Double ionization of the hydrogen sulfide molecule by electron impact:influence of the target orientation on the fivefold differential cross sections

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A fivefold differential cross sections (5 DCSs) for electron-impact double ionization of hydrogen sulfide molecule are calculated for high incident energy (1 keV) and for three particular target orientations. The theoretical procedure is based on the first Born approximation (FBA) model using a partial wave functions development [1, 2, 3]. In this approach, the incident (scattered) electron is described by a plane wave, while a Coulomb wave function is used for modeling the two ejected electrons. Furthermore, we identify clearly the signature of the usual mechanisms involved in the (e, $3e$) reaction, namely, the shake-off and the two-step 1.

References

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