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Book Review

Basic Mathematics for Biochemists. by Athel Cornish-Bowden (athel@ibsm.cnrs-mrs.fr). Oxford University Press, Oxford. 1999. 221 pp. £35, hardback, ISBN 0-19-850217-6. £ 13.99, paperback, ISBN 0 19 850216 8

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This is a new edition of the book published under the same title by Chapman and Hall in 1981. Two chapters (the first and the last) are completely new, and the other chapters have been thoroughly revised to make the treatment more suitable for modern students of biochemistry.

It will be also very helpful for all the other experimental chemists, in addition to biochemists, to have a copy of this book. After reading though it, I feel I have brushed up my essential knowledge of physical chemistry, particularly chemical kinetics and chemical equilibrium. It also gave me an opportunity to recall the correct scientific attitude and scientific methods of a chemist. In almost all chapters, particular attention is called to data treatment, which I learned twenty years ago only when I was taking my analytical chemistry lectures and I never had a chance to review it until now when I read this book. It will be very useful in practice for both beginners, such as experimental chemistry graduate students, and for experimental chemists working in industry and in research institutes.

I guess many of us already learned all the mathematics described in this book before. However, this book offers many practical examples in a clear manner showing how to use the basic mathematical methods correctly. It will help many experimental chemists to keep better experimental records, prepare their scientific manuscripts and technical reports in a correct and professional way. When these essential mathematics are mastered and practiced, chemists will also be able to assess experimental results presented by their peers.

Comparing it to mathematics texts authored by mathematicians, this book written by a senior

chemist has advantage of learning many useful numbers and tips. E.g., 100 Da per residue as a reasonable guess for the average molecular mass of a protein. If the molecular mass of a protein is given, the number of residues can be easily figured out.

With many exercises, this book can also serve as a textbook for university students. Notes and the solutions to problems are given at the end. A glossary can help readers to quickly find the important definitions.

Maybe recommended bibliography can be added in any new edition to provide sources for more advanced mathematics required in some special cases in biochemistry and molecular biology.

For readers' convenience, any typographical errors detected after this book is printed will be listed on the <http://ir2lcb.cnrs-mrs.fr/~athel/basmaths.htm> website maintained directly by the author.

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