## **Supporting information**

## Carbon doped molybdenum disulfide nanosheets stabilized on graphene for hydrogen evolution reaction with high electrocatalytic ability

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## Figure captions:

Fig. S1 XRD patterns of GO (a), and XRD patterns of C/MoS<sub>2</sub>@G<sub>1</sub> (I), C/MoS<sub>2</sub>@G<sub>2</sub> (II), C/MoS<sub>2</sub>@G<sub>3</sub> (III) and C/MoS<sub>2</sub>@G<sub>4</sub> (IV) (b).

Fig. S2 FESEM images of C/MoS<sub>2</sub>@G<sub>1</sub>, C/MoS<sub>2</sub>@G<sub>2</sub>, C/MoS<sub>2</sub>@G<sub>3</sub> and C/MoS<sub>2</sub>@G<sub>4</sub>.

Fig. S3 TEM images of graphene (a),  $C/MoS_2@G_1$  (b),  $C/MoS_2@G_2$  (c),  $C/MoS_2@G_3$  (d) and  $C/MoS_2@G_4$  (e).

Fig. S4 Polarization curves of  $C/MoS_2@G_1$ ,  $C/MoS_2@G_2$ ,  $C/MoS_2@G_3$  and  $C/MoS_2@G_4$  nanohybrids.

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Fig. S3 TEM images of graphene (a),  $C/MoS_2@G_1$  (b),  $C/MoS_2@G_2$  (c),  $C/MoS_2@G_3$  (d) and  $C/MoS_2@G_4$  (e).



Fig. S4 Polarization curves of C/MoS<sub>2</sub>@G<sub>1</sub>, C/MoS<sub>2</sub>@G<sub>2</sub>, C/MoS<sub>2</sub>@G<sub>3</sub> and C/MoS<sub>2</sub>@G<sub>4</sub> nanohybrids.

