Supporting information for

Thermal effect on pseudocapacitive behavior of high-performance flexible supercapacitors based on polypyrrole-decorated carbon cloth electrodes

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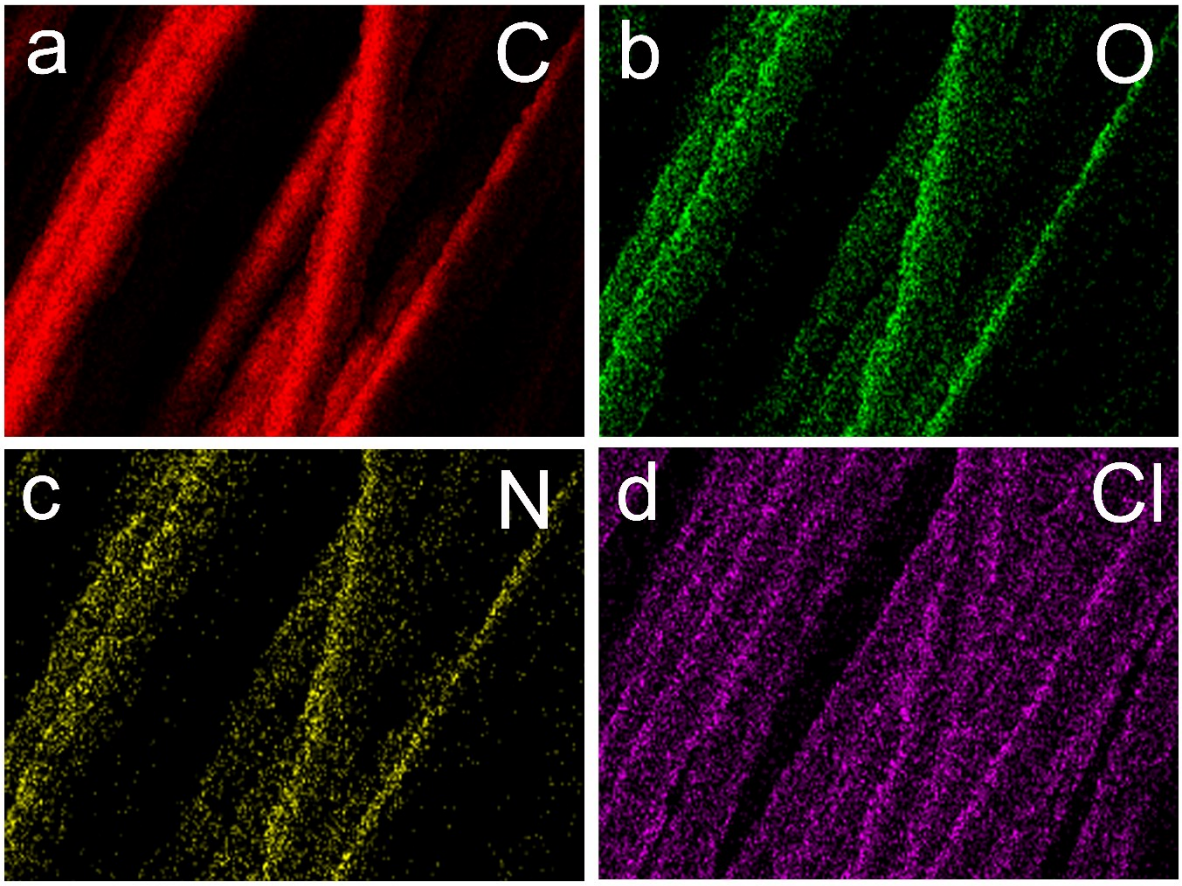

Figure S1. EDS mappings of CC/PPy. (a) C element. (b) O element. (c) N element. (d) Cl element.

