

Abstract Submitted
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Effect of Stone-Wales defect on the electronic structure of Silicon Nanoribbons¹ SUMIT SAXENA, TREVOR A. TYSON, Department of Physics, New Jersey Institute of Technology — We have investigated the electronic properties of Silicon nanoribbons using density functional theory within the local density approximation. It has been reported that the armchair Silicon nanoribbons can be metallic or semiconducting depending on their width. We present the ab-initio studies of the electronic properties of Silicon nanoribbons with structural defects like the Stone-Wales defects. Comparisons with grapheme nano-ribbons will be made.

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