

## Additions and Corrections

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**A Very Large Metallo-supramolecular Capsule with Cube-like  $4^3$  Topology Assembled from Twelve Cu(II) Centers and Eight Tri-Bidentate Tri-Anionic Ligands Derived from 2,4,6-Triphenylazo-1,3,5-trihydroxybenzene** *J. Am. Chem. Soc.* **1999**, *121*, 3535–3536 BRENDAN F. ABRAHAMS, SIMON J. EGAN, AND RICHARD ROBSON\*

Page 3535, column 2, footnote 12, line 10: *Pcca* should read *Pbaa* (a non-standard setting of *Pcca*)

**Supporting Information Available:** Corrected Table 1 (PDF). This material is available free of charge via the Internet at <http://pubs.acs.org>.

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## Book Reviews

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**Handbook of Chemical Technology and Pollution Control.** By Martin B. Hocking (University of Victoria). Academic Press: New York. 1998. xxiv + 777 pp. \$125. ISBN 0-12-350810-X.

The stated objectives of this book are to provide a “unified treatment of the fields of industrial and environmental chemistry”, with a target audience including senior students in applied chemistry, engineering, and environmental programs, as well as professionals and consultants employed in these areas. The underlying philosophy in this work is that a combined presentation of the process chemistry and emissions information provides a context for understanding the nature and sources of emissions. It also provides an opportunity for identifying process changes for reducing environmental impact in existing facilities, rather than adding on “end-of-pipe” treatment solutions.

Any single volume book with such a large scope is bound to disappoint some readers, due to a lack of information on their topic of interest. With that limitation in mind, it can be said that the book does a reasonable job presenting an overview of the primary chemicals industries of interest in Canada and the United States. Examples include sodium and potassium salts, sulfuric, nitric and phosphoric acid, ammonia, metals (aluminum, copper, iron, and steel), pulp and paper, petroleum production, refining and petrochemicals, and polymers.

The first chapter (Background and Technical Aspects) gives a very brief overview of some chemical engineering core material, i.e., economy of scale, reactor types, conversion and yield, and instrumentation. It is perhaps of importance and interest to students in applied chemistry but will be largely known already to practitioners. No separation technologies are discussed here, although distillation of ethanol and crude oil is covered in later chapters dealing with fermentation and refining, respectively. It might be worthwhile including some more extensive discussion on separations in future editions, since incomplete separations are frequently a source of pollution generation in chemical processing.

Chapters 2 and 3 cover air quality, pollution effects, and control methods. In general, it is a nice overview of particulate emissions and controls. However, it is weak on volatile organic compound (VOC) emissions, controls, and their effects such as photochemical smog formation.

Chapters 4 and 5 deal with water quality and treatment technologies. Again, it is a reasonable overview of the standard water quality measurement parameters, as well as treatment methods. The focus is

primarily on general process principles rather than detailed descriptions, identifying typical options for a treatment problem.

The remaining 18 chapters cover the various industrial sectors mentioned above. In general, each chapter presents some information on the capacity or demand for the specific products and then some details on the chemistry of historical and current production methods. Finally, a section is usually devoted to the environmental aspects of the industry, either the emissions or the impact of the product itself during its lifecycle.

Four of these 18 chapters are devoted to polymer chemistry and production. The polymer chemistry presented here seems to be reasonably comprehensive. The environmental aspects are primarily limited to an overview of some of the process impacts and the potential for recycling of plastics.

One of the major concerns with this book is the dated references in some parts. While production data has been largely updated to publications from the 1990s, a lot of the process descriptions and chemistry are based on publications from the 1970s and 1980s. This problem becomes apparent in portions that refer to potential “new” processes that in fact have been in commercial operation for a decade or more. Examples are found in the chapter on fermentation and other microbiological processes, where reference is made to the potential commercial reality of high-fructose corn syrup and enzymatic conversion of lactose in milk products. Both processes have been well established for some time. Knowledgeable readers will likely find other such examples in their area of expertise.

Keeping in mind the foregoing limitations, the book is still a useful reference work for academic and other purposes. Its concise descriptions of traditional chemical industries and their major environmental concerns provide a quick and easy introduction to unfamiliar processes. Undergraduate students may find it useful as a stepping-stone to more detailed and recent reference materials. Likewise, consultants and others active in the environmental industry may find it helpful in identifying the underlying process reasons for the emissions and impacts in specific industrial sectors.

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