

Support Information

Hierarchical Hollow Tubular Fibrous Brucite-Templated Carbons Obtained by KOH Activation for Supercapacitor

Fangfang Liu^{1,2}, Xiuyun Chuan^{1*}, Yupeng Zhao¹

1. School of Earth and Space Sciences, Peking University, Beijing 100871, China

2. School of Materials and Physics, China University of Mining and Technology, Xuzhou 221009, China

*Corresponding author: xychuan@pku.edu.cn

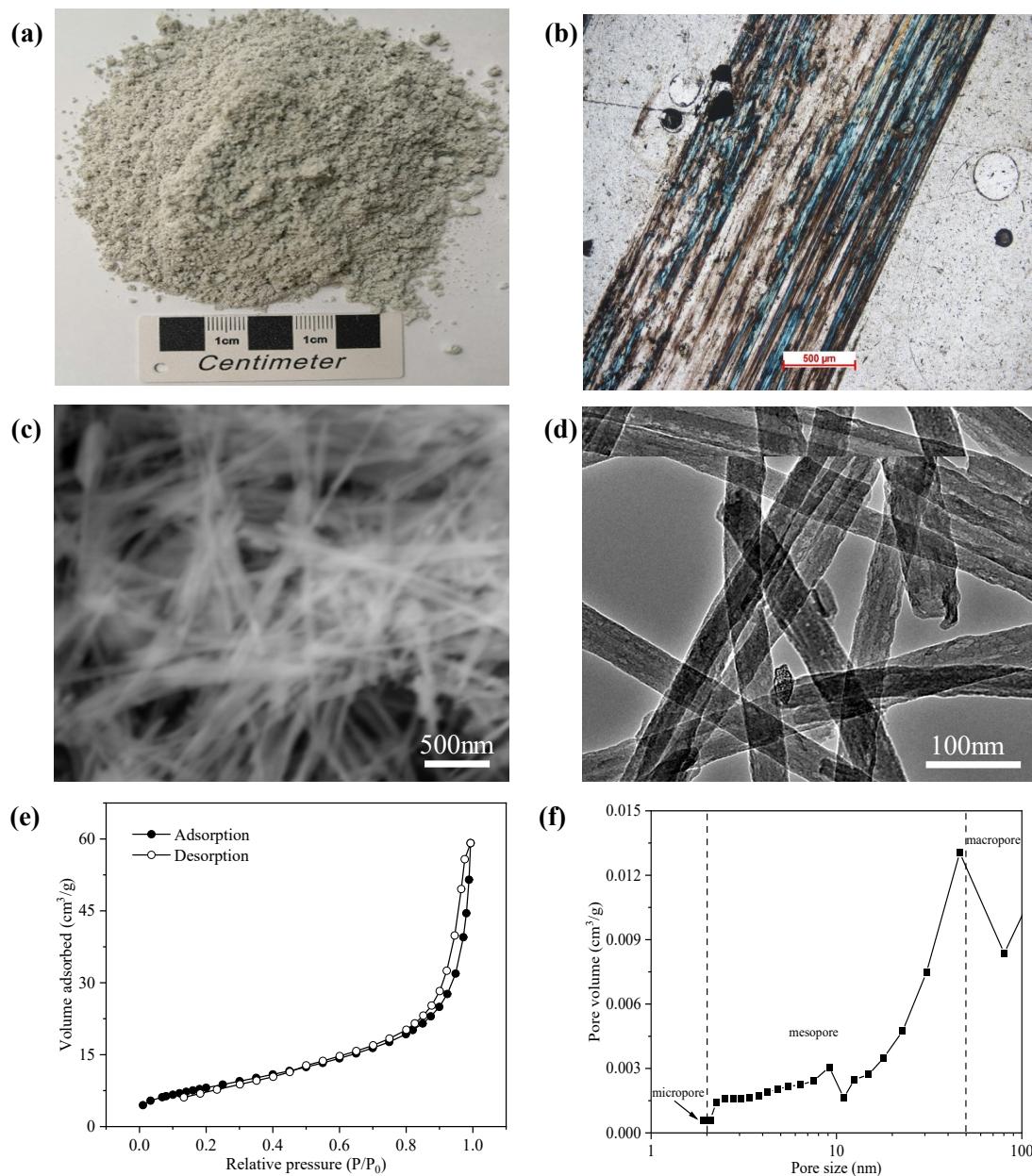


Fig. S1 Mineralogical characteristics analysis of fibrous brucite used in experiments. (a) Fibrous brucite powder. (b) Photomineralogical features under cross-polarized. (c) SEM. (d) TEM micrograph. (e) N_2 adsorption-desorption isotherms and (f) DFT pore size distribution.

