Study on Direct Synthesis of Energy Efficient Multifunctional Polyaniline–Graphene Oxide Nanocomposite and Its Application in Aqueous Symmetric Supercapacitor Devices

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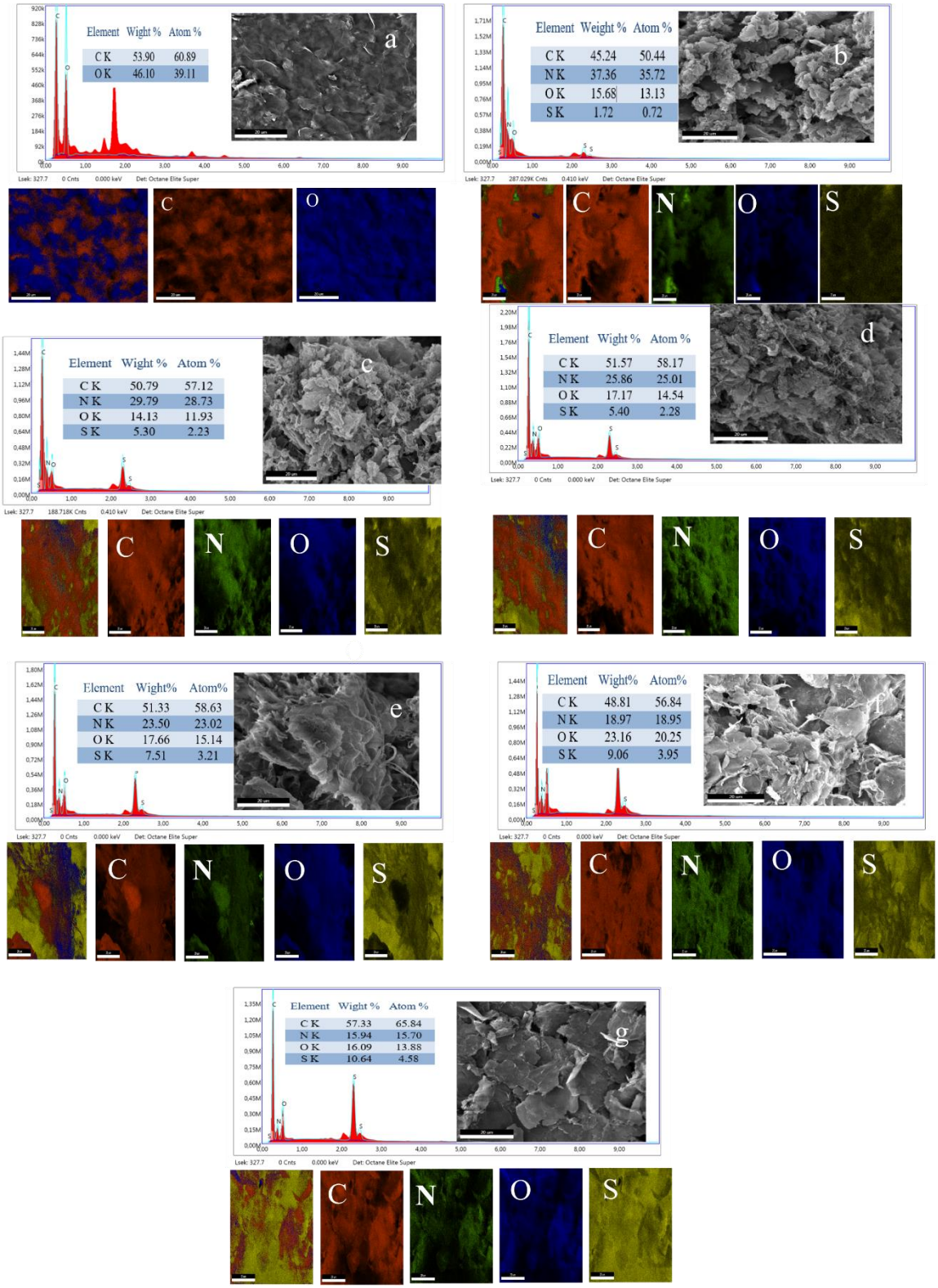

Figure S1. Elemental analysis and mapping of a) GO, b) PANI, c) PANI-GO-1, d) PANI-GO-4, e) PANI-GO-nanocomposite, f) PANI-GO-8, g) PANI-GO-10.

