10.1071/FP21131

Functional Plant Biology

Supplementary Material

Investigating the impact of light quality on macromolecular of Chaetoceros muelleri

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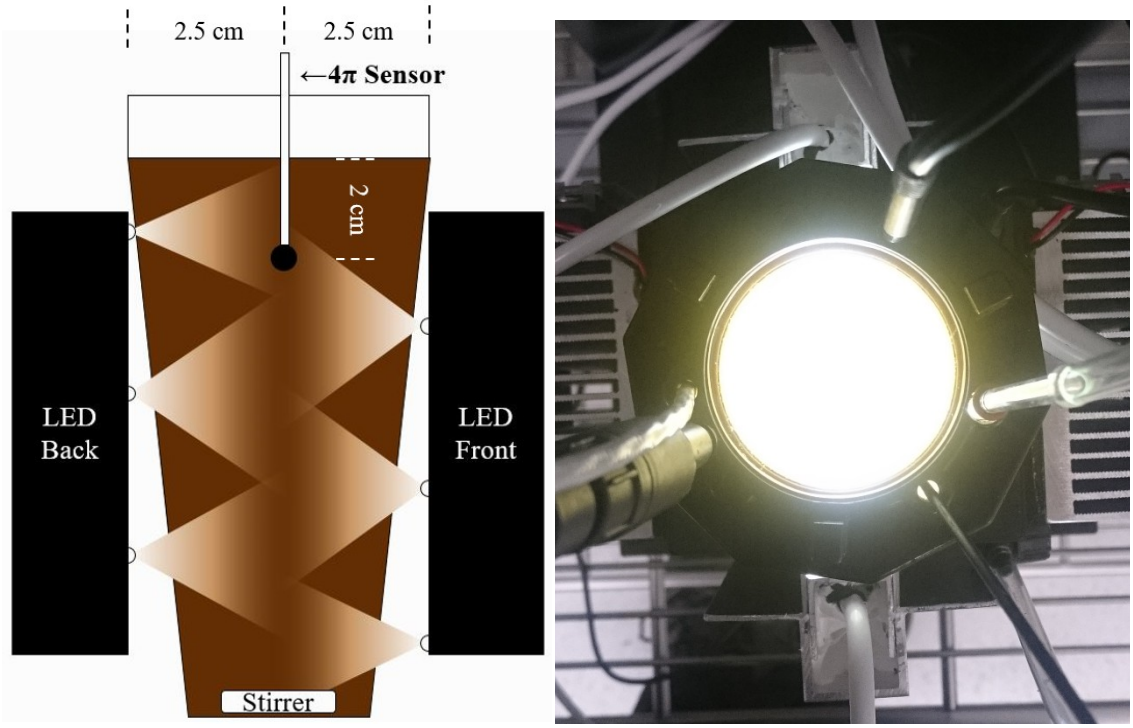

Figure S1 Light calibration and measurement method is shown. Six LED chips were used between two LED panels (three chips on each panel), one at the front and the other at the back of the ePBR vessel. On the left, a schematic shows the approximate method of light calibration and measurement with a quantum 4π sensor measuring photon fluence rate (PFR) *in situ* by suspending the sensor ≈2 cm from the surface of the culture at the longest path length (≈2.5 cm from each panel) (LED illumination is shown for demonstrative purposes only and it is not indicative of actual LED emission angles). On the right, a photograph shows the experimental setup from above with both LED panels attached between the black peltier jackets during the light phase. The quartz glass

lid seen in the center of the photo is removed, and the quantum sensor is subsequently suspended to measure PFR.

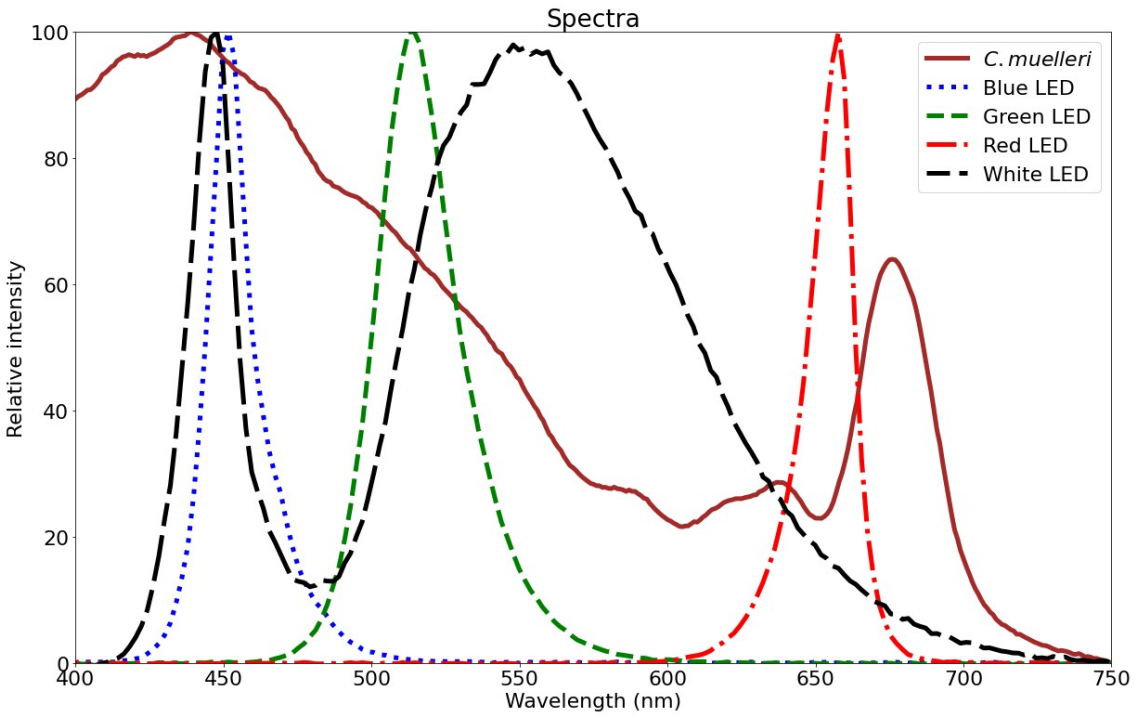

Figure S2 Relative emission spectra of LEDs used in experiments compared with the relative absorptance spectrum of *C. muelleri* where the spectrum is normalized to Soret band (439 nm = 0.25).