



Supporting Information for:

Tobacco Waste Liquid-Based Organic Fertilizer Particle for Controlled-Release Fulvic Acid and Immobilization of Heavy Metals in Soil

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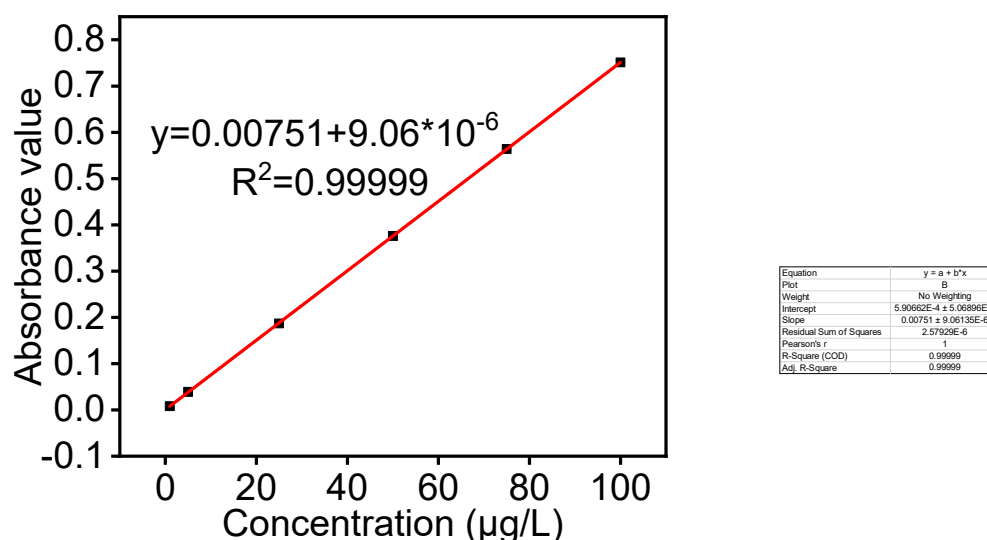


Figure S1. The relationship between FA and absorbance value.

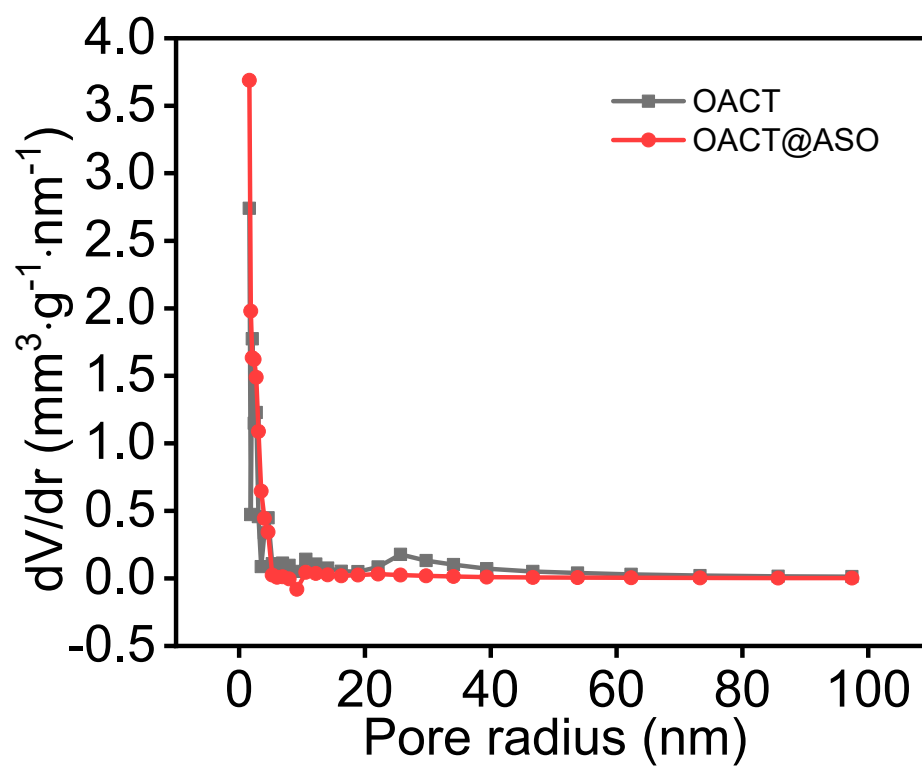


Figure S2. The pore size distributions of OACT and OACT@ASO.

