Atomic and Molecular Auger Decay in CHCl3

- Poster
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The Auger electron spectra after the chlorine 2p excitation[1] and ionization in the gas phase CHCl3 molecule were investigated both theoretically and experimentally. Experimentally, in this study the molecule was photoionized by soft X-rays from the monochromatic synchrotron radiation in a beamline of the variable line space plane, grating monochromator (VLS-PGM) energy range from 5.5 eV to 250 eV, of the Canadian Light Source Inc. synchrotron radiation laboratory (Saskatoon, Canada).The molecular and atomic auger transitions are examined and assigned. The atomic decay regime is expressed by sharp features in energy, suggesting welldefined initial and final states[2]. The photoexcited or photoionized molecule give rise to the transition of an electron with a vacancy in a core electron shell is strongly unstable and short-lived. The molecular decay regime, on the other hand, are represented as broad and structureless peaks and the widths of the broad structures reflect the slope of the dissociative molecular potential.

Comentários: