

Supplementary material

Discharge water treatment of Yellow River water purification plant: optimization and application of enhanced coagulation technology

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Table S1 Indicators of water quality of the effluent from the first water plant

PH	Turbidity	Color	COD _{Mn}	NH ₃ -N	TP
8.2~8.4	39.7~48.8	14~28	2.34~4.35	0.59~1.67	0.23~0.35
Al	Fe	Mn	Cd	Total Bacterial Count	Fecal Coliform Count
0.19~0.49	0.15~0.37	0.03~0.13	<0.004	1480~2050	930-1380

Table S2 Indicators of sludge after intensive coagulation of discharged water from water
purification plant during the abundant water period

Solids content	Sludge specific resistance (1012 m/kg)
8.04~22.37	0.15~0.94

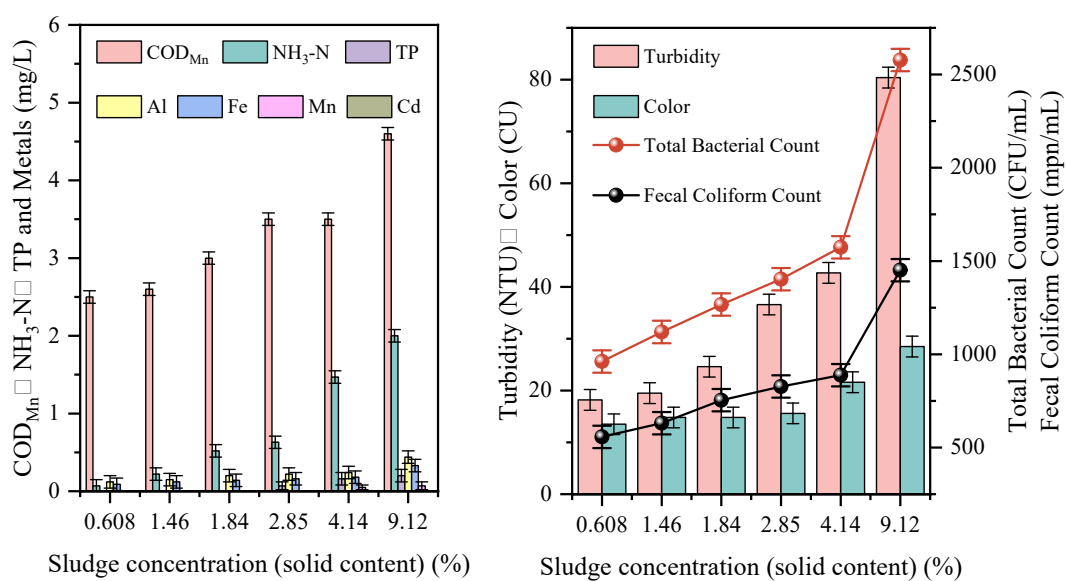


Fig. S1 The effect of different drainage water concentrations on the quality of the supernatant.

