

## Reading List (Optional)

The following texts offer good general accounts of photosynthesis

1. Buchanan BB, W Gruissem, RL Jones 2001 Biochemistry and Molecular Biology of Plants. American Society of Plant Physiologists (Rockville, MD) ISBN 0-943088-37-2
2. Raven PH, RF Evert, SE Eichhorn 1999 Biology of Plants. Worth (New York, NY) ISBN 1-57259-041-6<sup>1</sup>
3. Taiz L, E Zeiger 2002 Plant Physiology (3d Edition). Sinauer Associates, Inc. (Sunderland, MA) ISBN 0-87893-823-0

The following sources offer up-to-date reviews of photosynthesis

1. Outlaw WH Jr 2002 Photosynthetic Carbon Metabolism. *unpublished notes for BOT 4503, available in the Biology Resource Center*
2. Outlaw WH Jr 2002 Photosynthetic Electron Transport. *unpublished notes for BOT 4503, available in the Biology Resource Center*

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<sup>1</sup>This is an introductory text, appropriate for the sophomore level.

The following articles discuss the regulation of photosynthesis from the level of the whole plant to the level of the individual enzymes<sup>2</sup>

1. Allen JF 1992 How does protein phosphorylation regulate photosynthesis? TIBS 17: 12-17
2. Anderson LE 1986 Light/dark modulation of enzyme activity in plants. Adv Bot Res 12: 1-46
3. Buchanan BB 1991 Regulation of CO<sub>2</sub> assimilation in oxygenic photosynthesis: the ferredoxin/thioredoxin system. Arch Biochem Biophys 288: 1-9
4. Giersch C, D Lämmel, G Farquhar 1990 Control analysis of photosynthetic CO<sub>2</sub> fixation. Photosynthesis Res 24: 151-165
5. Knaff DB, M Hirasawa 1991 Ferredoxin-dependent chloroplast enzymes. Biochim Biophys Acta 1056: 93-125
6. Portis, AR Jr 1992 Regulation of ribulose 1,5-bisphosphate carboxylase/oxygenase activity. Annu Rev Plant Physiol Plant Mol Biol 43: 415-437
7. Scheibe R 1995 Light modulation of stromal enzymes. *in* Carbon Partitioning and Source-Sink Interactions in Plants (eds., Lucas WJ, MA Madore) Current Topics in Plant Physiology: An American Society of Plant physiologist Series. Vol. 13: 13-22
8. Sharkey TD 1985 Photosynthesis in intact leaves of C<sub>3</sub> plants: physics, physiology and rate limitations. Bot Rev 51: 53-105
9. Ruelland E, M Miginiac-Maslow 1999 Regulation of chloroplast enzyme activities by thioredoxins: activation or relief from inhibition? Trends Plt Sci 4: 136-141 *Particularly Recommended.*
10. Süß KH, C Arkona, R Manteuffel, K Adler 1993 Calvin cycle multienzyme complexes are bound to chloroplast thylakoid membranes of higher plants *in situ*. Proc Natl Acad Sci 90: 5514-5518
11. Woodrow IE 1986 Control of the rate of photosynthetic carbon dioxide fixation. Biochim Biophys Acta 851: 181-192

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<sup>2</sup>Biochemical regulation occurs at many different levels. Our focus, reflected in this reading list, is on reversible post-translational modifications. Specifically excluded here (but important) are (a) regulation by metabolite levels (particularly the signal substance fru 2,6-P<sub>2</sub> and the endogenous nocturnally accumulating inhibitor, carboxyarabinitol-P) and (b) protein levels.

The following articles discuss light regulation of processes other than RPPP-enzyme activation. They are relevant to an overall understanding of the regulation of photosynthate production by plants.

1. Allen JF 1993 Redox control of transcription: sensors, response regulators, activators and repressors. FEBS Lett 332: 203-207
2. Levings CS III, JN Siedow 1995 Regulation by redox poise in chloroplasts. Science 268: 695-696

The following symposium proceedings describes various types of post-translational modifications of proteins that regulate metabolism

Batley NH, HG Dickinson, AM Hetherington 1993 Post-translational Modifications in Plants. Cambridge University Press (Cambridge, UK)

The following is a classic book on English style:

Strunk W, EB White 1979 The Elements of Style (3<sup>d</sup> ed.) Macmillan (New York, NY)

The following book was written by the former managing editor of the nine ASM journals. Although some aspects are outdated (e.g. it does not include electronic submissions), it is still considered to be one of the best, if not the best, guide for writing a paper

Day RA 1983 How to Write and Publish a Scientific Paper (2<sup>d</sup> ed.) ISI Press (Philadelphia)

The following books should be on the shelf of every biology writer:

Anon. 1986 Scientific Writing for Graduate Students. Council of Biology Editors (Bethesda)

Anon. 1994 Scientific Style and Format (6<sup>th</sup> Ed). Council of Biology Editors (Bethesda)

The following article is an example of a simple report of light activation of a plant enzyme

Zhang SQ, WH Outlaw Jr, R Chollet 1994 Lessened malate inhibition of guard-cell phosphoenol pyruvate carboxylase during stomatal opening. FEBS Lett 352: 45-48