

Abstract Submitted
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Vibrational Excitation of Furan by Electron Impact¹ GABREILA SERNA, REHAB AL-BURAI, LEIGH R. HARGREAVES, MURTADHA A. KHAKOO, California State University Fullerton Physics, Fullerton, CA 92834 — Normalized absolute experimental electron scattering differential cross-sections (DCS) (normalized to the elastic DCS of [1]) for the electron impact excitation of eight energy loss structures, mostly composite, for vibrational excitation of the ground state of furan will be presented. The incident electron energy range of the present study was 5-15eV. The analysis of these structures follows the detailed FTIR photoabsorption studies of [2]. The present DCS reveal that most of the vibrational structures do not display forward scattering typical of IR-active excitations. However, two of these features contain components that incorporate IR-active modes and these clearly display forward-scattering DCS at some incident electron energies, but not all.

[1] M. A. Khakoo et al., Phys. Rev. A, 81, 062716 (2010)

[2] A. Mellouki et al., Chem. Phys. 271, 239 (2001)

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