

## SUPPLEMENTARY INFORMATION

Associated to:

### **A highly productive mixotrophic fed-batch strategy for enhanced microalgal cultivation**

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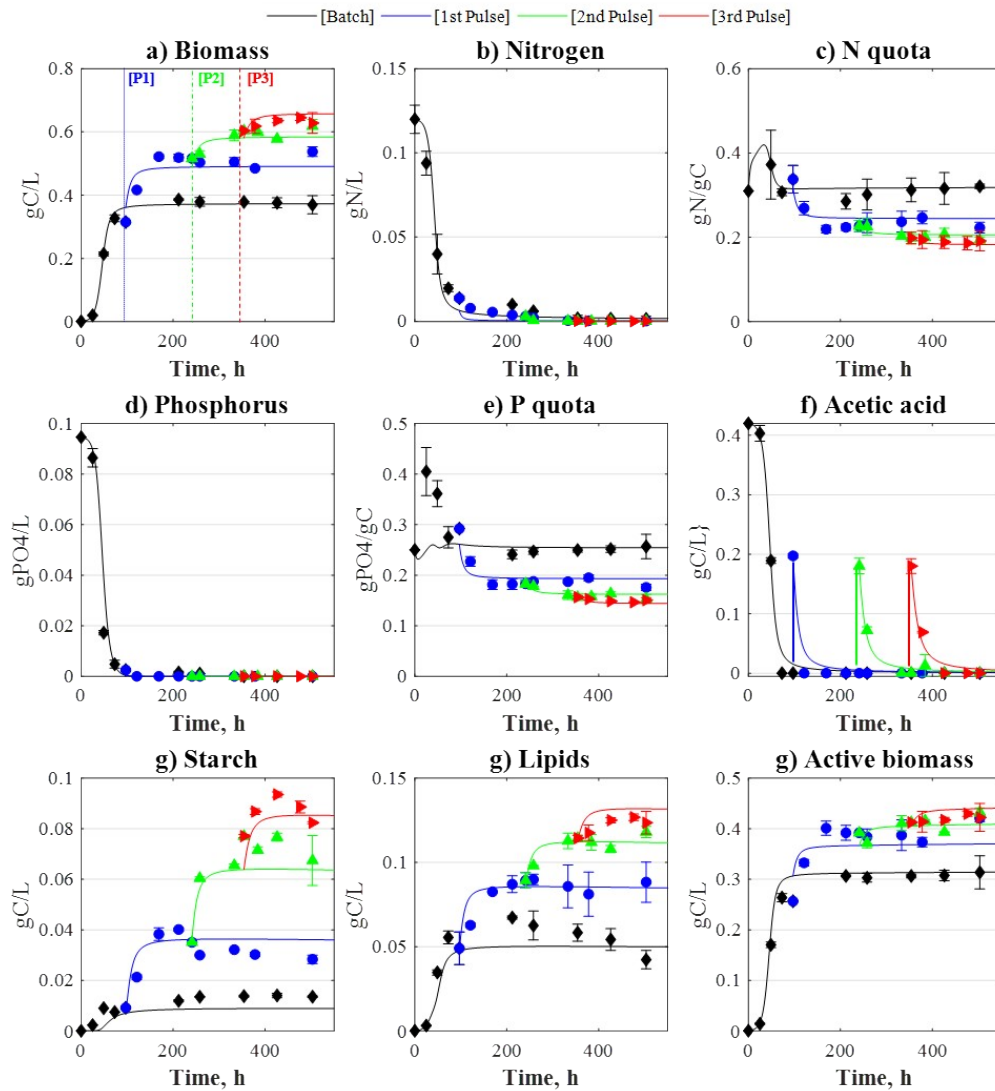


Figure S1. Comparison between model-derived concentration profiles (lines) and experimental data (points) obtained by the *regular-interval* pulse strategy (model fitting), where:  $t_{P,1} = 97h$ ,  $t_{P,2} = 241h$ , and  $t_{P,3} = 354h$ . Data and S.D. are the mean of two biological replicates.

