Table S1. Basic properties of *M. aeruginosa* algal fluid

Indicator	Moisture content	TS（g/L）	TCOD（mg/L）	pH	OD_{680}
Results	98.74±0.1	3.21±0.2	868±12.5	10.25±0.2	2.68±0.28

Table S2. Analysis of Substances Corresponding to Each Fluorescence Peak and Their Characteristics[28]

Fluorescence Region	λex/em (nm)	Corresponding Substance Type
Region I	200-250/280-330	Tyrosine-like proteins
Region II	200-250/330-380	Tryptophan-like proteins
Region III	200-250/380-500	Fulvic-like substances
Region IV	250-280/280-380	Microbial by-products
Region V	250-400/380-500	Humic-like substances

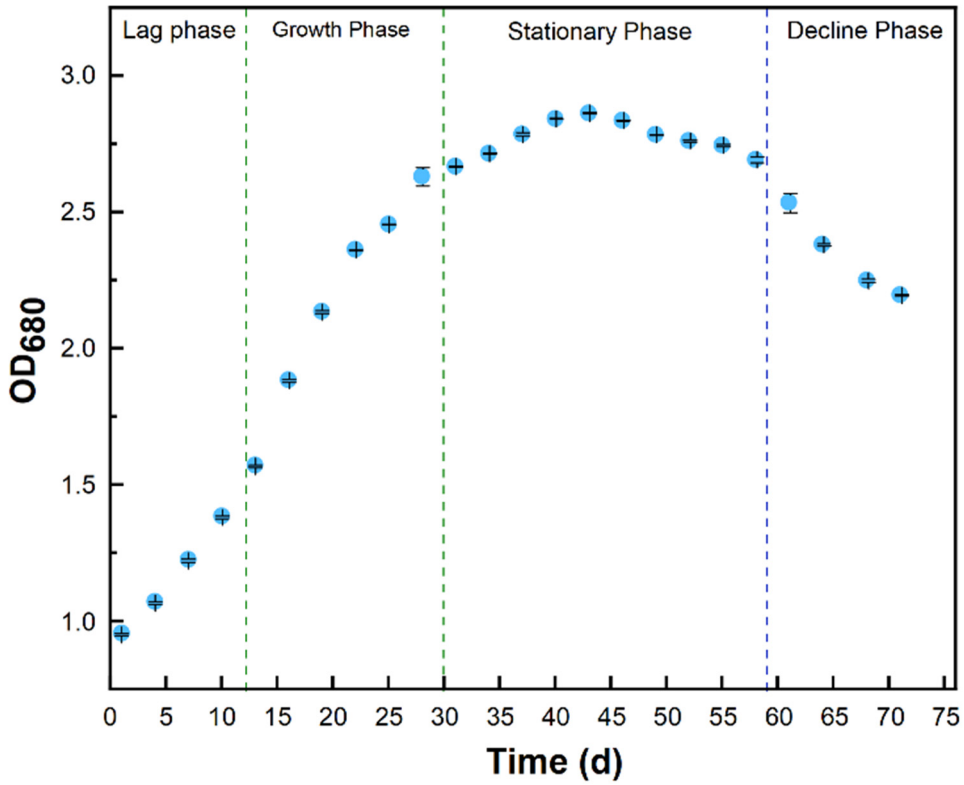


Figure S1. Growth curve of *M. aeruginosa*

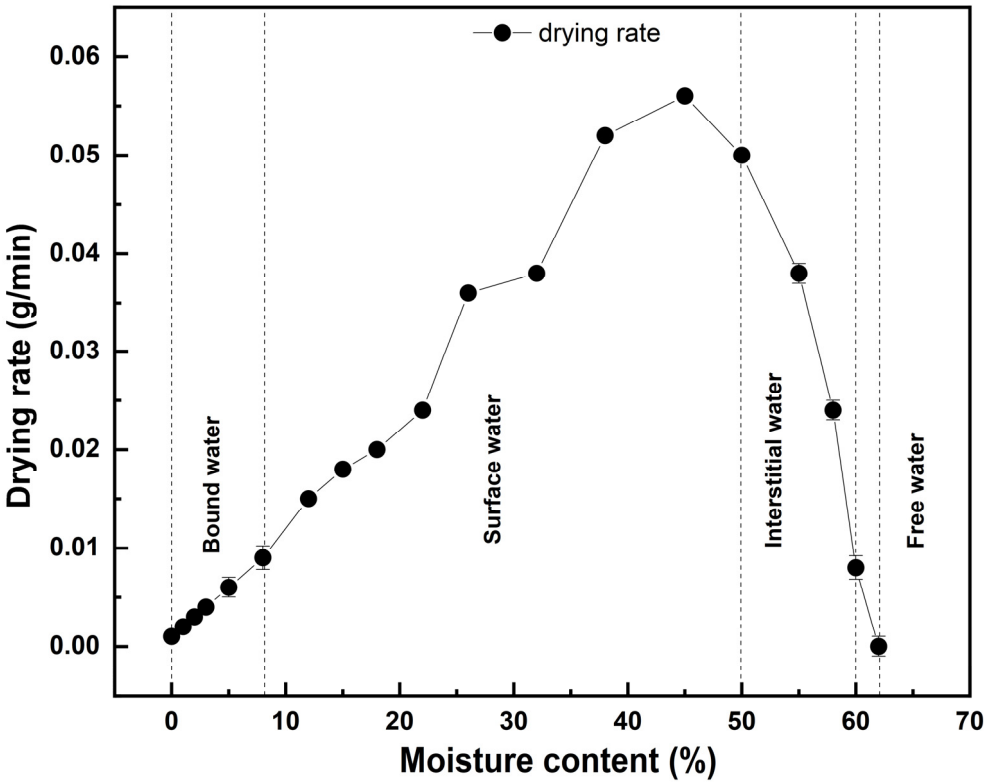


