

## Carbon nanospheres derived from Lablab Purpureus as a high performance supercapacitor electrode: Green approach

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### Electronic supplementary information (ESI)

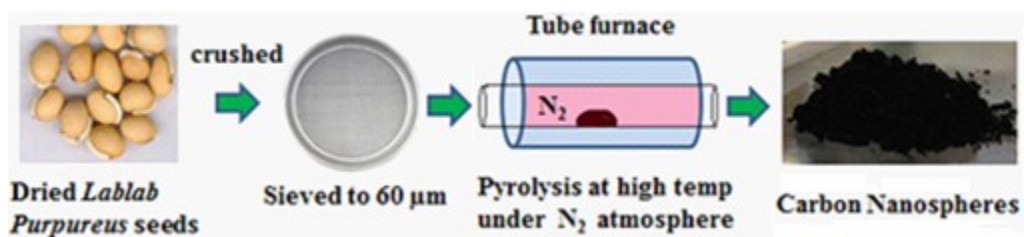


Figure S1: Schematic illustration of synthesis of carbon nanospheres from Lablab Purpureus seeds.

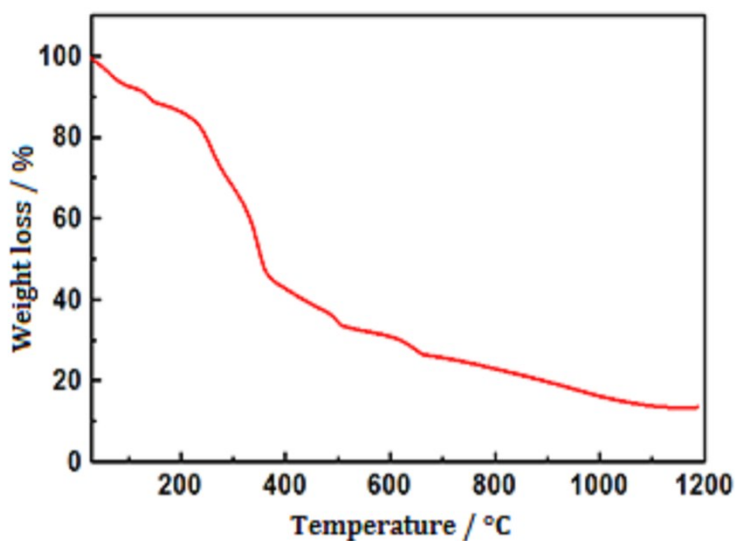


Figure S2: TGA curve of raw Lablab Purpureus seeds under N<sub>2</sub> atmosphere.

