

exogenous vitamins, carotenoids and polyphenols) as well as pro-oxidants that generate oxidative stress. Specific chapters are devoted to cardiovascular disease, cancer, cataracts, and aging. The latter subject is presented in detail, focusing upon antioxidant vitamins and aging, theories of aging, the free radical theory of aging, and the programmed genetics theory of aging. The most important epidemiological studies carried out over the past two decades are thoroughly discussed and compared, and the results are summarised in a concluding chapter. An extensive list of references is also provided.

The aim of this volume is to provide the reader with detailed knowledge about free radicals and reactive oxygen species via explanation of the mechanisms of antioxidation and antioxidant defenses in humans. It will be of particular interest and value to individuals with research interests concerned with antioxidants, cardiovascular disease, cancer, cataracts and aging, nutrition, etc.

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### Biophysical Chemistry

A. Cooper; RSC, London, 2004, v + 184 pages, ISBN 0-85404-480-9, £14.95

Biophysical chemistry, chemical biophysics, or physical biochemistry, call it what you will: all have some emphasis

of physics about them. As a chemist, what I always like to say to physicists is, ‘How can you do physics if you have no chemicals to work upon?’ And to biochemists/biologists, ‘How can you have life if you have no chemical material which can exhibit life?’ But what we must all remember is that all chemicals including carbohydrate polymers are not only chemicals but have a range of physical properties, particularly when they are molecular. Biophysical Chemistry covers the physical chemistry of biological macromolecules and the experimental techniques used to study them.

Topics covered include: spectroscopy, mass spectrometry and hydrodynamics of macromolecules, a ‘bluffer’s guide’ to molecular thermodynamics; bimolecular kinetics; chromatography and electrophoresis, and single-molecule methods. The easily digestible, pragmatic approach captures the reader with the fascinating challenges the subject poses for theoretical and experimental scientists.

This book will be ideal for early undergraduates studying chemical or physical sciences and will act as a basis for more advanced study. Students in other areas of biological sciences will appreciate the less intimidating approach to physical chemistry as demonstrated here. You are not a student? Fine the book is still for you particularly if you need help in getting to grips with physico-chemical principles!

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