

Figure Captions (Supplementary material)

Figure S1. The dark-adapted photosynthetic efficiency (F_v/F_m) and the specific growth rates μ (d^{-1}) of the *Synechococcus* strains (a – f) under the different temperature and CO₂ treatments. X axes show the specific growth rate values μ (d^{-1}) and Y axes show the F_v/F_m (-) values obtained in the strains under the different CO₂ and temperature treatments. The legend (on the bottom) represents the three CO₂ levels (400 ppm, 600 ppm and 800 ppm) and the three temperature levels (22 °C, 24 °C and 26 °C) used in this study. Error bars denote SEM.

Figure S2. The functional absorption cross section of PSII in the dark-adapted state (σ_{PSII}) and the specific growth rates μ (d^{-1}) of the *Synechococcus* strains (a – f) under the different temperature and CO₂ treatments. X axes show the specific growth rate values μ (d^{-1}) and Y axes show the σ_{PSII} (\AA^2) values obtained in the strains under the different CO₂ and temperature treatments. The legend (on the bottom) represents the three CO₂ levels (400 ppm, 600 ppm and 800 ppm) and the three temperature levels (22 °C, 24 °C and 26 °C) used in this study. Error bars denote SEM.

Figure S3. Pearson's product-moment correlation between the nitrogen stable isotopic composition, $\delta^{15}\text{N}_{\text{Air}}$ (‰) and the specific growth rates μ (d^{-1}) of the *Synechococcus* strains (a – f) under the different temperature and CO₂ treatments. X axes show the specific growth rate values μ (d^{-1}) and Y axes show the $\delta^{15}\text{N}_{\text{Air}}$ (‰) obtained in the strains under the different CO₂ and temperature treatments. The Pearson's correlation coefficient (r) and the p-values for each strain are also shown. The legend (on the bottom) represents the three CO₂ levels (400 ppm, 600 ppm and 800 ppm) and the three temperature levels (22 °C, 24 °C and 26 °C) used in this study. Error bars denote SEM