

**Experimental and modeling studies of torrefaction of spent coffee grounds and coffee husk:
Effects on surface chemistry and carbon dioxide capture performance**

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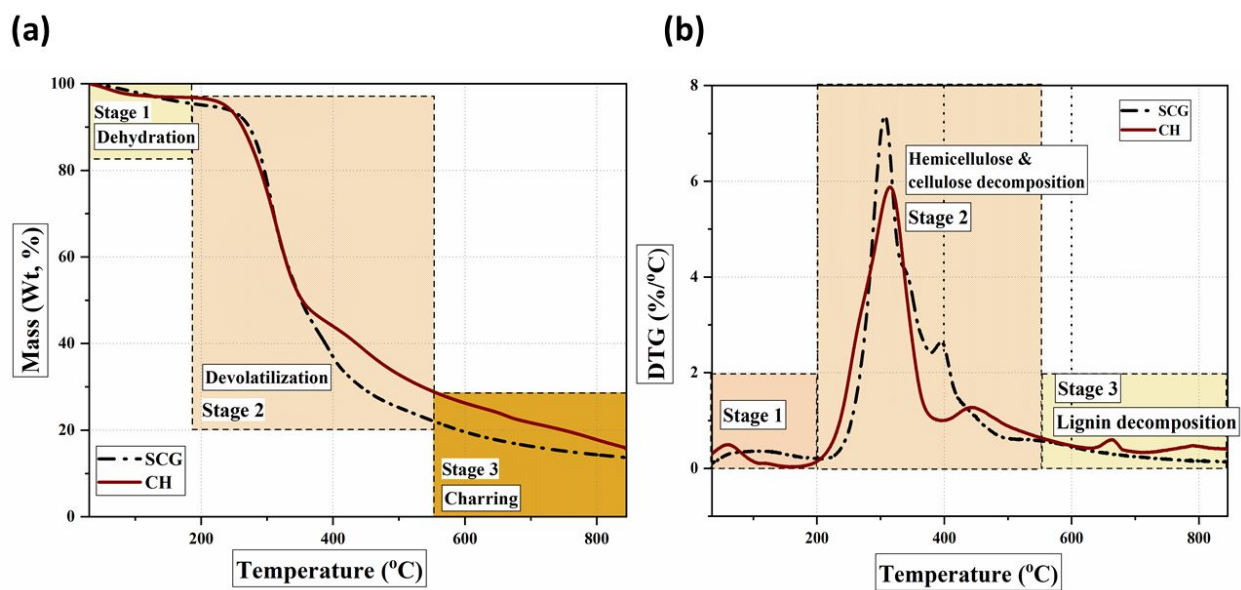


Figure S1. TGA-DTG analysis of (a) SCG and (b) CH (before torrefaction)

Table S1. Deconvoluted C1s spectra of SCG and CH derived torrefied biomass samples

Sample	Peak I (C1)	Peak II (C2)	Peak III (C4)	Peak IV (C4)
	B.E (284.1-284.7 eV)	B.E (285.5 eV)	B.E (286.1 eV)	B.E (288.0-288.8 eV)
SCG-200-0.5h	25.2	28.7	40.4	8.7
SCG-300-1h	34.3	63.5	11.3	3.5
CH-200-0.5h	24.4	39.1	28.1	6.9
CH-300-1h	31.0	49.1	19.3	7.2

Table S2. Deconvoluted O1s spectra of SCG and CH derived torrefied biomass samples

Sample	Peak I (O1)	Peak II (O2)	Peak III (O3)
	B.E (531.2-531.5 eV)	B.E (532.04-532.3 eV)	B.E (533.3 eV)
SCG-200-0.5h	67.30	22.8	9.9
SCG-300-1h	47.03	44.7	8.3
CH-200-0.5h	60.4	29.3	1.3
CH-300-1h	39.2	59.4	2.7