

Abstract Submitted
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The Physics and Chemistry of Carbon Cages¹ ROBERT COURTNEY, BORIS KIEFER, New Mexico State University — Carbon nano-structures have been an area of exciting developments in recent years. A unique set of these structures are carbon fullerenes which are similar to “bucky balls.” These spherical cages have varying degrees of roundness, and are found in single and multi-shell configurations. Restructuring of the hybridized bonds between the carbon atoms is thought to contribute to the roundness of the structure, as well as the difference in energy between the multi-shell and single shell structures. In addition, removal or restructuring of bonds can create potential for functionalization of the structure’s surface. We will discuss modes of bond hybridization which lend themselves to functionalization and can lead to increased solubility in polar solvents. This leads to possibilities for applications in biological systems, of which we will specifically address targeted tissue drug delivery.

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