Table S1 Specific surface areas and pore texture of fibrous brucite

Sample	D _{ap} (nm)	S _{Total} (m ² /g)	V _{Total} (cm ³ /g)	V _{micro} (cm ³ /g)	V _{meso} (cm ³ /g)
FB	8.2	33	0.09	0.001	0.06

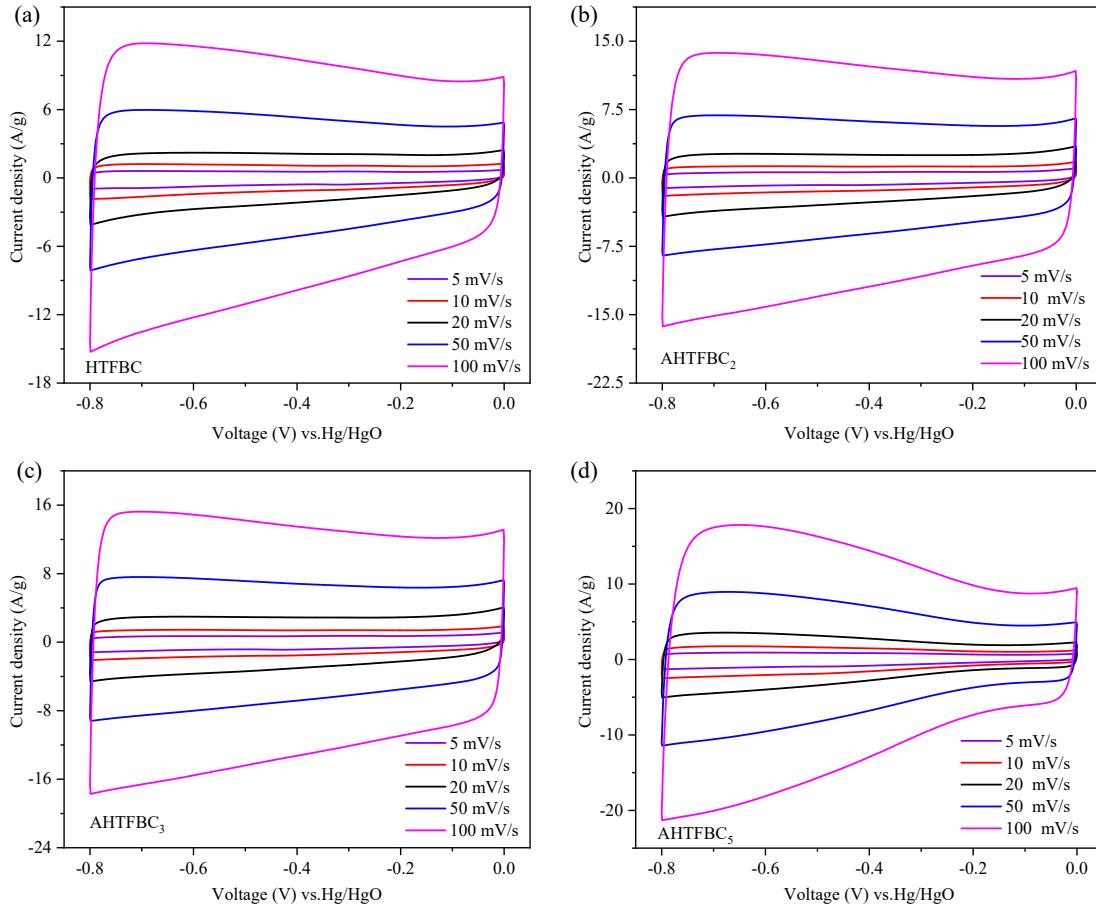


Fig. S2 CV curves of the HTFBC and AHTFBCs measured in a three-electrode system in the 6 M KOH electrolyte. (a) HTFBC; (b) AHTFBC₂; (c) AHTFBC₃; (d) AHTFBC₅

