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Material studies with positron annihilation spectroscopy

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Positron annihilation spectroscopy (PAS) is a method dedicated to detection of open-volume defects such as vacancies and their clusters in structures. Nowadays, this technique is of a great interest due to the practical character of obtained results. It is successively applied in the field of material science, surface engineering and ion modification.

Recently PAS studies have been provided at JINR. Researches using positrons emitted directly from the radioactive source and from slow positron beam are possible. In this way defects located on the depths from unit nanometers up to micrometers can be simply found. In the frame of presentation the basics of PAS, current status of facility, examples of application as well as directions of development will be discussed.

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