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Acknowledgements

Acknowledgements

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Love and best wishes to all of you,

Milou

List of Publications

Schuermans RM, Matthijs HCP, Stal LJ, Hellingwerf KJ.

Cyanobacterial cellulose synthesis in the light of the photanol concept.

In: Sharma NK, Rai AK, Stal LJ, editors. Cyanobacteria: an economic perspective. Wiley Online Library; 2014. pp. 181-195.

Schuermans RM, Schuurmans JM, Bekker M, Kromkamp JC, Matthijs HCP, Hellingwerf KJ.

The Redox Potential of the Plastoquinone Pool of the Cyanobacterium *Synechocystis* Species Strain PCC 6803 Is under Strict Homeostatic Control.

Plant Physiol. 2014;165: 463-475.

Schuermans RM, van Alphen P, Schuurmans JM, Matthijs HC, Hellingwerf KJ.

Comparison of the Photosynthetic Yield of Cyanobacteria and Green Algae: Different Methods Give Different Answers.

PloS one. 2015;10: e0139061.

Schuermans RM, Matthijs HCP, Hellingwerf KJ.

Transition from exponential to linear photoautotrophic growth changes the physiology of *Synechocystis* sp. PCC 6803.

Submitted to Photosynthesis Research. 2017