Figure S2. Drying rate curve of *M. aeruginosa*-laden sludge

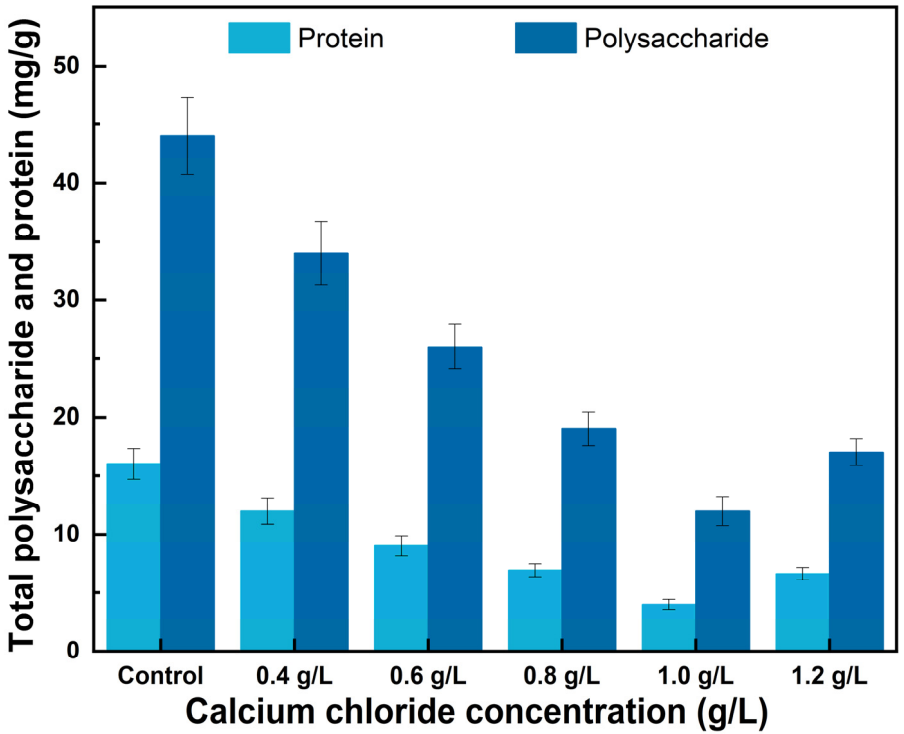


Figure S3. The changes in polysaccharide and protein in *M. aeruginosa* EPS

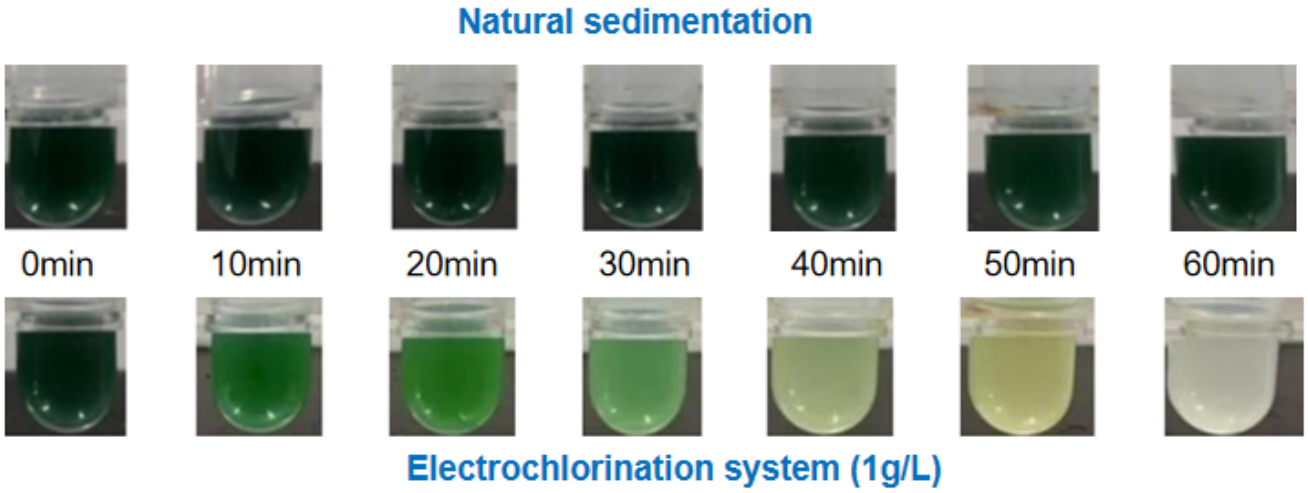


Figure S4. The changes in algae over time in the electrochlorination system (from left to right, 0 min to 60 min)

