

Flexible and conductive carbonized cotton fabrics coupled with a nanostructured Ni(OH)₂ coating for high performance aqueous symmetric supercapacitors

Tian Xia,^a Xiaofang Zhang,^a Jiangqi Zhao,^{a,c} Qingye Li,^a Chenghong Ao,^a Rui Hu,^a Zhuo Zheng,^a

Wei Zhang,^{a,b,} Canhui Lu,^{a,b,*} Yulin Deng.^d*

a. State Key Laboratory of Polymer Materials Engineering, Polymer Research Institute at Sichuan University, 24 South Section 1, Yihuan Road, Chengdu 610065, China.

b. Advanced Polymer Materials Research Center of Sichuan University, 1900 Port Avenue, Shishi 362700, China.

c. Department of Electrical Engineering and Computer Sciences, University of California, 550 Cory Hall, Berkeley, California 94720, United States.

d. School of Chemical and Biomolecular Engineering and RBI at Georgia Tech, Georgia Institute of Technology, 500 10th Street N.W., Atlanta, Georgia 30332-0620, United States.

*Authors for correspondence: E-mail: weizhang@scu.edu.cn (W. Zhang), canhuilu@263.net (C. Lu); Phone: 86-28-85460607; Fax: 86-28-85402465.

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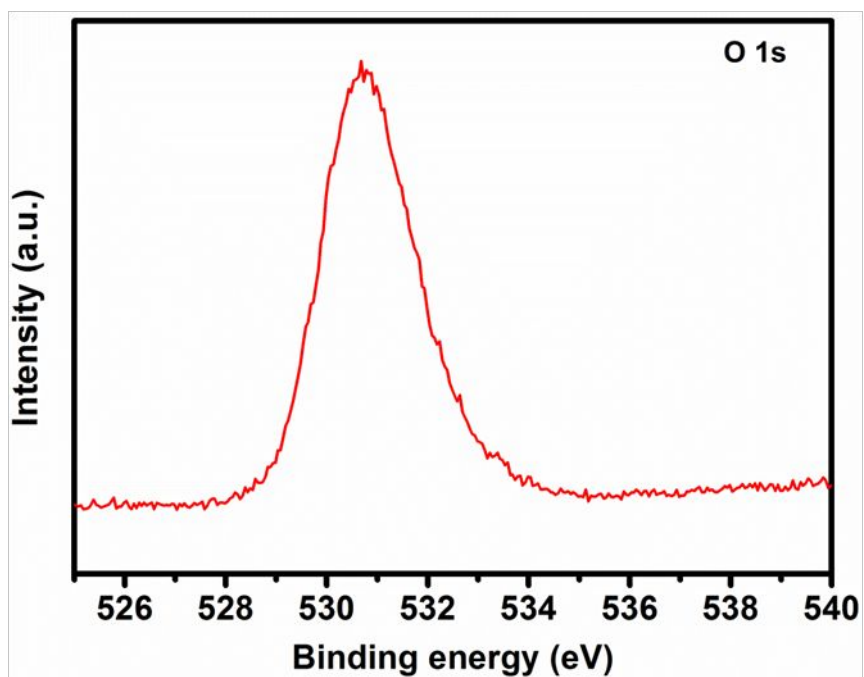


Figure S1. High-resolution XPS spectrum of O 1s.

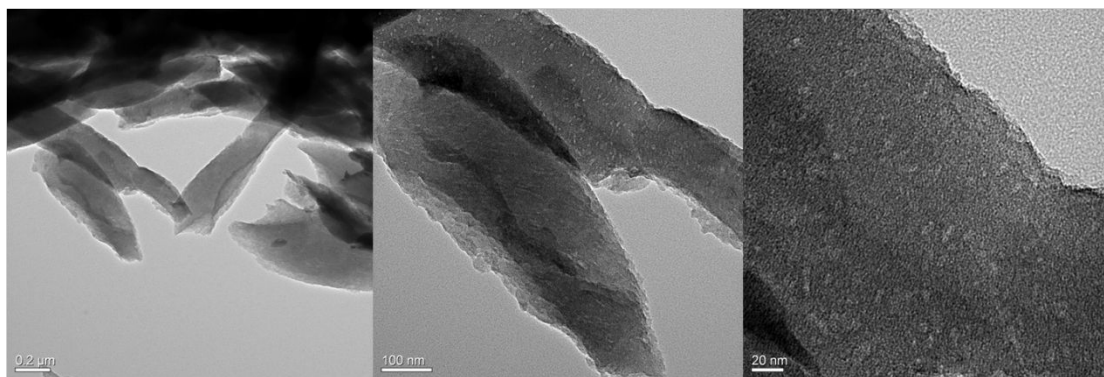


Figure S2. TEM images of Ni(OH)₂@CCF-200 at different magnifications.

