

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Diffusion of Vacancies in 4H-SiC RODRICK KUATE DEFO, XINGYU ZHANG, DAVID BRACHER, EVELYN HU, EFTHIMIOS KAXIRAS, Harvard Univ — Defect centers in silicon carbide (SiC) have emerged as strong contenders in the quest to realize quantum devices due to the materials lower cost as compared to its counterpart diamond, and due to the microfabrication techniques now available and favorable optical emission wavelengths and spin properties. We investigate the stability and diffusion of silicon vacancies of varying charge states in 4H-SiC and under the influence of strain, using density-functional-theory, which should serve as an invaluable guide in controlling defect position within devices.

Rodrick Kuate Defo
Harvard Univ

Date submitted: 10 Nov 2016

Electronic form version 1.4