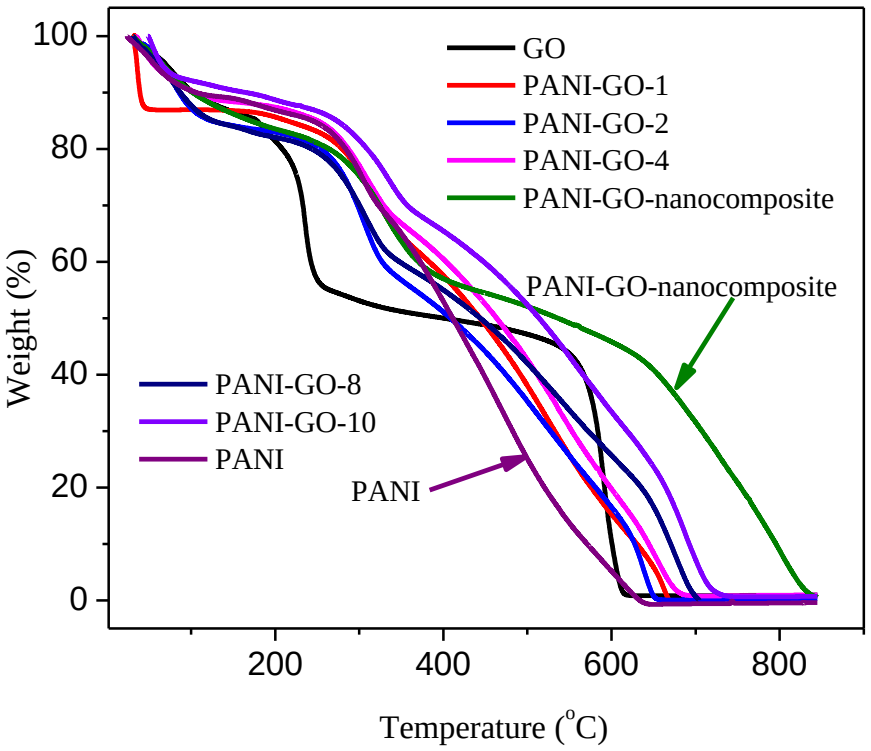

Figure S2. Thermo Gravimetric Analysis curves of GO, PANI and PANI-GO composites.

Table 1. Weight loss steps of GO, PANI and PANI-GO composites.

	Up to temperature ^{0}C (% weight loss)			
Sample	**First step**	**Second step**	**Third step**	**Fourth step**
GO	191(17)	251(28)	541(11)	615(43.22)
PANI	94(10)	260(6)	639(84)	
PANI-GO-1	44(13)	257(5)	333(17)	664 (64.22)
PANI-GO-2	97(15)	242(4)	319(20)	649(59.7)
PANI-GO-4	80(9)	254(6)	331(19)	678(64.5)
PANI-GO-nanocomposite	97(11)	265(9)	351(29)	825(58.62)
PANI-GO-8	109(14)	248(7)	328(17)	729(61.22)
PANI-GO-10	71(6)	284(8)	351(15)	615(69)

