

Abstract Submitted
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A new experimental technique for the measurement of absolute electron-impact partial ionization cross sections of radical species¹
DARRYL JONES, School of Chemical and Physical Sciences, Flinders University, GEORGE DA SILVA, Universidade Federal de Mato Grosso, MICHAEL BRUNGER, CAMS, Flinders University — We describe a new experimental methodology for measuring absolute partial ionization cross sections (PICS). The new technique employs pulsed and crossed electron and skimmed supersonic beams with an orthogonal pulsed-extraction time-of-flight mass spectrometer. Absolute scales for PICS of a species are determined through normalisation to a reference PICS. Here we determine the relative density of the target and the reference gases by normalisation of their centreline intensities in their expansions. Preliminary data demonstrating the validity of this technique will be presented. The potential of this new technique for performing new experimental measurements on transient radical species will be discussed.

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