

## Book Review

STEVEN A. EDWARDS

### The nanotech pioneers: where are they taking us?

Wiley-VCH, 2006,  
254 pp; price £17.99/€27.00  
ISBN 3-527-31290-0 (hardcover)

Hardly any other scientific area during the last decades has generated so much public interest and stimulated so much creative activity than the area of research related to nanoscale materials. In many cases the visions and hype that are propagated to society are semi-scientific at best, possibly resulting in irrational fears and severe damage to the future development of the field. In order to avoid confusion, and in order to enable the public to better understand and participate in the advancement of nano-related science, researchers have to communicate what is behind their interest in the field and what can be expected in the future. The book *The Nanotech Pioneers: Where Are They Taking Us* by Steven Edwards contributes to fulfilling this need by providing the reader with a broad overview of what is considered to be the area of nanotechnology. The book consists of 12 chapters, each accompanied by relevant references, and a total of 46 illustrations and 26 tables. Chapter 1 provides a quick rundown of the basic notions relevant to the field and

Chapter 2 introduces outstanding contributors to the field. Chapters 3 and 4 cover some important experimental tools of the trade such as lithography and analytic methods. Chapters 5 and 6 cover particular examples of nanomaterials that are the focus of current research, in particular carbon nanotubes and quantum dots. Chapters 7 and 8 address some of the application area that are fueling the interest in nanoscience with focus on nanoelectronics and biomedical applications of nanotechnology. Chapter 9 presents background information about the funding situation in the field and Chapter 10 provides a discussion of three areas of interest—alternative energies, quantum computing and the more illusory space elevator—where nanotechnology would likely play a key role. Chapter 11 presents a discussion of the ethic issues related to nanotechnology as well as some of the concerns that are often raised in the public in the context of nanotechnology. Chapter 12 closes with a discussion of the ethics issues related to nanotechnology and some of the concerns that are often discussed in the public in the context of nanotechnology.

The book is well written and makes a good evening read. It provides an interesting multifaceted perspective on the vast field of nanotechnology and will offer some interesting information for a

broad range of readers. Non-scientists will profit from the very elementary level of the book and probably will be the target group for this book. Researchers are likely to find interest in the presentation of some of the personalities that are behind the development and funding of the field. Credit should also be given to the authors' attempt to dismantle some of the exaggerated expectations related to the field, both with respect to the pros and cons. The breadth of the book is, in my opinion, also its weakness. With the technical level being rather elementary, researchers will find large parts of the book unnecessary to read (also the book contains a number of flaws such as the uncertainty principle that is attributed to Schroedinger). On the other hand, the book goes into some depth on the funding side of nanotechnology, which will be of less interest to readers outside the field. Fortunately, the book is available at a rather modest price which will make it more attractive to readers who will only be interested in parts of the book.

**Michael R. Bockstaller**

Carnegie Mellon University, Pittsburgh,  
PA, USA

DOI:10.1002/aoc.1099