1. Record Nr. UNIPARTHENOPE000013657

Autore	Schwarzschild, Martin
Titolo	Structure and evolution of the stars / by Martin Schwarzschild
Pubbl/distr/stampa	Princeton : Princeton University Press, c1958
Titolo uniforme	Structure and evolution of the stars
Descrizione fisica	XIII, 296 p. : fig, tab. ; 25 cm
Disciplina	523.8
Collocazione	523.8/103 S 23/13
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910974453903321

Autore	Whitney Cynthia Kolb <1941->
Titolo	Algebraic chemistry : applications and origins / / Cynthia Kolb Whitney
Pubbl/distr/stampa	New York, : Nova Publishers, c2013
ISBN	1-62257-866-X
Edizione	[1st ed.]
Descrizione fisica	1 online resource (386 p.)
Collana	Chemical engineering methods and technology Mathematics research developments
Disciplina	541.01/512
Soggetti	Molecular dynamics - Mathematics Ionization constants - Measurement Quantum chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- ALGEBRAIC CHEMISTRY -- ALGEBRAIC CHEMISTRY -- CONTENTS -- PREFACE -- INTRODUCTION -- 1. THE BACKGROUND --

REFERENCES -- CATALYSIS OF CHEMICAL REACTIONS -- ABSTRACT -- INTRODUCTION -- 1. THE EXAMPLE REACTION.
1.1. The Full Reaction -- 1.2. The Textbook Catalyzed Reaction Steps -- 1.3. Why the Textbook Story Didn't Work -- 2. A NEW ATTACK ON THE PROBLEM -- 2.1. The First Catalyzed Reaction Step -- 2.2. The Second Catalyzed Reaction Step -- 2.3. Define More Reaction Steps? -- 3. QUESTIONING THE ASSUMED REACTION -- 4. NATURAL CATALYSIS -- CONCLUSION -- A PROJECT FOR READERS -- ACKNOWLEDGMENTS -- REFERENCES -- ELECTRO-CHEMISTRY IN POWER GENERATION -- ABSTRACT -- INTRODUCTION -- 1. THE ORIGINS OF CONTROVERSY -- 1.1. Lack of Neutrons -- 1.2. Variability of Excess Heat -- 1.3. Lack of Credible Theory -- 2. THE NUMERICAL INFORMATION NEEDED -- 3. WHAT HAPPENS IN THE ELECTROLYTIC SOLUTION -- 4. WHAT HAPPENS AT THE CATHODE -- CONCLUSION -- A PROJECT FOR READERS -- ACKNOWLEDGMENTS -- REFERENCE -- PART II. CHEMISTRY AS QUANTUM MECHANICS -- PROLOG TO PART II -- REFERENCES -- HYDROGEN AS THE PROTOTYPICAL ATOM -- ABSTRACT -- INTRODUCTION -- 1. RADIATION FROM ACCELERATING CHARGES -- 2. TORQUING IN THE HYDROGEN ATOM -- 3. EVEN MORE RADIATION -- 4. BALANCE AT THE GROUND STATE -- 5. EXCITED STATES -- CONCLUSION -- REFERENCES -- GENERAL CHARGE PAIRS -- ABSTRACT -- INTRODUCTION -- 1. HYDROGEN -- 2. POSITRONIUM -- 3. THE PROTON PAIR -- 4. THE ELECTRON PAIR -- CONCLUSION -- REFERENCE -- ELECTRON RINGS AND STRUCTURES THEREOF -- ABSTRACT -- INTRODUCTION -- 1. COMFORTABLE ELEMENTS -- 1.1. A Ring of Three Electrons -- 1.2. Two Rings of Three Electrons -- 1.3. A Ring of Five Electrons -- 1.4. Two Rings of Five Electrons -- 1.5. A Ring of Seven Electrons -- 1.6. Two Rings of Seven Electrons -- 2. UNCOMFORTABLE ELEMENTS -- 3. PECULIAR ELEMENTS -- CONCLUSION -- APPENDIX -- A PROJECT FOR READERS -- ACKNOWLEDGMENTS -- REFERENCES -- EXPLOSIONS AND EXPLANATIONS -- ABSTRACT -- INTRODUCTION -- 1. LOG-LINEARITY OF IONIZATION POTENTIALS.
2. ON THE MEANING OF HIGHER-ORDER IONIZATION POTENTIALS -- 2.1. Observations -- 2.2. Explanations -- 3. ON THE MEANING OF FIRST-ORDER IONIZATION POTENTIALS -- 3.1. Full Periods -- 3.2. Sub-Period Levels -- 3.3. Sub-Period Slopes -- 4. ON THE UTILITY OF HIGHER-ORDER IONIZATION POTENTIALS IN CHEMISTRY -- CONCLUSION -- REFERENCES -- PART III. QUANTUM MECHANICS AS ELECTRODYNAMICS -- PROLOG TO PART III -- REFERENCE -- PHOTONS AND MAXWELL'S EQUATIONS -- ABSTRACT -- INTRODUCTION -- 1. APPROACH -- 2. E'S AND B'S FOR ONE OF THE TWO ORIENTATIONS -- 3. WAVEFORM EVOLUTION -- 4. WAVEFORM ENERGY DENSITIES -- 5. RELATIVE MOTION -- 6. IMPLICATIONS FOR FIELDS DELIVERED -- 7. IMPLICATIONS FOR RELATIVITY THEORY -- CONCLUSION -- ACKNOWLEDGMENTS -- APPENDIX -- [A] Theory of the Photon -- The Concept of Convergence -- REFERENCES -- ON THE INVARIANCE OF MAXWELL'S EQUATIONS -- ABSTRACT -- INTRODUCTION -- 1. EXTENDED TENSOR NOTATION, WITH MATRIX DEMONSTRATIONS -- 3. GALILEAN TRANSFORMATION OF MAXWELL'S EQUATIONS -- CONCLUSION -- REFERENCES -- CONCLUSION -- 1. SOME HISTORY TO RECALL -- 2. THE TASK TO ADDRESS -- 3. SPECIFIC TOOLS TO USE -- ACKNOWLEDGMENTS -- REFERENCES -- INDEX.

Sommario/riassunto

Algebraic chemistry is based on numerical patterns observed in readily available data about ionization potentials of atoms, and on a physical model that interpolates and extrapolates from that data to situations for which data is not readily available, such as ionization potentials for atoms that are already ionized, or corresponding energy increments involved in adding, rather than subtracting, electrons. This Book

presents an approach to chemistry that permits numerical evaluation of many chemical scenarios without use of much computation power. Everything here can be worked out with a hand calculator. The approach thus makes numerical analysis of scenarios in chemistry feasible for students, or up-coming researchers, or retirees, who work with minimal financial support.