

Abstract Submitted
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P-Si Based Microbolometer ASAHIEL BANOBRE, New Jersey Institute Technology, SITA RAJYALAXMI MARTHI, N. M. RAVINDRA, New Jersey Institute of Technology — Uncooled microbolometers are widely used in thermal detection in the fields of defense, surveillance, automotive and other related industries. The motivation for this study is the consideration of p-doped silicon as an alternative candidate to replace the standard infrared detector thermosensing materials. Its low cost and easy integration with the actual silicon planar lithography microfabrication techniques are some of the primary drivers for this investigation. Simulation of the radiative properties of a multilayer structure, comprising of p-Si as the sensing element, in the infrared spectral range of 2.5-14 microns, utilizing MultiRad-software based on a matrix method of representing the optical properties, at room temperature, is presented.

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