

# *Chlorella vulgaris* acclimated cultivation under flashing light: an in-depth investigation under iso-actinic conditions

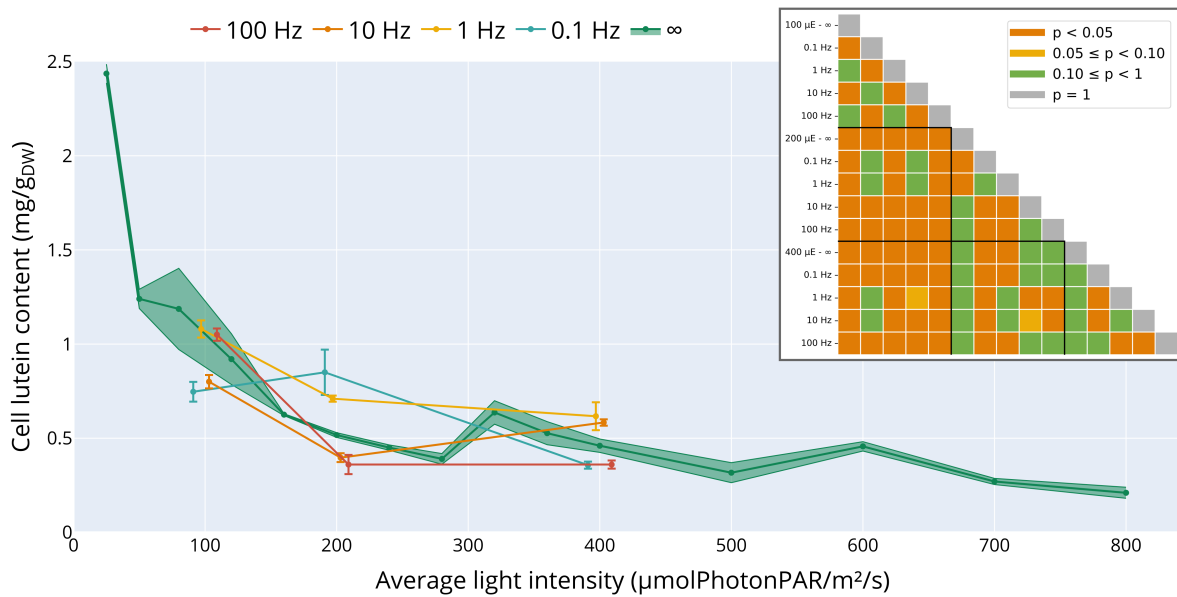
## Supplementary materials

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### Total carotenoid to total chlorophyll ratio

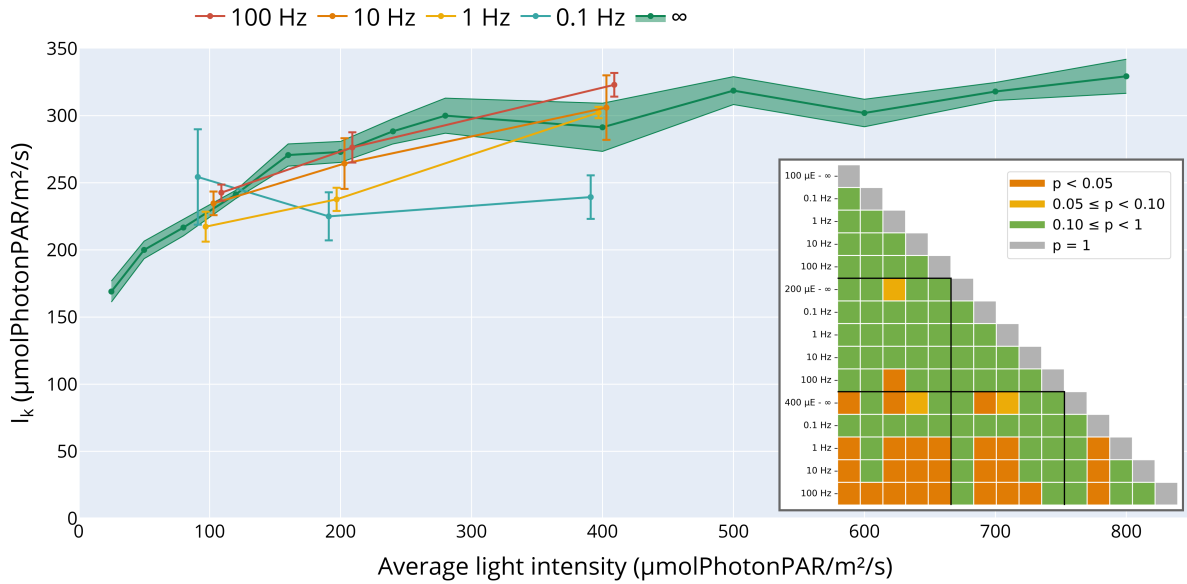
Figure 1 reports the cell lutein content for the tested conditions.



