

## *Photosynthesis Energy Transduction*

### A Practical Approach

Edited by M.F. Hipkins and N.R. Baker

*IRL Press; Oxford, 1986*

xi + 199 pages. £25.00, \$45.00 (hardback); £15.50, \$28.00 (paperback)

This short paperback is a member of the 'practical approach series' published by IRL Press. It aims to describe the laboratory techniques most commonly used in the investigation of photosynthetic energy transduction, defined as those photosynthetic reactions leading to NADP<sup>+</sup> reduction and ADP photophosphorylation. On the whole, the book succeeds admirably. Chapter 2 gives excellent descriptions of the reagents and procedures necessary to isolate protoplasts, intact chloroplasts, thylakoids, and membrane complexes such as *b<sub>6</sub>-f*, the PSII reaction centre and CF<sub>0</sub>-CF<sub>1</sub>. This is followed by a chapter on the electrophoretic analysis of pigment-protein complexes. This again is a useful compendium of techniques, although I cannot agree with the author that laboratory staff should need a computer programme (pp. 31–32) to perform a simple calculation of chlorophyll concentrations (explained on pp. 63–64). Chapter 4 is a very useful review of the principles of spectroscopy, containing reminders of several basic points essential to accurate spectrophotometric measurements. The next chapter gives very clear

and detailed instructions on the setting up and use of oxygen electrodes for chloroplast experiments, and on performing redox titrations. Chapter 6 explains how photophosphorylation should be measured. Finally, there are two brief appendices, one of which is a useful note on the various ways of measuring radiant energy.

Overall, I enjoyed this book and it should provide a valuable laboratory manual. Its weakest feature is perhaps the introductory chapter (chapter 1), which reviews the photosynthetic electron transport system and photophosphorylation in a very condensed fashion. Such a review is probably unnecessary for most scientists who will use the book, who should understand this material to begin with. Also, chapter 1 overlaps with brief introductory reviews in the other chapters.

Overall, though, a very good book. I hope to see a similar book, dealing with the assay of chloroplast enzymes, in the near future.

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## *Frontiers in Bioinorganic Chemistry*

Edited by Antonio V. Xavier

*VCH Verlagsgesellschaft; Weinheim, 1986*

736 pages. DM 185.00, \$92.50

The title reflects forgivable enthusiasm rather than the whole truth. The contents originate from the lectures given at the Second International Con-

ference on Bioinorganic Chemistry held in April 1985 in the Algarve, Portugal, and the diversity of the 80 papers reflects current structural and func-