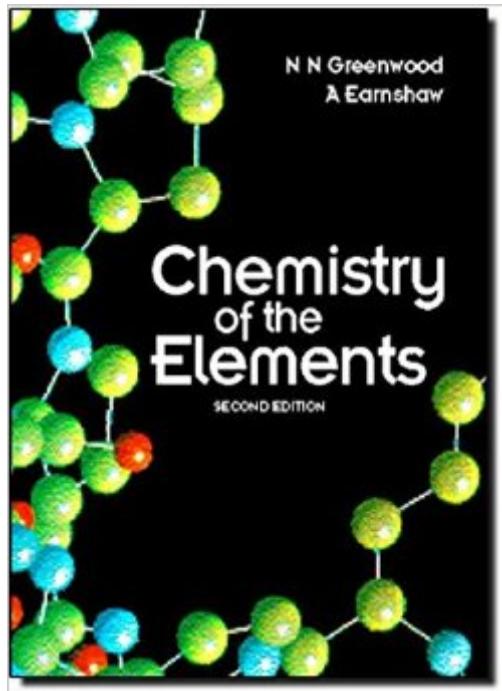


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Chemistry Of The Elements, Second Edition



Synopsis

When this innovative textbook first appeared in 1984 it rapidly became a great success throughout the world and has already been translated into several European and Asian languages. Now the authors have completely revised and updated the text, including more than 2000 new literature references to work published since the first edition. No page has been left unaltered but the novel features which proved so attractive have been retained. The book presents a balanced, coherent and comprehensive account of the chemistry of the elements for both undergraduate and postgraduate students. This crucial central area of chemistry is full of ingenious experiments, intriguing compounds and exciting new discoveries. The authors specifically avoid the term 'inorganic chemistry' since this evokes an outmoded view of chemistry which is no longer appropriate in the final decade of the 20th century. Accordingly, the book covers not only the 'inorganic' chemistry of the elements, but also analytical, theoretical, industrial, organometallic, bio-inorganic and other cognate areas of chemistry. The authors have broken with recent tradition in the teaching of their subject and adopted a new and highly successful approach based on descriptive chemistry. The chemistry of the elements is still discussed within the context of an underlying theoretical framework, giving cohesion and structure to the text, but at all times the chemical facts are emphasized. Students are invited to enter the exciting world of chemical phenomena with a sound knowledge and understanding of the subject, to approach experimentation with an open mind, and to assess observations reliably. This is a book that students will not only value during their formal education, but will keep and refer to throughout their careers as chemists. Completely revised and updatedUnique approach to the subjectMore comprehensive than competing titles

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Customer Reviews

Although I have some formal chemistry training, I am not a professional chemist, nor teacher. However, since childhood I have been fascinated by the chemical elements. I suppose this is similar to the fascination for prime numbers, Platonic solids, or elementary particles. I suspect there are many others "out there" sharing this fascination. If so, and you are interested in any of the following, this book might be for you: 1) why are most elements metals? 2) why are there so few liquid elements? 3) why are there no gaseous metals? (Well actually there is: hydrogen) 4) why is there an island of super-dense elements centered about osmium? 5) why is carbon unique in that it is the progenitor of a vast family of compounds (the subject of organic chemistry)? 6) why do carbon's two nearest neighbors, silicon and boron, not have similar empires? (Silicon does have an empire -- rocks! -- but it is obviously quite different) 7) what makes "heavy metals" heavy, and why are they so toxic? 8) why is there virtually no technetium in the Earth, though it is a relatively light metal, and not a member of the "heavy" radio-active series? 9) why is deuterium virtually a distinct elements (rather than just a form of hydrogen)? The book is "friendly" enough so as not to intimidate non-specialist, but at the same time it contains sufficient details and technical information to interest the expert. A special asset is the grouping of elements according to the periodic table. The mysteries of the transition elements are especially well covered. The book is enhanced by excellent graphics. The price, while high for say a novel, is quite reasonable for a technical book. Happy browsing!

For years I have enjoyed the previous edition as a source of information and reference. It is a good adjunct to many of the courses in Chemistry to give additional background. The authors seem to anticipate what you will need to learn. The inset boxes are excellent in that they call attention to practical industrial chemistry and I know of no other text that so successfully stresses applied chemistry while most texts give no insight into the real world of the practical side of Chemistry. Do you know how a match is made? Chemistry of the Elements will educate you! Harry Persinger

Greenwood and Earshaw is an excellent inorganic chemistry text as well as a valuable reference for the chemist or geochemist. Their systematic treatment of the elements by group within the periodic table makes for a coherent treatment of periodic properties. Besides the almost encyclopedic

coverage of element chemistry, they cover the sources and uses of the elements and their compounds, making the chemistry much more relevant to everyday life. This is a good text for a university level inorganic class, but has enough general information that would be digestable for lower level students as well. An excellent resource for chemistry instructors at all levels.

For anyone in need of a general reference on the chemical elements and their compounds (anyone majoring or working in chemistry), this book is indeed the bible. It has the advantage of being a well-written reference, but make no mistake, it is a reference - in the same way that a book on grammar, even if it is well-written, is still a book on grammar. Which means that if you are looking for an interesting and pleasantly readable popular science book about the chemical elements, and unless you have a serious technical interest in chemistry, this is probably not the best choice. The author doesn't make any claims that it was written for a popular audience, but some of the reviews seem to hint that it might be.

Before I got a copy of this book I was always intrigued by the references to it in other texts. It does indeed have many interesting things in it. Some of the material it covers I have not seen in any other text. With that said however, this book is not really all that suitable as a standalone text for a course. It is missing too much descriptive chemistry and coordination theory to support an inorganic course. It is written at too high a level for a general chemistry course. It just doesn't seem to fit well anywhere. It has a great deal of information, arranged based on periodicity, especially in the areas of terrestrial abundance and industrial chemistry. Chemistry of the Elements repeats very little of what is covered in Cotton & Wilkinson's Advanced Inorganic and is well worth having to supplement that text. I enjoy reading this book, but I doubt I will ever use it exclusively for a course. Worth the money for the major and those interested but not for everyone!

Did you know that the ending ON in silicon was chosen (by Thomas Thomson) to stress the analogy of this element with both carbon and boron? I didn't. Along with such kind of historical details, Greenwood and Earnshaw's book contains a great deal of information (data, tables, graphs, etc.) about the elements of the Periodic Table and their corresponding compounds. The material is logically organized in 31 chapters, which are followed by 7 appendices (1341 pages!). This chemistry bible should stay on the desk of every chemist and scientist alike.

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