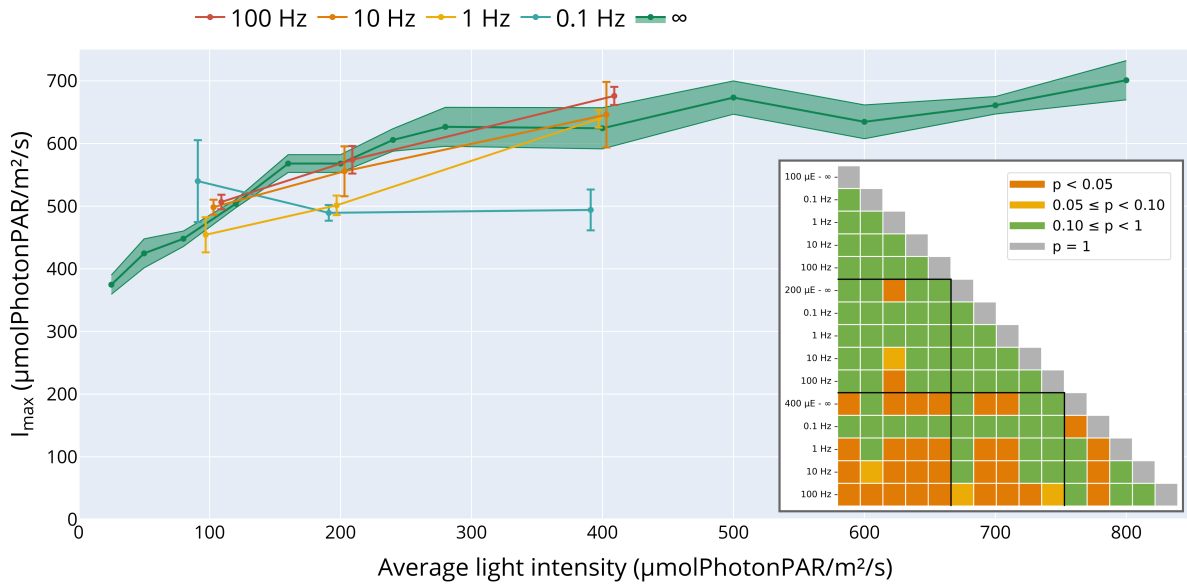
**Fig. 1.** Cell lutein content for all the tested conditions. ∞ - continuous light. Light pattern: square signal with a duty cycle of 0.5. Error bars - standard deviation (n = 3). Nested matrix, p-values based on Tukey's HSD test. Black lines delimit the blocks with the same average light intensity