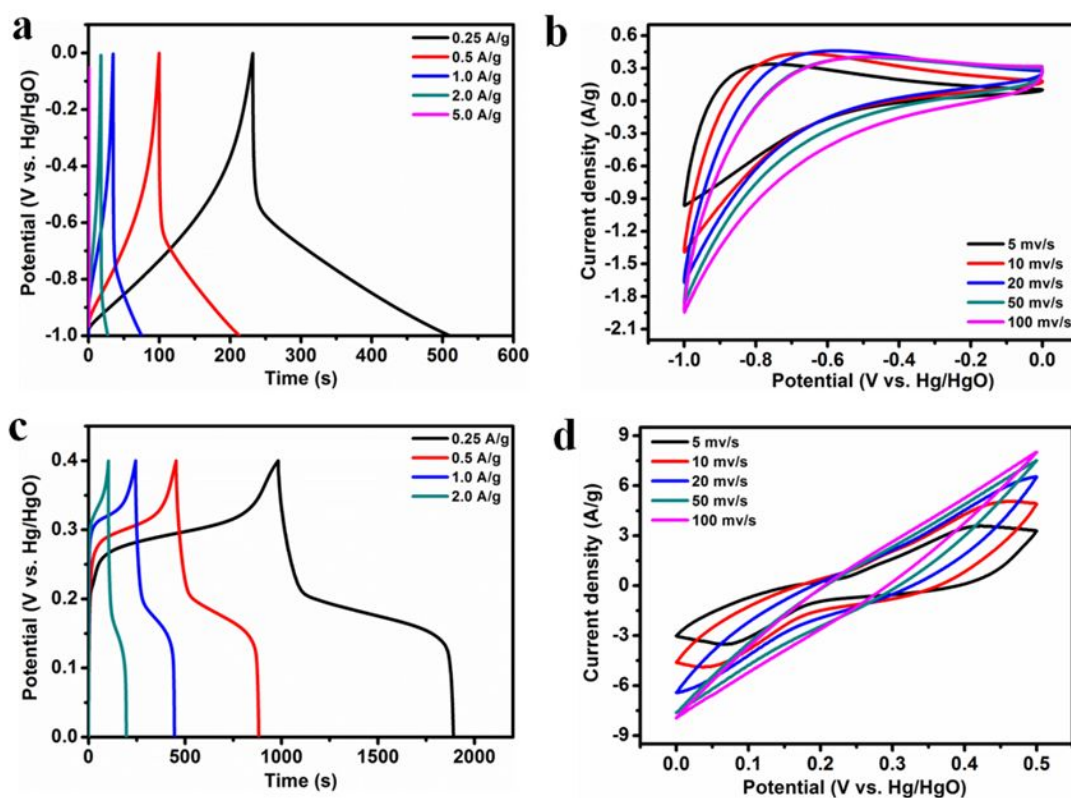


Figure S3. GCD curves a) and CV curves b) of the CCF electrode. GCD curves c) and CV curves d) of the Ni(OH)₂@CCF-200 electrode.

