

Supplementary Materials

NADH accumulation on DPAO denitrification performance in simultaneous nitrification denitrification and phosphorus removal system

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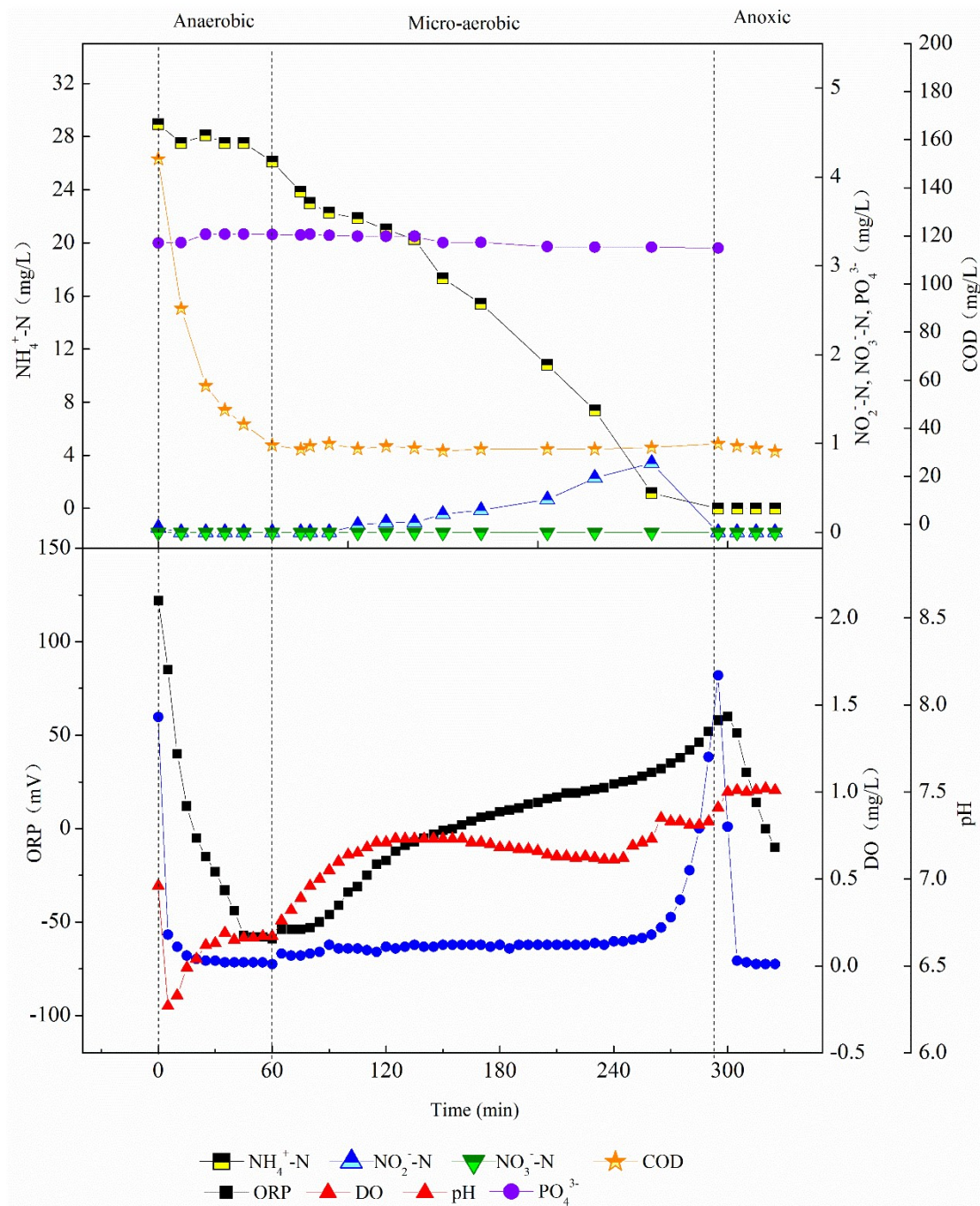


Figure S1 Profiles of COD, nitrogen, phosphorus, DO, pH, and ORP in the the GAOs dominated SND system under a typical cycle

Determination of NO and N₂O concentrations

Preparation of Standard curves of NO and N₂O

(1) Blow nitrogen at a rate of 5 L/min for more than 5 min to drive out 99.99% of NO/N₂O in the water and make the solution of zero calibration for use.

(2) Aerate NO/N₂O into pure water, and inflate continuously at a rate of 5 L/min for 15-20 min until it reaches saturation (the temperature must be kept constant 30°C during the inflation process, otherwise the saturation solubility will change.), spare. Saturated solubility can be obtained by looking up the table.

(3) Place NO/N₂O microelectrode in the solution of zero calibration and read after the signal is stable.

(4) Take a certain volume of NO/N₂O saturated solution and put it into a certain volume of nitrogen-filled solution, shake it gently to mix it, then place the microelectrode in the diluent until the signal stabilizes, read the value, and so on.

(5) Plot or use a linear regression to obtain a standard curve.

Determination of NO/N₂O

The online monitoring system of Danish Unisense microelectrode was used to measure the dissolved NO/N₂O in SBR, and the data reading interval was 10s. By calculating the slope of the curve, the concentrations of NO/N₂O can be ascertained according to the standard curve.