

Abstract Submitted
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Electronic and Thermal Properties of Graphene and Carbon Structures GILMORE ANTHONY, MAHFUZA KHATUN, Ball State University — We will present the general properties of carbon structures. The research involves the study of carbon structures: Graphene, Graphene nanoribbons (GNRs), and Carbon Nanotubes (CNTs). A review of electrical and thermal conduction phenomena of the structures will be discussed. Particularly carbon nanoribbons and CNTs have many interesting physical properties, and have the potential for device applications. Our research interests include the study of electronic structures, electrical and thermal transport properties of the carbon structures. Results are produced analytically as well as by simulation. The numerical simulations are conducted using various tools such as Visual Molecular Dynamics (VMD), Large Large-scale Atomic/Molecular Massively Parallel Simulator (LAMMPS), NanoHub at Purdue University and the Beowulf Cluster at Ball State University.

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