Supporting Information

Unveiling the Effect of the Structure of Carbon Material on the Charge Storage Mechanism in MoS₂-Based Supercapacitors

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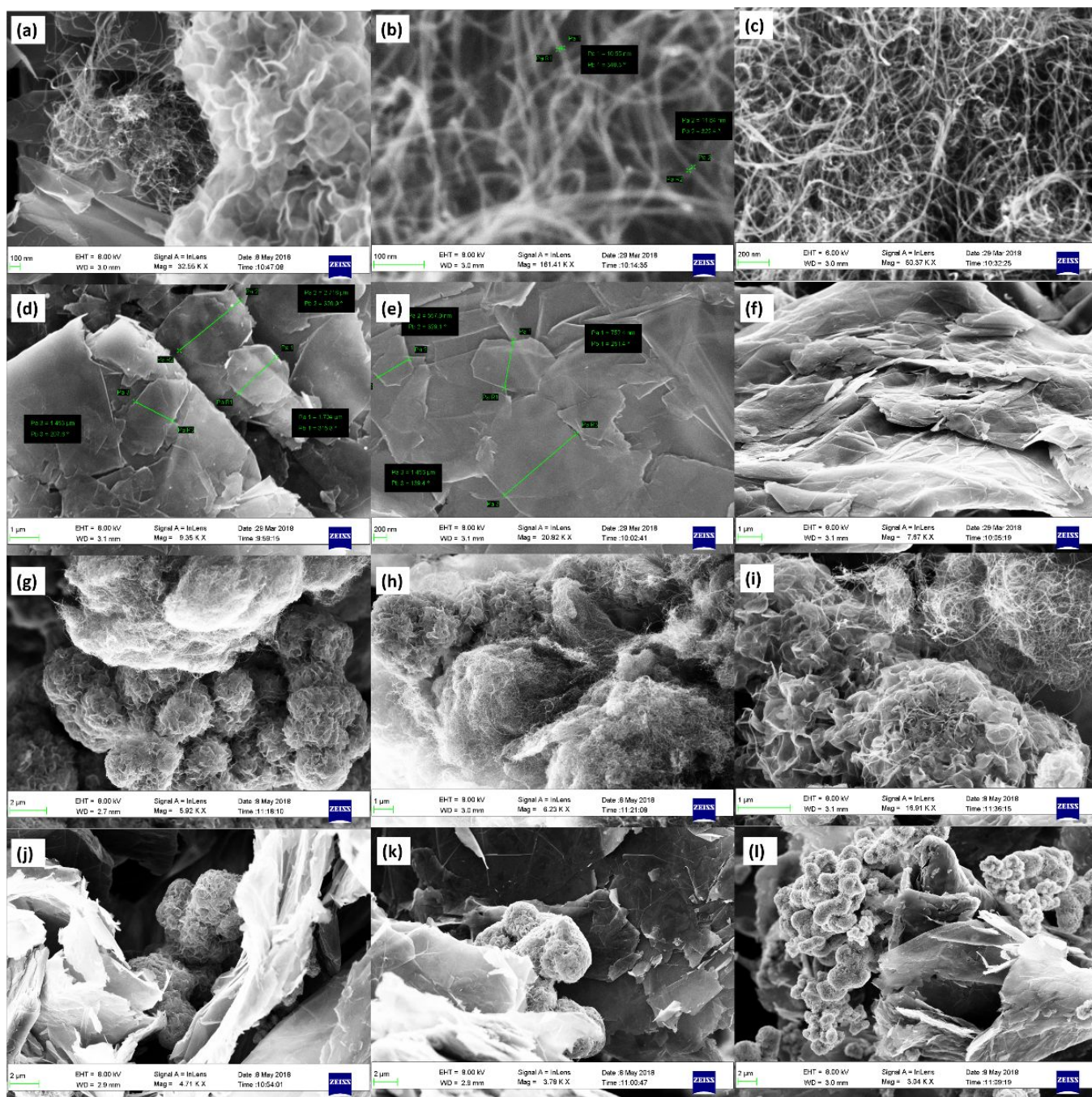
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Figure S1 SEM images of **(a)** MCG, **(b)-(C)** CNT, **(d)-(f)** GNF, **(g)** MCNT 1:1, **(h)** MCNT 1:3, **(i)** MCNT 3:1, **(j)** MGNF 1:1, **(k)** MGNF 1:3, **(l)** MGNF 3:1.

