

Electronic Supplementary Information

Synthesis of high surface area and functionalized nanoporous biocarbons and their efficiency for CO₂ capture and supercapacitors

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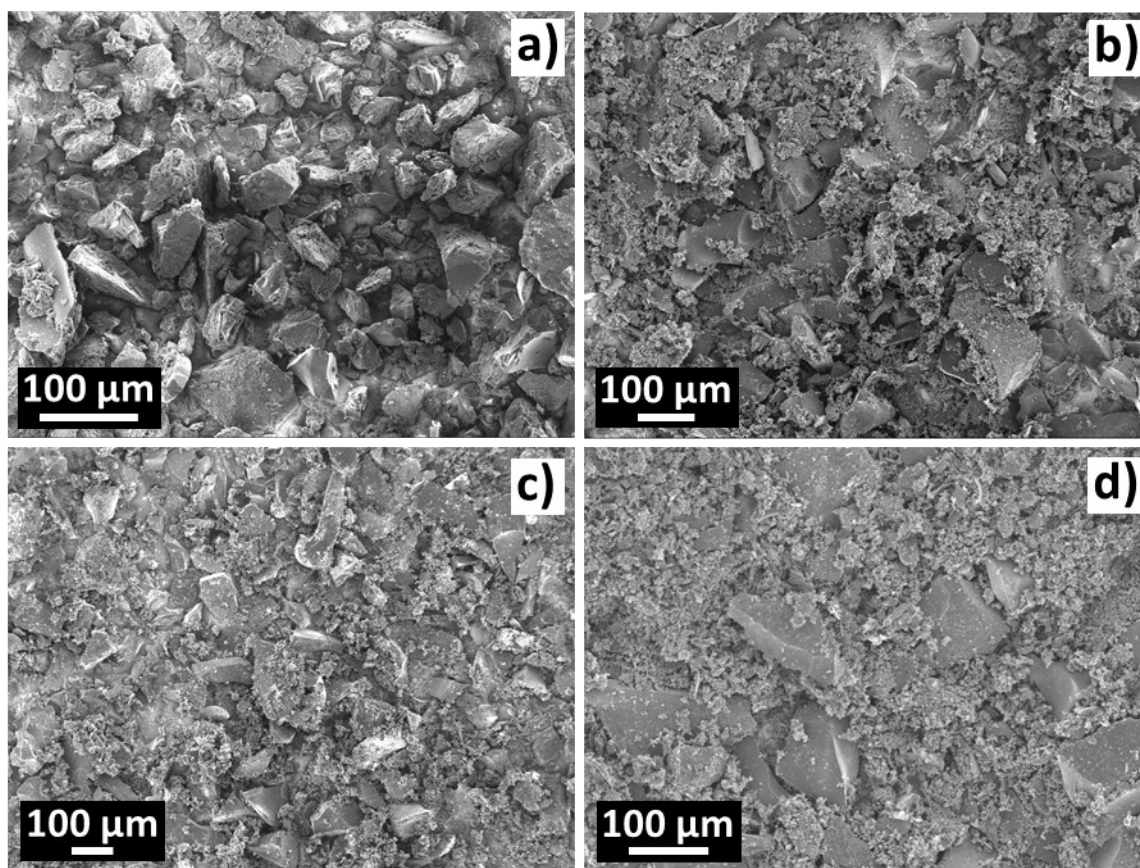
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Tables

Material	Carbon (%)	Nitrogen (%)	Oxygen (%)
CPC-1	85.4	5.3	9.3
CPC-2	90.9	1.3	7.7
CPC-3	93.0	0.6	6.3
CPC-4	89.8	0.9	8.2

Table S1. XPS surface composition of the synthesized materials



Figures

Fig. S1: SEM images of the synthesized porous carbons a) CPC-1, b) CPC-2, c) CPC-3, and d) CPC-4 taken at 100 μm .

