Milgrom, L.R.: **The Colours of Life**. - Oxford University Press, Oxford - New York - Tokyo 1997. ISBN 0 19 855380 3 (hardback), 0 19 855962 3 (paperback). 249 pp., GBP 22.50.

The author is senior lecturer of Brunel University. He explains the roles of porphyrins and their derivatives in physiology of living organisms. Seven chapters deal in a clear way with the chemistry of porphyrins, their biogenesis, functions, and breakdown.

First chapter deals with the history of porphyrins, their chemical structure, macrocycles and substituents, systematic and trivial names, and brings basic information on their functions (chlorophylls, heme, cytochromes, vitamin B_{12}, enzymes, *etc.*) in cell metabolic processes. Finally, an information is given how to draw a porphyrin. Chapter 2 explains the evolution of various porphyrins, including the prebiotic synthesis of molecules and experiments simulating it in the laboratory, and shows theoretical synthetic pathways. Chapters 3 and 4 are on the main functions of porphyrins, on the production and transformation of oxygen. The text includes methods for studying porphyrins (NMR, UV-visible spectroscopy), spectral changes related to conformation of macrocyclic skeleton and substituents, chlorophyll functions in photosynthesis, functions of myglobin and hemoglobin in oxygen storage and transport, functions of cytochromes in cellular electron transport in mitochrondria, *etc.*

Chapter 5 deals with bile pigments of plants and animals, catabolism of chlorophyll and heme, and with petroporphyrins (in petroleum and oil shale). Chapter 6 explains under a rather strange title (What happens when it all goes wrong?) the sensitisation of oxygen into an electronically excited state, birth of singlet oxygen, origin of neonatal hyperbilirubinaemia, faulty hemoglobins (methemoglobinaemia, sicle-cell hemoglobin, porphyrias), *etc.* The last chapter is on synthetic porphyrins and their applications in medicine, electronics, and alternative energy generation. Indigo, phthalocyanines, hydrogen use in cars, porphyrin use in photoelectric, photoelectrochemical, and photogalvanic cells, synthetic zinc porphyrins for solar energy conversion, photosynthetic models, porphyrins in cancer therapy, as model compounds, molecular conductors, liquid crystal compounds, *etc.* are the topics of this chapter.

The clearly written text is accompanied with numerous explanative figures. Lists of brief references include only basic papers (from 8 to 36 references per chapter). A detailed subject index is supplemented. The book is recommended to university students and researchers, to all those who are interested in plant and animal physiology and biochemistry, medicine, and technical progress.

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