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Book Review

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Methods and Reagents for Green Chemistry: An Introduction John Wiley & Sons; 2007

314 pages; price £52.95/€69.90(hardcover) ISBN:978-0-471-75400-8

The drive towards Green Chemistry which has been so powerful over the last decade has its roots about a decade further back in time. One of the major annual events which ran from the early days was the Summer School in Green Chemistry, held every year in Venice. This course, which is now well established, gives the opportunity for students, academics and industrialists to immerse themselves in an intensive school with leading proponents of Green Chemistry. A wide variety of approaches and themes are covered to illustrate the different ways in which green principles can be applied, helping students to appreciate that the subject is dynamic and varied, and that it can be applied in many different ways.

The 10th School was held in 2007, and this book was released in part as a record of some of the contributions over the last few years in the form of a collection of chapters based on various lectures from recent Summer Schools. It deliberately chooses a wide and diverse range of topics from multi-component reactions (where complex products can be made in one pot from simple reagents, avoiding multiple isolations and purifications) to novel reagents, new solvents, renewable resources for new platform molecules, and techniques such as photochemistry, all of which can offer benefits to chemists planning a synthesis with environmental concerns in mind.

The coverage of a book on green chemistry is difficult to balance well, as the subject is very broad and diverse and there are several

different opinions on what "is green" or not. Indeed, a great deal of work is ongoing to develop metrics to help with this problem. Nonetheless, the editors have provided an interesting collection of chapters, which broadly cover the typical main chapters, but also have one or two very focussed chapters which illustrate the application of green principles to specific industrial targets. The variety of approaches is valuable in that it allows one to think about a wide range of potential avenues to explore in the development of a green process, without getting bogged down in an extensively detailed review of the subject. This approach is nice to see, as it distinguishes the present text from most of the other recently published on green chemistry.

The 15 short chapters, written by leaders in the areas of focus, allow for a wide range of chemistry to be showcased in a relatively short and readable book. This provides much food for thought for the chemist who would like to incorporate green methodologies, or who wants to consider how his/her methods can contribute to greening processes. In particular, for readers of *Applied Organometallic Chemistry*, there are chapters focussed on organometallic systems for enantioselective catalysis, and on using supported liquid phase systems to immobilise organometallic catalytic species, with organometallics making appearances in other chapters too. Many other topics could have been included, and everyone would have a different opinion on which should and should not be there, but the 15 topics covered give a good flavour of the subject without becoming unwieldy or off-putting.

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