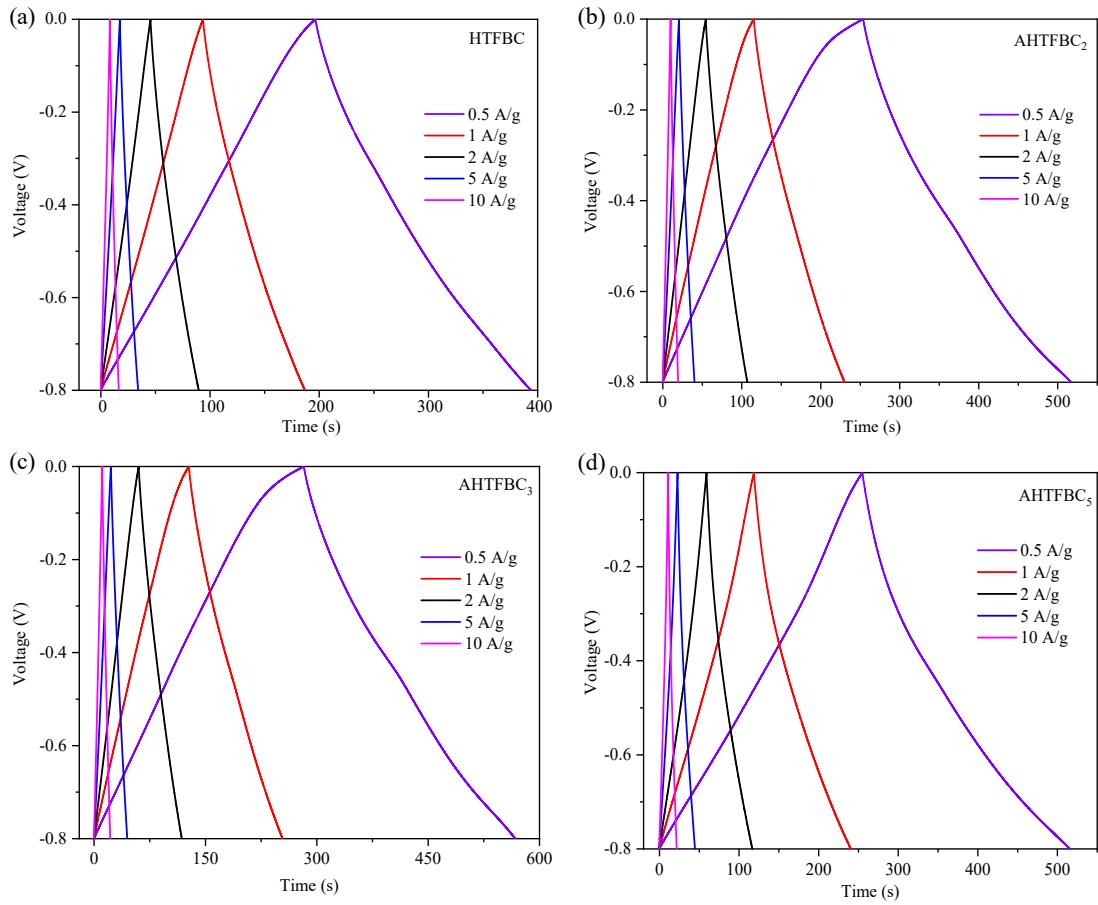


Fig. S3 GCD curves of the HTFBC and AHTFBCs measured in a three-electrode system in the 6 M KOH electrolyte. (a) HTFBC; (b) AHTFBC₂; (c) AHTFBC₃; (d) AHTFBC₅