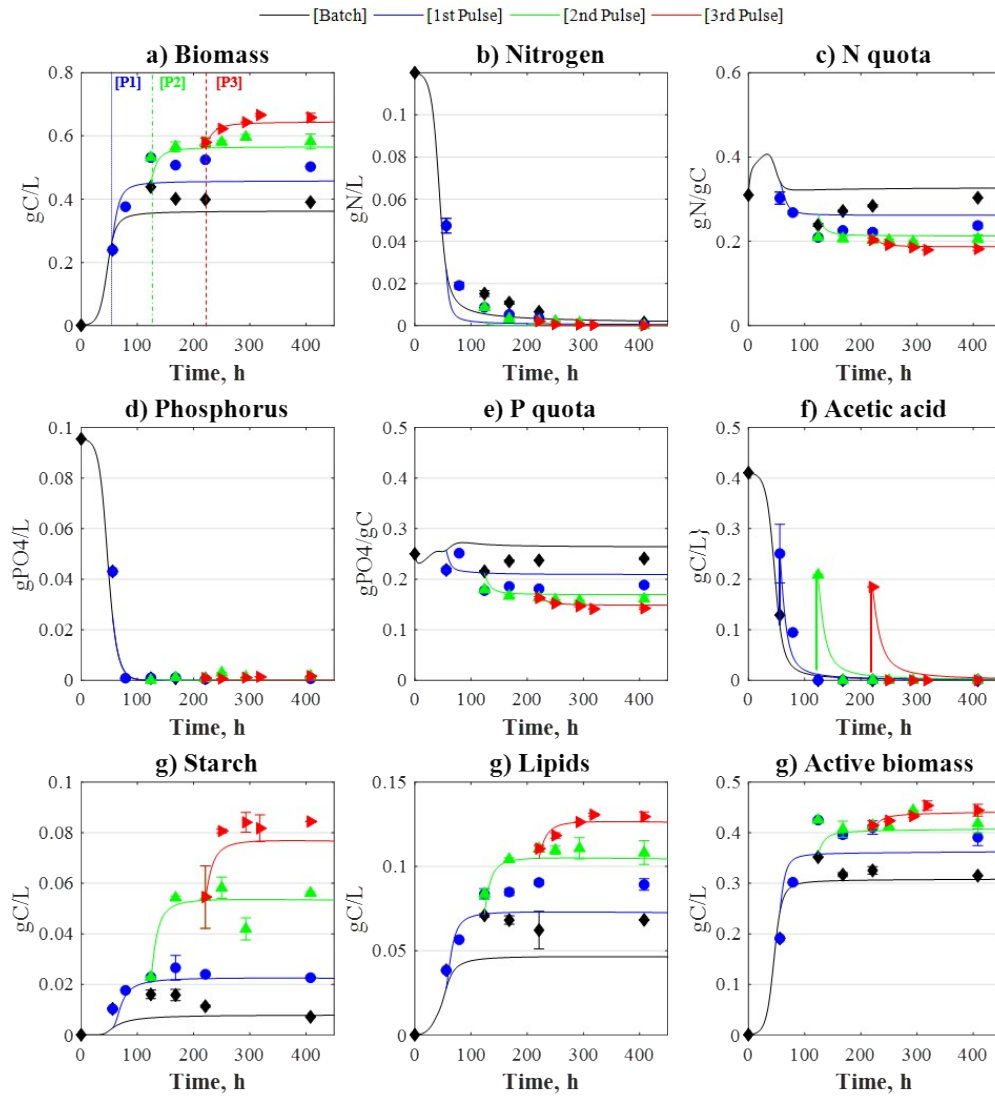


Figure S2. Comparison between model-derived concentration profiles (lines) and experimental data (points) obtained by the *short-interval* pulse strategy (model fitting), where:  $t_{P,1} = 56 \text{ h}$ ,  $t_{P,2} = 124 \text{ h}$ , and  $t_{P,3} = 221 \text{ h}$ . Data and S.D. are the mean of two biological replicates.

