

Preface

This text covers material that could be included in a one-quarter or one-semester course in bioinorganic chemistry for graduate students and advanced undergraduate students in chemistry or biochemistry. We (Bertini, Gray, Lippard, and Valentine) believe that such a course should provide students with the background required to follow the research literature in the field. The topics were chosen to represent those areas of bioinorganic chemistry that are mature enough for textbook presentation. Although each chapter presents material at a more advanced level than that of bioinorganic textbooks published previously, the chapters are not specialized review articles. What we have attempted to do in each chapter is to teach the underlying principles of bioinorganic chemistry as well as outlining the state of knowledge in selected areas. We have chosen not to include abbreviated summaries of the inorganic chemistry, biochemistry, and spectroscopy that students may need as background in order to master the material presented. We instead assume that the instructor using this book will assign reading from relevant sources that is appropriate to the background of the students taking the course. For the convenience of the instructors, students, and other readers of this book, we have included an appendix that lists references to reviews of the research literature that we have found to be particularly useful in our courses on bioinorganic chemistry.

The idea of preparing a bioinorganic chemistry textbook was conceived by one of us (IB) at a "Metals in Biology" Gordon Conference in January, 1986. The contributing authors were recruited to the project shortly thereafter. The project evolved as a group effort, with substantial communication among the authors at all stages of planning and execution. Both first and revised drafts of the book were class-tested at UCLA, Caltech, and the University of Wisconsin and modified in response to the reviews of students and teachers. Particularly valuable suggestions were made by Professor Judith N. Burstyn (University of Wisconsin); Ken Adress, Raymond Ro, Kathy Kinnear, Clinton Nishida, Roger Pak, Marlene Sisemore (UCLA); and Deborah Wuttke (Caltech) during the review process. We thank them for their contributions. Even with all this help, the book would never have seen the light of day had it not been for the dedication and hard work of Debbie Wuttke. With RBG, Debbie checked every line through four rounds of galleys and pages. Grazie mille, Debbie!