

# Positron Annihilation in Semiconductors: Defect Studies, ISSN 0171-1873 / 1999 / 9783540643715 / 378 pages / Reinhard Krause-Rehberg, Hartmut S. Leipner / Springer Science & Business Media, 1999

Workshops on positron annihilation in gases and on slow positron technique will probably continue to be arranged in the future. 1.2 History of Chemistry-Oriented Positron Annihilation Studies The positron was introduced into physics by Dirac in 1930 [1.19]. He proposed in the theory of holes that the negative - energy states of the Dirac equation (see, e.g., [1.20]) are normally completely filled by electrons. Hence, a transition to the negative-energy states of the positive-energy electrons is prevented by the. Positron annihilation spectroscopy is also used for the study of crystallographic defects in metals and semiconductors; it is considered the only direct probe for vacancy-type defects.[4]. "Defect identification in semiconductors with positron annihilation: Experiment and theory". *Reviews of Modern Physics*. 85 (4): 1583â€“1631. Positron Annihilation In Semiconductors book. Read reviews from world's largest community for readers. This comprehensive book reports on recent investig... This comprehensive book reports on recent investigations of lattice imperfections in semiconductors by means of positron annihilation. It reviews positron techniques, and describes the application of these techniques to various kinds of defects, such as vacancies, impurity vacancy complexes and dislocations. Get A Copy. Amazon. The sensitivity range of positron annihilation with respect to the detection of these defects is compared to that of other defect-sensitive methods. The most prominent results obtained with positrons in practically all important semiconductors are reviewed. Basics of positron annihilation in semiconductors.- Native defects.- Irradiation induced defects. This book surveys the properties, effects, roles and characterization of extended defects in semiconductors. The basic properties of extended defects (dislocations, stacking faults, grain boundaries, and precipitates) are outlined, and their effect on the electronic properties of semiconductors, their role in semiconductor devices, and techniques for their characterization are discussed. Positron annihilation spectroscopy in materials structure studies. V. I. Grafutin, E. P. Prokopiev. Institute for Theoretical and Experimental Physics (Russian Federation State Scientific Center), Moscow. V. Funtikov, "Positron-Annihilation-Spectroscopy Study of Proton-Induced Defects in Silicon", *Russ Microelectron*, 34:3 (2005), 181. Gninenko S.N., Krasnikov N.V., Matveev V.A., Rubbia A., "Some Aspects of Positronium Physics", *Phys. Part. Nuclei*, 37:3 (2006), 321â€“346. Klym H., Ingram A., "Unified Model of Multichannel Positron Annihilation in Nanoporous Magnesium Aluminate Ceramics - Art.