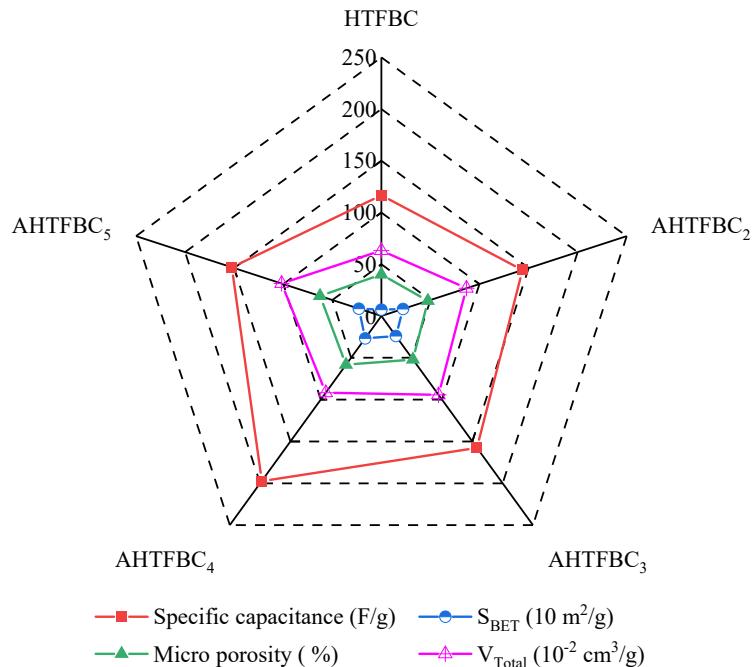


Fig. S4 The cobweb map of specific capacitance、specific surface area、pore volume and micro porosity of HTFBC and AHTFBCs

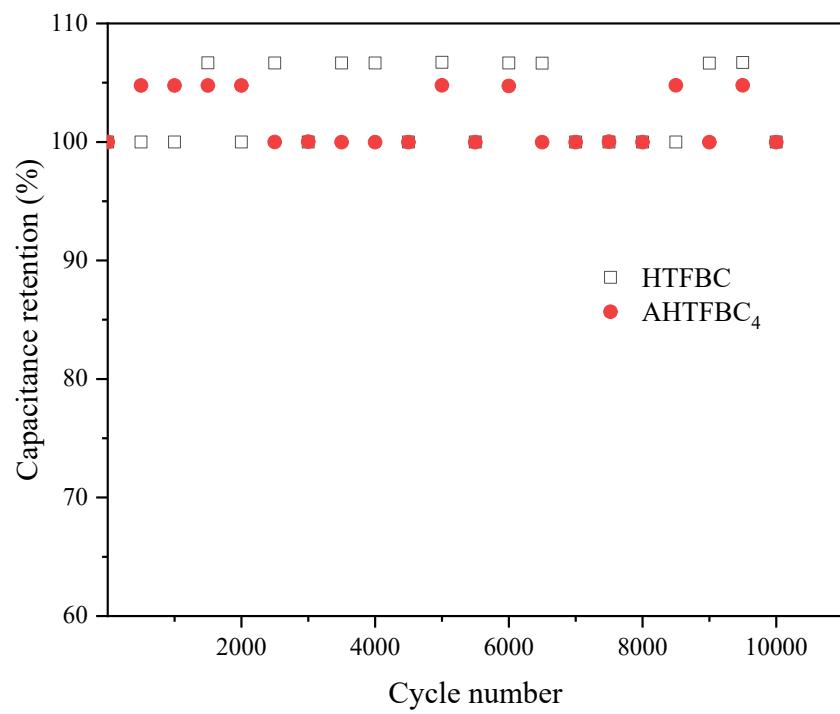


Fig. S5 Cycling performance at 5 A/g of HTFBC and AHTFBC₄ measured in a three-electrode system in the 6 M KOH electrolyte

