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Book Review

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Tomorrow's Chemistry Today: Concepts in Nanoscience, Organic Materials and Environmental Chemistry

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What an interesting concept for a book. I suspect every chemist in the world sits down to consider where chemistry as a subject is going and what chemists will be doing in the next ten, twenty or thirty years. Of course such thoughts may be associated with what funding bodies are considering but more often than not all scientists will try to apply their knowledge to the great questions of the day. This intriguing book starts from the premise that chemistry offers enormous potential for answering many questions that face not only today's world but also the future world.

The book takes an interesting approach to the hugely difficult task of identifying what areas of chemistry will prove to be important in coming years. The book comprises a series of chapters written by young chemists, the chemists of tomorrow. Indeed each chapter is written by a chemist, under the age of 34, who is an up-and-coming leader in the field and was nominated for the European Young Chemists Award at the 1st European Chemistry Congress held in Budapest in 2006. Thus each chapter in the book reflects the views of one of the emerging chemists who are likely to put their mark upon the chemistry of tomorrow.

The book is divided into three sections, "Self-organization, Nanoscience and Nanotechnology", "Organic Synthesis, Catalysis and Materials" and "Health, Food and Environment" which encompass ten, four and four chapters respectively. This balance will delight some and annoy others, however, perhaps this perceived imbalance reflects the way this particular selection of chemists view tomorrow's chemistry. Ranging from self-assembly

methodology, the synthesis of molecular nanoscale architectures to making nanostructured porous materials and methods of mimicking and exploiting natural building-blocks, the first section of the book covers a huge range of modern chemistry. The spread of the Nanoscience section, from materials science to biology, ultimately defuses any perceived imbalance in the book.

Sections two and three are relatively short, in comparison to the first section, but are intriguing in the selection of topics. The section that is nominally "Organic Synthesis, Catalysis and Materials" also reflects a materials and self-assembly emphasis within the book. Chapters on synthetic processes and catalysis are effective in redressing the balance to some extent but one is still left with an impression that materials related chemistry using a self-assembly strategy seems to be the topic of the future. Interestingly the final section is also relatively short and perhaps this is more surprising considering the wide ranging title of "Health, Food and Environment". I have no doubt that entire volumes could be written on the role of chemistry in each of these broad topics. The chapters that are presented are excellent as far as they go, but one would have thought topics relating to renewable energy sources and green chemistry would be high in the list of priorities of most chemists.

Ultimately it is difficult to fault the book as it reflects the views of a select group of young chemists. Although everyone who reads this book will have their own opinion of what areas of chemistry are going to make significant breakthroughs in the near future, (typically this will be their own area of chemistry!), this book offers a wide variety of individual opinions that will provoke thought and at the very least offer an interesting insight into the minds and research areas of some of the next generation of chemists.

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