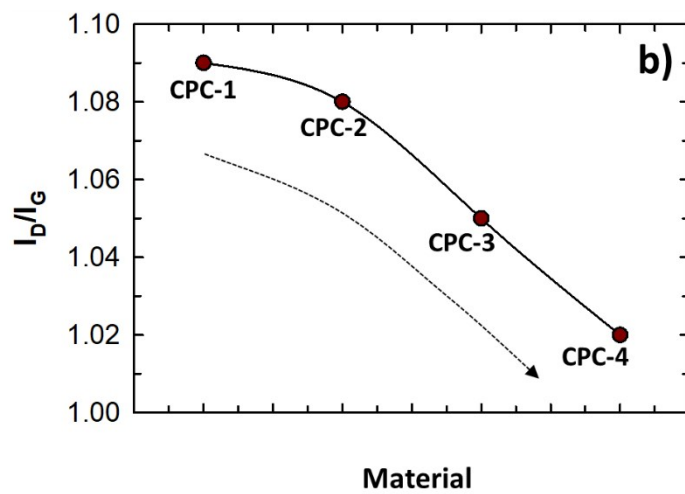
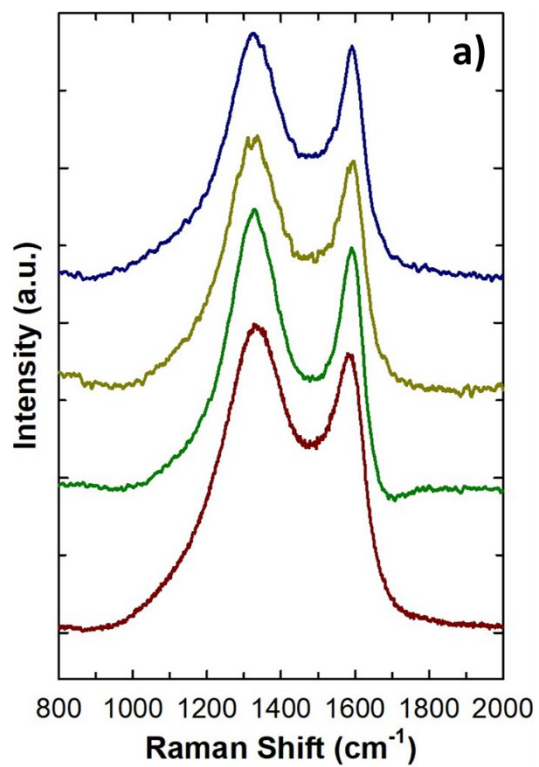


Fig. S2: a) Raman spectra and b) I_D/I_G ratio of the synthesized porous carbons a) CPC-1, b) CPC-2, c) CPC-3, and d) CPC-4

