Electronic Supplementary Material (ESI) for New Journal of Chemistry.

The coralloid-carbon material based on biomass as promising anode material for lithium and sodium storage

Ziqiang Yu*[a], Zhiqiang Zhao [b], Tingyue Peng [c]

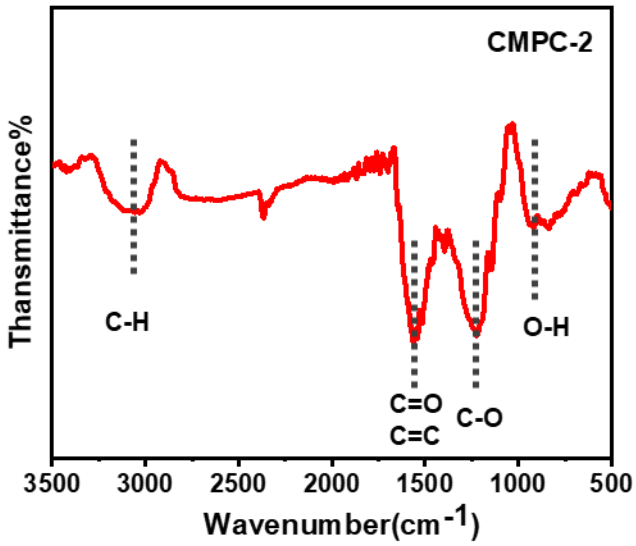

Figure S1. FT-IR spectra of CMPC-2.

The functional group of generated CMPC-2 is analyzed via the Fourier infrared spectrometer (FI-IR) as shown in Fig. S1. The absorption peak of CMPC-2 at the 900 cm^{-1} deemed as the O-H groups bending vibrations, at the range of 1100-1310 cm^{-1} is assigned as the C-O stretching vibration, for another, at 1500-1650 cm^{-1} is identified as the C=O vibration of the carboxyl group or the stretching vibration of the aromatic ring structure C=C. the rich O-based functional groups in CMPC-2 enhance the conductivity of electrode materials[39-40]. As the above, during the activation and carbonization treatment, the CMPC-2 goes through the process of dehydration, polymerization, and aromatization.

Table S1. Summary of physical characterization of the samples

Samples	**Yield**	**SSA**[a]	**Vt**[b]	**Vm**[c]	**d_{002}**[d]	**I_D/I_G**[e]
	%	**m^2g^{-1}**	**$cm^{-3}g^{-1}$**	**$cm^{-3}g^{-1}$**	**nm**	
CMPC-3	21.5	900.1	1.242	0.675	0.349	1.233
CMPC-2	22.7	903.0	1.090	0.343	0.354	1.28
CMPC-1	19.2	908.4	1.026	0.412	0.356	1.18
MPC	14.1	39.8	0.081	0.013	-	0.87

[a] BET specific surface area

[b] adsorption total pore volume from at a relative pressure P/P_0=0.99

[c] micropore volume (pore size < 2nm) from t-Plot analysis

[d] interlayer distance of (002) plane calculated based on Bragg equation from XRD patterns

[e] the intense ratio of D band and G band from Raman spectra