

Abstract Submitted
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Double Photoionization of Adamantane¹ RALF WEHLITZ, Synchrotron Radiation Center, Univ. of Wisconsin - Madison, MAX YOUNG², Univ. of Idaho - Moscow, PAVLE JURANIC, Synchrotron Radiation Center, Univ. of Wisconsin - Madison — We have measured double-to-single ionization cross-section ratios of adamantane (C₁₀H₁₆) in gas phase using photons of the Synchrotron Radiation Center (SRC). Adamantane, which is the first in the family of diamandoids, has a unique cage structure — the same structure that is found in the diamond crystal lattice. Thus, adamantane can be viewed as the smallest piece of diamond. Its cage structure prompted us to measure the first double-to-single photionization ratios over a large photon energy range because previously we have found a surprising relation between modulations in that ratio and geometrical dimensions of a C₆₀ cluster³. However, in contrast to C₆₀, adamantane does not have a “regular” structure and has additional hydrogen atoms attached to its cage. We will present our new data for adamantane and compare them to C₆₀.

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