Supplementary Materials

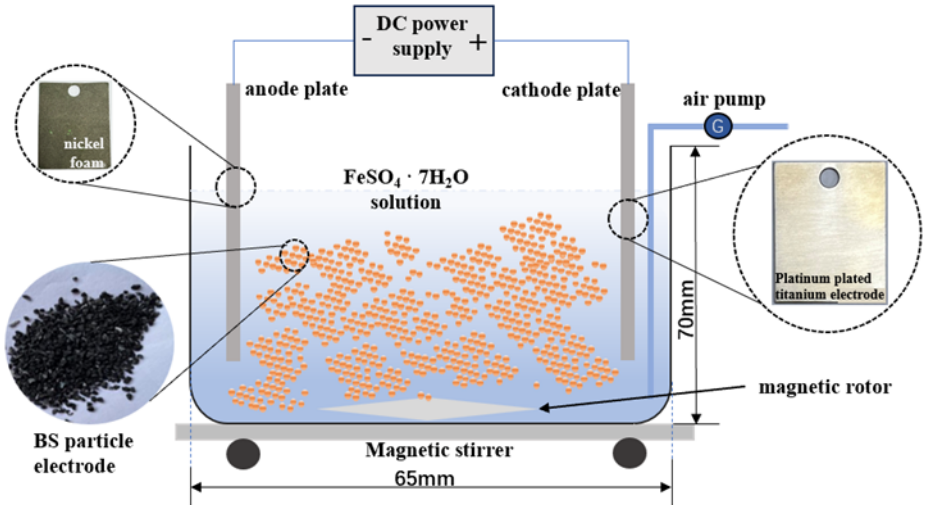

Fig. S1. Schematic diagram of EF-BSJ system

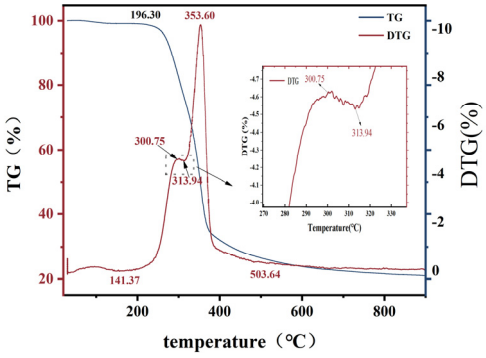

Fig. S2. Pyrolysis curve of the caranda shell in thermogravimetric analysis

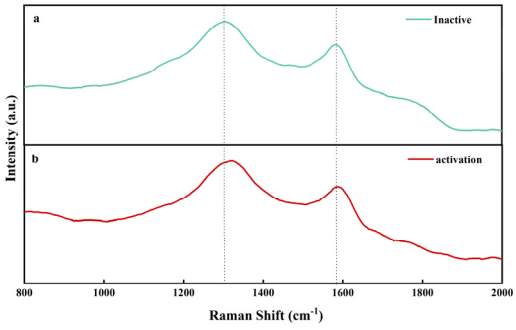

Fig. S3. (a) Raman spectra of BSJ before activation (b) Raman spectra of BSJ after activation

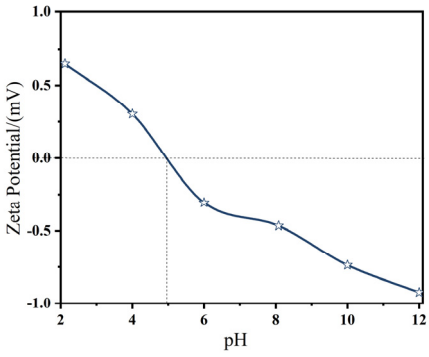

Fig. S4. Zeta potential of biochar

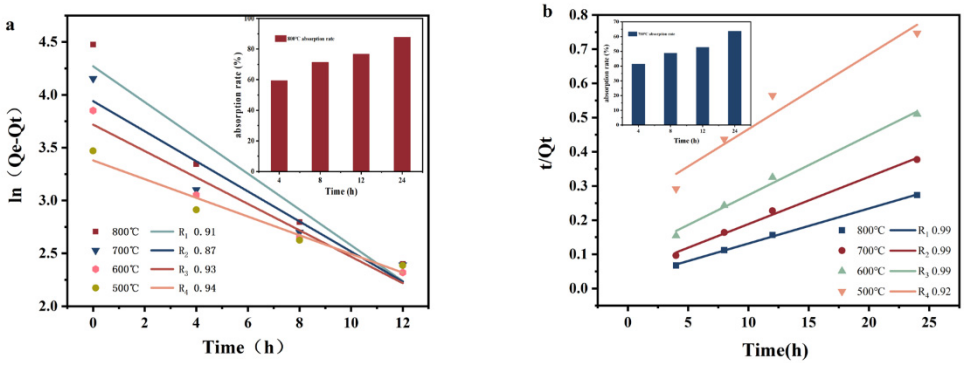

Fig. S5. Linear fitting of adsorption kinetics (a) pseudo first order kinetics fitting; (b) pseudo second order kinetics fitting

Table S1. Initial pollutant concentration, adsorption time and BSJ dosage of various pollutants

Pollutant type	Contaminants	Initial concentration and solution system	Adsorption time	BSJ dosage
antibiotic	ciprofloxacin tetracycline ampicillin roxithromycin	100mg/L 200ml	4h	3g
heavy metal	Cadmium nitrate Lead nitrate Copper nitrate Zinc nitrate	100mg/L 50ml	12h	0.05g
dyestuff	Methylene blue	200mg/L 100ml	24h	0.05g
	Rhodamine B			
	Congo red	500mg/L 50ml	24h	0.1g
	Methyl orange			

Table S2. Determination Results of Organic Elements in Biomass and Biochar of *Jacaranda* Fruit Shell

	C	H	O	N	S
biomass	45.12	6.23	46.01	0.26	0.05
Biochar	80.79	1.93	11.15	0.65	0.06

Table S3. BET determination results of activated BSJ

	Specific surface area (m^2/g)		Pore volume (cm^3/g)		aperture /(nm)	
	Langmuir	micropore	Total pore volume/pore volume	micropore volume / Pore volume	Average aperture	Average pore diameter of mesopore
Inactive	476.14	336.46	0.17	0.13	1.71	2.53
activation	699.55	484.93	0.25	0.19	1.75	2.95

Table S4. Adsorption Kinetic Parameters of Pseudo First and Pseudo Second Order Kinetic Models of CIP on Japonica Biochar

CIP concentration	Pseudo-first order model				Pseudo-second order model		
	K_1	Qe (mg /g)	R^2	Qexp	K_2 (g/mg)	Qe (mg/g)	R^2
800℃	0.1694	87.79	0.91	87.79	0.01024	87.79	0.99
700℃	0.1423	63.68	0.87	63.68	0.01382	63.68	0.99
600℃	0.1250	47.05	0.93	47.05	0.01764	47.05	0.99
500℃	0.0885	32.14	0.94	32.14	0.02181	32.14	0.92