An Introduction to Mössbauer Spectroscopy

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Preface

The initial impetus for this text occurred when we were searching for a single book that could be recommended to the attendees at the Mössbauer Spectroscopy Institute at The Catholic University of America. This Institute is an introductory course on the theory and interpretation of Mössbauer spectroscopy for workers in industrial, academic, and government laboratories. None of the books available adequately covered the breadth and scope of the lectures in the Institute. A list of these books and review articles is included in Appendix C. To meet our needs, we undertook the creation of this text.

The chapters are based upon the lectures given at the various Institutes from 1967 to 1969. Most of the lectures were recorded and transcripts sent to the lecturers, who then prepared the manuscripts, using the transcripts as a guide so as to retain the style developed during the lecture. Each chapter is written in the style of the authors. As the editor, my main task was to maintain uniformity of format and nomenclature. A list of nomenclature used in this volume is reproduced in Appendix A. We hope that this list will be used particularly by new investigators and teachers of Mössbauer spectroscopy so that future literature will employ a uniform system.

The text is written primarily to introduce scientists, both at the graduate student level and in active research, to areas in which Mössbauer spectroscopy may be of assistance. Each author is an active research worker, and many are regarded as leaders in their particular aspect of the subject matter. They bring to their writing both specific knowledge of their research and the desire to transmit adequately the results and principles to the reader.

I wish to thank the authors for their efforts and suggestions in making this endeavor possible and also the secretarial staff at the Chemistry Department of Catholic University for their assistance, particularly Mrs. Olivia Messer and Miss Judy Williams.

Leopold May

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