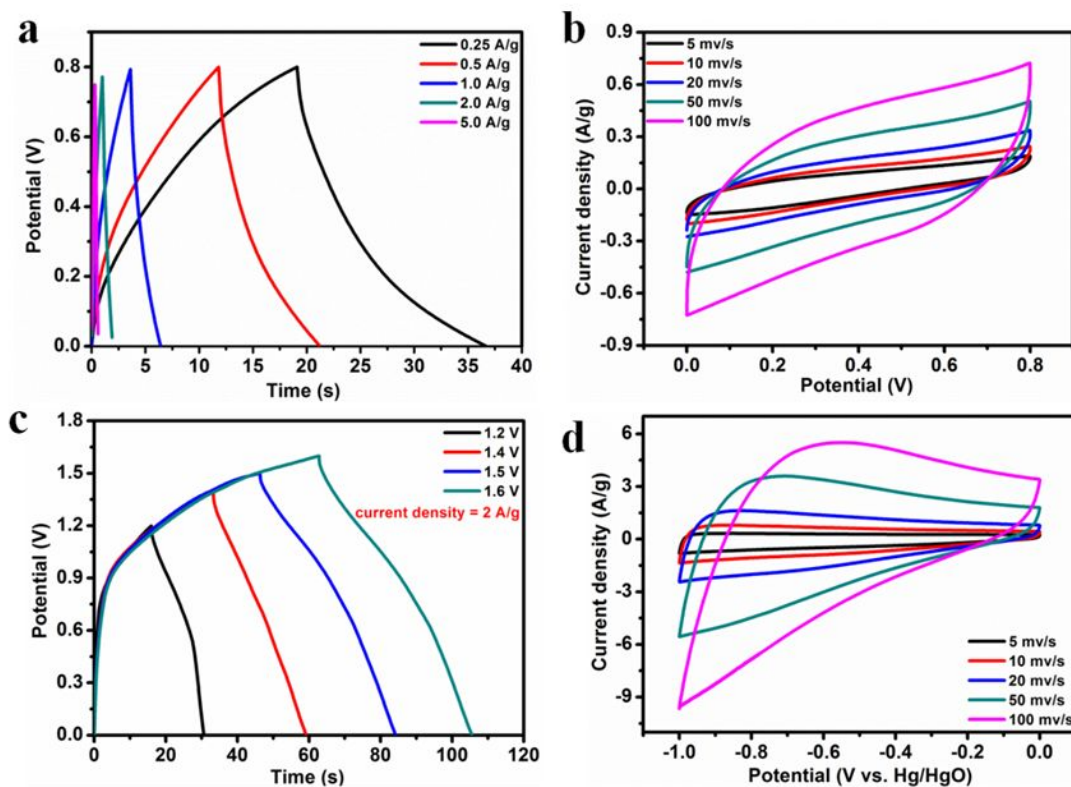


Figure S4. GCD curves a) and CV curves b) of the CCF//CCF SC device at various current densities and scan rates in 6 M KOH aqueous solution. c) GCD curves of a symmetric Ni(OH)₂@CCF-200//Ni(OH)₂@CCF-200 SC device at 1.2 V, 1.4 V, 1.5 V and 1.6 V under 2 A g⁻¹ current density. CV curves d) of the Ni(OH)₂@CCF-200 electrode.

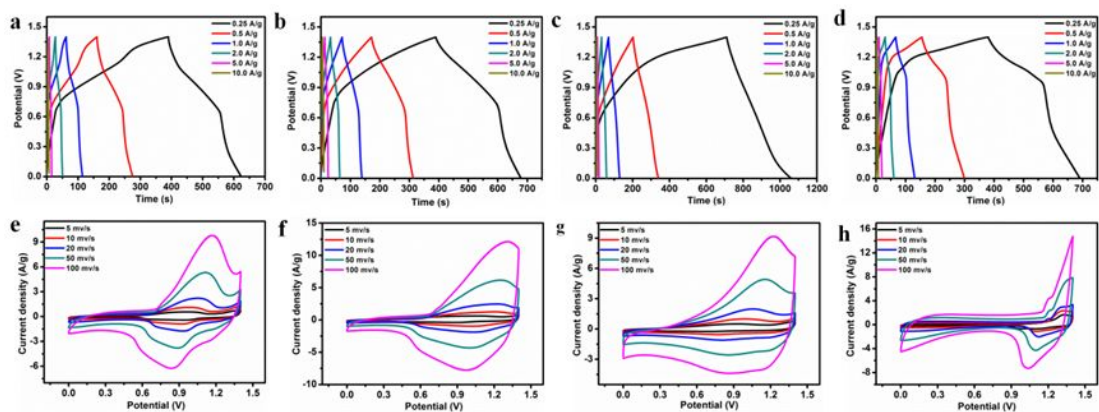


Figure S5. GCD curves of a) Ni(OH)₂@CCF-50//Ni(OH)₂@CCF-50, b) Ni(OH)₂@CCF-100//Ni(OH)₂@CCF-100, c) Ni(OH)₂@CCF-300//Ni(OH)₂@CCF-300 and d) Ni(OH)₂@CCF-400//Ni(OH)₂@CCF-400 SC devices at various current densities in 6 M KOH. CV curves of the e) Ni(OH)₂@CCF-50//Ni(OH)₂@CCF-50, f) Ni(OH)₂@CCF-100//Ni(OH)₂@CCF-100, g) Ni(OH)₂@CCF-300//Ni(OH)₂@CCF-300 and h) Ni(OH)₂@CCF-400//Ni(OH)₂@CCF-400 SC devices at various scan rates in 6 M KOH aqueous solution.

