Electronic Supplementary Information (ESI)

Electrochemical property of of kenaf-based activated carbon monolith for supercapacitor electrode applications

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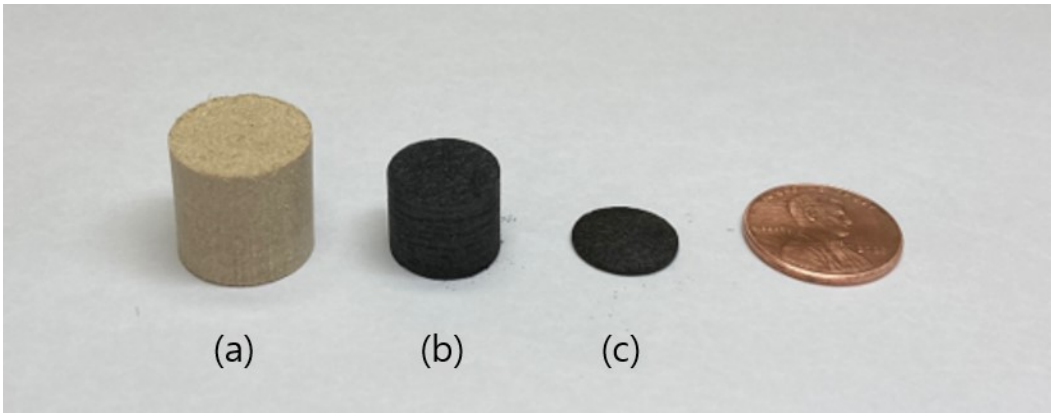

Fig. S1. Photographs of kenaf-based monolith (a), CMK after the pyrolysis at 500 °C for 4 h (b), and disc sample after the activation at 700 °C for 1 h (c).

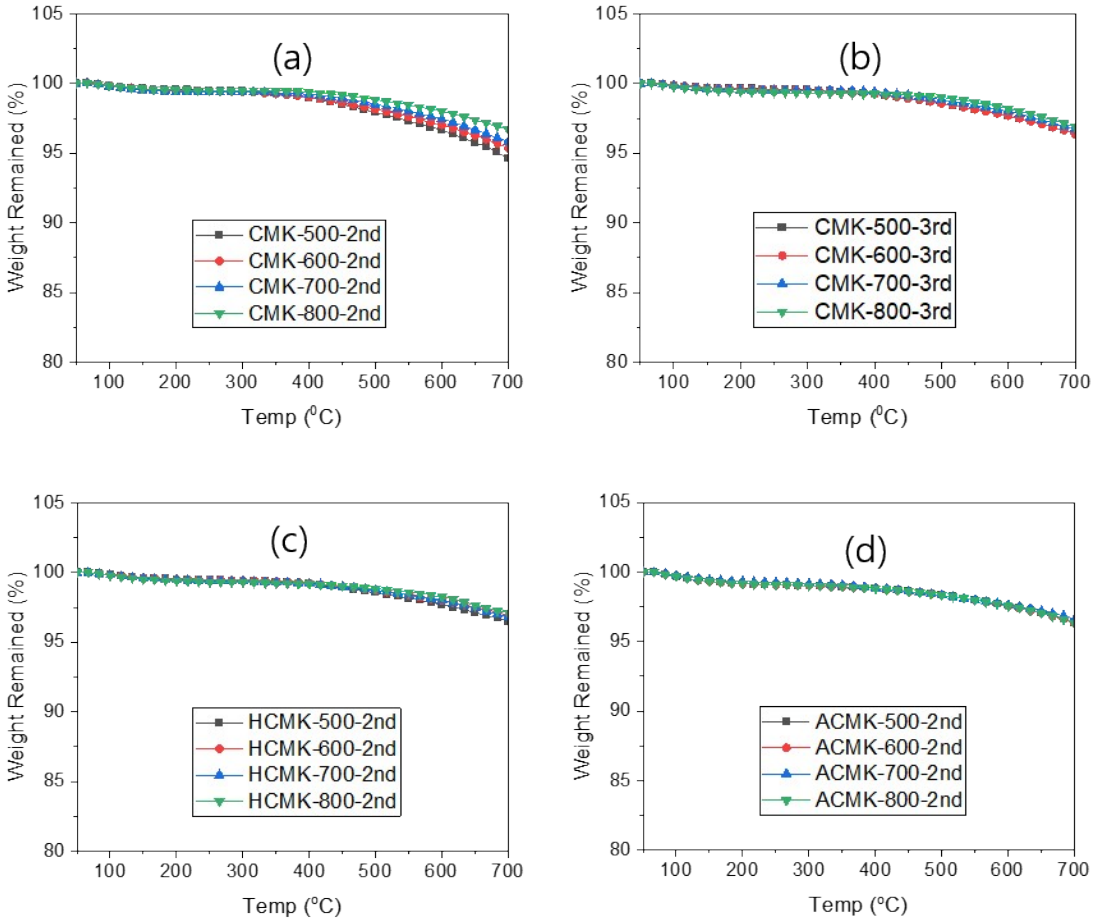

Fig. S2. The 2nd (a) and 3rd TGA (b) of CMK, as well as the 2nd TGA of HCMK (c) and ACMK (d) under N_2 flow of 20 cc/min at 10 °C/min.

