

**CRC Handbook of Chemistry and Physics, 87th ed.** Editor-in-Chief: David R. Lide (National Institute of Standards and Technology). CRC Press/Taylor and Francis Group: Boca Raton, FL. 2006. 2608 pp. \$139.95. ISBN 0-8493-0487-3.

This latest edition of the CRC Handbook of Chemistry and Physics continues to provide up-to-date, critically evaluated chemical and physical data in a one-volume format. In this edition, the following four tables feature major revisions and updates: *Physical Constants of Inorganic Compounds*, which includes 20% more compounds; *Bond Dissociation Energies*, which covers 4193 chemical bonds as well as organometallics, low-molecular-weight biochemical compounds, and positive ions; *Table of the Isotopes*, which includes over 4500 individual isotopes; and *Scientific Abbreviations and Symbols*, which contains about 1100 entries and “includes more acronyms from quantum chemistry and abbreviations for chemicals of environmental interest”. Fourteen other tables have been updated, and a new table, *Specific Enthalpies of Solution of Polymers and Copolymers*, has been included. This edition is also available on the CD-ROM version 2007, which must be purchased separately.

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**Natural Fullerenes and Related Structures of Elemental Carbon. From the Series: Developments in Fullerene Science, Volume 6.** Edited by Frans J. M. Rietmeijer (University of New Mexico, Albuquerque, NM). Springer: Dordrecht. 2006. xxiii + 296 pp. \$169.00. ISBN 1-4020-4134-9.

This book is a wide-ranging collection of information on naturally occurring fullerenes and offers a refreshingly novel look at a widely studied class of compounds. The collection is highly interdisciplinary, including contributions from the fields of chemistry, astronomy, planetary science, meteoritics, and geochemistry. Such a comprehensive survey offers an invaluable starting point for anyone interested in naturally occurring fullerenes, as this work is the only available publication on fullerenes that includes detailed information in all of these areas.

Each chapter concentrates on a specific area of fullerene research. The first two outline the discovery of C<sub>60</sub> and methods for the formation of fullerenes. Chapters 3–5 are discussions of astronomical searches for fullerenes in the interstellar medium, whereas Chapters 6–8 cover studies of fullerenes and related carbonaceous compounds in meteorites and interplanetary dust. Natural terrestrial fullerenes are described in Chapters 9–12, which include studies of meteorite impact-related sediments, pillow lavas, coal, and shale. The last two chapters include a discussion of possible mechanisms for the formation of these naturally occurring fullerenes and new techniques for the isolation of higher order fullerenes.

In the Overview, the editor describes the goal of the book as an attempt to address the question “What possible link could there be between fullerenes in interstellar space, asteroids, and terrestrial rocks?” Although the book contains all of the important pieces of information necessary for answering this question, it still falls short of this goal due to several aspects of its organization and editing. It is expected that a book with numerous contributors may contain different sections that cover similar material. In this book, however, these sections are often separated by multiple chapters, leading to seemingly disjointed coverage of many topics. The absence of an index contributes to this lack of cohesiveness. Additionally, there are many glaring grammatical and typographical errors that distract from the content. Last, the broad scope of this book necessitates sufficient background information for each topic, yet little such background information is provided, and in many cases discipline-specific jargon is used with no explanation. Obtaining a full overview of a specific topic is therefore a daunting task, even for an expert in one of these fields of research. Despite these structural shortcomings, however, the book does serve as an excellent reference guide for someone seeking an introduction to fullerene studies in astronomy, planetary science, meteoritics, and geochemistry. It is an important compilation of work in these connected but individually specific areas of research.

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