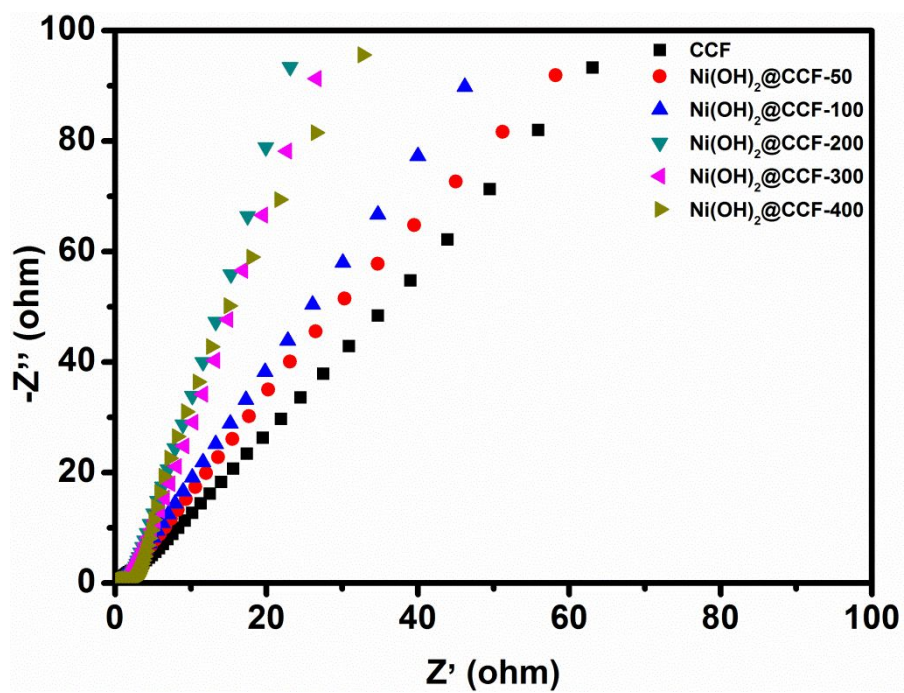


Figure S6. EIS of CCF//CCF and various Ni(OH)₂@CCF//Ni(OH)₂@CCF SC devices.

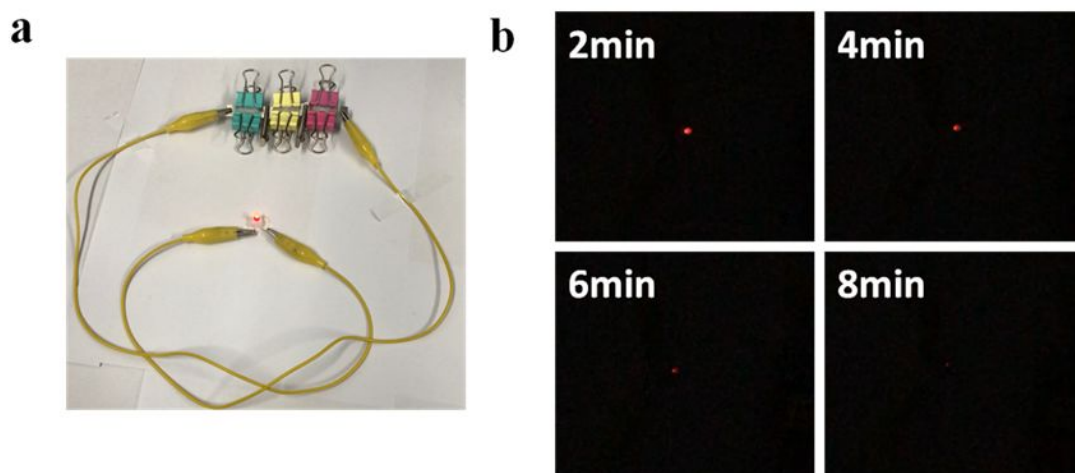


Figure S7. a) A red LED powered by three $\text{Ni(OH)}_2\text{@CCF//Ni(OH)}_2\text{@CCF}$ SCs in series. b) a demo showing this SC device could light up the red LED for 8 min.