Supporting information

Facile and Scalable Fabrication Method of Scrolled Graphene/Boron Nitride-based Van der Waals Superlattices Heterostructure Materials for Highly Stable Supercapacitor Electrode Application

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Table S1. Atomic content of GO, O-BN, G/BN, G/Fe/BN, and G/Fe/BN(NS) as determined by XPS (in at %).

Sample	Atomic content (%)				
	C	B	N	O	Fe
O-BN	10.34	45.4	39.43	4.83	N/A
GO	77.29	N/A	4.64	17.89	N/A
G/BN	60.56	8.72	4.26	26.47	N/A
G/Fe/BN	59.40	3.87	7.67	28.00	N/A
G/Fe/BN(NS)	57.03	5.80	8.96	28.14	0.07

*N/A: Not available

Table S2. Specific mass capacitance (C_m) and specific volume capacitance (C_v) of GO, G/Fe/BN, and G/Fe/BN(NS) with various current density.

Current density (A·g⁻¹)	Specific mass capacitance (F·g⁻¹)			Specific volume capacitance (F·cm⁻³)		
	GO	G/Fe/BN	G/Fe/BN(NS)	GO	G/Fe/BN	G/Fe/BN(NS)
0.5	53	129	207	23.69	51.73	83.01
1.0	41	93	189	18.33	37.29	75.79
2.0	36	84	171	16.09	33.68	68.57
3.0	33	72	162	14.75	28.87	64.96
4.0	32	66	156	14.31	26.47	62.55
5.0	30	59	153	13.41	23.66	61.53

The specific volume capacitance (C_v) was calculated according to the following equation[1]:

$$C_v = C_m \times \rho$$

Where C_m is the specific mass capacitance and ρ is density of electrode.

