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Characterization of thylakoid membrane in a heterocystous cyanobacterium and green alga with dual-detector fluorescence lifetime imaging microscopy with a systematic change of incident laser power

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photosystem II, photosystem I, chlorophyll fluorescence, fluorescence lifetime imaging microscopy, heterocystous cyanobacteria, green algae

Abbreviations:

APC: allophycocyanin, light-harvesting subunit of phycobilisome.

CF: chlorophyll fluorescence.

CFL: chlorophyll fluorescence lifetime.

Chla, Chlb: chlorophyll a, chlorophyll b.

CP26, CP29; light-harvesting complex of photosystem II.

FL: fluorescence lifetime.

FLIM: Fluorescence Lifetime Imaging Microscopy.

FWHM: full width at half maximum.

IRF: instrument-response function.

LHCI: light-harvesting complex of photosystem I.

LHCII: light-harvesting complex of photosystem II.

NPQ: nonphotochemical quenching.

PAM: Pulse-amplitude-modulation fluorometry.

PBS: phycobilisome.

PC: phycocyanin, light-harvesting subunit of phycobilisome

PEC: phycoerythrocyanin, light-harvesting subunit of phycobilisome.

PSI, PSII: photosystem I, photosystem II.

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