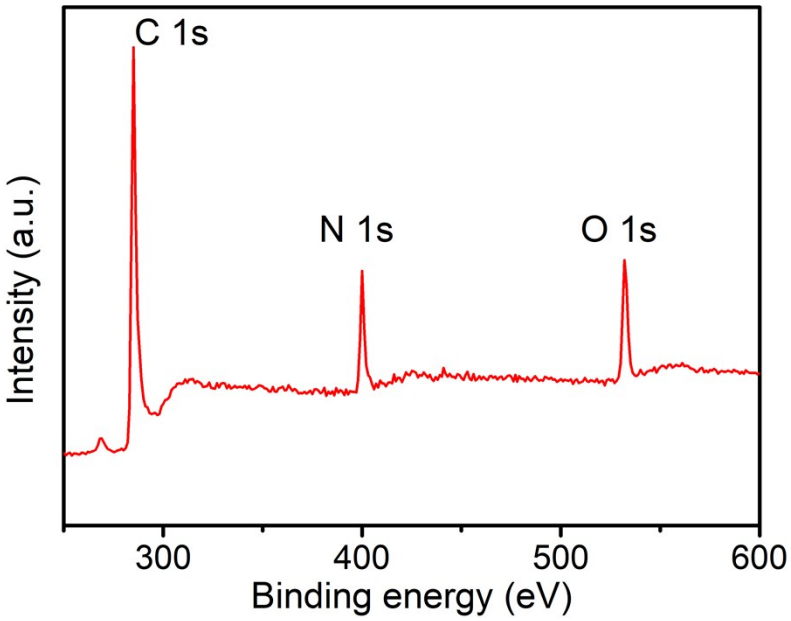

Figure S2. XPS spectrum of CC/PPy.

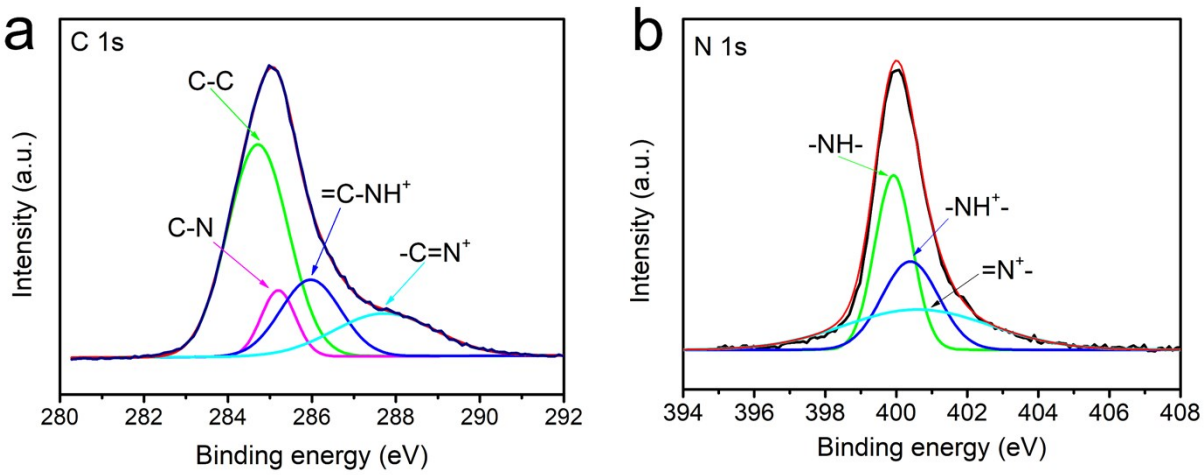

Figure S3. XPS spectrum of CC/PPy. (a) C 1s. (b) N 1s.

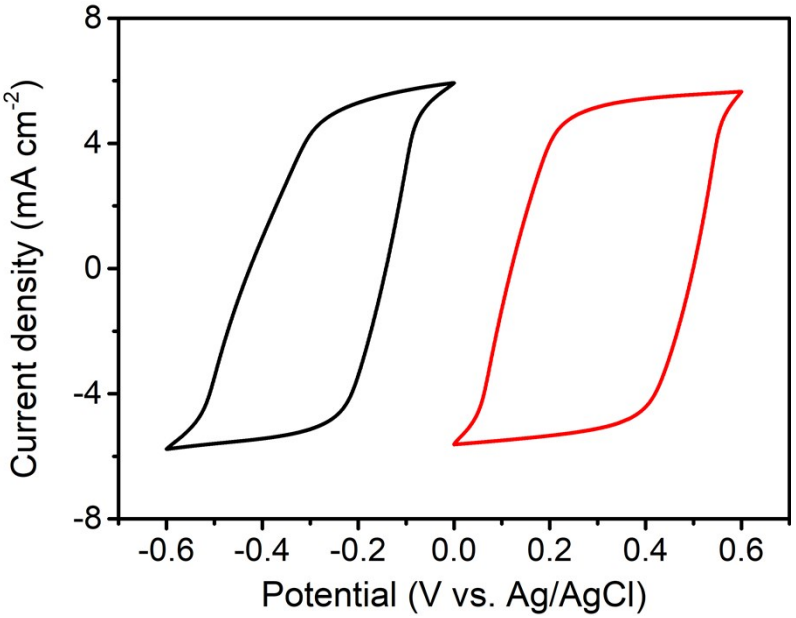

Figure S4. CV curves collected over diverse potentials of CC/PPy electrode in a three-electrode system at a scan rate of 50 mV s^{-1}

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Table S1. Comparison of specific capacitances of supercapacitors.

