images of different NiCo-LDH@DE: (a-b) Ni3Co1-LDH@DE; (c-d) Ni2Co1-LDH@DE; (e-f) Ni1Co1-LDH@DE



Fig. S2 XRD pattern of Ni3Co1-LDH@DE、Ni2Co1-LDH@DE、Ni1Co1-LDH@DE and DE



Fig.S3 (a) CV curves at 50 mV s⁻¹, (b) GCD curves at 1 A g⁻¹, Specific capacitance under different current density, (c) Nyquist plots of Ni3Co1-LDH@DE、Ni2Co1-LDH@DE and Ni1Co1-LDH@DE



Fig.S4 (a) CV curves at 50 mV s⁻¹, (b) GCD curves at 1 A g⁻¹, (c-d) Nyquist plots, (e) Specific capacitance under different current density, (f) Coulomb efficiency under different current density of Ni3Co1-OH@DE、Ni2Co1-OH@DE and Ni1Co1-OH@DE



Fig.S5 Comparison of electrochemical performance of NiCo-OH@DE 和 NiCo-LDH@DE



Fig.S6 Comparison of electrochemical properties of samples before and after vulcanization, (a-b) Ni3Co1-OH@DE 和 Ni3Co1S@DE, (c-d) Ni2Co1-OH@DE 和 Ni2Co1S@DE, (e-f) Ni1Co1-OH@DE 和 Ni1Co1S@DE, (g-h) Ni₂Co1-LDH@DE 和 Ni2Co1S@DE-NS