



Supplementary Materials

Sawdust-Derived Activated Carbon with Hierarchical Pores for High-Performance Symmetric Supercapacitors

Yan Zhou ^{1,†}, Jun Li ^{2,†}, Shilin Hu ¹, Gujie Qian ³, Juanjuan Shi ¹, Shengyun Zhao ¹, Yulin Wang ¹, Chuan Wang ^{4,*} and Jiabiao Lian ^{2,*}

¹ School of Ecology and Resource Engineering, School of Civil Engineering and Architecture, Wuyi University, Wuyishan 354300, China; zhouyan@wuyiu.edu.cn (Y.Z.); hslwyu2021@163.com (S.H.); sjj1998wyu@163.com (J.S.); zhaoshengyun@wuyiu.edu.cn (S.Z.); ylwanghm@163.com (Y.W.);

² Key Laboratory of Zhenjiang, Institute for Energy Research, Jiangsu University, Zhenjiang 212013, China; lj42485115@163.com

³ College of Science and Engineering, Flinders University, Bedford Park, SA 5042, Australia; gujie.qian@flinders.edu.au

⁴ Institute of Advanced Synthesis, Jiangsu National Synergetic Innovation Center for Advanced Materials, School of Chemistry and Molecular Engineering, Nanjing Tech University, 30 Puzhu South Road, Nanjing 211800, China

† These authors contributed equally to this work.

* Correspondence: ias_cwang@njtech.edu.cn (C.W.); jblian@ujs.edu.cn (J.L.)

Supplementary Materials:

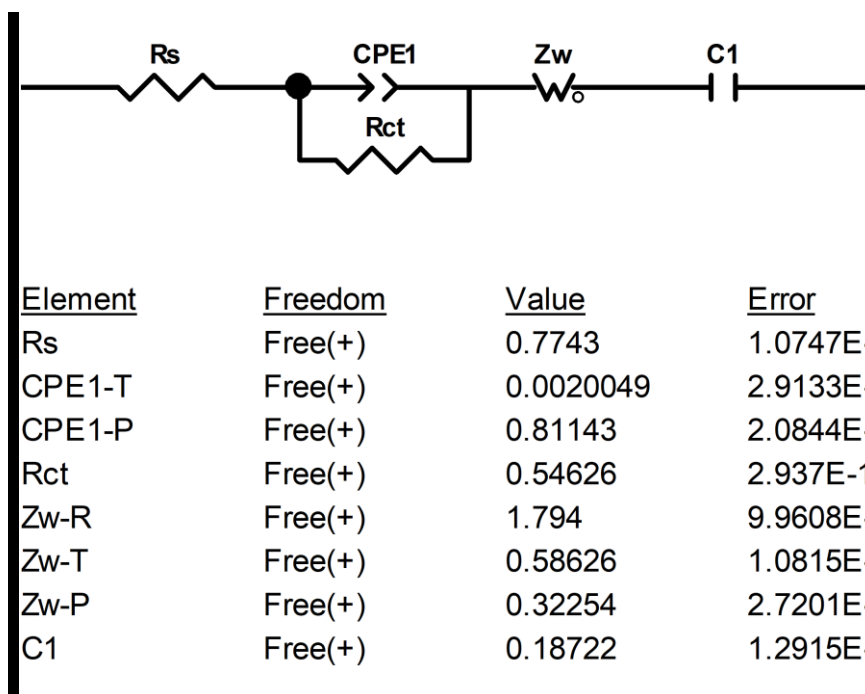


Figure S1. The equivalent electrical circuit model used for fitting the Nyquist plot and the values derived from the fitted data.

Table S1. Electrochemical performance comparison of biomass-derived carbon materials.

Reference	Precursor	Electrolyte	Specific Capacitance (F g ⁻¹)	Cycling performance
[1]	Rice straw	1M H ₂ SO ₄	332@0.5A g ⁻¹	99% over 5000 cycles @10A g ⁻¹
[2]	Pine cone	1M NaSO ₄	137@0.5A g ⁻¹	100% over 10,000 cycles@5.0A g ⁻¹
[3]	Pomelo peel	1M NaNO ₃	43.5@1.0A g ⁻¹	90% over 1100 cycles@2.0A g ⁻¹
[4]	Lotus leaf	6 M KOH	298@20A g ⁻¹	90% over 5000 cycles
[5]	Pitch	6 M KOH	157@100A g ⁻¹	-
[6]	Macadamia Nut Shell	1 M Na ₂ SO ₄	231@1.0A g ⁻¹	87% over 1000 cycles@10A g ⁻¹
[7]	Coconut shells	K ₂ CO ₃	91.2@0.2A g ⁻¹	85% over 5000 cycles@0.1A g ⁻¹
[8]	Cotton stalk	1 M KOH	254@0.2A g ⁻¹	96% over 10,000 cycles@1.0A g ⁻¹
[9]	Rose	6 M KOH	208@0.5A g ⁻¹	99% over 25,000 cycles@10A g ⁻¹
[10]	Rice husk	6 M KOH	110.2@0.2A g ⁻¹	78% over 5000 cycles@0.5 A g ⁻¹
[11]	Mulberry wood	2 M KOH	96@5.0 mA cm ⁻¹	87% over 5000 cycles@5.0 mA cm ⁻¹
[12]	Bagasse	6 M KOH	320@0.5A g ⁻¹	93% over 15,000 cycles@10A g ⁻¹
This work (SD-AC)	Chinese fir sawdust	3 M KOH	244.1@1.0A g⁻¹ 129.1@20A g⁻¹	87% over 10,000 cycles@10A g⁻¹

Table S2. Electrochemical performance of our SD-AC//SD-AC symmetric supercapacitor in comparison with other previously reported supercapacitors.

Reference	Source of Electrode Materials	Energy Density (Wh kg ⁻¹)	Power Density (W kg ⁻¹)	Cycling performance
[1]	Rice straw	17.4	174	78% over 5000 cycles@0.5A g ⁻¹
[2]	Pine cone	19.0	100	100% over 10,000 cycles@5A g ⁻¹
[3]	Pomelo peel	17.1	420	-
[4]	Lotus leaf	9.2	491	90% over 5000 cycles@5A g ⁻¹
[5]	Pitch	20	100	-
[7]	Coconut shells	23.1	135	89.2% over 5000 cycles@2A g ⁻¹
[8]	Cotton stalk	18.1	450	-
[9]	Rose	20.3	525	92% over 10,000 cycles@5A g ⁻¹
[12]	Bagasse	20	182	91% over 10,000 cycles
[13]	Soya Bean pods	22.3	450	91% over 10,000 cycles@5A g ⁻¹
This work	Chinese fir sawdust	19.9	650	80% over 10,000 cycles @10A g⁻¹

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