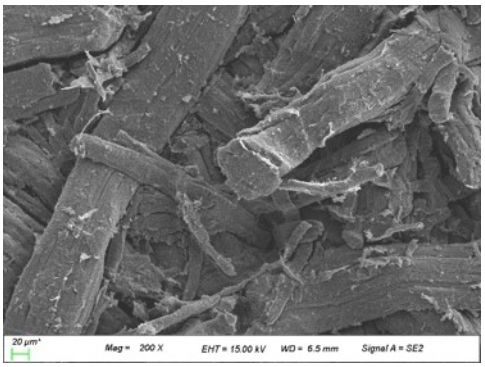

Fig. S3. SEM micrograph of as-molded kenaf fiber.

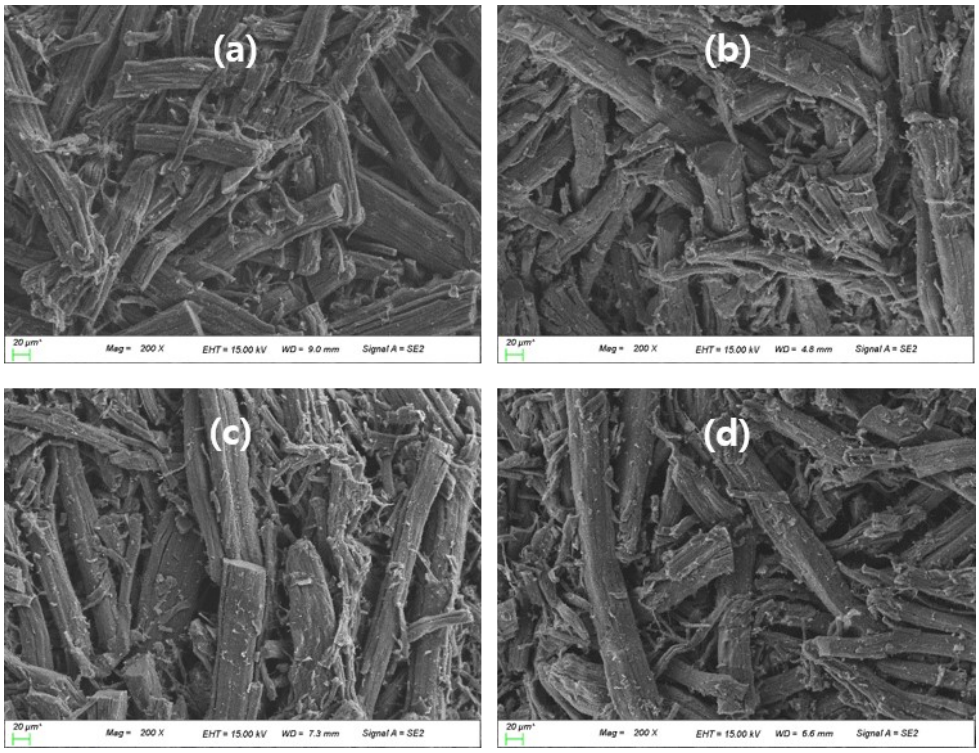

Fig. S4. SEM micrograph of CMK-500 (a), CMK-600 (b), CMK-700 (c) and CMK-800 (d).

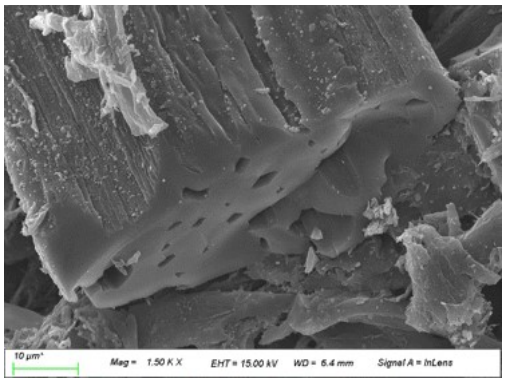

Fig. S5. SEM micrograph of kenaf fiber from CMK-500.

