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Kinetic energy distribution of positive ions from electron induced dissociative ionization of pyrimidine molecule

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Abstract. We report on measurements of kinetic energy distributions of positive ions, formed upon electron induced ionization of gaseous pyrimidine ($C_4H_4N_2$) molecule, which is akin to cytosine and thymine in DNA as well as uracil in RNA. The kinetic energy spectra were obtained for different incident electron energies from 30 eV to 250 eV and under different detection angles (30° - 110°) defined with respect to the incident electron beam. The results show a considerable fraction of energetic positive ions, the distribution of which depends on the electron energy and the angle of detection.[©]

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Electron scattering by magnesium: excitation of the $3s\ 3p\ ^3P$ state

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Abstract. Differential cross section (DCS) for electron impact excitation of the $3s3p\ ^3P$ state in magnesium at incident electron energy of 10 eV has been measured. The energy-loss spectra within energy range (ΔE) from 0 to 5 eV have been recorded up to 150° . The absolute DCS was determined by using inelastic ($3s3p\ ^3P$)-to-inelastic ($3s3p\ ^1P_1$ resonance state) intensity ratios and DCSs for the resonance state (Filipović *et al* 2006 *J. Phys. B: At. Mol. Opt. Phys.* **39** 2583). The result is analysed and compared with previous experimental data and theoretical calculations.^d

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