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Nota di contenuto	Preface; Acknowledgments; CONTENTS; Chapter 1 Introduction to Positron and Positronium Chemistry; 1.1 A new chemistry: positronium chemistry; 1.2 Existing books and articles on positron and positronium chemistry and annihilation; Problems; References; Answers to problems; Chapter 2 Compounds of Positrons and Positronium; 2.1 Introduction; 2.2 Quantum mechanical considerations; 2.2.1 Basic physics of mixed electron-positron systems; 2.2.2 The calculation of annihilation rates; 2.2.3 Quantum mechanical methods; 2.2.3.1 The stochastic variational method (SVM) 2.2.3.2 The quantum Monte Carlo (QMC) method 2.2.3.3 Other methods; 2.3 Current knowledge of bound states; 2.3.1 Polyleptons; 2.3.2 One-electron atoms; 2.3.3 Two-electron atoms (excluding He); 2.3.4 The nonmetals; 2.3.5 The noble gases; 2.3.6 Molecules; Acknowledgments; References; Chapter 3 Experimental Techniques in Positron Spectroscopy; 3.1 Introduction; 3.2 Positron sources; 3.2.1 Introduction; 3.2.2 Radioactive sources for laboratory experiments;

3.2.3 Positron sources for facility-based beams; 3.2.4 Accelerator-based positron sources for the laboratory  
3.3 Particle and radiation detectors  
3.3.1 Radiation detectors; 3.3.1.1 Scintillation detectors; 3.3.1.2 Semiconductor detectors; 3.3.1.3 Multiwire proportional chambers; 3.3.2 Particle detectors; 3.3.2.1 Scintillators; 3.3.2.2 Surface-barrier detectors; 3.3.2.3 Channel electron multipliers; 3.4 Notes on pulse electronics; 3.4.1 Transmission of pulses; 3.4.2 Elements of circuits used in positron spectroscopy; 3.4.2.1 Discriminators; 3.4.2.2 Amplifiers; 3.4.2.3 Single and multi-channel analyzers; 3.5 Lifetime spectrometry; 3.6 Doppler broadening spectroscopy; 3.6.1 Introduction  
3.6.2 Experimental set-up  
3.6.3 Data analysis; 3.6.4 Two-detector technique; 3.7 Age-momentum correlation (AMOC); 3.8 Angular correlation of annihilation radiation (ACAR); 3.8.1 One-dimensional ACAR; 3.8.2 Two-dimensional ACAR; 3.9 Positron beams; 3.9.1 Positron moderators; 3.9.2 Laboratory-based beams; 3.9.3 Facility-based beams; 3.9.4 Beam bunching; 3.9.5 Polarized positron beams; 3.9.6 MeV positron beams; 3.9.7 Time-of-flight spectrometry; 3.9.8 Positron microscopy; 3.9.9 Plasma-generated positron beams; Problems; References; Answers to Problems  
Chapter 4 Organic and Inorganic Chemistry of the Positron and Positronium  
4.1 Positronium formation in condensed matter; 4.1.1 The spur model in polar solvents (Strasbourg Group) [2]; 4.1.2 The spur model in nonpolar solvents; 4.1.3 Quantitative approaches and modeling of Ps formation; 4.1.4 Positronium formation in solids; 4.2 Positron chemistry; 4.3 Positronium states in condensed matter; 4.3.1 Ps trapping in liquids: the bubble model; 4.3.2 Ps trapping in solids: the free volume model; 4.3.3 Ps states in condensed matter: the contact density parameter; 4.4 Positronium chemistry in liquids  
4.4.1 Positronium reactions

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Sommario/riassunto

This book provides a comprehensive description of the principles and applications of positron and positronium chemistry. Pedagogical and tutorial in nature, it will be ideal for graduate students and researchers in the area of positron annihilation spectroscopy. The contributing authors are authoritative scientists prominent in the frontiers of research, actively pursuing positron annihilation research on chemical and applied systems. Contents: Introduction to Positron and Positronium Chemistry (Y C Jean et al.); Compounds of Positrons and Positronium (D M Schrader); Experimental Techniques in

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