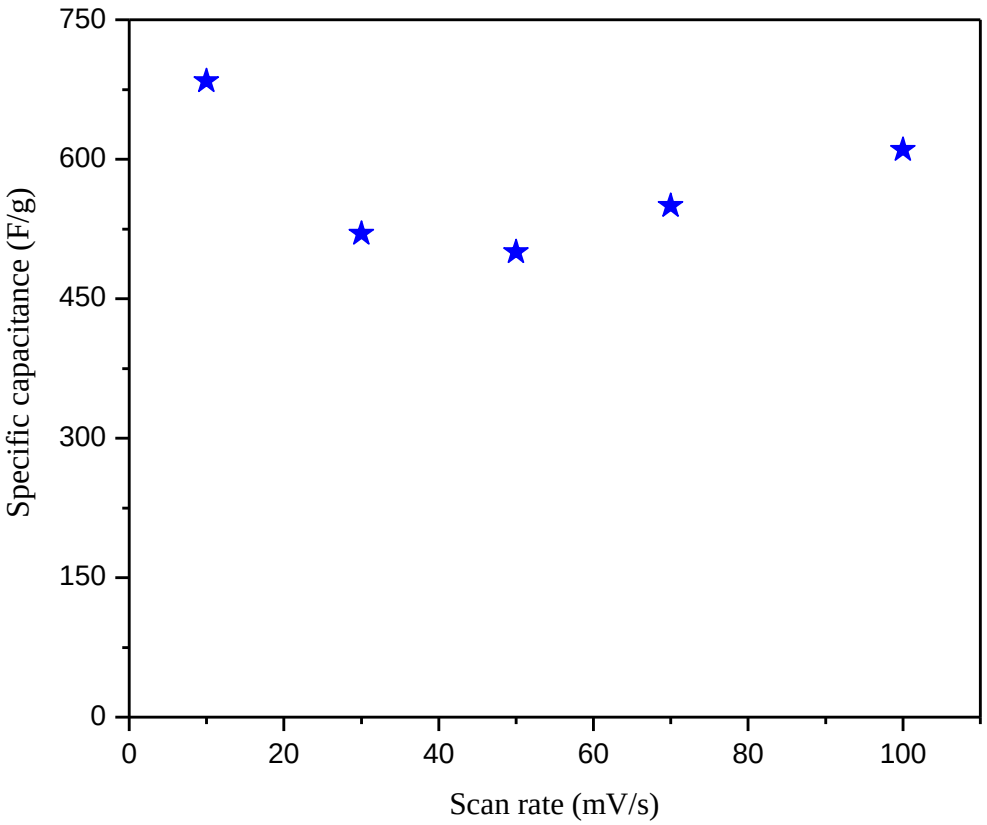

Figure S3. Specific capacitance vs scan rates.

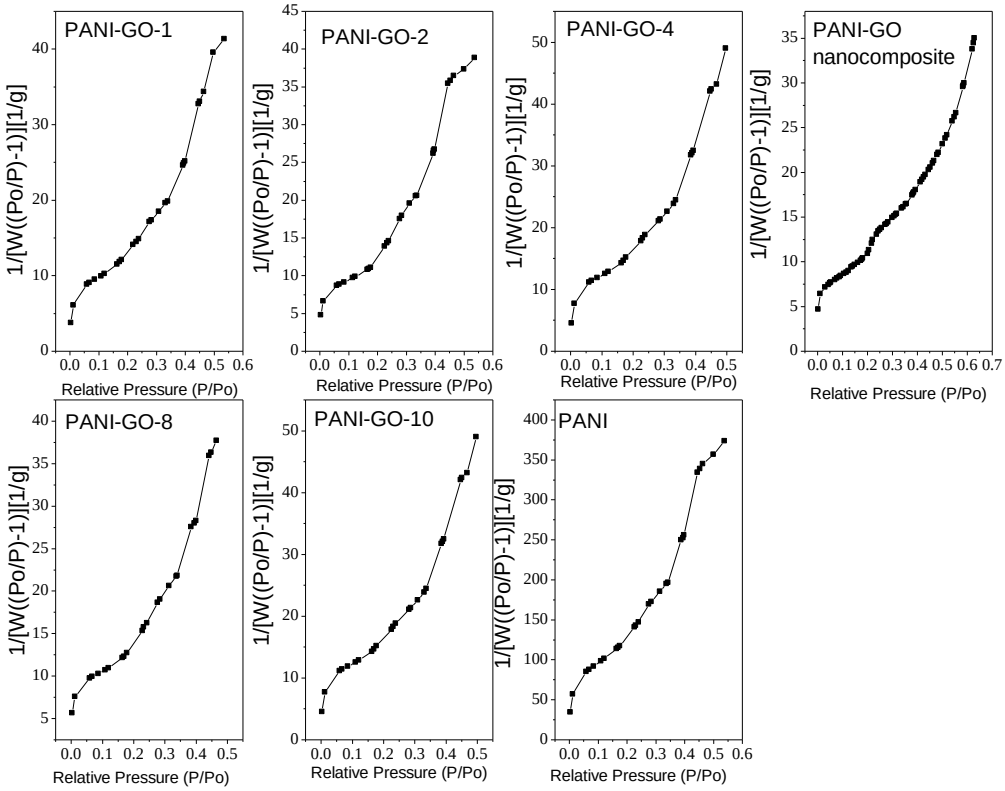

Figure S4. Brunauer–Emmett–Teller (BET) surface area.