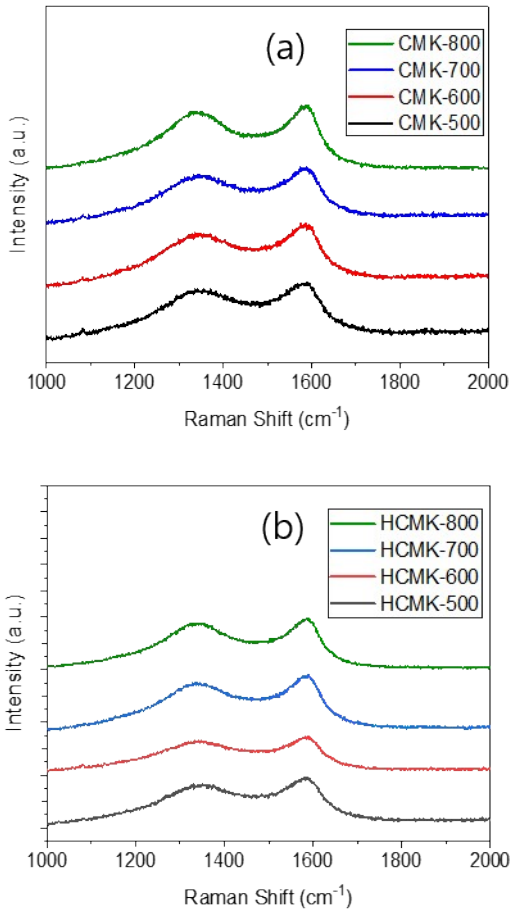

Fig. S6. Raman spectroscopy of CMK (a) and HCMK (b).

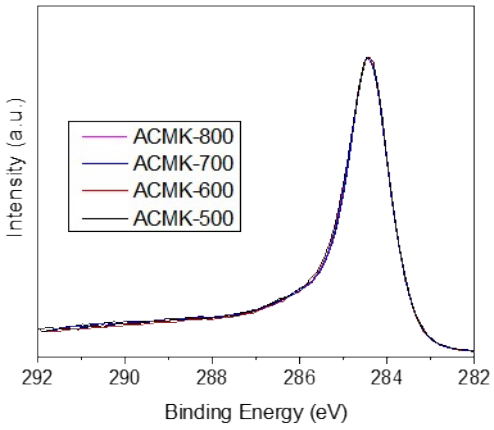

Fig. S7. C_{1s} peaks from ACMKs.

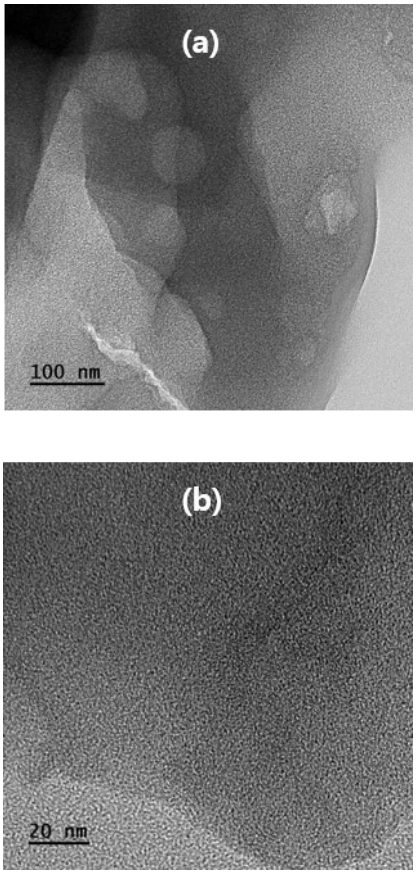

Fig. S8. TEM micrographs of ACMK-500 at low (a) and high (b) magnification

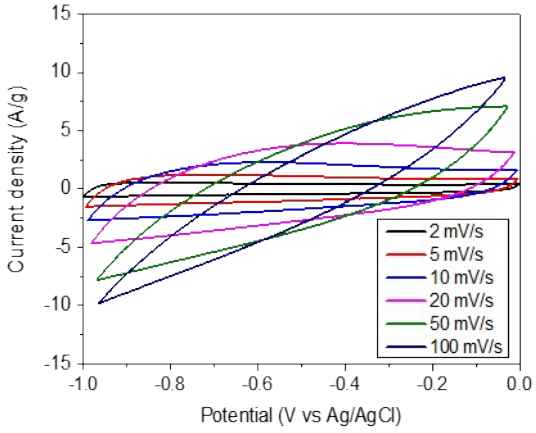

Fig. S9. Scan rate variation of CV curve from ACMK-500 via a 3-electrode system.

Table S1. Weight changes of CMKs upon the pyrolysis, KOH solution soaking, activation as well as heat treatment along with diameter loss upon the pyrolysis.

	Wt. loss (%) by pyrolysis	Diam. loss (%) by pyrolysis	Wt. gain (%) via KOH soaking	Wt. loss (%) via activation	Wt. loss (%) via heat treatment
CMK-500	74.7	17.5	55.1	18.7	13.3
CMK-600	77.3	20.5	53.7	13.9	7.7
CMK-700	79.5	22.9	54.3	9.3	4.9
CMK-800	80.7	23.2	53.5	7.8	3.5