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Electron Collision Cross Sections for "Plasma-Like" Gas Mixtures LEIGH HARGREAVES, ARC Centre for Antimatter-Matter Studies, Flinders University, Australia; ARC Centre for Antimatter-Matter Studies, University of Adelaide, Australia, JESSICA FRANCIS-STAITE, MICHAEL BRUNGER, ARC Centre for Antimatter-Matter Studies, Flinders University, Australia, STEPHEN BUCKMAN, ARC Centre for Antimatter-Matter Studies, Australian National University, Australia — Measurements of electron collision cross sections for a "plasma-like" gas mixture are presented. A gas target was prepared by thermally dissociating a CF_3I precursor to form a gas mixture containing species which are commonly observed in industrial plasmas. Products included stable molecules such as CF_3I, I_2 and C_2F_6, as well as neutral radicals such as CF_3 and I. Subsequently, the elastic differential cross sections for the gas mixture were measured for energies between 5 – 50 eV. The measured data represents an important step towards the compilation of a sufficiently extensive database to meet the modeling needs of the low-temperature plasma industry.

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