### Total carotenoid to total chlorophyll ratio

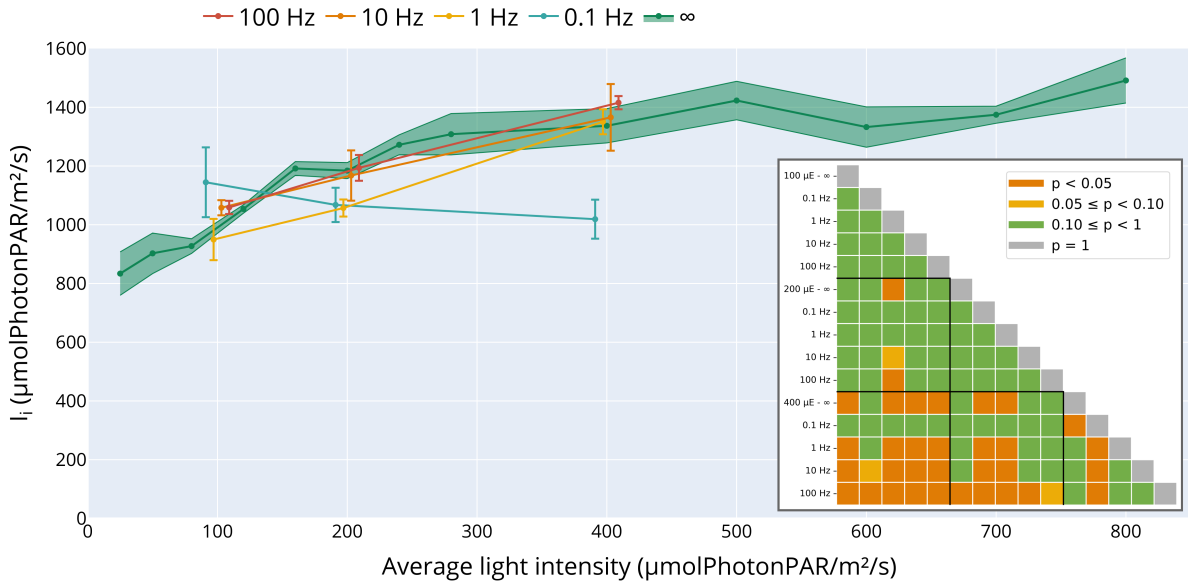
Figure 2 to 6 report photosynthetic apparatus characteristics obtained with the light curve protocol for the tested conditions.



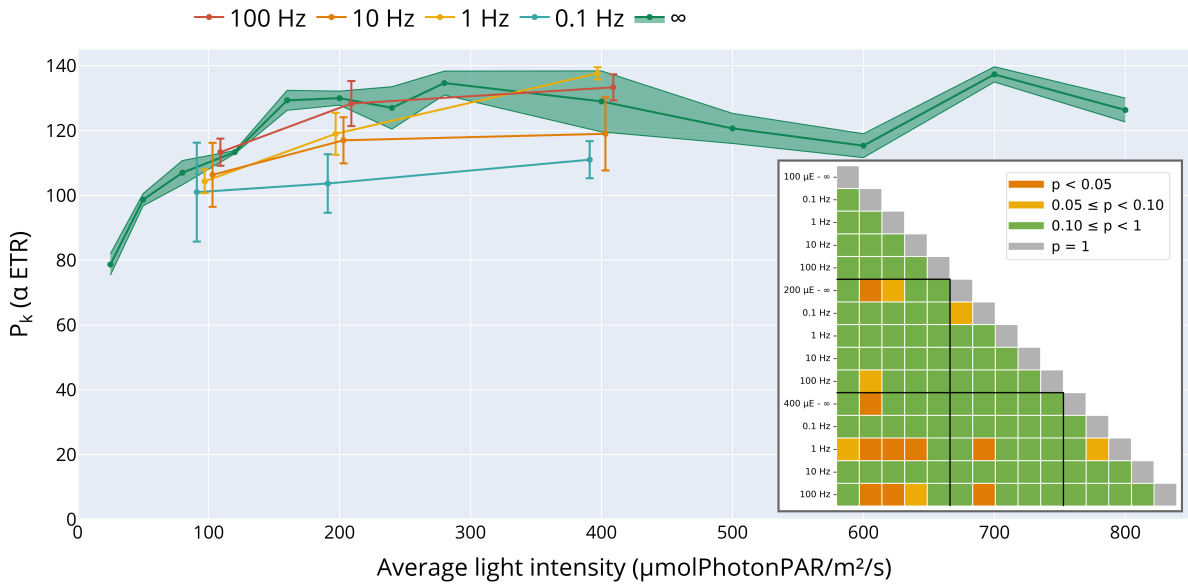
**Fig. 2.**  $I_k$ : light intensity corresponding to the intersection point between the theoretical linear relationship and  $P_{max}$  all the tested conditions.  $\infty$  - continuous light. Light pattern: square signal with a duty cycle of 0.5. Error bars - standard deviation ( $n = 3$ ). Nested matrix, p-values based on Tukey's HSD test. Black lines delimit the blocks with the same average light intensity



