Abstract Submitted
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Investigation of Positron Sticking to the Surfaces of Topological Insulators[1] K. SHASTRY, P.V. JOGLEKAR, A.Y. OLENGA, N.G. FAZLEEV, A.H. WEISS, University of Texas at Arlington, B. BARNIELLINI, Northeastern University — We describe experiments aimed at probing the sticking of positrons to the surfaces of topological insulators. In these experiments, a magnetically beam will be used to deposit positrons at the surface of Bi_2Te_2Se. The energy spectra and intensities of electrons emitted as a result of Positron Annihilation induced Auger electron Spectroscopy (PAES) provides a distinct element specific signal which can be used to determine if positrons can be trapped efficiently into a surface localized bound state. The experiments are aimed at determining the practicality of using positron annihilation to selectively probe the critically important top most layer of topological insulator system.

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