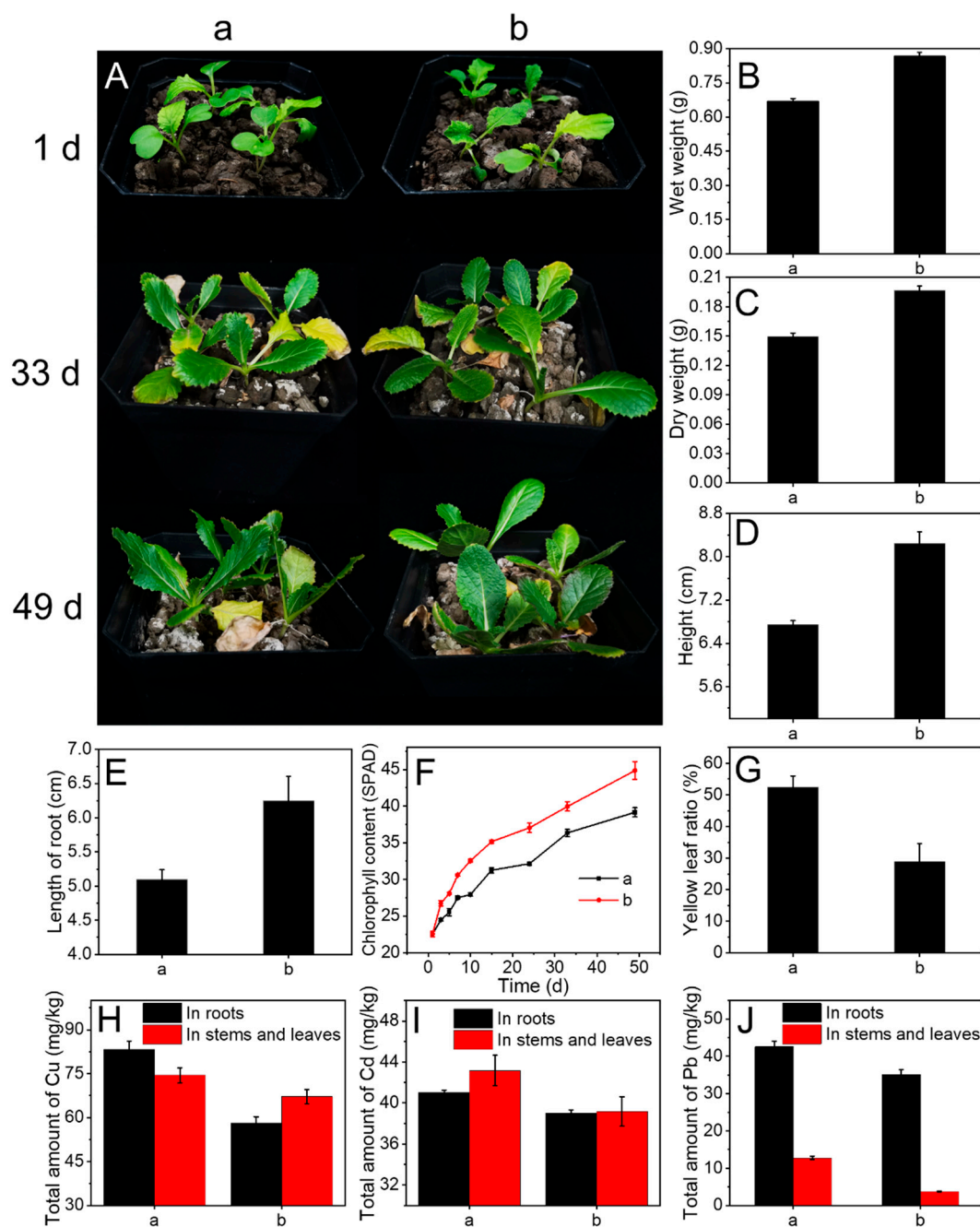


Figure S3. (A) Digital photographs of pakchoi seedlings in soil. (B–G) Wet weight, dry weight, height, length of root, chlorophyll content, and yellow leaf ratio of pakchoi seedlings. (H–J) Total amounts of Cu, Cd, and Pb in pakchoi seedlings roots, and stems and leaves: (a) Soil+Cu(II)/Cd(II)/Pb(II) mixed solution and (b) Soil+Cu(II)/Cd(II)/Pb(II) mixed solution+OACT@ASO.



Figure S4. (A) Digital photographs of pakchoi at field.

Table S1. The composition analysis of tobacco waste liquid.

No	Test Item	Test Results		
		Unit	Test Method	Test Result
1	density	g/mL	NY/T 887-2010	1.19
2	Cu	g/L	NY/T 1974-2010	<0.1
3	Mo	g/L	NY/T 1974-2010	<0.1
4	Mn	g/L	NY/T 1974-2010	<0.1
5	P ₂ O ₅	%	NY/T 1977-2010	0.26
6	S	%	NY/T 1117-2010	0.35
7	B	g/L	NY/T 1974-2010	<0.1
8	Fe	g/L	NY/T 1974-2010	<0.1
9	Mg	mg/kg	NY/T 1117-2010	7.3
10	Zn	g/L	NY/T 1974-2010	<0.1
11	Insoluble Matter	%	NY/T 1973-2010	0.18
12	Total Nitrogen	%	NY/T 1977-2010	0.99
13	Ca	mg/kg	NY/T 1117-2010	9.1
14	pH	-	NY/T 1973-2010	5.07
15	Cl	%	NY/T 1117-2010	2.24
16	Organic Matter	%	NY 525-2012	27.7

17	K	%	NY/T 1977-2010	1.37
18	Humic Acid	%	NY/T 1971-2010	2.37
19	Fulvic Acid	%	Ultraviolet-visible Spectrophotometer	8.70
20	Nicotine Content	%	JY/T 021-1996	0.25