Electrode materials	Electrolyte	Areal capacitance (mF cm^{-2})	Reference
CC/PPy	PVA-H_3PO_4	110.6	This work
$Co(OH)_2$/VN	PVA-KOH	21	[1]
Au/MnO_2-Au/PPy	PVA-LiCl	1.27	[2]
MnO_2/rGO/C-Cu/rGO	PAAK-KCl	50.8	[3]
CNT/PANI	PVA-H_2SO_4	38	[4]
CNT/Co_3O_4	PVA-H_2SO_4	52.6	[5]
rGO/PANI/kapton	PVA-H_2SO_4	3.31	[6]

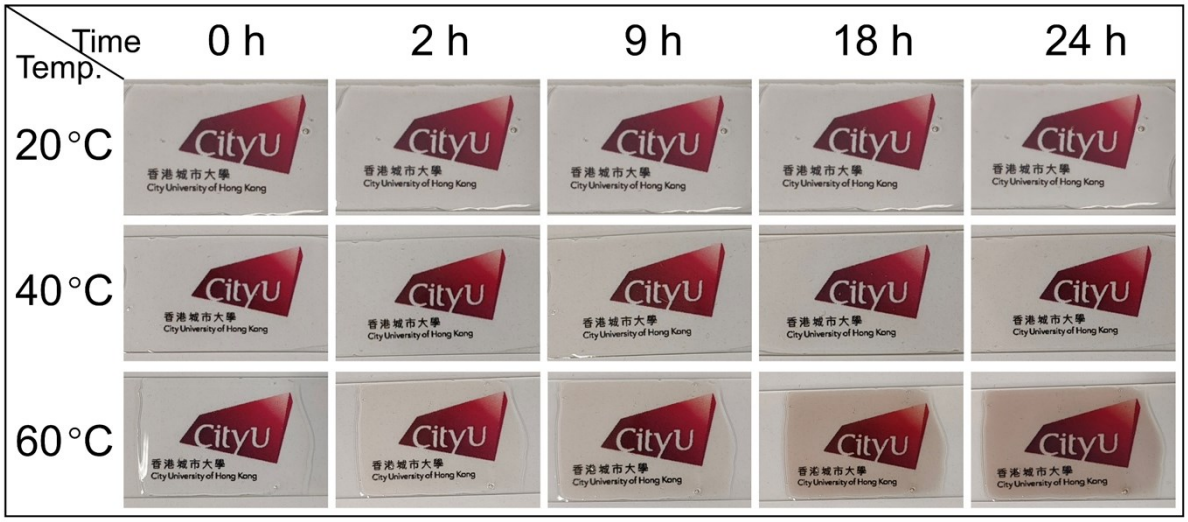

Figure S5. Colour change of PVA-H_3PO_4 electrolyte at different temperatures and times. The electrolyte was coated on glass slides (3 cm × 2.5 cm) and then placed on a thermostat of 20, 40 and 60 °C to observe the colour change of electrolyte.

