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Momentum transfer cross sections for electron-C₂H₄ scattering MANOJ KUMAR, SATYENDRA PAL, RAJBEER SINGH, M.M.H. College, Ghaziabad/ C.C.S. University, Meerut- India — Momentum transfer cross sections for electron-atom/ molecule collision are important in various fields including those of physics of gaseous discharge, plasma physics and also useful in the study of transport properties of electrons in gases. Specially, the conductivity of plasma electrons depends on the electron ion and electron neutral momentum transfer cross sections. An attempt is made to calculate the momentum transfer cross sections for the electron impact ionization of the C₂H₄ molecule in the energy range from ionization threshold to 2 keV using [1], $Q_i(E, \theta)$, the differential cross sections as a major input evaluated by employing a semiempirical formulation based on the Bethe and Möller cross sections [2-3]. The present results substantiate a reasonable reliability as in comparison with the elastic cross sectional data. **References:** [1]. R. Panajotovic, *J. Phys. B: At. Mol. Opt. Phys.* **36** (2003) 1615. [2] S.Pal *et al.*, *Rad. Phys. Chem.* **173** (2020) 108877. [3] S.Pal *et al.*, *J. Phys. Chem. A* **123** (2019) 4314.

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