

Table S1. The basic physical and chemical properties of the collected sediment in this study (means $\pm$ standard deviation; n =3).

Parameters	Average Values
pH	8.28 $\pm$ 0.02
Water content (%)	0.41 $\pm$ 0.03
Salinity (‰)	2.35 $\pm$ 0.03
Fe ²⁺ (μ mol/g)	27.68 $\pm$ 0.71
Fe ³⁺ (μ mol/g)	22.32 $\pm$ 0.54
Sulfide (μ mol/g)	2.05 $\pm$ 0.05
NH ₄ ⁺ (μ mol/kg)	192.20 $\pm$ 2.22
NO ₃ ⁻ (μ mol/kg)	91.90 $\pm$ 0.32
NO ₂ ⁻ (μ mol/kg)	0.92 $\pm$ 0.02
TOC (mg/g)	9.93 $\pm$ 0.07
TC (μ g/g)	14.65 $\pm$ 0.24

TOC: Total organic carbon; TC: Total carbon.