(1) J. Zhou, J. Lian, L. Hou, J. Zhang, H. Gou, M. Xia, Y. Zhao, T.A. Stobel, L .Tao, F. Gao, *Nat. Commun.,* 2015, **6**, 8503.
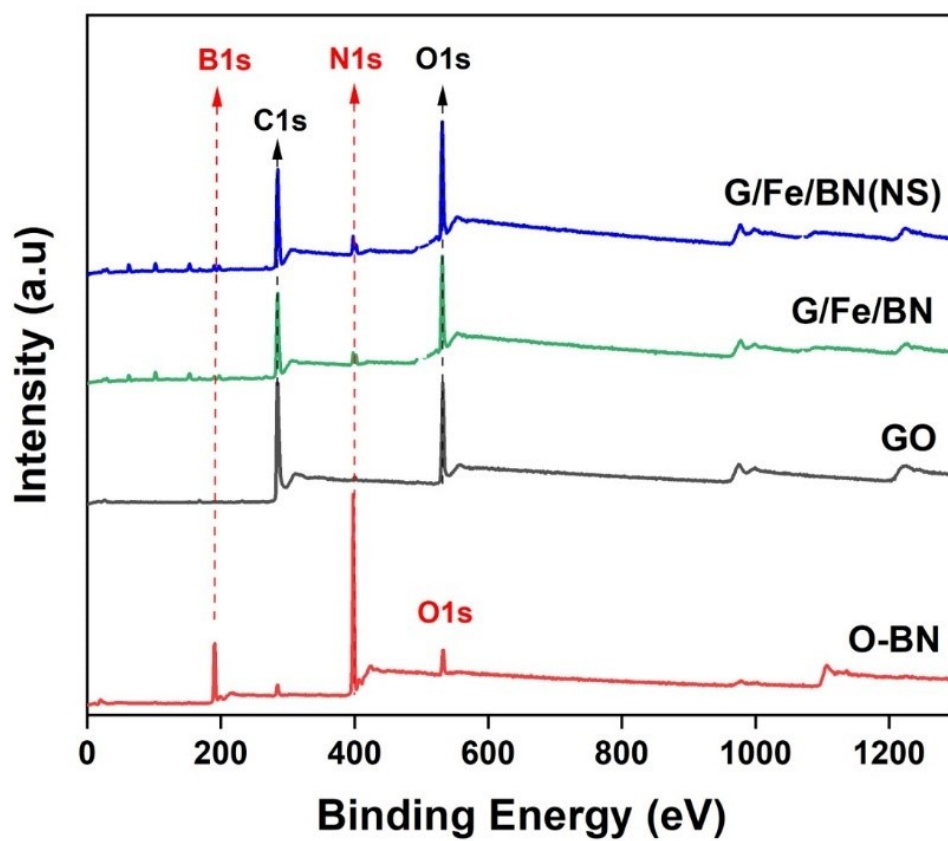
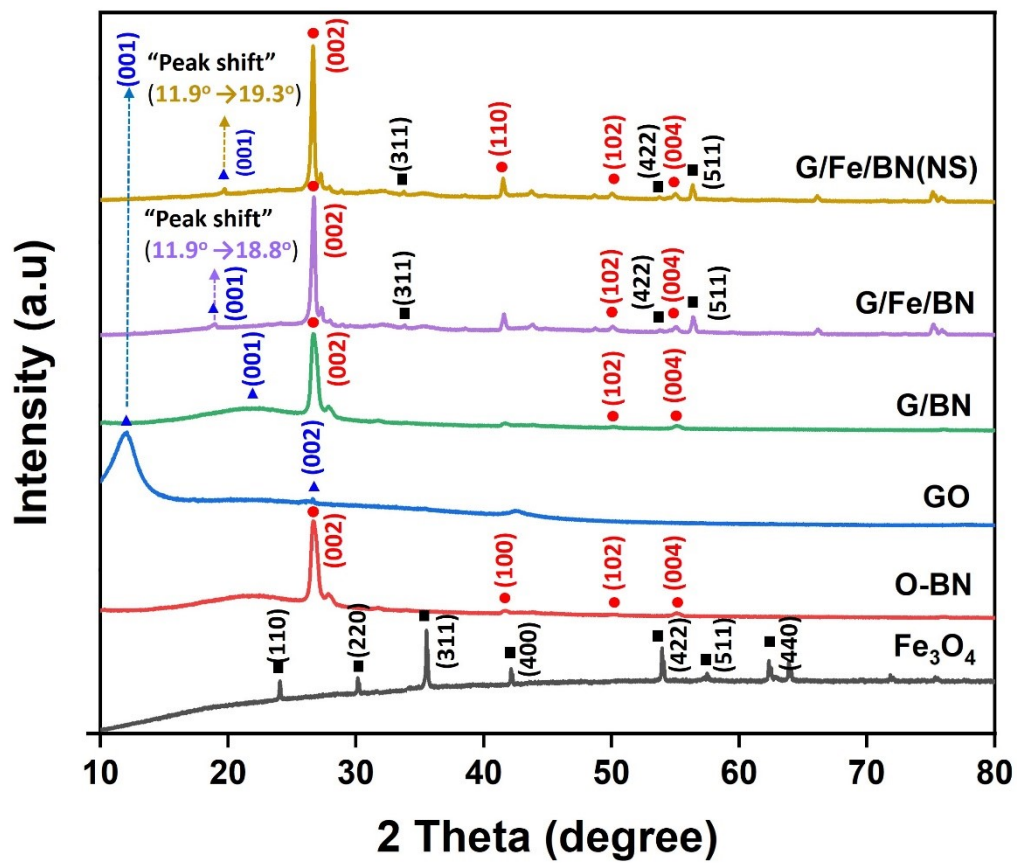**Fig. S1** XPS survey spectra of the O-BN, GO, G/Fe/BN, and G/Fe/BN(NS)