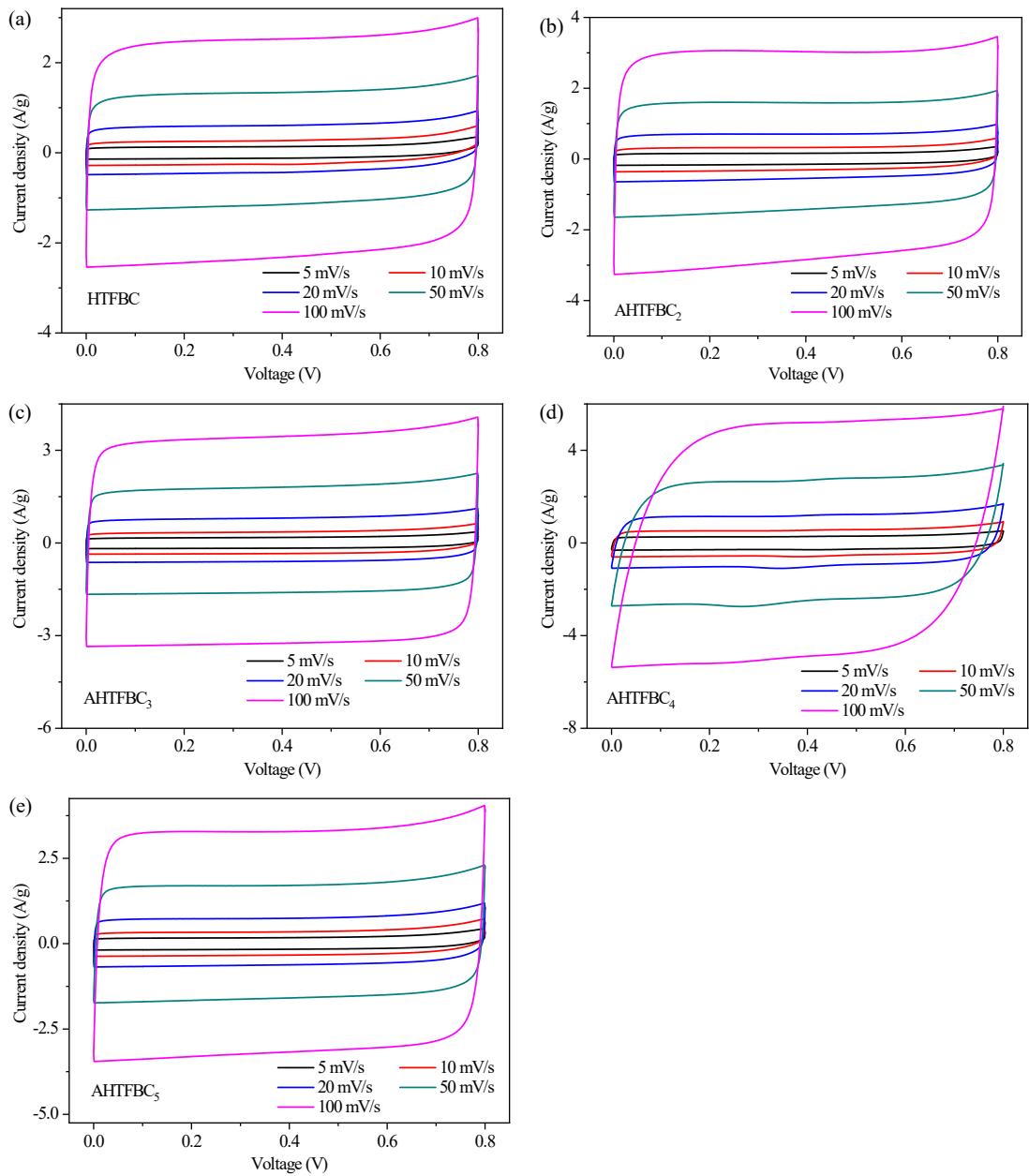


Fig. S6 CV curves of the HTFBC and AHTFBCs measured in a two-electrode symmetrical system in the 6 M KOH electrolyte. (a) HTFBC; (b) AHTFBC₂; (c) AHTFBC₃; (d) AHTFBC₄; (e) AHTFBC₅