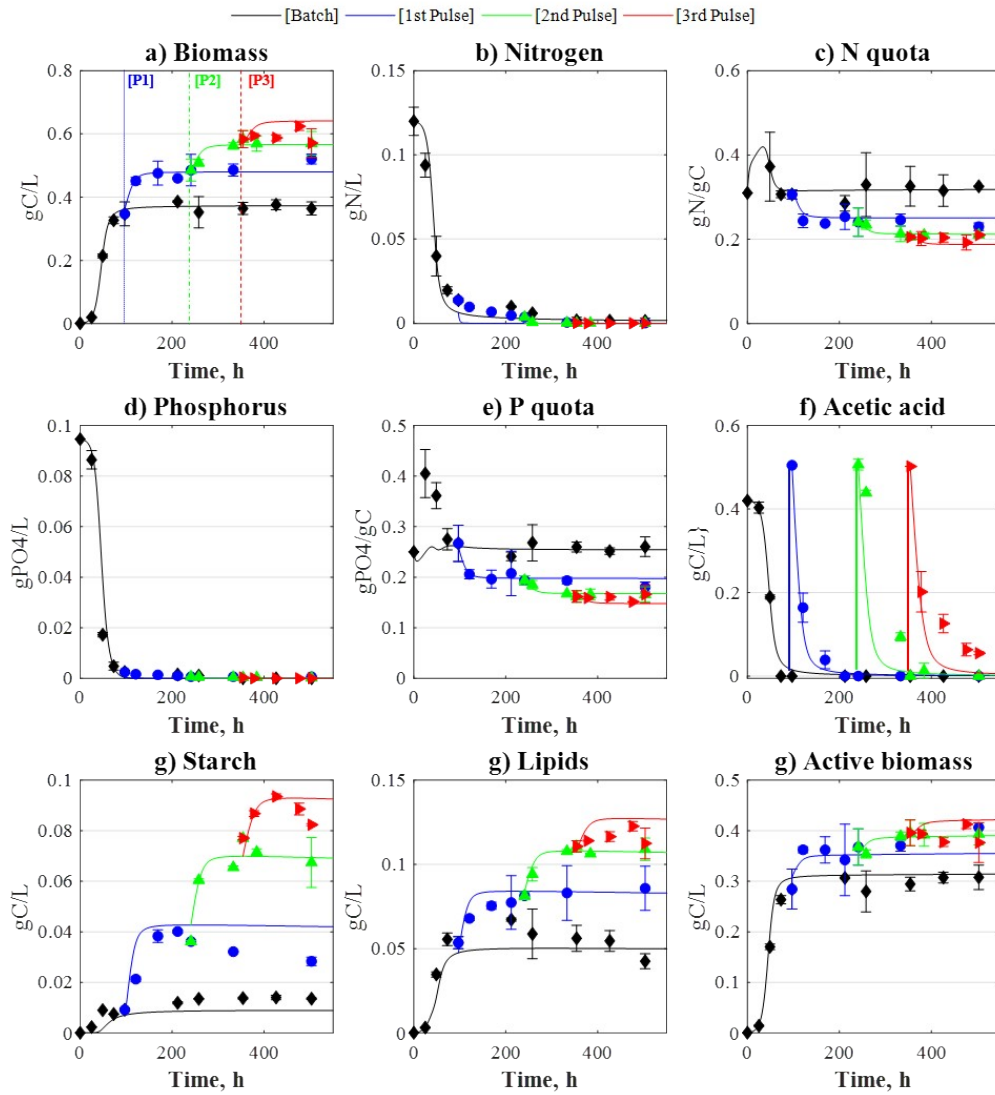


Figure S3. Comparison between model-derived concentration profiles (lines) and experimental data (points) obtained by the *High-A* pulse strategy (model fitting), where:  $t_{P,1} = 97 \text{ h}$ ,  $t_{P,2} = 241 \text{ h}$ , and  $t_{P,3} = 354 \text{ h}$ . Data and S.D. are the mean of two biological replicates.