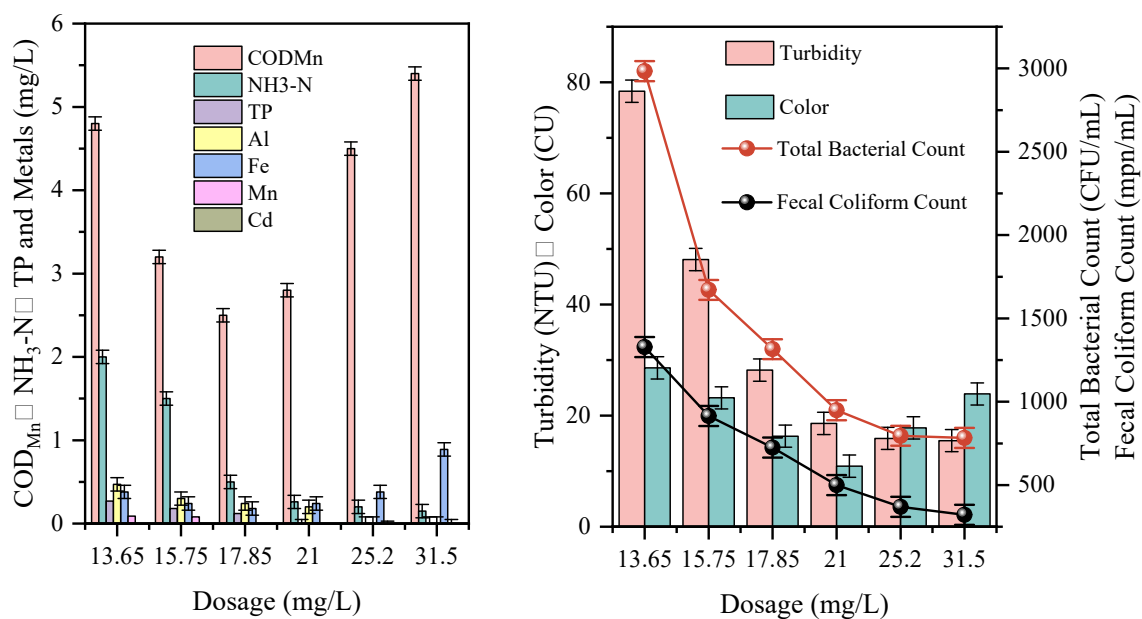


Fig. S2 Effect of different dosage on supernatant water quality

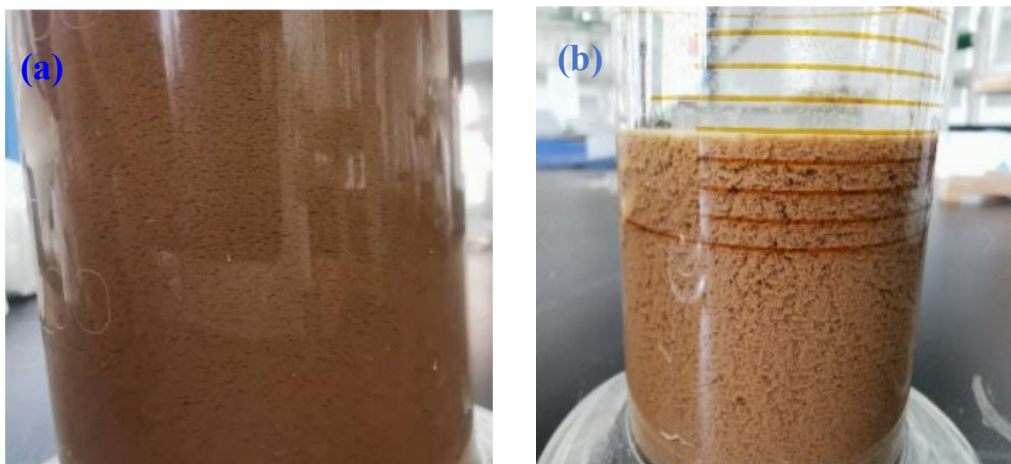


Fig S3 Plot of settling effect with different effects

(a) Floes after natural settling of drainage water; (b) Sludge floes after intensive coagulation of the discharge water

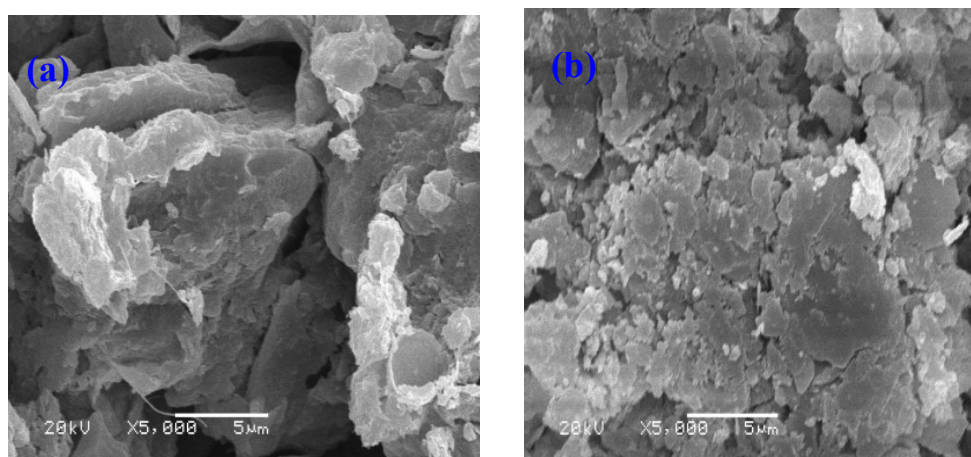


Fig. S4 Scanning Electron Microscope Diagram

(a) Raw water flocs in drainage water (x5000); (b) Sludge floc after intensive coagulation of the discharge water (x5000)