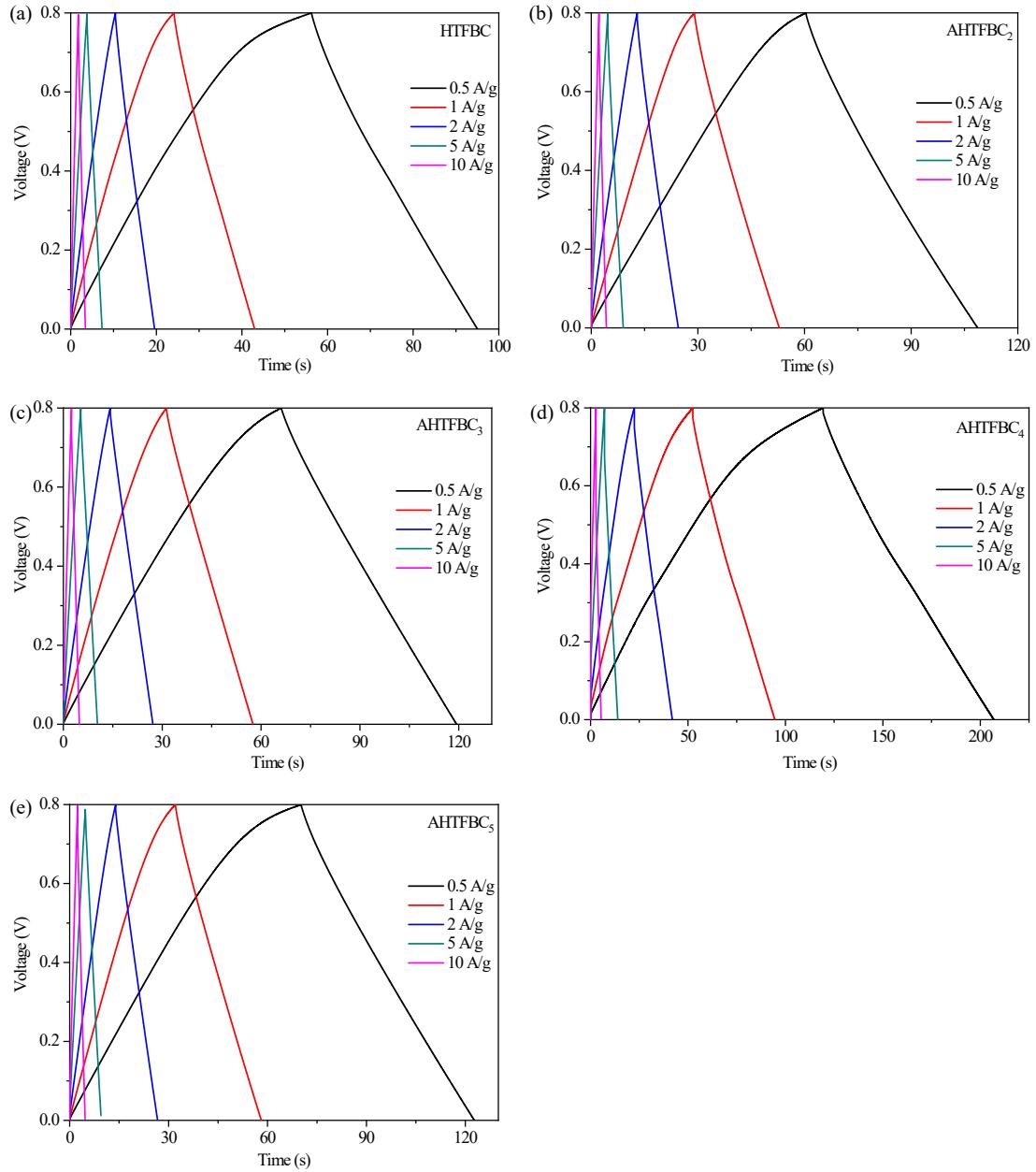


Fig. S7 GCD curves of the HTFBC and AHTFBCs measured in a two-electrode symmetrical system
in the 6 M KOH electrolyte. (a) HTFBC; (b) AHTFBC₂; (c) AHTFBC₃; (d) AHTFBC₄; (e)
AHTFBC₅

