Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting materials:

$NiCo_2S_4$/tryptophan-functionalized graphene quantum dots nanohybrid for high-performance supercapacitors

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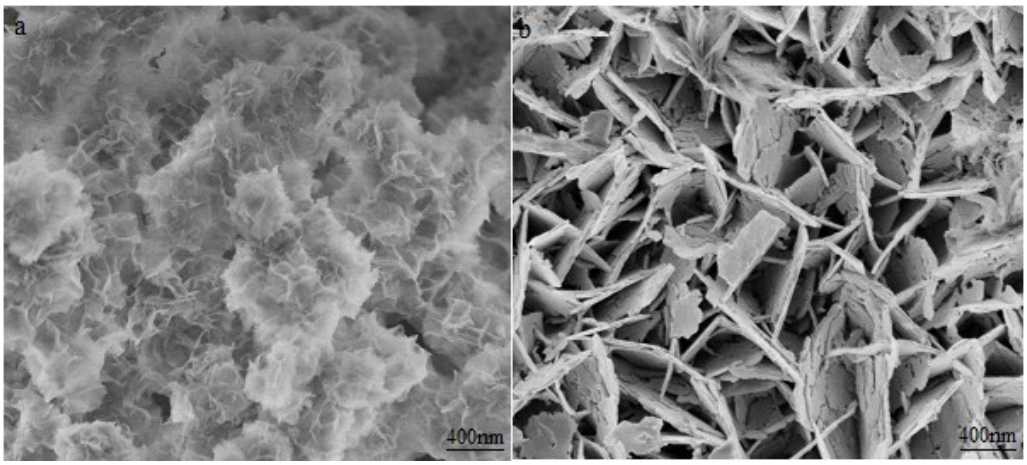

Fig. s1 SEM images of the Ni/Co-LDH (a) and $NiCo_2S_4$ (b) prepared by classical two-step method

