Electronic Supplementary Material (ESI) for Sustainable Energy & Fuels


# Engineered biocatalytic architecture for enhanced light utilisation in algal $H_2$ production

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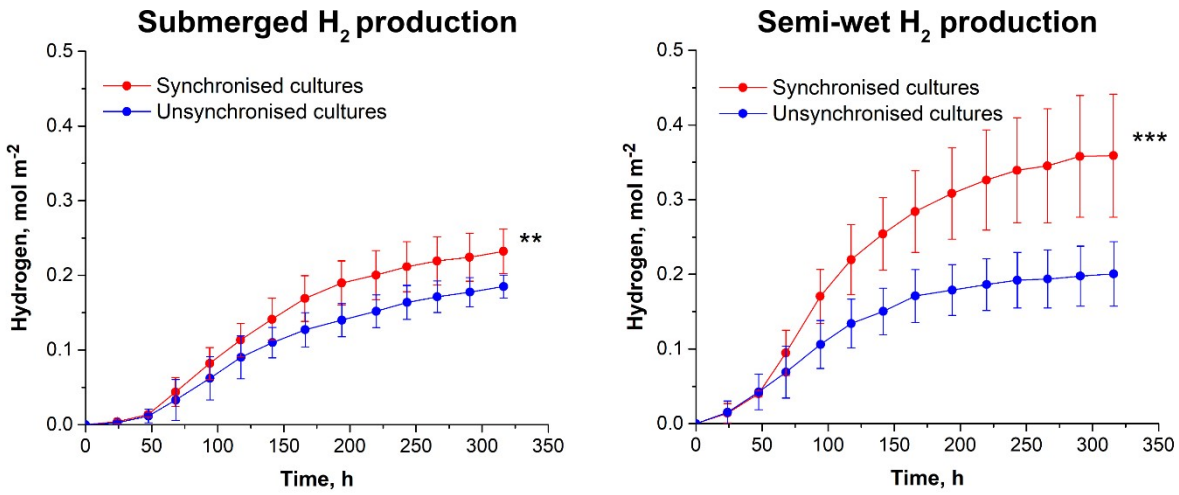
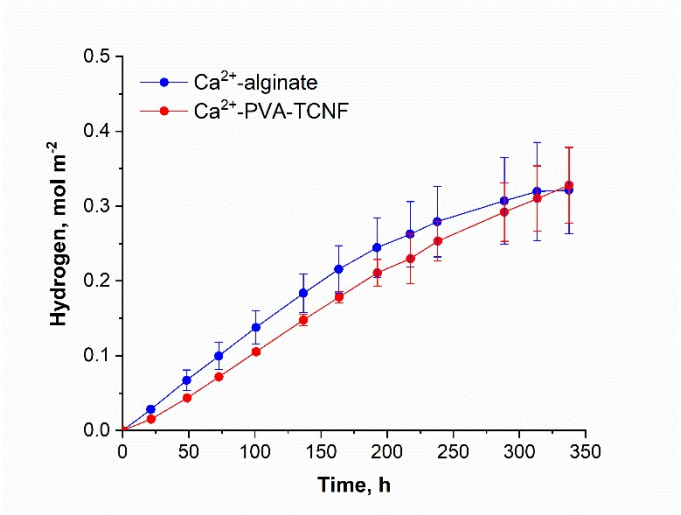
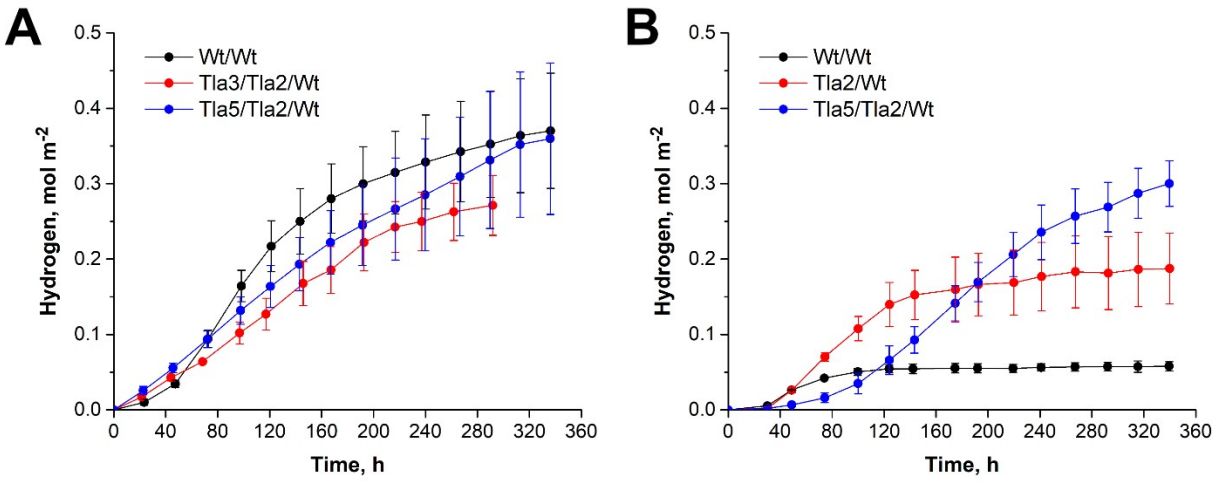
The data supporting this article are available in the file: Data.xlsx




Suppl. Fig. 1 Effect of production conditions and cell cycle synchronisation on long-term $H_2$ photoproduction by S-deprived *C. reinhardtii* cells entrapped within single-layer $Ca^{2+}$-alginate films. Differences are significant at **, $P < 0.01$ and ***, $P < 0.001$.




Suppl. Fig. 2 Comparison of $H_2$ photoproduction yields by single-layer $Ca^{2+}$-alginate and $Ca^{2+}$-PVA-TCNF films under semi-wet production conditions.




Suppl. Fig. 3 Hydrogen photoproduction by $Ca^{2+}$-PVA-TCNF films with double- and triple-layer architecture exposed to 25 (A) and 200 (B) μmol photons $m^{-2}$ $s^{-1}$ light under semi-wet production conditions. The double-layer films consist of two 120 μm-thick layers, while triple-layer films consist of three 80 μm-thick layers.