

Editors' comments and author responses

Manuscript: High-resolution photosynthesis-irradiance curves in microalgae

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Manuscript edited 2022-12-10: *Only major points included.*

Editors

'the rate of O₂ evolution' cannot be the acceptor of electrons - 'it' needs to be spelled out.

Authors

We modified: "Another proxy for PI curves is the rate of O₂ evolution, as O₂ is directly proportional to the number of electrons that move through the pETS."

Editors

Units light intensity [$\mu\text{mol photons}\cdot\text{s}^{-1}\cdot\text{m}^{-2}$]. Mathematically, this is identical to [$\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$]. Conceptually, the flow of photons [$\mu\text{mol}\cdot\text{s}^{-1}$] can be normalized to area, volume, cell count, ... Therefore, the flow [$\mu\text{mol}\cdot\text{s}^{-1}$] remains the constant part of the quantity which then is normalized in variable ways. Compare oxygen flow (in the system) [$\text{pmol O}_2\cdot\text{s}^{-1}$] and flow per cell [$\text{amol O}_2\cdot\text{s}^{-1}\cdot\text{x}^{-1}$].

Authors

Change accepted.

Editors

The oxygen 'signal' (=the signal of the oxygen sensor) does not stabilize during constant respiration, and must be distinguished from O₂ flux calculated as a function of the calibrated oxygen signal over time and appropriate corrections.

Authors

Change accepted

Editors

At 0.8 μg of chlorophyll per million cells (see above), 5 to 10 million cells per mL corresponds to 4-8 μg Chl per mL. Please, check. Is the 'more than 30 times' value related to cell count concentration or to cell Chl concentration, and might have to be corrected, if the latter applies?

Authors

You are right, the number in line 206 should be "0.08" instead of "0.8" μg of chlorophyll per million cells. The value of 30 is correct.