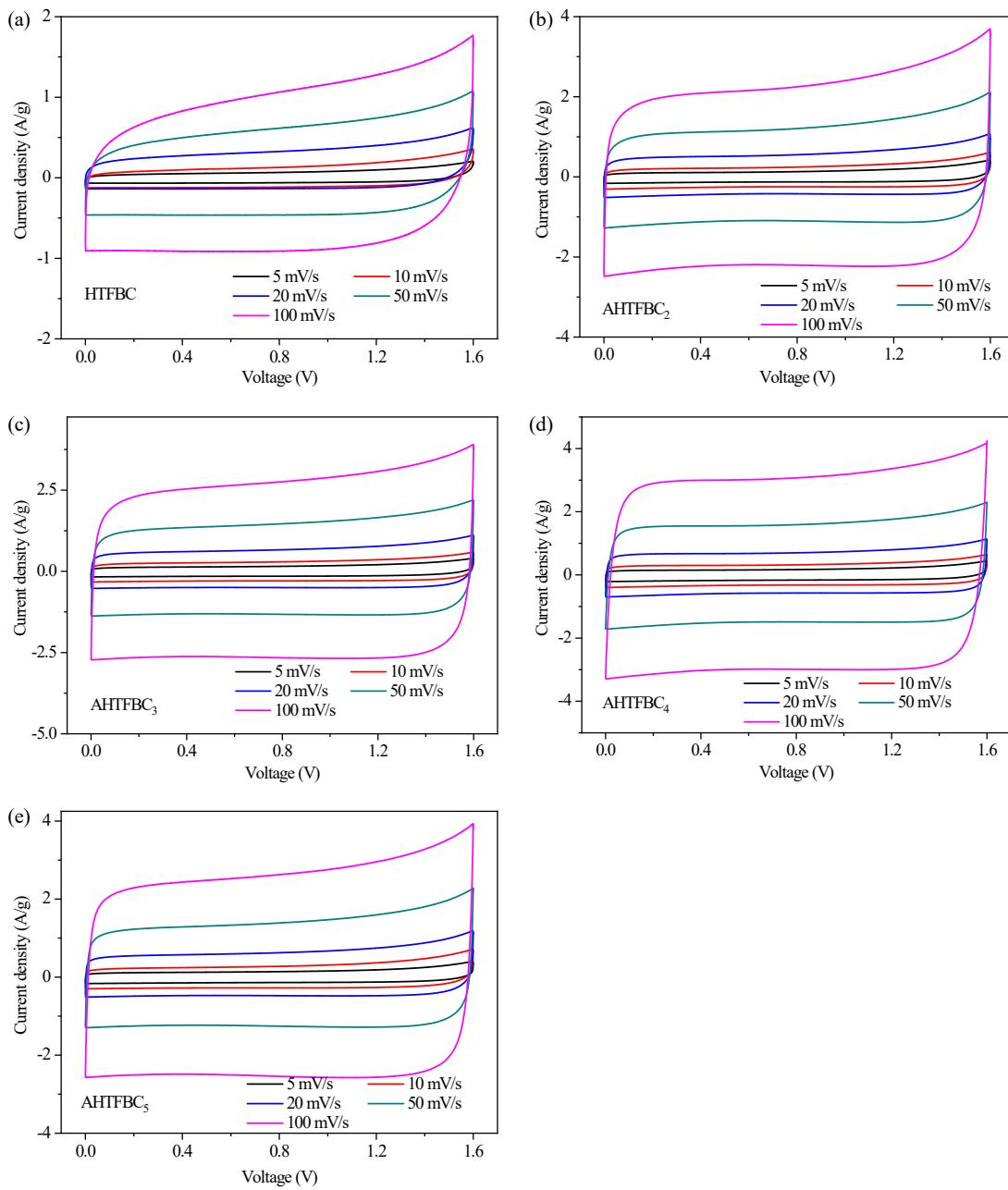


Fig. S8 CV curves of the HTFBC and AHTFBCs measured in a two-electrode symmetrical system in the 1 M Na₂SO₄ electrolyte. (a) HTFBC; (b) AHTFBC₂; (c) AHTFBC₃; (d) AHTFBC₄; (e) AHTFBC₅

