

Table of Contents

Preface

Chapter 1: Summer School Alfredo Dupasquier. Techniques and Instrumentation

Positron Lifetime Spectroscopy to Study Defects in Solids J. Čížek	3
Coincidence Doppler Broadening to Study the Chemical Environment at Positron Annihilation Sites R. Ferragut	27
Spin-Polarized Positron Annihilation Spectroscopy: Principles and Applications in Materials Study A. Kawasuso	39
Low-Energy Positron Beams: Positron Sources, Moderation and Beam Setups C. Hugenschmidt	49
Low-Energy Positron Beams, New Developments A. Wagner	65

Chapter 2: Summer School Alfredo Dupasquier. Applications

Radiation Damage Studies by Positron Annihilation Spectroscopy M.F. Barthe	75
Positron Annihilation Spectroscopy Applied to Materials Science and Engineering F.A. Selim	99
Defects in Semiconductors: Charge States, Shallow Traps and Annealing Experiments J. Slotte	115
Positron and Positronium Atom in Molecular Liquids S.V. Stepanov, L.I. Budaeva and O.V. Ilyukhina	121
Hole and Cusp Formalism in Electron-Positron Density Functional Theory B. Barbiellini	145
Quantum Monte Carlo in Positron Physics I. Makkonen	155