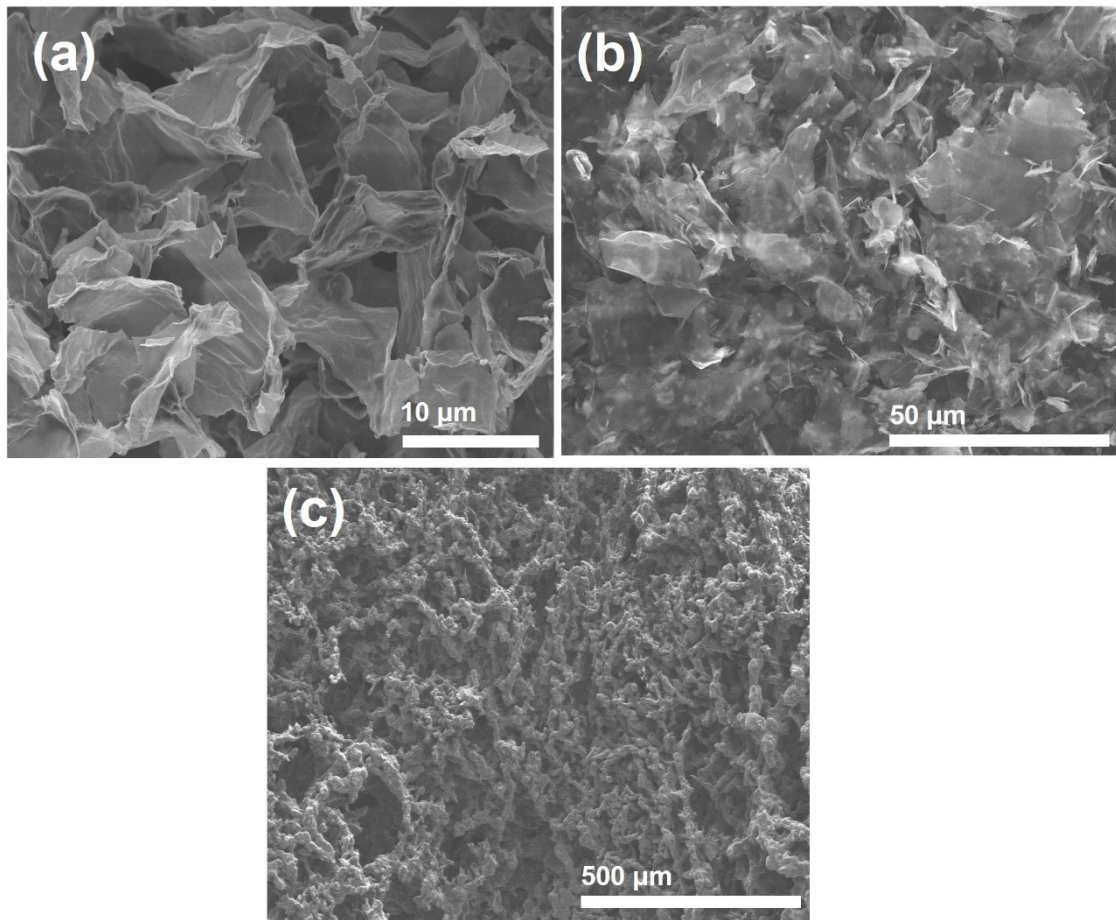**Fig. S2** XRD pattern of Fe_3O_4, O-BN, GO, G/BN, G/Fe/BN, and G/Fe/BN(NS).

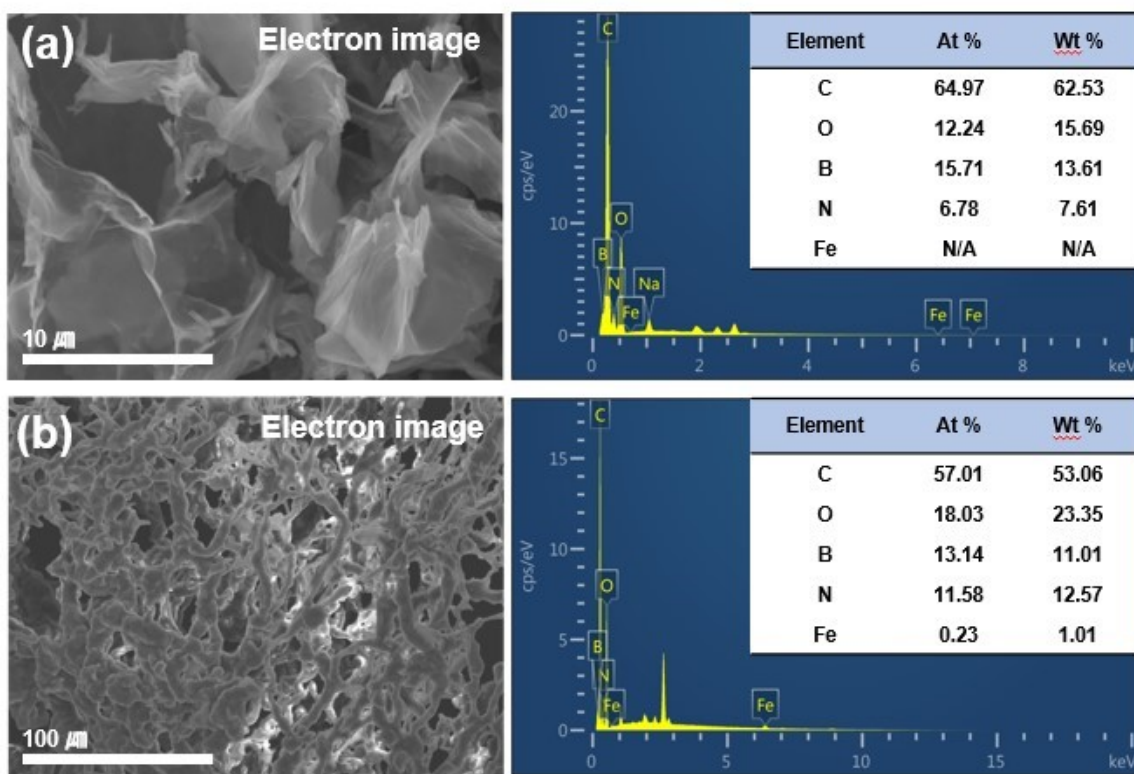**Fig. S3** The FE-SEM image of (a) G/BN, (b) G/Fe/BN, and (c) G/Fe/BN(NS).

