

Abstract Submitted
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Type-II Strained Layer InAs-GaSb Superlattice Photodiodes For Long Wave IR Detection MARK FIELD, GERARD SULLIVAN, AMAL IKHLASSI, BERINDAR BRAR, Rockwell Scientific, MICHAEL FLATTE, University of Iowa, CHRISTOPHER GREIN, University of Illinois, MICHAEL WEIMAR, Texas A&M University — We have fabricated and tested p-i-n photodiodes in InAs-GaSb superlattice material with measured cutoff wavelengths from 8.5 – 10 μm , and compared their performance with mercury cadmium telluride (MCT) detectors of the same cutoff wavelengths. Impedance area (ROA) products approaching the MCT devices have been demonstrated with quantum efficiencies of over 14 % per micron depth of the intrinsic layer. Progress towards designs with longer cutoff wavelengths, up to 16 μm , will be discussed along with issues and latest results on fabrication of a focal plane array using this material.

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