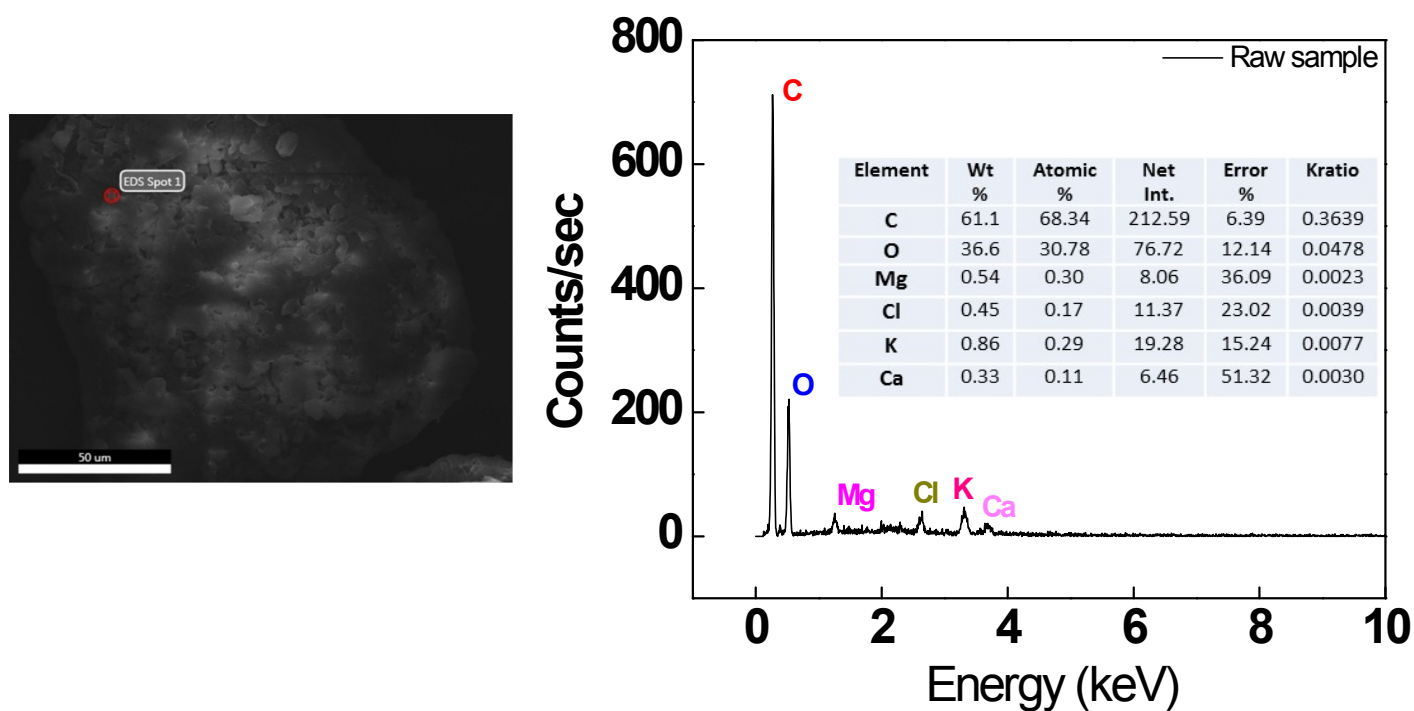


Figure S3: SEM image (a) and EDX spectrum (b) of raw Lablab Purpureus seeds before pyrolysis, (the inset shows the elemental composition).

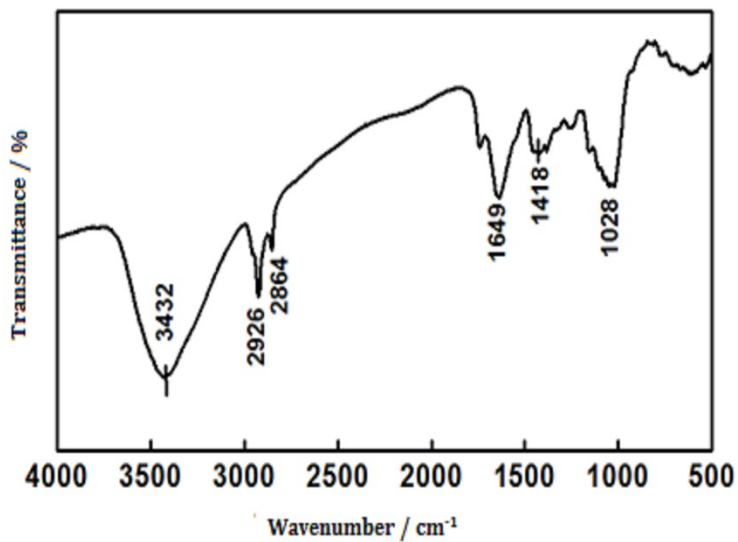


Figure S4: FTIR spectrum of raw Lablab Purpureus seeds before pyrolysis

Table S1 Elemental composition of the carbon nanospheres synthesized from Lablab Purpureus seeds at different temperatures (LP500, LP700 and LP800).

Elements	LP500		LP700		LP800	
	Weight (%)	Atomic (%)	Weight (%)	Atomic (%)	Weight (%)	Atomic (%)
Carbon	74.37	82.32	74.51	83.21	79.53	85.33
Oxygen	18.24	15.16	21.20	15.35	19.05	13.96
Potassium	7.39	2.51	4.30	1.44	1.42	0.71

