

Abstract Submitted  
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**Cross sections for electron scattering from the CF<sub>3</sub> radical** LEIGH HARGREAVES, ARC Centre for Antimatter-Matter Studies, Flinders University, Australia; ARC Centre for Antimatter-Matter Studies, University of Adelaide, Australia, JESSICA FRANCIS-STAITTE, MICHAEL BRUNGER, ARC Centre for Antimatter-Matter Studies, Flinders University, Australia, STEPHEN BUCKMAN, ARC Centre for Antimatter-Matter Studies, Australian National University, Canberra, Australia, CARL WINSTEAD, VINCE MCKOY, A. A. Noyes Laboratory of Chemical Physics, California Institute of Technology, Pasadena, USA — Electron interaction cross sections with fluorocarbon radicals, such as CF, CF<sub>2</sub> and CF<sub>3</sub>, are a key data need for modeling industrial plasmas used to manufacture semiconductor devices. Here measurements of low-energy electron scattering cross sections for the CF<sub>3</sub> radical are presented. The gas target was prepared by thermal dissociation of a CF<sub>3</sub>I precursor forming a gas mixture containing, amongst other products, CF<sub>3</sub>. Time-of-flight analysis was used to characterize the gas mixture and, subsequently, the elastic differential cross sections for CF<sub>3</sub> were measured for energies between 5 – 50 eV. The measured data are compared with new Schwinger Multichannel calculations.

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