Fig. S4 The FE-SEM image and EDX spectrum of (a) G/Fe/BN and (b) G/Fe/BN(NS). Inserted table exhibits the quantification results of detected atoms of carbon (C), oxygen (O), boron (B), nitrogen (N), and iron (Fe).
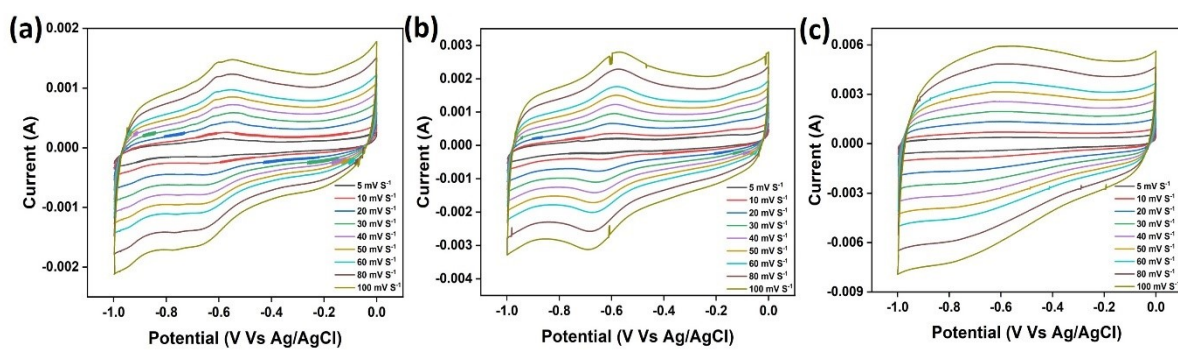
Fig. S5 CV plot with scan rate increasing from 5 mV S^{-1} to 100 mV S^{-1}: (a) GO, (b) G/Fe/BN, and (c) G/Fe/BN(NS).
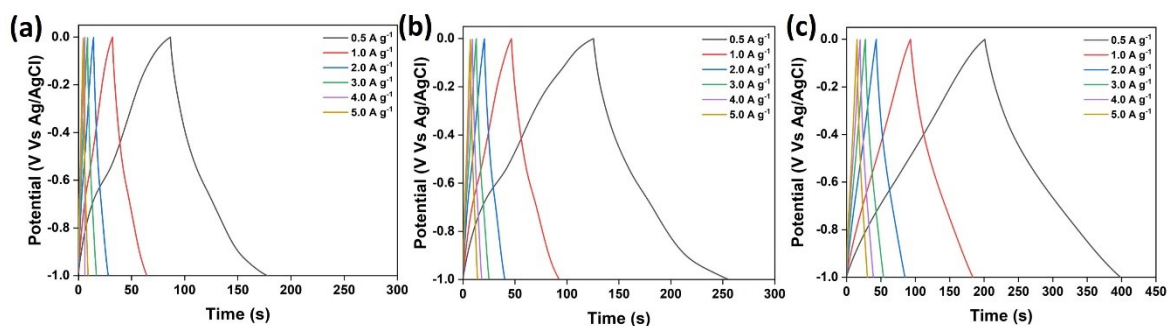

Fig. S6 GCD curve with current density increasing from 0.5 A g^{-1} to 5.0 A g^{-1}: (a) GO, (b) G/Fe/BN, and (c) G/Fe/BN(NS).