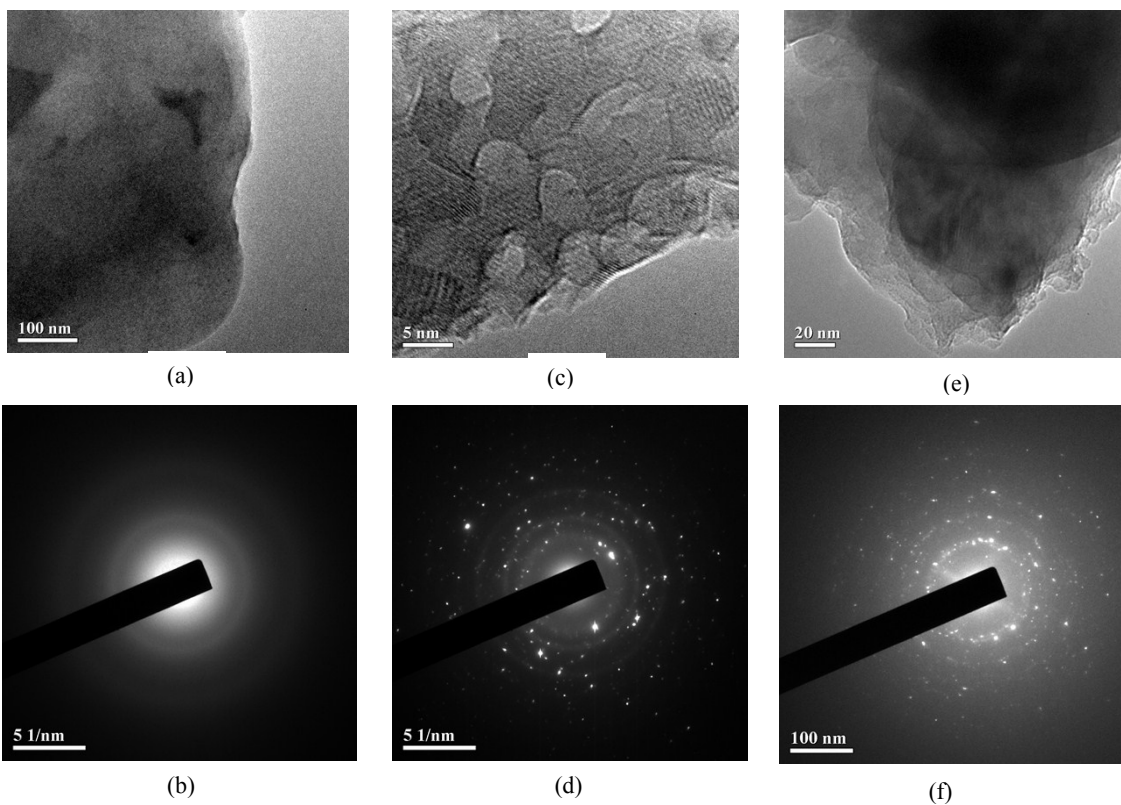


Figure S5 TEM and mounting images of LP500 (a, b), LP700 (c, d) and LP800 (e, f), respectively.

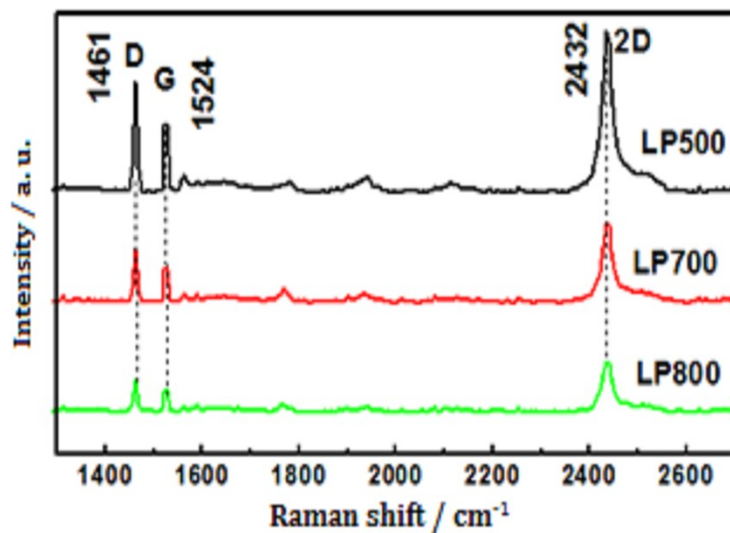


Figure S6: Raman spectra of the indicated materials.

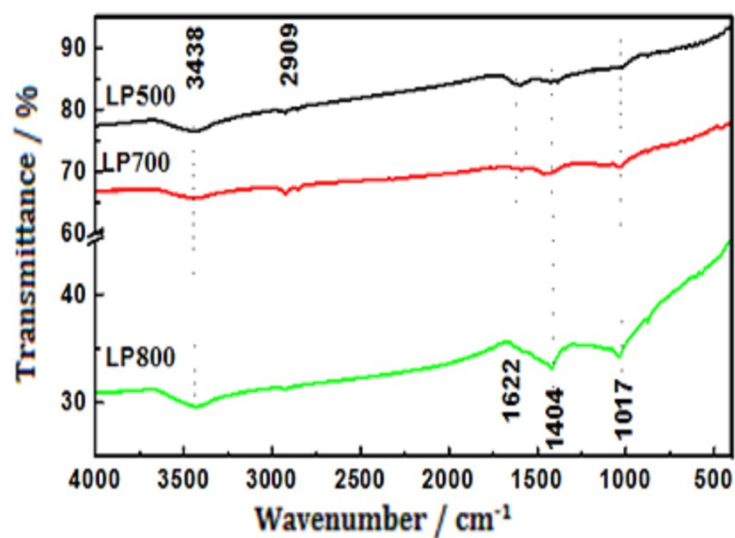


Figure S7: FTIR spectra of the indicated materials.

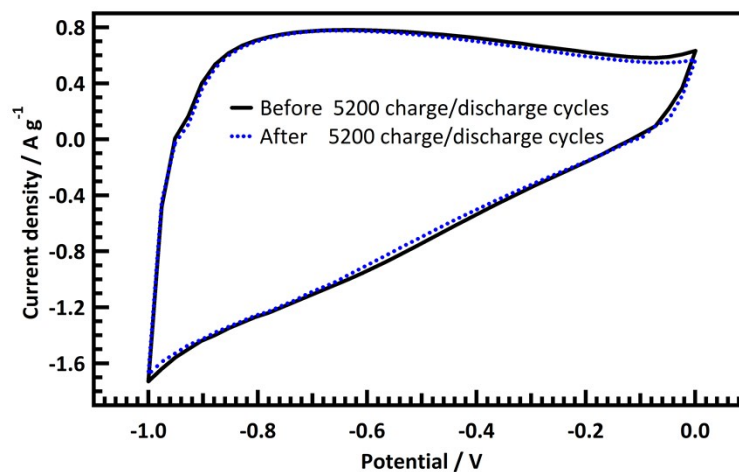


Figure S8: Cyclic voltammetry before and after 5200 charge/discharge cycles at  $3 \text{ A g}^{-1}$  of LP800.