

Shriver & Atkins Inorganic Chemistry

Peter Atkins, University of Oxford, Tina Overton, University of Hull, Jonathan Rourke, University of Warwick, Mark Weller, University of Southampton and Fraser Armstrong, University of Oxford

Shriver and Atkins Inorganic Chemistry is the essential text to inspire students in their study of this far-reaching subject. The author team draw upon their excellence in teaching and research to provide students with a text that helps them to truly grasp the fundamentals of inorganic chemistry.

The book is carefully tailored to students' needs, offering careful explanations and a less formal writing style, and assuming a lower level of mathematical and chemical knowledge. Extensive coverage of the chemistry of the elements provides a framework on

which students can build their understanding of the subject, while 'Frontiers' chapters open up to the student topics at the forefront of contemporary research. Examples throughout the book show the relevance of inorganic chemistry to real-life situations, encouraging students to engage fully with the subject.

I feel this text delivers magnificently, as indeed did its predecessor editions. It clearly develops and reinforces the basic principles discussed in the Foundations.

Rob Janes, Open University

- Author team brings together chemical educators and researchers who are at the cutting edge of their fields to produce a text which combines authoritative coverage with a clear and lucid writing style.
- Takes students from the basic concepts through to the frontiers of chemical research, making the text the ideal teaching and learning resource throughout an undergraduate chemistry degree programme.
- Examples illustrating the impact of inorganic chemistry on everyday life, and a new full-colour text design, increase the student's interest in and engagement with the text to make their learning more effective.

848 pages 2006 978-0-19-926463-6 Paperback £38.99

Readership:

Undergraduates at all stages of their bachelors or masters chemistry degree programmes. Also a valuable reference for postgraduates and researchers.

Contents

PART I: FOUNDATIONS

1. Atomic structure
2. Molecular structure and bonding
3. The structures of simple solids
4. Acids & bases
5. Oxidation and reduction
6. Physical techniques in inorganic chemistry
7. Molecular symmetry
8. An introduction to coordination compounds

PART 2: THE ELEMENTS AND THEIR COMPOUNDS

9. Hydrogen
10. The Group 1 elements
11. The Group 2 elements
12. The Group 13 elements
13. The Group 14 elements
14. The Group 15 elements
15. The Group 16 elements
16. The Group 17 elements
17. The Group 18 elements
18. The d-block metals
19. d-metal complexes: Electronic structure & spectra
20. d-metal complexes: Reactions in solution
21. d-metal organometallic chemistry
22. The f-block metals

PART 3: FRONTIERS

23. Solid state and materials chemistry
24. Nanomaterials, nanoscience and nanotechnology
25. Catalysis
26. Biological inorganic chemistry

Solutions Manual to Accompany Shriver and Atkins Inorganic Chemistry

Michael Hagerman, Union College, USA, Chris Schnabel, Eckerd College, USA, Kandalam Ramanujachary, Rowan University, USA and Steven Strauss, Colorado State University, USA

320 pages 2006 978-0-19-928859-5 Paperback £21.99

ONLINE RESOURCE CENTRE

For lecturers:

- Figures from the book available to download
- Figures in PowerPoint format
- Tables of data
- Test bank of questions

For students:

- 3D rotatable molecular structures
- Tables for group theory
- Video clips demonstrating key chemical experiments
- Library of web links



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Molecules and Models

The molecular structures of main group element compounds

Arne Haaland, University of Oslo, Norway

This book provides a systematic description of the molecular structures and bonding in simple compounds of the main group elements with particular emphasis on bond distances, bond energies and coordination geometries. *Molecules and Models* provides a lucid discussion of a number of models such as the Lewis electron-pair bond and the VSEPR models, the spherical and polarizable ion models, and molecular orbital calculations, and it outlines the successes and failures of each.

Readership:

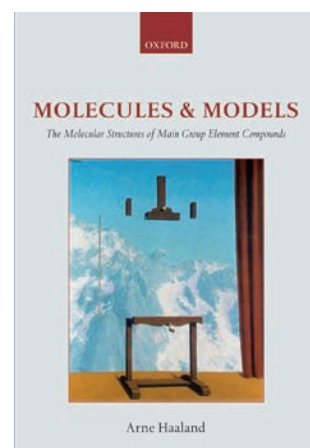
Undergraduate and graduate students in chemistry, inorganic chemistry and physical chemistry.

304 pages February 2008 978-0-19-923535-3 Hardback £39.95

A lucid introduction to the models used to interpret molecular structures.

A light and didactic reading on the structure of molecules of main-group elements. The author has put his four decades of research experience into this book and made excellent use of some 300 representative examples

Magdolna Hargittai, Hungarian Academy of Sciences



Essential Trends in Inorganic Chemistry

D. M. P. Mingos, University of Oxford; The Royal College of Science

Essential Trends in Inorganic Chemistry shows how a chemist uses the Periodic Table to organise and process the mass of information available in the field of inorganic chemistry. It includes a detailed discussion of the important horizontal, vertical and diagonal trends in the properties of atoms of the elements and their compounds.

Contents:

The Quantum Mechanical Basis of the Periodic Table; Vertical Trends; Horizontal and Diagonal Trends; Isoelectronic and Iso-stoichiometric Relationships; Transition Metals (d-block elements), Lanthanides and Actinides (f-block elements)

Readership:

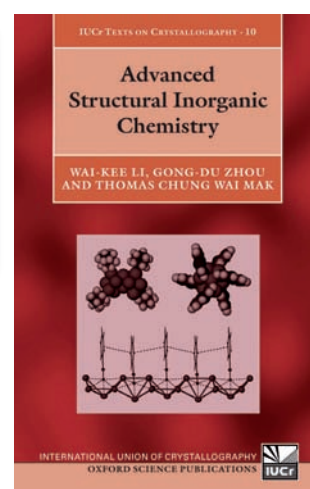
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This book will go a long way in improving the understanding of modern chemical crystallography among the general chemistry community.

Gautam R. Desiraju, University of Hyderabad, India

International Union of Crystallography Texts on Crystallography



The Electronic Structure and Chemistry of Solids

P. A. Cox, University of Oxford

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Contents:

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Readership:

Advanced undergraduate and graduate students of chemistry and materials science.

270 pages 1987 978-0-19-855204-8 Paperback £39.99

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Wai-kee Li, The Chinese University of Hong Kong, China, Gong-Du Zhou, Peking University, China and Thomas Mak, The Chinese University of Hong Kong, China

Advanced Structural Inorganic Chemistry provides students with the background knowledge to comprehend the exciting advances in modern inorganic chemical research. This book is a revised and updated English edition of a textbook that has grown out of several years of teaching.

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817 pages October 2007 978-0-19-921695-6 Paperback £37.50