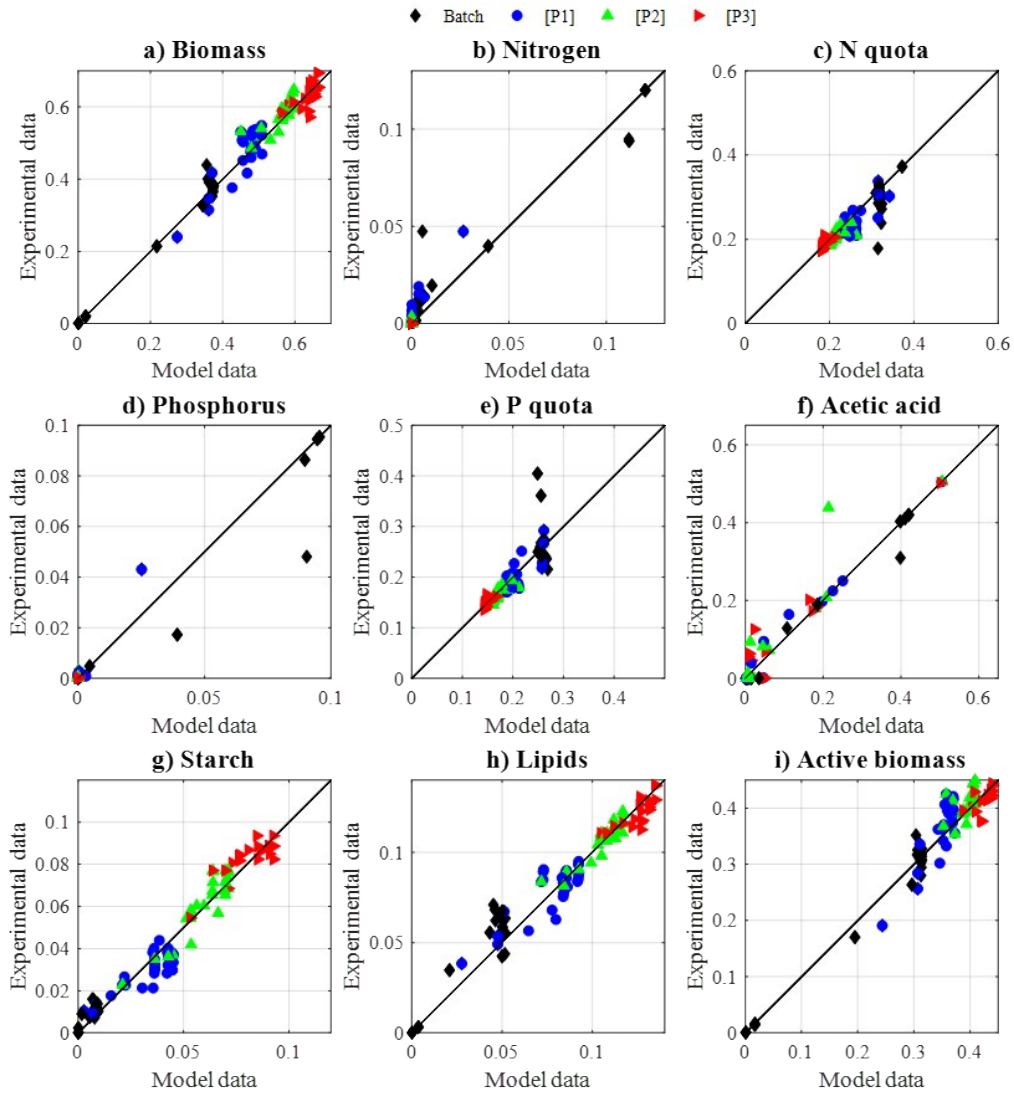


Figure S4. Parity plots comparing predicted and experimental data obtained across all pulse feeding strategies (i.e. *regular-intervals*, *short-intervals*, *long-intervals*, and *High-A* pulses). All experimental and model-derived data has been grouped as ‘Batch’ data, [P1] data, [P2] data, and [P3] data.