

Abstract Submitted
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Theoretical and Experimental Triple Differential Cross Sections for Electron Impact Ionization of SF₆¹ HARI CHALUVADI, Missouri University of Science and Technology, KATE NIXON, ANDREW MURRAY, University of Manchester, CHUANGANG NING, Tsinghua University, JAMES COLGAN, Los Alamos National Laboratory, DON MADISON, Missouri University of Science and Technology — Experimental and theoretical Triply Differential Cross Sections (TDCS) will be presented for electron-impact ionization of sulfur hexafluoride (SF₆) for the molecular orbital 1t_{1g}. M3DW (molecular 3-body distorted wave) results will be compared with experiment for coplanar geometry and for perpendicular plane geometry (a plane which is perpendicular to the incident beam direction). In both cases, the final state electron energies and observation angles are symmetric and the final state electron energies range from 5eV to 40eV. It will be shown that there is a large difference between using the OAMO (orientation averaged molecular orbital) approximation and the proper average over all orientations and also that the proper averaged results are in much better agreement with experiment.

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Don Madison
Missouri University of Science and Technology

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