

Supplementary information

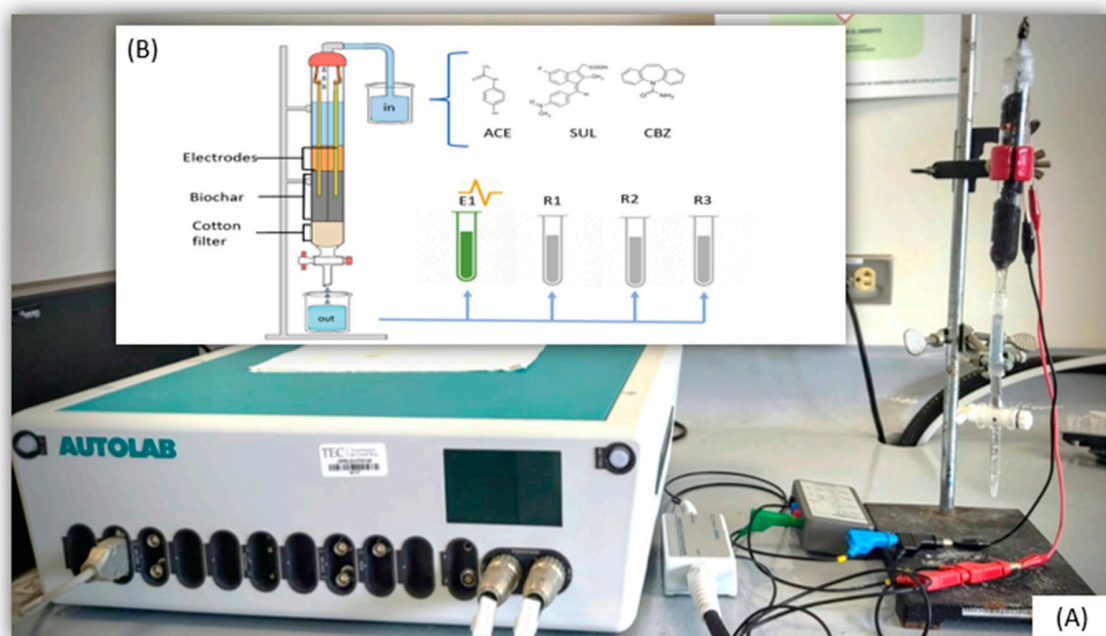


Figure S1. (A) Electrochemical setup for static and dynamic electro-degradation of pharmaceutical substances based on biochar. (B) Schematic of biochar column, sample treatment and nomenclature.

Cyclic voltammetry of water, showing its electrochemical window using a three-electrode configuration and an Ag|AgCl electrode.

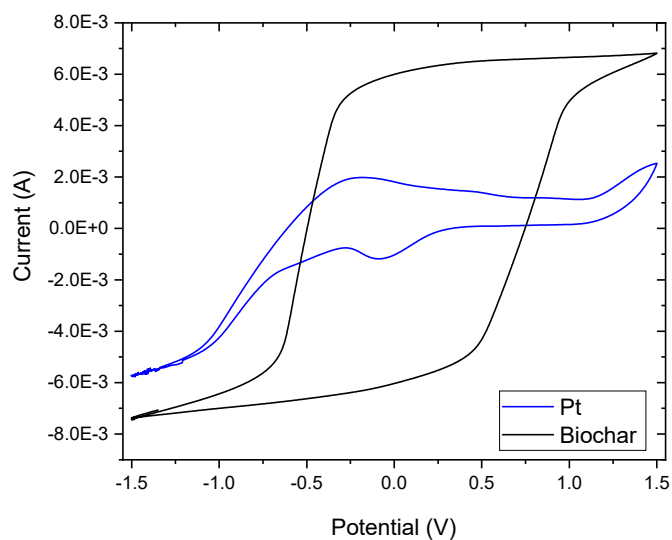


Figure S2. Cyclic voltammetry measurements of supporting electrolyte using (blue) platinum and (black) biochar electrodes against Ag|AgCl electrode in a 3M KCl.

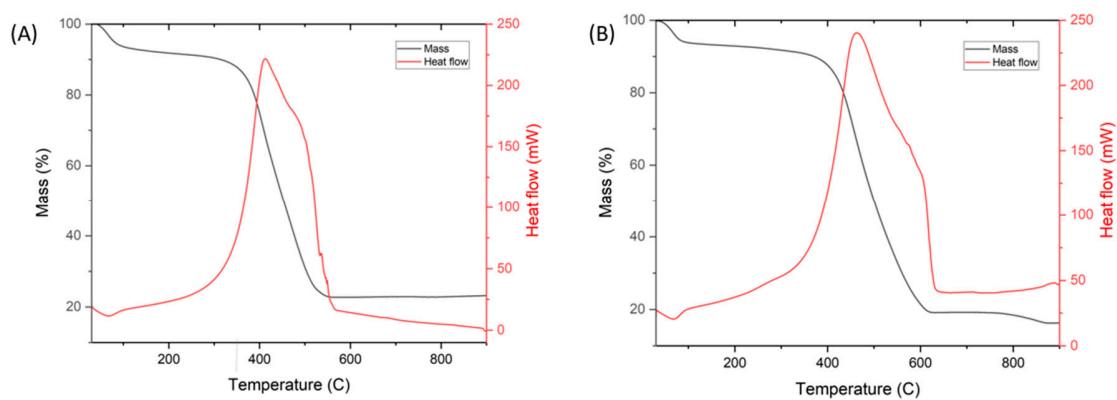


Figure S3. STA curves of (a) biochar before use and (b) after electrodegradation process. Black line is mass loss, and red line is the heat flow (Note: exothermic up).

Table S1. Carbamazepine, sulindac and acetaminophen mixture remotion rate as influenced by each treatment cycle in the degradation process. Results obtained by HPLC analysis.

			Degradation (%)		
			ACE	CBZ	SUL
Electro degradation	First Cycle	P1EN	100.0	100.0	100.0
		P1R1N	100.0	99.6	100.0
		P1R2N	100.0	100.0	100.0
		P1R3N	100.0	99.6	100.0
	Second Cycle	P2EN	100.0	99.6	100.0
		P2R1N	100.0	99.6	100.0
		P2R2N	100.0	99.5	100.0
		P2R3N	100.0	99.4	100.0
	Third Cycle	P3EN	100.0	99.4	100.0
		P3R1N	100.0	100.0	100.0
		P3R2N	100.0	99.2	100.0
		P3R3N	100.0	100.0	100.0
	Fourth Cycle	P4EN	100.0	100.0	100.0
		P4R1N	100.0	100.0	100.0
		P4R2N	100.0	100.0	100.0
		P4R3N	100.0	99.6	100.0
	Fifth Cycle	P5EN	100.0	99.3	100.0
		P5R1N	100.0	99.6	100.0
		P5R2N	100.0	99.8	100.0
		P5R3N	100.0	99.7	100.0