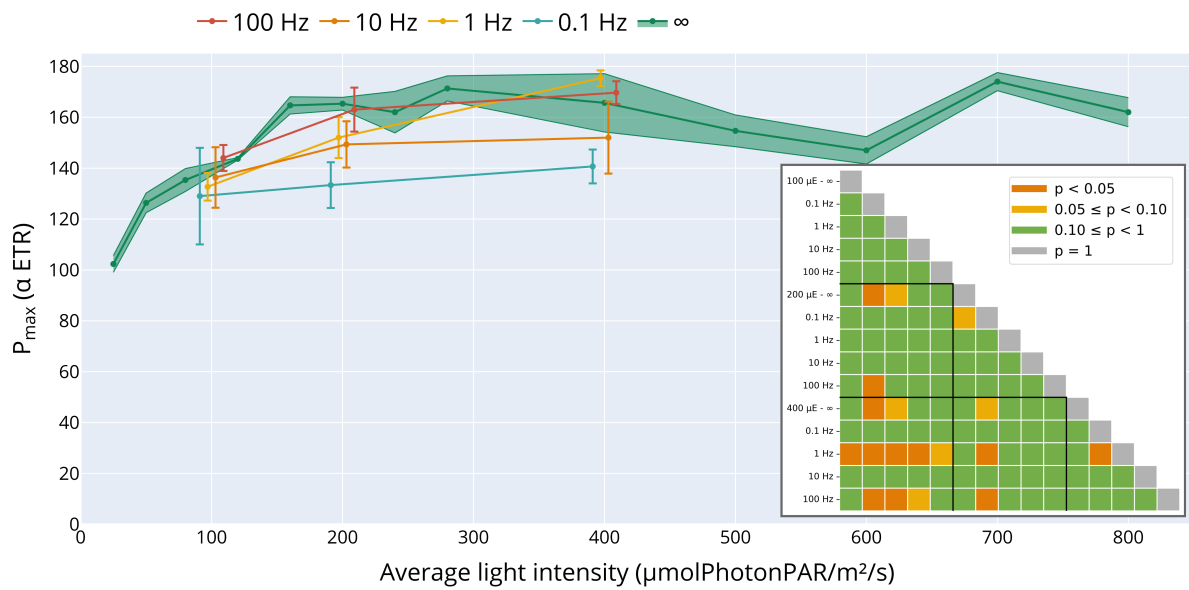
**Fig. 3.**  $I_{P_{max}}$ : light intensity for which the photosynthesis rate is maximum all the tested conditions.  $\infty$  - continuous light. Light pattern: square signal with a duty cycle of 0.5. Error bars - standard deviation ( $n = 3$ ). Nested matrix, p-values based on Tukey's HSD test. Black lines delimit the blocks with the same average light intensity



**Fig. 4.**  $I_i$ : light intensity at which the depression of photosynthesis occurs defined when  $P = P_{I_k}$  in the descending phase of the light curve for all the tested conditions.  $\infty$  - continuous light. Light pattern: square signal with a duty cycle of 0.5. Error bars - standard deviation ( $n = 3$ ). Nested matrix, p-values based on Tukey's HSD test. Black lines delimit the blocks with the same average light intensity



**Fig. 5.**  $P_{I_k}$ : photosynthetic rate at the intensity  $I_k$  for all the tested conditions.  $\infty$  - continuous light. Light pattern: square signal with a duty cycle of 0.5. Error bars - standard deviation ( $n = 3$ ). Nested matrix, p-values based on Tukey's HSD test. Black lines delimit the blocks with the same average light intensity



**Fig. 6.**  $P_{max}$ : maximum rate of photosynthesis for all the tested conditions.  $\infty$  - continuous light. Light pattern: square signal with a duty cycle of 0.5. Error bars - standard deviation ( $n = 3$ ). Nested matrix, p-values based on Tukey's HSD test. Black lines delimit the blocks with the same average light intensity