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Hell, R., Dahl, C., Knaff, D., Leustek, T. (ed.): **Sulfur Metabolism in Phototrophic Organisms**. - Springer, Dordrecht 2008. 516 pp. EUR 229.00. ISBN 978-1-4020-6862-1.

The new volume of the Advances in Photosynthesis and Respiration acquaints us with the metabolism of sulfur in photosynthetic systems.

Sulfur is one of the elements which are essential for metabolic processes of living organisms. Biologically important sulfur compounds – these include sulfur amino acids cysteine and methionine, glutathione, as well as numerous cofactors, e.g. coenzyme A, thiamin-diphosphate, lipoic acids or proteins that transfer acyls in lipid biosynthesis – contain sulfur chiefly in sulfide form. However, the source of sulfur for biochemical compounds is the sulfate anion. It is reduced and incorporated into organic substances by plants, bacteria and fungi only.

This field of research has never received much attention. However, substantial progress has been achieved in understanding sulfur assimilation, due in particular to a combination of methods of biochemistry and molecular biology in the recent ten to fifteen years.

The book is of appropriate length (500 pages), divided into five parts: Part I: Sulfate activation and reduction, biosynthesis of sulfur containing amino acids; Part II: Sulfur in plants and algae; Part III: Sulfur in phototrophic prokaryotes; Part IV: Ecology and biotechnology; Part V: Specific methods. It is evident that nothing has been omitted, from the fundamentals of sulfur metabolism through genetic and proteomic studies to ecology and biotechnology, including specific methods.

Next to the four chief editors, another 55 authors of the individual chapters participated in writing this book, scientists literally from all over the world.

Thus, thanks to the editor of the Advances in Photosynthesis and Respiration, Prof. Govindjee, an up-to-date, complete and well classified review of the contemporary knowledge of the sulfur metabolism in phototrophs is now available to the scientific public.

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