Table S1. Chemical properties of the reed biochar under different pyrolysis temperature.

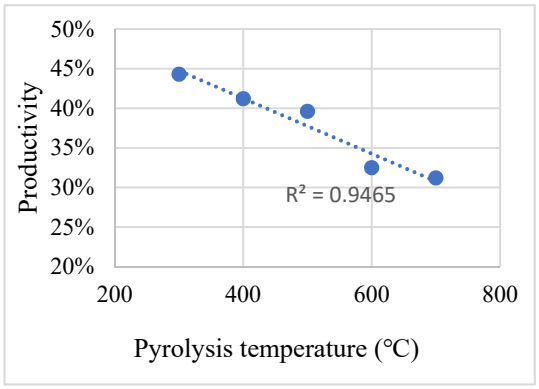
Pyrolysis temperature	Productivity %	Element Composition				Atomic Ratio				pH	SAGs
		C	H	O	N	Ash content	C:N	O:C	H:C		
300	44.3a [1]	59.50b	3.88	28.75	0.67	7.2	88.81	0.48	0.07	8.21	2.73
400	41.2a	57.56b	2.84	31.8	0.70	7.1	82.23	0.55	0.05	7.83	2.17
500	39.6ab	58.94b	2.29	29.97	0.80	8.0	73.68	0.51	0.04	7.75	1.72
600	32.5c	68.90a	2.18	17.86	0.86	10.2	80.12	0.26	0.03	9.12	1.06
700	31.2c	71.34a	1.42	16.11	0.33	10.8	216.18	0.23	0.02	10.33	0.87

[1] Different letters indicate significant differences between samples under different pyrolysis temperature ($p < 0.05$).

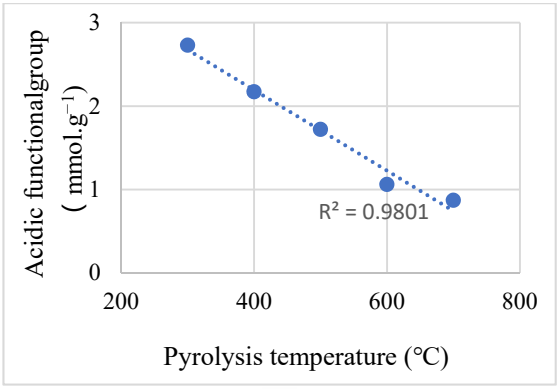
Table S2. Physical properties of the reed biochar under different pyrolysis temperature.

Pyrolysis temperature (°C)	Specific surface area (m^2/g)	Microporous surface area (m^2/g)	Total pore volume (m^3/g)	Mesopore volume (m^3/g)	Average aperture (Å)
300	1.03d[1]	0.03c	0.001c	--	51.70a
400	4.51d	1.08c	0.0035c	0.0025c	30.83b
500	91.58c	21.97a	0.05b	0.022a	23.80c
600	147.80b	21.27a	0.08ab	0.019ab	21.16c
700	200.61a	13.84b	0.10a	0.013b	20.75c

[1] Different letters indicate significant differences between samples under different pyrolysis temperature ($p < 0.05$).



(a)



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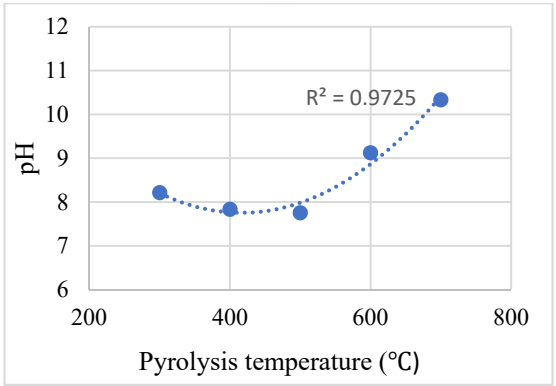

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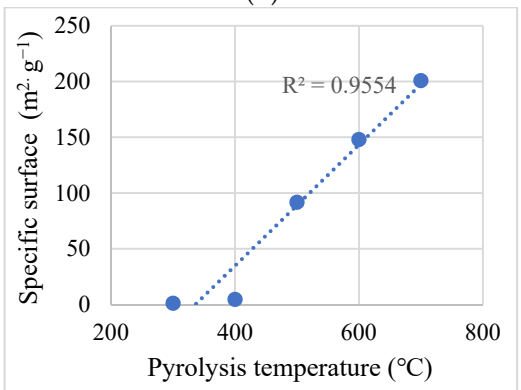

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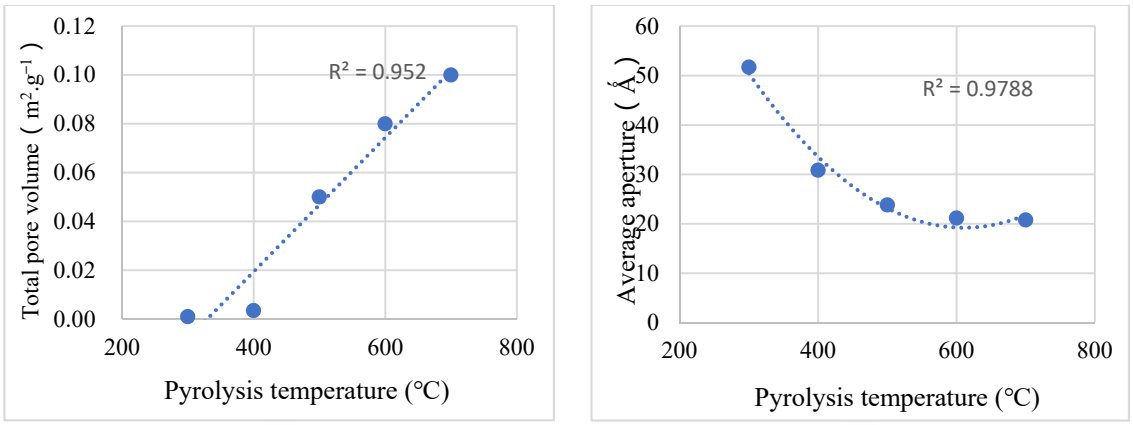

Figure S1. Relationship of the pyrolysis temperature and the physical and chemical properties.