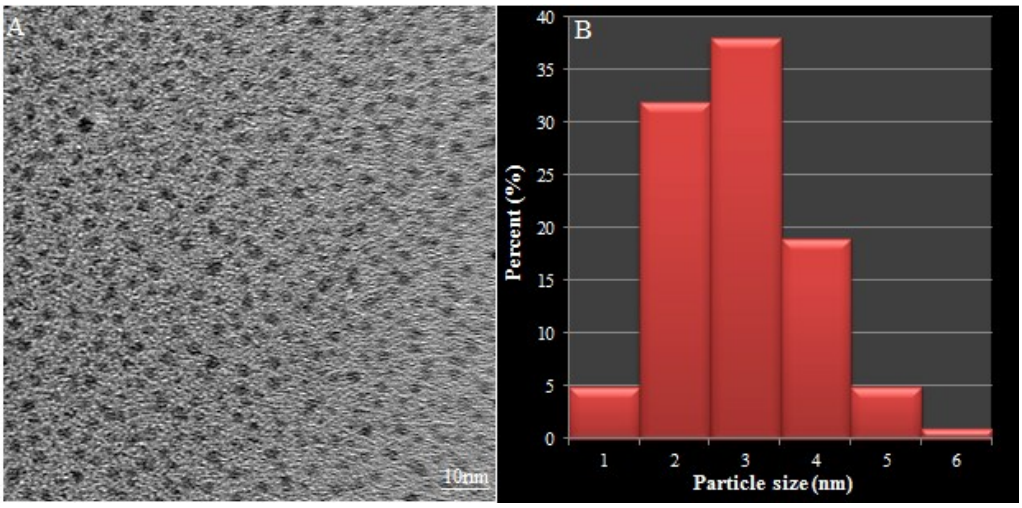

Fig. s2 The TEM image (A) and particle size ditribution of Trp-GQD

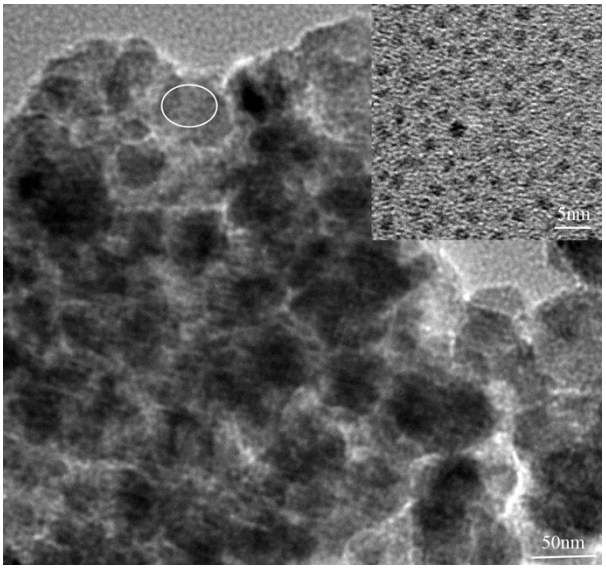

Fig. s3 TEM image and TEM iamge (insert) of the $NiCo_2S_4$/Trp-GQD nanohybrid

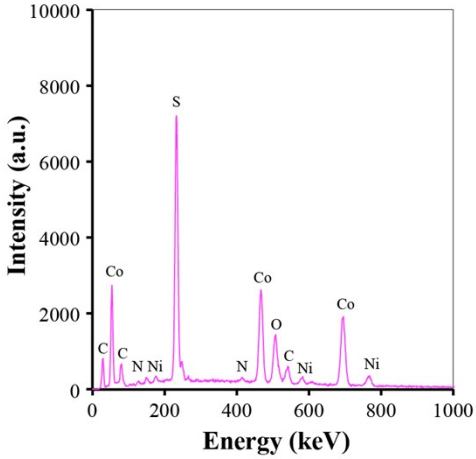

Fig. s4 EDS patterns of $NiCo_2S_4$/Trp-GQD nanohybrid

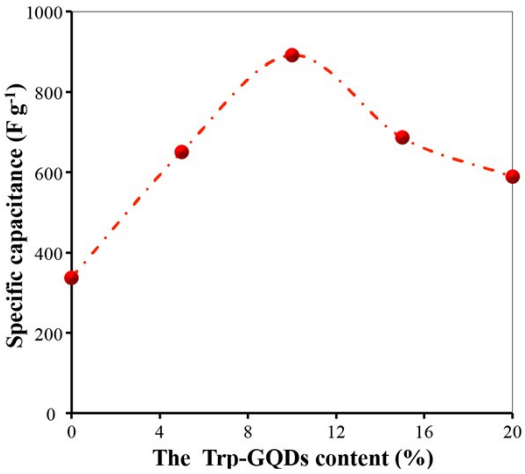

Fig. s5 The relationship curve of the specific capacitance with the Trp-GQD content for $NiCo_2S_4$/Trp-GQD electrode using a three-electrode test system in a 3 M KOH at the current density of 3 A g^{-1}

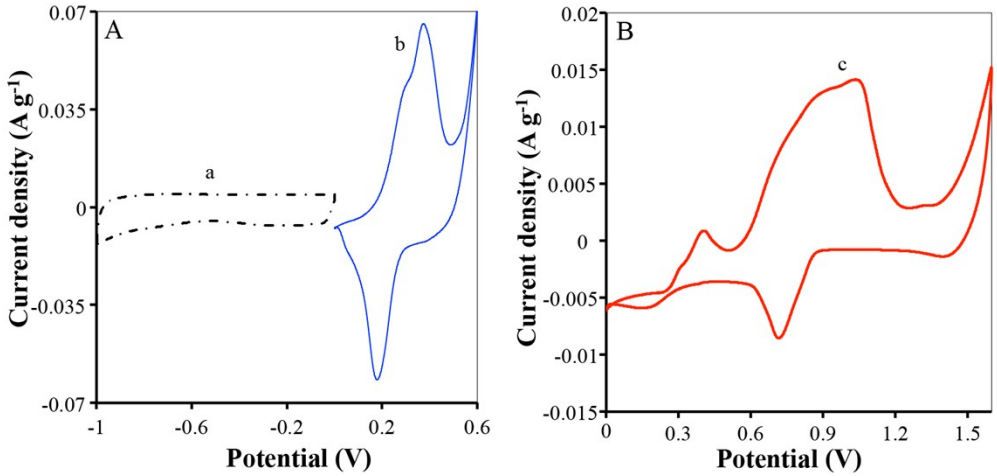

Fig. s6A: CV curves of single AC electrode (a) and $NiCo_2S_4$ electrode in a 3 M KOH aqueous solution at the scan rate of 10 mV s^{-1} using a three-electrode test system. B: CV curve of the $NiCo_2S_4$/Trp-GQDs/AC cell in a 3 M KOH aqueous solution at the scan rate of 10 mV s^{-1}

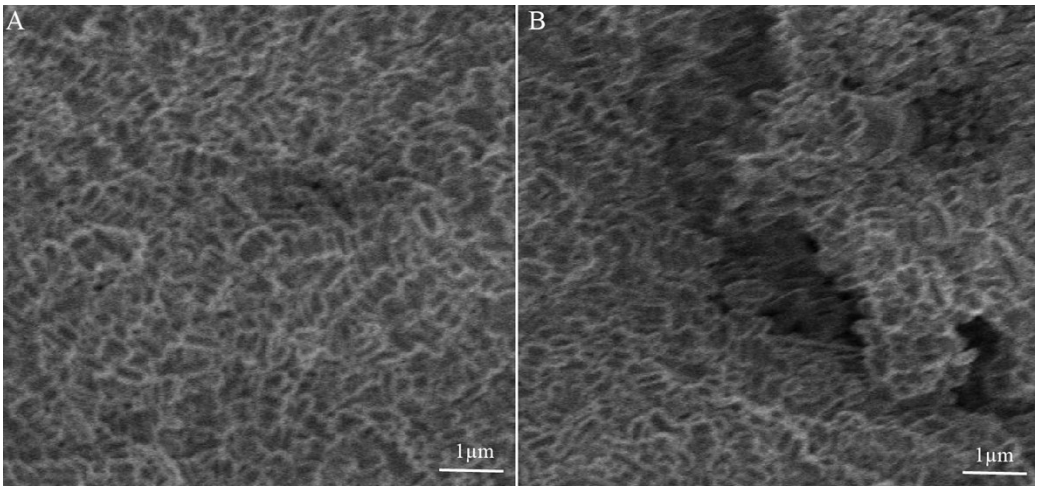

Fig. s7 SEM images of the $NiCo_2S_4$/Trp-GQD (A) and $NiCo_2S_4$-two/Trp-GQD (B) after 5000 cycles

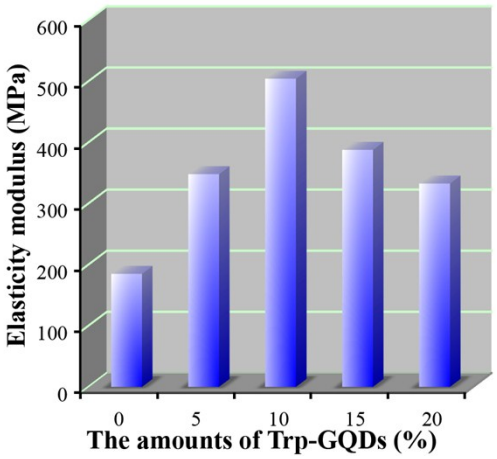

Fig. s8 The eleasticity modulus of the CMC film with different amounts of Trp-GQD