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Simulation and Testing of Type-II Strained-Layer Superlattices for Long Wavelength Thermophotovoltaics ABIGAIL LICHT, DANTE DEMEO, THOMAS VANDERVELDE, Tufts University — In this presentation we detail our research on long wavelength thermophotovoltaic (TPV) cells, with cut-off wavelength in the 7-9 micron range, which hold the potential for a wide array of applications due to their ability to work with lower temperature sources. We will discuss simulation results on the optimization of structures utilizing type II strained-layer superlattice (SLS) cells and unipolar barriers. The performance of these simulated cells is compared with fabricated cells which were characterizing using calibrated blackbody sources.

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