# Book Review

**Research and Development Management in the Chemical Industry**

by P. Bamfield, ISBN 3-527-28778-7, published by VCH, Weinheim, Germany, 1996, hardback DM 118, 178 pp.

"How do you teach management to a chemist? You don't, you employ a chemical engineer". This was one of the comments made to me when I mentioned to a colleague that I was reviewing this book. There is, however, a shortage of chemical engineers and, in its recently published "Strategy for Chemical Engineering Research for the UK", the Institution of Chemical Engineers welcomes the natural trend for graduates in related disciplines to enrich the profession and to tackle aspects that chemical engineers do not have the resources to carry out. It also says that it has a role in ensuring that appropriate training and support are available to them. This book fits nicely into that category.

The book is the distillation of many years' experience in R&D management and is designed to swiftly build up the management skills of young chemists in industrial R&D. It is a sort of DIY guide covering the whole range of activities from staff selection and management, organisation structures, the creation of an innovative climate through the project management. And all that in 178 pages!

Covering so much material in relatively few pages forces the author to cover most of the material somewhat superficially. At the same time this makes it a very readable text and has not prevented Dr Bamfield from including some heartfelt messages. He comments, for example, on the problems of measuring R&D performance in terms which are relevant both to R&D and to the "customers" in the business functions. He also comments on the absurdity, common in industry, of a person successfully running a home with all the financial dealing and control involved, who when in work is not allowed to sanction the purchase of a refrigerator without higher authority. The book might well be used as a reminder by many a senior manager.

I was a bit suprised to find no reference to de Bono in the chapter on creativity and felt that more might have been made of the need for a multidisciplinary approach to process development. The author quite rightly makes the point in the chapter on project management that reducing the time to market is becoming more and more critical in an ever more competitive world, and that an effective technique is to use "cross-functional" teams. Throughout most of the book, however, one gets the impression that other disciplines are only called in for solving specialist problems rather than being used in an integral fashion throughout the process.

Unfortunately, an otherwise excellent book is rather let down by the tables and figures. There are some irritatingly trivial examples in tabular form and the figures, most of which look like sketches of various multi-legged insects, add little to the clarity. Apart from breaking up the text, they might just as well have been omitted. Not only are they monotonous but I also find some of the apparent combinations confusing. In the very first figure, for example, the author has a box labelled "Skills Base" surrounded by, in a clockwise direction, boxes labeled; "Skills Audit", "Skills Requirements" and "Skills Gap". There are clearly steps in establishing a correct skill base and, on the face of it, this is fine. However, a neighbouring box in the same figure, "R&D Manager" is linked to "Career Planning", "Managerial Skills" and "Creative Groups". Two of these might legitimately be called core competencies but even then, is not "Career Planning" a subset of "Managerial Skills"? And what is "Creative Groups"? Also, maybe I'm being a pedantic old engineer, but shouldn't the graphs towards the end of the book really have labels on the axes?

Nevertheless, this is a useful introductory book on the subject, not only for chemists, but for any young scientist or engineer going into (R&D) management. I would also suggest they leave it lying around at home as some of their parents might also find it a useful refresher.

A. Barber
*Church Brampton, Northampton, UK*