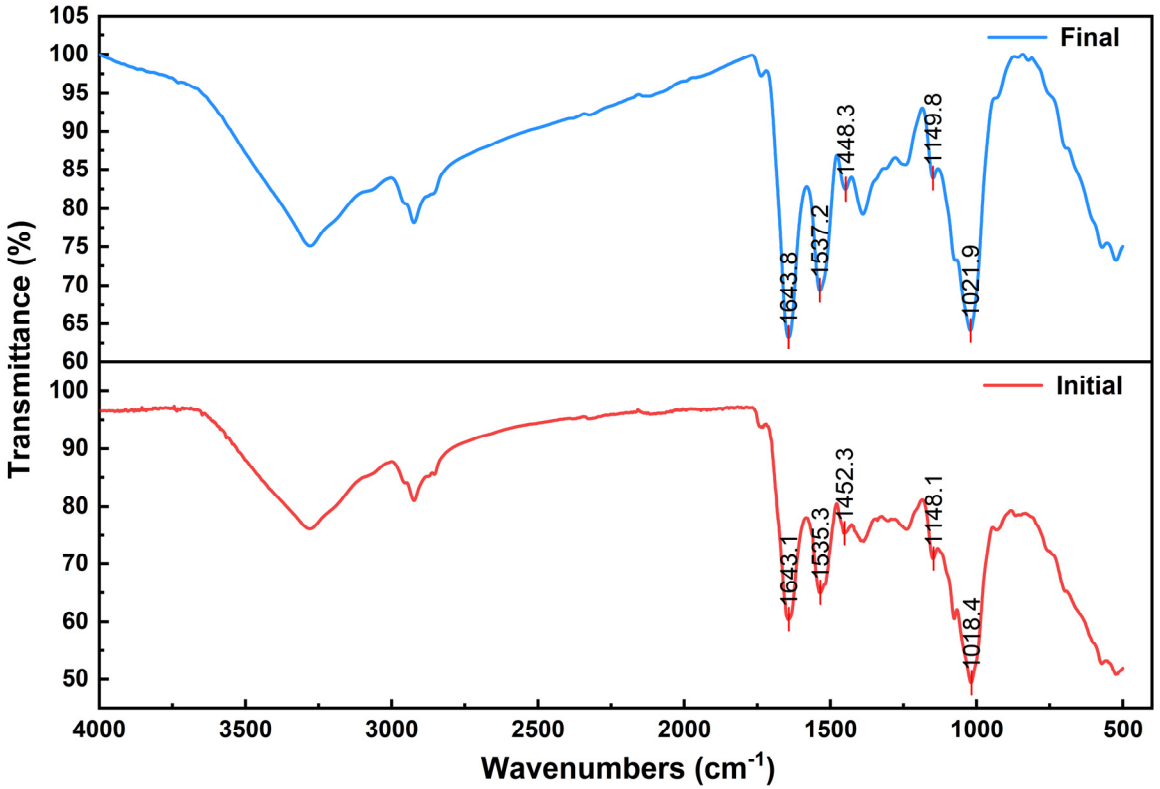


Figure S5. Spectrum Algae liquid' FTIR before and after electrochlorination treatment

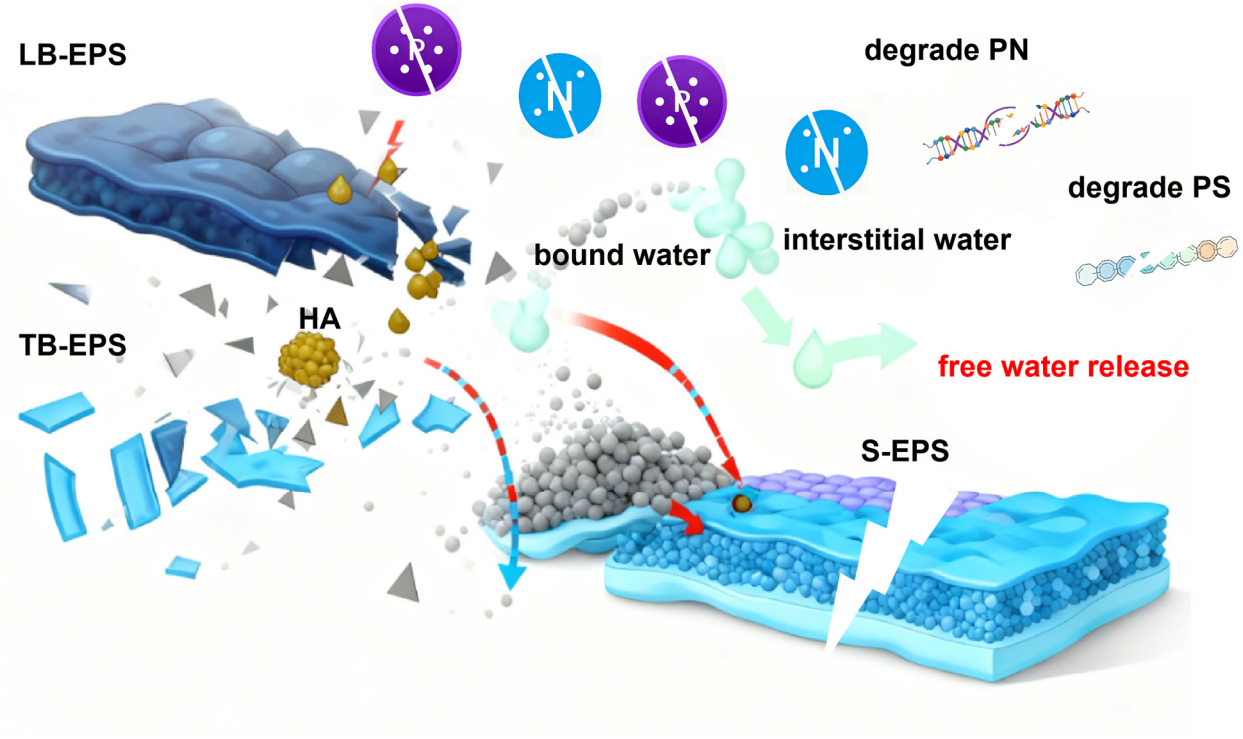


Figure S6. Schematic diagram of EPS degradation and transformation