

Computation of electron impact total cross sections for Glycine over an extensive range of impact energy (0.1 – 5000 eV)

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Synopsis Various total cross sections upon electron impact for glycine are reported

In this work we report various electron impact total cross sections (TCS) for gaseous Glycine ($C_2H_5NO_2$) over an extensive range of impact energies (0.1 eV - 5000 eV). Below 15 eV, we carried out ab-initio calculations with fixed nuclei approximation employing the R-matrix method [1] and above the threshold of the target we employ the well-established Spherical Complex Optical Potential (SCOP) formalism [2]. To calculate total ionization cross section we employ CSP-ic (Complex Scattering Potential-ionization contribution) [3]. We have investigated the cross sections at the transition energy which enables us provide the cross sections over such a wide range which will serve as an important data base. Our results are in good agreement with available data throughout the energy range. Therefore, we are confident that this methodology may be employed further to calculate total cross sections over a wide range of energy for variety of applied molecules

References

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