

Abstract Submitted
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Photofragmentation of Fullerene Molecular Ions KIRAN BARAL, NAGENDRA ARYAL, DAVID ESTEVES, CHRISTOPHER THOMAS, RONALD PHANEUF, University of Nevada, Reno, DAVID KILCOYNE, Lawrence Berkeley National Laboratory — Experimental results are reported for single ionization and ionization with fragmentation of the fullerene molecular ions C_{60}^+ and C_{70}^+ after excitation by monochromatized vacuum ultraviolet synchrotron radiation at different photon energies: 22 eV, 35 eV, 65 eV, 105 eV and 140 eV. Since fullerenes are composed of even numbers of carbon atoms, the fragmentation occurs by the loss of differing numbers of carbon atom pairs. The energy dependences of relative cross sections for direct photoionization yielding C_{60}^{2+} and C_{70}^{2+} are compared with those for forming different doubly charged fullerene fragment ions. This research was supported by the Division of Chemical Sciences, Geosciences and Biosciences of the U.S. Department of Energy.

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