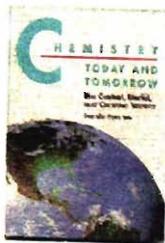


Chemistry Today and Tomorrow – The Central, Useful, and Creative Science

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Chemistry Today and Tomorrow - The Central, Useful, and Creative Science

Ronald Breslow

Published jointly by the American Chemical Society, Washington, D.C. and Jones and Bartlett Publishers
Sudbury, MA, USA, 1996
pp 134. Price US \$20. *

“We often hear about ‘toxic chemicals’ or ‘chemical pollution’ without hearing about the absolutely central role that chemistry plays in human well-being” – Ronald Breslow makes this statement in the preface of his new book. And, in the eight easy-to-read chapters of this book he very successfully presents a picture which will make chemists proud of their profession. More importantly, young students and the common man will be able to appreciate what chemistry really is.

The tone of the book is neither defensive nor argumentative – and as a result a real picture of chemistry emerges. The book is written from an American perspective (the author was the President of the American Chemical Society in 1996). But the points made are valid for all, especially in the present trend of globalization.

* *There is a possibility that an Indian Edition of this book will be published soon.*

The first few chapters largely deal with the practical contributions that chemistry makes to modern life, and the later part of the book describes how chemists go about making these contributions. At the end of each chapter, there is a small section on what are likely to be the areas in which the future generation of chemists will contribute.

In the first chapter Breslow introduces chemistry to the common man, and goes on to explain the central role it plays in our everyday life. Some chemical principles have also been introduced. The next chapter covers one of the most important contributions of chemistry – in human and animal health. Appropriately, a small section in this chapter is devoted to drug design. The third chapter deals with the contributions of chemistry in housing, clothing, transportation, food supply, law enforcement, quality of life, etc.

In the beginning of the fourth chapter, Breslow rightly admits (in the context of environmental pollution caused by our advanced civilization) “...as a central part of that advance, chemistry certainly contributes to the problem”, but he goes on to say that chemistry also holds the key to solve it. Ways of reducing pollution are discussed and he ends with the caveat that humans cannot afford to be careless in any activity that may possibly damage the world. The fifth chapter deals with the contributions of chemistry (specially in the design of new materials) to the electronics revolution. The significant contribution of computers in chemistry has

also been highlighted. The sixth chapter discusses catalysis in living systems and industry. Catalysts like enzymes, metals and zeolites have all been discussed. This chapter ends, like all the other chapters, with a discussion of the areas in which catalysts will play a greater role in the future.

The last two chapters, somewhat more technical, but still highly readable, discuss how chemists make molecules, and determine structures and reaction mechanisms.

All the chapters have many illustrations and photographs in vibrant colours which makes reading this book a pleasure. For non-chemists much of the basic chemistry has been explained with simple examples. Formulas and technical details are presented in boxes (the layout and format are not very

different from those of *Resonance!*). Overall, I feel that this book should be read by a wide audience. General public, especially science administrators and policy makers, who may harbour negative feelings about the field will be able to see the practical value of chemistry. Students who feel that chemistry is a 'dry' subject requiring remembering endless terms and names, would certainly appreciate what chemistry really does for us, and will become aware of numerous challenging problems it holds. This would certainly encourage many young individuals to take up chemistry as their profession, and make significant contributions to our well being.

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Neem : A User's Manual

The 'Free Tree' – Its Healing Power and Other Uses

M D Subash Chandran



Neem : A User's Manual

K Vijayalakshmi, K S Radha and
Vandana Shiva

Centre for Indian Knowledge Systems,
Chennai and Research Foundation for
Science, Technology and Natural
Resource Policy, New Delhi, 1995
pp. 96. Rs.75.

It is an irony that a tree from the Indian sub-continent – *Azad-darakth* i.e. the 'Free tree',

(in Persian) obviously for its property to free people and plants from diseases and pests, is itself slipping into the hands of the multinational companies in the West as their 'intellectual property'. That is the story of neem *Azadirachta indica*, as portrayed in this book. Neem is venerated in India and used from time immemorial in agriculture, human and livestock health, cosmetics and rituals.

The sleek book has a beautiful *Kalamkari* painting by C Subramaniam on its cover, depicting the *puranic* story of churning the ocean of milk by the *Devas* and the *Asuras* and the neem tree springing from the drops that spilled from a pot of ambrosia (*Amritha*)