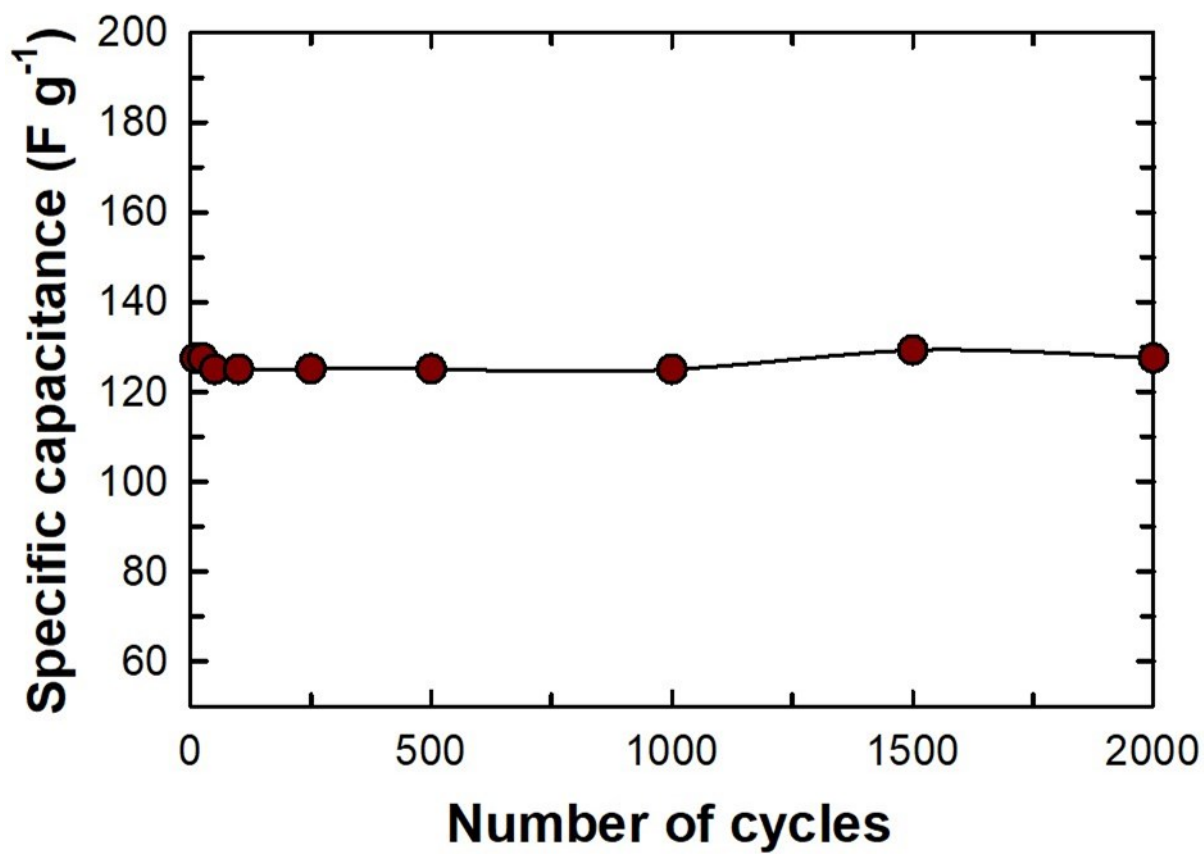


Fig. S3: Specific capacitance cycling stability of CPC-3 observed for 2000 cycles at a current density of 5 A g⁻¹.