Table S1 Active surface area of the studied composite active materials.

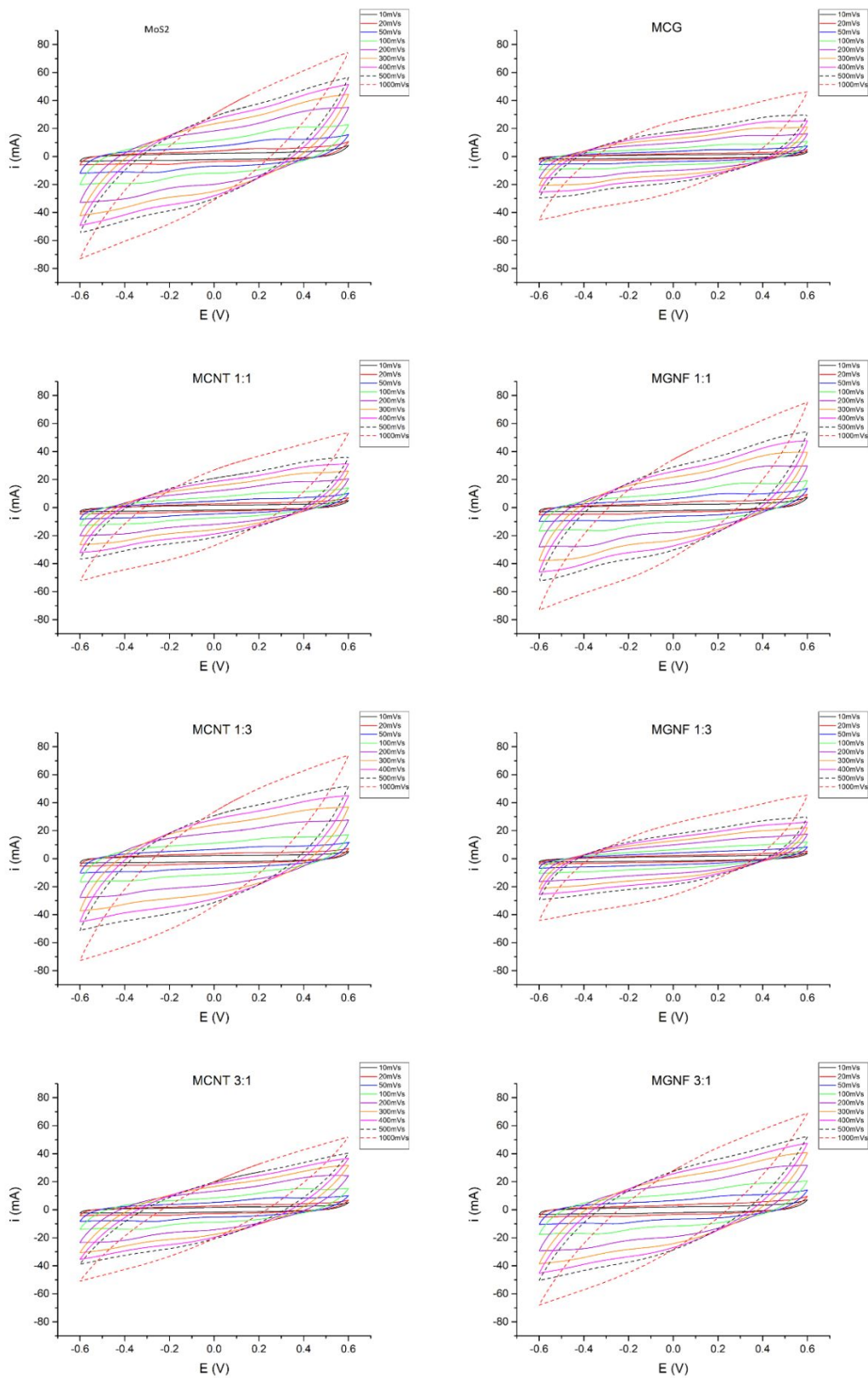| Material	BET value m²/g
MoS_2	6.9851
MCNT1:1	128.6986
MCNT1:3	180.6995
MCNT3:1	35.3578
MGNF1:1	4.4570
MGNF1:3	5.8126
MGNF3:1	6.0841
MCG	95.3127

