**Chapter 11**

**Photosynthesis**

**General**

Nagarajan, D. *et al*. (2021). Biohydrogen production from microalgae—Major bottlenecks and future research perspectives. *Biotechnology Journal* **16**(5), 2000124. <https://doi.org/10.1002/biot.202000124>

Tanaka, K. *et al*. (2021). Ferrihydrite reduction by photosynthetic *Synechocystis* sp. PCC 6803 and its correlation with electricity generation. *Frontiers in Microbiology* **12**, 469. <https://www.frontiersin.org/article/10.3389/fmicb.2021.650832>

**Photosynthetic bacteria**

**Photosynthetic apparatus and pigments**

Izaki, K. & Haruta, S. (2020). Aerobic production of bacteriochlorophylls in the filamentous anoxygenic photosynthetic bacterium, *Chloroflexus aurantiacus* in the light. *Microbes & Environments* **35**(2), *ME20015*. <https://doi.org/10.1264/jsme2.ME20015>

Sui, S.-F. (2021). Structure of phycobilisomes. *Annual Review of Biophysics* **50**, 53-72. <https://www.annualreviews.org/doi/abs/10.1146/annurev-biophys-062920-063657>

**Light reactions**

Yamamoto, C. *et al*. (2021). Estimation of linear and cyclic electron flows in photosynthesis based on 13C-metabolic flux analysis. *Journal of Bioscience & Bioengineering* **131**(3), 277-282. <https://www.sciencedirect.com/science/article/pii/S1389172320304047>

**Circadian clock**

Eelderink-Chen, Z. *et al*. (2021). A circadian clock in a nonphotosynthetic prokaryote. *Science Advances* **7**(2), eabe2086. <https://advances.sciencemag.org/content/advances/7/2/eabe2086.full.pdf>

Sartor, F. *et al*. (2019). Are there circadian clocks in non-photosynthetic bacteria? *Biology* **8**(2), 41. <https://www.mdpi.com/2079-7737/8/2/41>

**Carbon metabolism**

**Photophosphorylation**

Chuon, K. *et al*. (2021). Assembly of natively synthesized dual chromophores into functional actinorhodopsin. *Frontiers in Microbiology* **12**, 993. <https://www.frontiersin.org/article/10.3389/fmicb.2021.652328>

Hassanzadeh, B. *et al*. (2021). Microbial rhodopsins are increasingly favoured over chlorophyll in high nutrient low chlorophyll waters. *Environmental Microbiology* *Reports* **13**(3), 401-406. <https://doi.org/10.1111/1758-2229.12948>

Higuchi, A. *et al*. (2021). Crystal structure of schizorhodopsin reveals mechanism of inward proton pumping. *Proceedings of the National Academy of Sciences of the USA* **118**(14), e2016328118. <https://www.pnas.org/content/pnas/118/14/e2016328118.full.pdf>

Kojima, K. *et al*. (2020). *Lokiarchaeota* archaeon schizorhodopsin-2 (LaSzR2) is an inward proton pump displaying a characteristic feature of acid-induced spectral blue-shift. *Scientific Reports* **10**, 20857. <https://doi.org/10.1038/s41598-020-77936-9>

Zeng, Y. *et al*. (2020). Potential rhodopsin- and bacteriochlorophyll-based dual phototrophy in a high arctic glacier. *mBio* **11**(6), e02641-20. <https://mbio.asm.org/content/mbio/11/6/e02641-20.full.pdf>