

CONTENTS

| | | |
|-------------------------------------|--|------------|
| 1 | Finite Dimensional Vector Spaces | 1 |
| 2 | Huckel Molecular Orbital Theory | 33 |
| 3 | Function Spaces and Linear Operators | 44 |
| 4 | Quantum Mechanics for Bound States | 57 |
| 5 | The Central Field Problem | 80 |
| 6 | Perturbation Theory | 97 |
| 7 | Electron Spin | 117 |
| 8 | Atomic Structure | 123 |
| 9 | The Variation Method | 145 |
| 10 | The Delta World | 157 |
| 11 | Diatomc Molecules | 176 |
| 12 | Symmetry: Localized and Nonlocalized Molecular Orbitals | 199 |
| Appendix I | Physical Constants to Four Significant Figures | 221 |
| Appendix II | Coordinate Systems | 222 |
| Appendix III | Normalized, Hydrogen-Like Wave Functions | 223 |
| Answers to Selected Problems | | |
| Index | | 229 |