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Inorganic chemistry miessler

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If you find this textbook too hard to read, well, I hope you never go to graduate school.The book lacks pictures and diagrams, and is rather dry, but it is meant for college juniors and seniors. I do not have any other inorganic textbooks to compare this edition to, but in my opinion, in comparison to other science and math textbooks I have used, including gen. chem. and orgo, this book is solid. Image not available forColor: To view this video download Flash Player Ask the publishers to restore access to 500,000+ books. Preface A new edition of a text can mean many things. To authors, it is a chance to try again to get it right and readable, and to revise outdated sections. To teachers and students, the new edition is potentially a more readable and useful text. For the author's family and friends, it is a chance to reclaim the attention that was devoted to the revising process. And finally, it means that the first edition was successful enough that a revision is necessary. We hope potential users will agree that this second edition retains the best features of the first edition and corrects any flaws. As in the first edition of Inorganic Chemistry, we have chosen to emphasize molecular orbitals and symmetry in many aspects of bonding and reactivity. For example, we have devoted an early chapter, Chapter 4, to a discussion of molecular symmetry and introductory group theory, with examples of applications to molecular vibrations and chirality. In later chapters, we have used group theory in a variety of other applications, including molecular orbitals of main group compounds (Chapter 5) and coordination complexes (Chapter 10), and infrared spectra of organometallic compounds (Chapter 13). Additional applications of group theory are included in problems at the end of these and other chapters. The early chapters provide a review of atomic theory (Chapter 2) and simple concepts of chemical bonding (Chapter 3). Following the introduction to group theory in Chapter 4, this theory is applied to the construction of molecular orbitals in Chapter 5. Chapter 6 provides a discussion of various acid-base concepts, emphasizing applications of molecular orbitals to acid-base interactions. Following the advice of many, we have added a chapter on solid state inorganic chemistry (Chapter 7). Chapter 8 summarizes some of the most important aspects of main group elements and their compounds. The rapid development of chemistry of the fullerenes has been recognized in a discussion of these molecules in Chapter 8 and of fullerene complexes in Chapter 13. Chapters 9 through 14 are directed to the chemistry of the transition elements. The first four of these chapters deal, respectively, with the structures, bonding, electronic spectra, and reactions of classical transition metal complexes. We have followed reviewers' advice in reorganizing these chapters into this sequence. For this edition we have moved the discussion of terms and microstates into Chapter 11 so it immediately precedes its most common use, interpretation of spectra of coordination complexes. We have written the section on terms and microstates so it can still be used with the discussion of atomic spectra (Chapter 2) for those who might wish to follow the organization of the first edition. Chapters 13 and 14 provide an introduction to organometallic compounds, their spectra, and reactions. Special attention has been given to catalytic cycles and their application to problems of chemical and industrial significance. We believe that seeking similarities in the chemistry of different types of compounds can be an extremely valuable exercise, and we have therefore discussed some of these important parallels in Chapter 15, placing particular emphasis on the isolobal analogy developed by Roald Hoffmann and on similarities between main group and transition metal clusters. Finally, no text would be complete without a discussion of the role of inorganic compounds in biological processes and in the environment. We have therefore devoted the final chapter, Chapter 16, to selected aspects of bioinorganic and environmental inorganic chemistry. We have chosen the topics and the level of treatment that works well for us. Every teacher has favorite topics, as well as least-favorite ones. We hope that our choice of topics allows potential users to tailor the contents to their own courses. We welcome suggestions for improvements in future editions. In addition to selecting the most appropriate topics, we have attempted to make our text as accessible to students as possible. We have therefore increased the number of examples and exercises within the chapters, with answers to examples included in the chapters and answers to exercises in Appendix A. To encourage use of the literature in inorganic chemistry, we have retained the extensive references in the first edition and have also increased the number of end-of-chapter problems taken from the chemical literature. We hope that these will be useful to both faculty and students using this text. At the end of each chapter is a list of suggested supplemental readings, with brief comments on each. We want to express special appreciation to our students, who have submitted many suggestions for improving the clarity and accuracy of this edition. We especially appreciate one student, Beth Truesdale (now a Rhodes Scholar), who reviewed every chapter in detail and made hundreds of valuable suggestions. Thanks also to those from other schools who reviewed this book in preparation and offered many helpful suggestions: Christopher W. Allen, University of Vermont E. Joseph Billo, Boston College Shelby Boardman, Carleton College J. K. Burdett, University of Chicago Robert L. 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