

BOOK REVIEWS

that the following areas need revolutionary progress, if globalization of trade is to confer substantial economic and human benefits.

- Productivity per units of land, water and time;
- Quality in terms of nutritive, culinary, organoleptic, processing, storage and transportation;
- Net income and *new* on-farm and non-farm employment;
- Innovations in management and institutional structures, which can confer on small producers the advantages of scale, both in the production and post-harvest phases of agriculture.

Our achieving the first position in the world in milk production is clear evidence of the power of scale which co-operatives and other institutional structures have given to the over 50 million women and men who produce over 80 million tonnes of milk. Without a small producer management revolution, it will be difficult to keep our agriculture economically and socially alive.

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Essentials of Biophysics. P. Narayanan. New Age International (P) Limited, 4835/24, Ansari Road, Daryaganj, New Delhi 110 002. 2000. 510 pp. Price: Rs 250.

*'We have boiled everything down to signs,
And Reasoning's done on strict mathematical lines.
If God's a point, as cylinder he just won't pass,
You can't stand on your head while sitting on your...'*

Karl Marx in his poem *Mathematical Wisdom (Collected Works, Progress Publishers, 1975, vol. 1)*.

The book under review has four sections: Biomolecular structures, Physical

techniques in structure determination, Bioenergetics, and Biological systems along with four appendices and a glossary. The section on biomolecular structures has five chapters dealing with small molecules and macromolecules. The physical techniques section goes chapter-wise through spectroscopies, NMR, microscopies (sic), X-ray diffraction, lasers and holography. The bioenergetics part is made of two chapters on thermodynamics, photo and chemobioenergetics. Biological systems cover neurobiophysics, biomechanics and radiation biophysics. Each chapter has a synopsis. Acknowledgements are given for figures. Suggestions for further reading and references are given at the end of each chapter. The organization is exhaustive and the book, at a first glance, seems to be good.

In the author's words, 'For the understanding and progress of any subject, especially for students and researchers in that field, good books dealing with most of the aspects of the subject (preferably in one volume) are essential. The need is more acute for a multidisciplinary subject like biophysics. Where as (sic) a large number of standard and good books are available in biochemistry, microbiology, genetics and molecular biology, there is a dearth in the case of biophysics. The lacuna is acutely felt by all the students, researchers and others who deal in this subject. The present book is an attempt to fill this lacuna... This book is intended for all students and researchers with Physics, Chemistry, Biology and Medicine background. It is to serve people with biological and medical background, to make them knowledgeable about physical principles and techniques which have become integral part of biological and medical sciences. It is also intended to serve as an introductory source to make the physicists and chemists and other physical scientists aware of the essential aspects of biological sciences and the trends and progresses in the *natural sciences*'. The aim and intentions are laudable, and definitely a book that fulfils it will be required and useful.

I tried using this book for teaching my course. Students and teacher alike did not find the book comparable to other standard books like the ones by Cantor and Schimmel or Hoppe or Campbell and Dwek. Like a parcel that

is covered with whatever is available, the book covers too much and reveals little. The details are uneven and many numbers and figures are given that help to hide understanding. There are errors (serious and trivial) evenly distributed all over the book, a listing of which would take up the whole review.

Unfortunately, the focus of the book is on introducing terms and names (names of persons are given in bold to make them stand out, and in some cases even the designation like professor being given in bold). Concepts and understanding are the sufferers. The linkage of chapters and ideas are absent. Each chapter is almost compartmentalized and separate. The nomenclature for equivalent entities is not maintained through the book. Equations and terms are introduced in many places without explanation and in a cryptic fashion. The book is packed with details, much of which is not required. The small print size allows all this to be packed in one volume of 500-odd pages. The author has put in a lot of effort, much of which gets wasted because of lack of care in presentation.

A book that definitely does not do justice to biophysical wisdom, but must be bought and checked as a typical example of what a good book in biophysics should not be. The lacuna remains.

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Nitric Oxide and Inflammation. D. Salvemini, T. R. Billiar and Y. Vodovotz (eds). Birkhauser Verlag AG, P.O. Box 133, CH-4010 Basel, Switzerland. 2001. 304 pp. (hard bound).

The ubiquitous role that the simple gas nitric oxide (NO) plays in the body, from maintaining vascular homeostasis and fighting infections to acting as a neurotransmitter and its role in cancer, has spurred a lot of interest among researchers all over the world. One prominent researcher, Jonathan Stamler of Duke University and the Howard Hughes Medical Institute, has received