

www.PositronAnnihilation.net - international Web-project devoted to positron annihilation

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intro news history applications techniques labs projects publications conferences support contact

Introduction

The internet project "PositronAnnihilation.net" is devoted to Positron Annihilation as an experimental method in materials research. It's main idea, as discussed at PSSD-02 (3d Int. Workshop on Positron Studies of Semiconductor Defects), is to create an international Web portal with coordination at Halle-University (Germany) that has three major goals to achieve:

- informative;
- educational;
- communicative.

Informational portal

is intended in the first place for non-positron physicists and industrial researchers and contains representative information on:

- applications of different positron annihilation techniques for both basic materials research and for solving some distinct industrial problems;
- positron laboratories all over the world;
- big-scale user-dedicated positron projects.

Furthermore, it is aimed to inform positron scientists and students about:

- conferences, meetings or workshops relevant to positron annihilation;
- other positron annihilation related news.

Communication portal

This part of PA.net should evolve into a convenient internet communication platform for the scientists and students working on the field of positron annihilation. It's heart is PA.net self-organized database, which includes:

- Almost all kinds of scientific publications related to positron annihilation: papers; scientific talks; posters.
- The procedure of addition of new publications is completely automated - a registered PA.net user can make his contribution online in several minutes. The new publications will be announced to other PA.net members in monthly Newsletters.

Up to the 04-Sep-2003, PA.net Database contains: 45 Papers, 8 Posters and 8 Talks.

- Mailing list, which provides a contact information of registered PA.net users. It is on the user responsibility to keep his contact data up-to-date by putting necessary corrections to his user profile.
- Software collection: represents information on all kinds of nowadays available software tools for analysis of positron annihilation data, for theoretical calculations of annihilation parameters, spectra simulation, etc.
- Conferences: Actual information on positron-related conferences.

Furthermore, there is a PA.net Forum for all kind of (not only) scientific discussions.



PA.net News

06.08.03 See in the first Pa.net Newsletter

- Moderators wanted
- New section - Support Software
- New publications: historic exchange
- Forum discussion: where is the energy?

18.01.03 New service Mailing list

14.01.02 Registration is visual. Register yourself as a PA.net member to be in the course of the last updates, news, new publications, conferences.

PA.net library - Applications

Learn about the possibilities of practical application of Positron Annihilation in:

- general
- metals
- semiconductors
- defects
- polymers
- other

Large scale Positron Projects

Here you will find the most interesting and in different:

- EPOS (Germany)
- FRM-II (Germany)
- LLNL (USA)
- KEK (Japan)
- AISP (Japan)

PA.net library - Techniques

Learn about different techniques of the method of Positron Annihilation:

- Positron Sources
- Positron Lifetime Spectroscopy (PLS)
- Monochromator Distribution Techniques
- Slow Positron Beams Techniques
- Positron Microscopy

Educational portal

is thought to provide interested students with complete and comprehensive information related to physics of Positron Annihilation phenomena in different materials. This involves description of the:

- historical evolution of positron annihilation as the method of experimental physics;
- basic theories of positron annihilation in different media (metals, semiconductors, polymers, liquids, gases, etc.);
- physical principles of different experimental techniques;
- existing Software tools for analysis of experimental data etc.

Property	Description
1. Lifetime	Used primarily for the determination of defect types. The lifetime of the positronium atom is determined by the annihilation rate of the positronium atom.
2. Doppler broadening	The Doppler broadening of the annihilation spectrum is determined by the momentum of the positronium atom at the moment of annihilation.
3. Angular distribution	The angular distribution of the annihilation radiation is determined by the spin of the positronium atom.

Diagram: Energy levels of positronium atom showing ground state and excited states.

PA.net Guestbook

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PA.net Database

Number of papers: 45

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Message: You've got a message! Post here, notify PositronAnnihilation and Forum: Hello: Where is the energy?

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