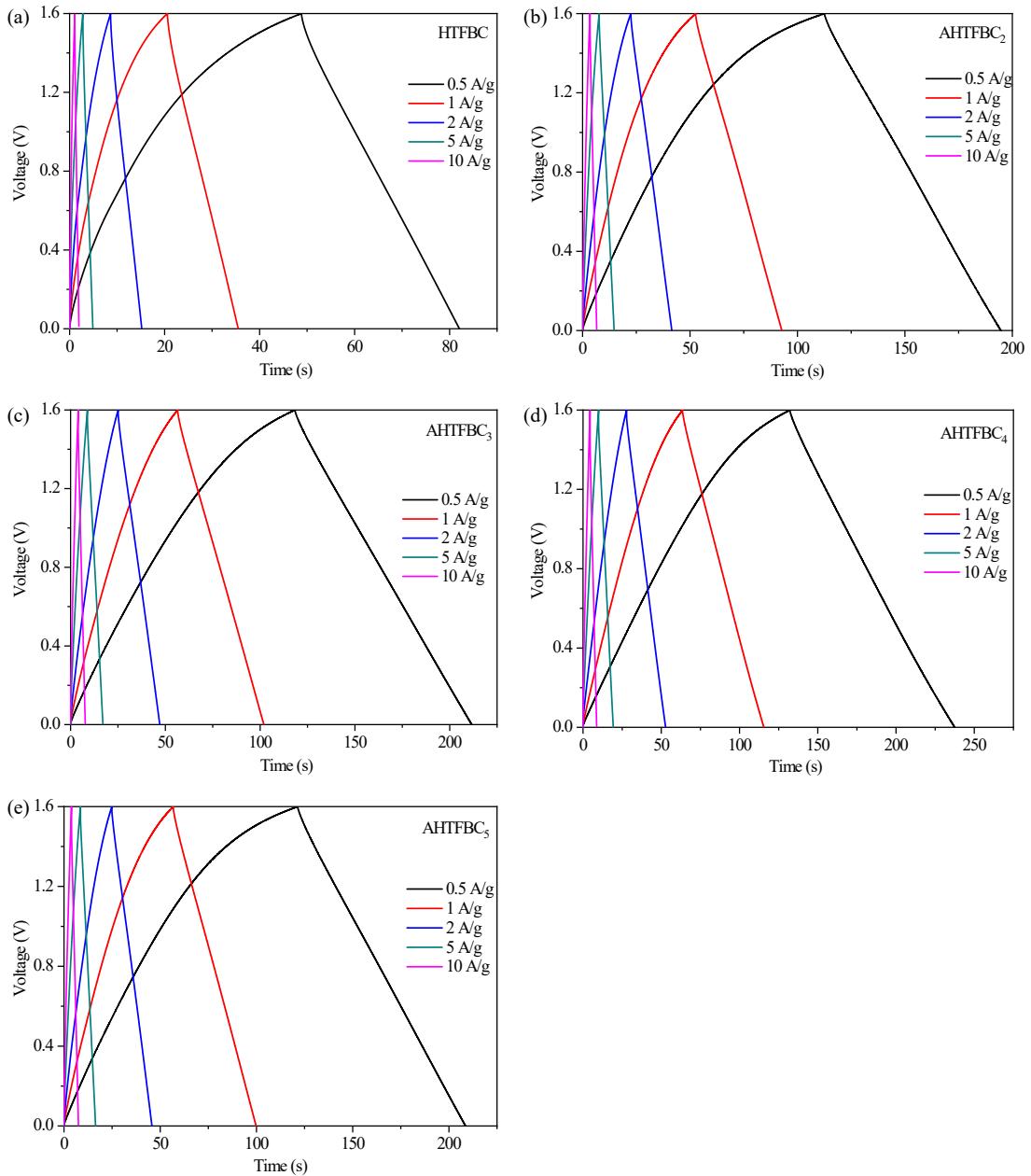


Fig. S9 CV curves of the HTFBC and AHTFBCs measured in a two-electrode symmetrical system in the 1 M Na_2SO_4 electrolyte. (a) HTFBC; (b) AHTFBC₂; (c) AHTFBC₃; (d) AHTFBC₄; (e) AHTFBC₅