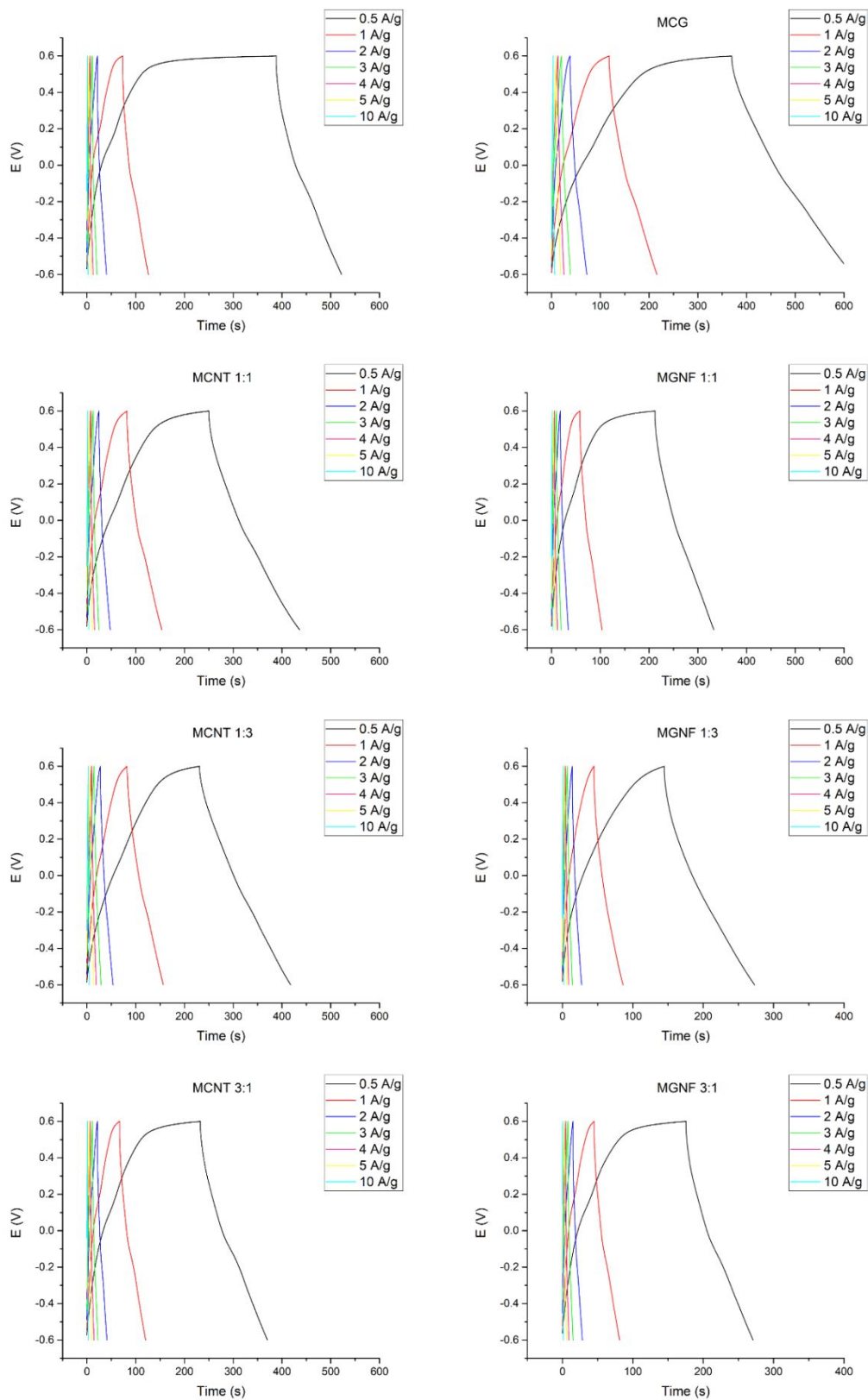**Figure S2** CV of the studied materials at different scan rates.

Figure S3 Charge/discharge diagrams for the studied materials at different current densities.

Table S2 Resistance parameters of the fitted equivalent circuit for the studied materials. R1 is the resistance of the solution, R2 the resistance of the

Parameter	MoS$_2$	MCG	MCNT 1:1	MCNT 1:3	MCNT 3:1	MGNF 1:1	MGNF 1:3	MGNF 3:1
R1	5.858	4.999	4.944	4.15	6.858	3.655	4.979	5.314
R2	94.23	98.37	105.4	476.4	89.77	181.2	65.64	240.9
W	2.297	7.131	7.169	3.876	4.986	4.972	4.597	3.407