Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Electronic properties of boron nano-ribbons: - DFT study SUMIT SAXENA, TREVOR A. TYSON, Department of Physics, New Jersey Institute of Technology, Newark, NJ. — Electronic properties of boron nano-ribbons have been studied using density functional techniques employing ultra-soft pseudo-potentials. Spin restricted calculations were performed for boron nano-ribbons constructed from stable boron sheet[1] structures. Different stable edge configurations of nano-ribbons were observed. Band structure analysis was performed and Density of states was calculated to determine the electronic phase of these nano-ribbons. Comparisons with the carbon systems will be made. This work is supported in part by NSF DMR-051219.

[1] H. Tang and S. Ismail-Beigi, Phys. Rev. Lett. **99**, 115501 (2007).

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Date submitted: 28 Nov 2008 Electronic form version 1.4