

Abstract Submitted  
for the MAR17 Meeting of  
The American Physical Society

**Electrical Excitation of Silicon Vacancies in 4H SiC<sup>1</sup>** JORDAN STROMAN, Howard University, EVELYN HU, Harvard University, GARY HARRIS, Howard University, CENTER FOR INTEGRATED QUANTUM MATERIALS COLLABORATION — The Silicon Vacancy in 4H Silicon Carbide (SiC) can serve as a single photon source. In this presentation I will describe my work to electrically excite an ensemble of Silicon Vacancies. A 4H SiC pn junction was irradiated with electrons and then a mesa structure was fabricated to probe this junction. I will describe the effects of this irradiation on the electroluminescence spectrum of this junction under forward and reverse bias conditions, as well as after annealing the junction at 200C, 500C, and 1000C.

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Date submitted: 11 Nov 2016

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