

## **Supplementary Information**

### **Wettability of vertically-oriented graphenes with different intersheet distances**

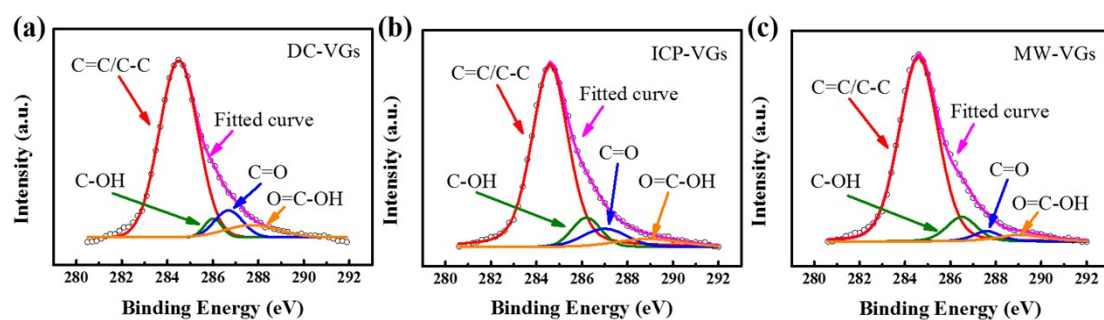
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**Table S1.** The positions, the ratios of  $I_D/I_G$  and  $I_{2D}/I_G$ , and FWHMs of D, G, 2D, and D+G peaks of VGs

Sample	D	$\omega_D$	G	$\omega_G$	2D	$\omega_{2D}$	D+G	$I_D/I_G$	$I_{2D}/I_G$
	(cm <sup>-1</sup> )	(cm <sup>-1</sup> )	(cm <sup>-1</sup> )	(cm <sup>-1</sup> )	(cm <sup>-1</sup> )	(cm <sup>-1</sup> )	(cm <sup>-1</sup> )		
DC-VGs	1340	57	1590	54	2680	64	2933	2.81	0.46
ICP-VGs	1343	52	1592	56	2686	61	2937	2.74	0.67
MW-VGs	1346	55	1593	55	2690	63	2937	2.72	0.88

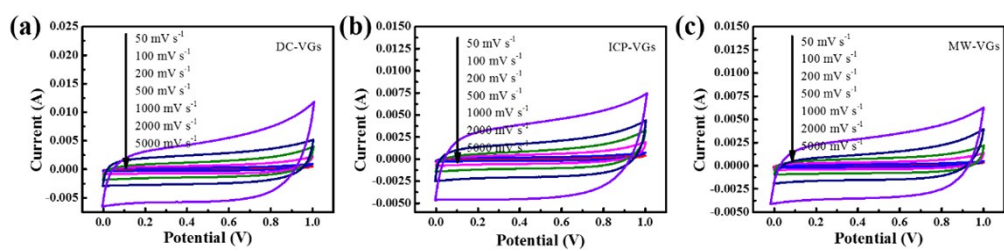


**Fig. S1** Curve fit of C 1s spectra of DC-VGs, ICP-VGs, and MW-VGs, respectively.

The Gaussian line fitted C 1s spectra of VGs were obtained. In the spectra, four peaks centering at  $\sim 284.5$  eV (the  $sp^2$  and  $sp^3$  hybridized carbon, C=C/C-C),  $\sim 286.5$  eV (the hydroxyl carbon, C-OH),  $287.6$  eV (the carbonyl carbon, C=O), and  $\sim 289.1$  eV (the carboxylate carbon, O=C-OH) are decomposed, corresponding to different oxygen functional groups.

**Table S2** Fractions of four components corresponding to C atom in C=C/C–C, C–OH, C=O, and O=C–OH for VG samples

		C=C/C–C	C–OH	C=O	O=C–OH
DC-VGs	Binding Energy	284.49 eV	286.01 eV	286.69 eV	287.71 eV
	Fraction	79.65%	3.88%	8.85%	7.62%
ICP-VGs	Binding Energy	284.60 eV	286.20 eV	287.05 eV	288.92 eV
	Fraction	76.16%	9.50%	8.86%	5.48%
MW-VGs	Binding Energy	284.60 eV	286.40 eV	287.62 eV	289.1 eV
	Fraction	83.83%	9.06%	3.68%	3.43%



**Fig. S2** CV curves of supercapacitors using (a) DC-VGs, (b) ICP-VGs, and (c) MW-VGs electrodes in 6.0 M KOH aqueous solution at different scan rates from 50 to 5000  $\text{mV s}^{-1}$ .