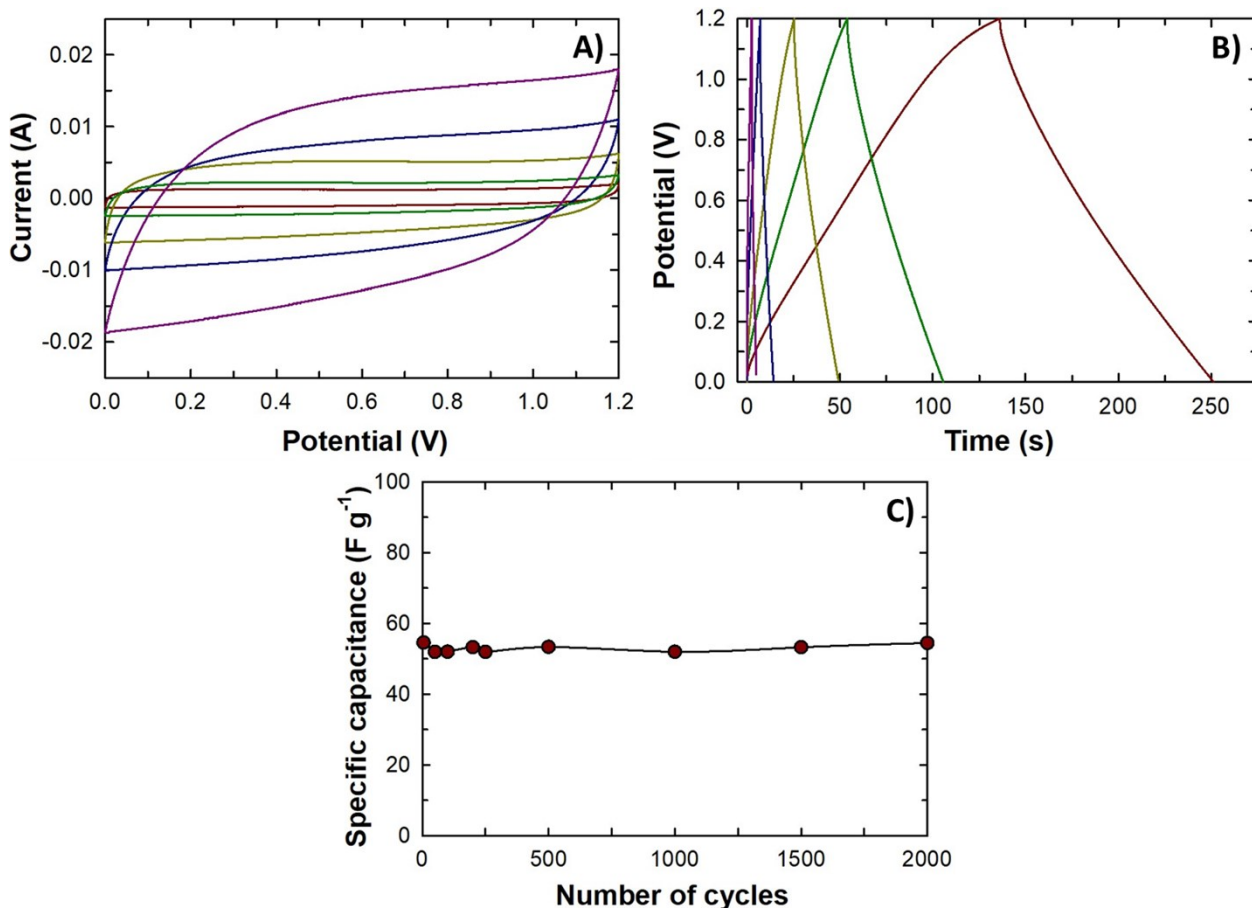


Fig. S4: Electrochemical performance of CPC-3 measured in a two-electrode system in the 3M KOH electrolyte; **A)** Cyclic voltammetry (CV) curves obtained at different scan rates, **B)** galvanostatic charge-discharge (CD) curves obtained at different current densities, **C)** cycling stability at 5 A g⁻¹ over 2000 cycles

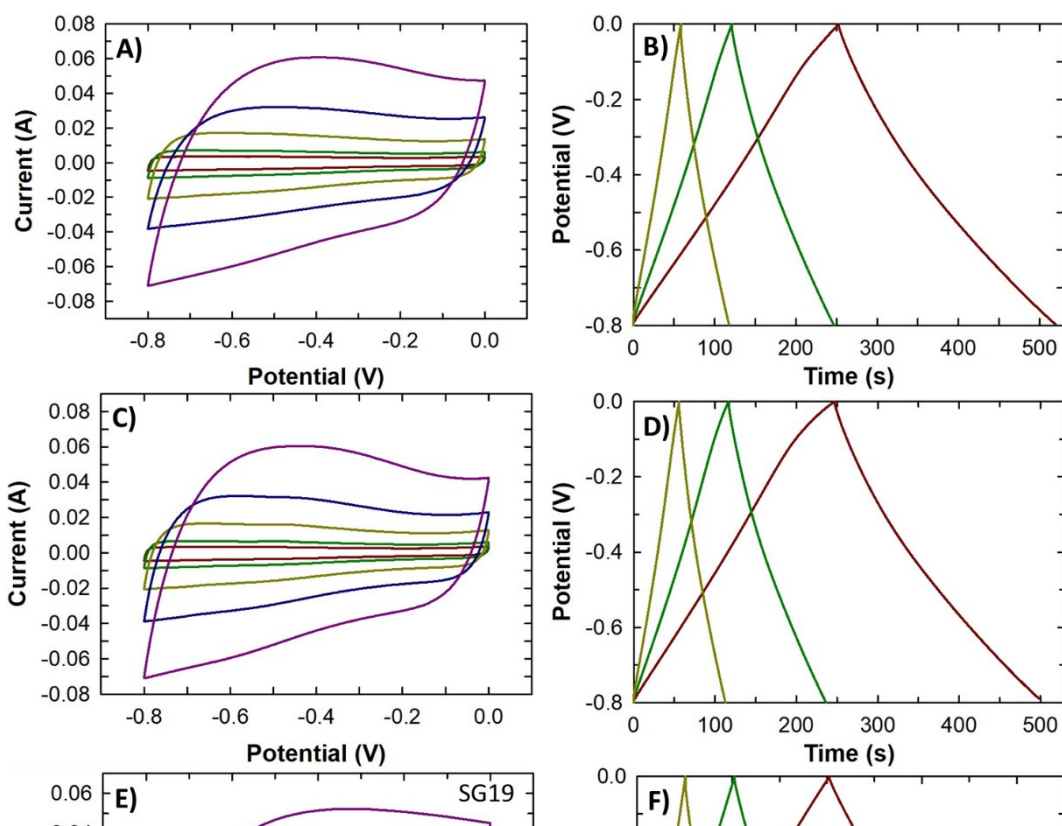


Fig. S5: The CV and CD plot of CPC-1 (**A and B**), CPC-2 (**C and D**), and CPC-4 (**E and F**)