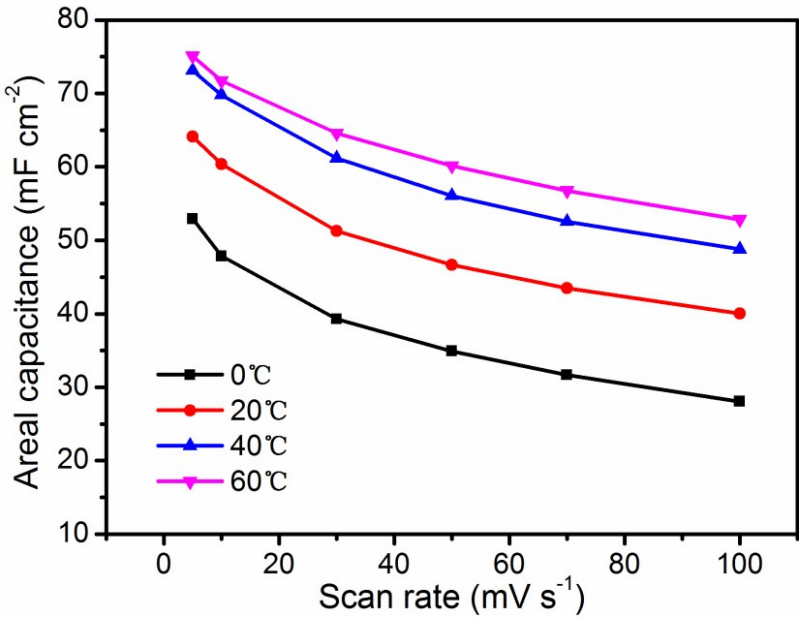

Figure S6. Areal specific capacitance of CC/PPy supercapacitor at various scan rates with different temperatures.

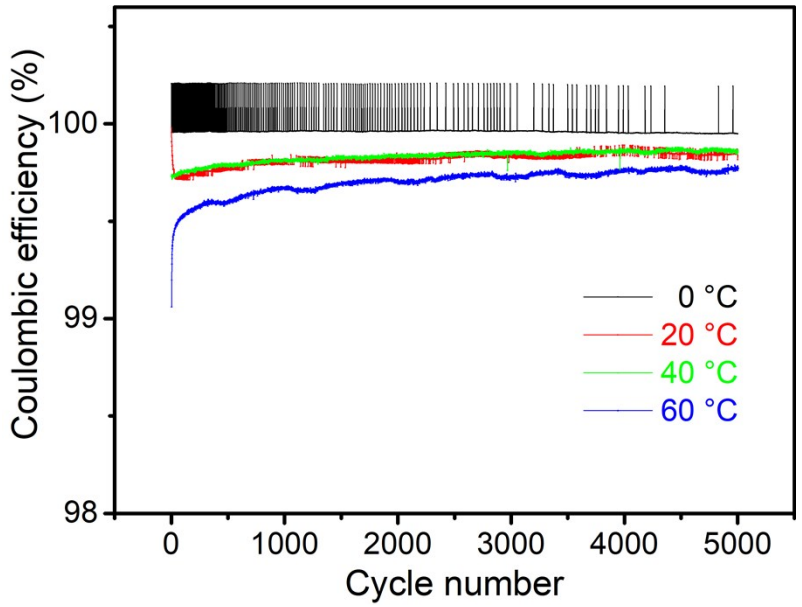

Figure S7. The coulombic efficiency of CC/PPy supercapacitor at various temperatures.

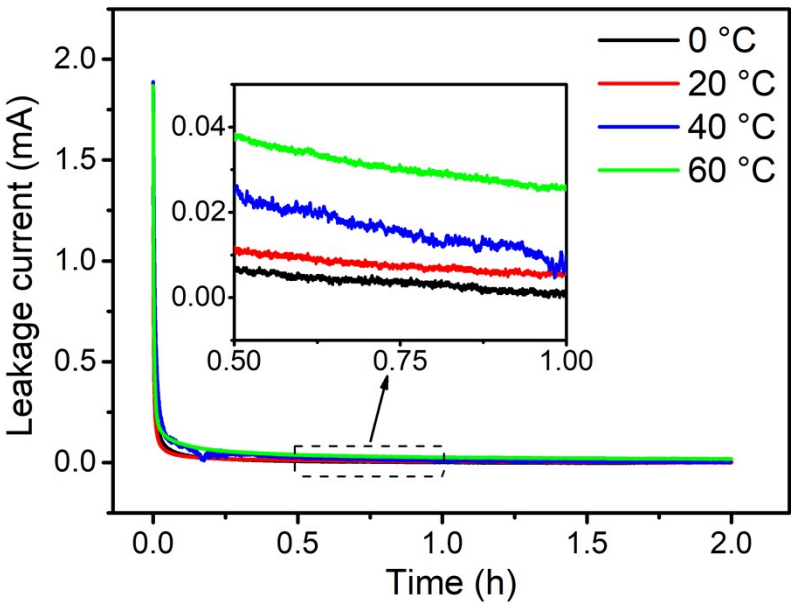

Figure S8. Leakage current curves of the all-solid-state supercapacitor device charged at 2 mA to a floating potential of 0.6 V and kept at 0.6 V for 2 h at different temperatures.

References

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