

Abstract Submitted
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Electron Impact Ionization Cross Sections of H₂ for Low Excess Energies Ranging from 2eV to 20eV¹ OLA AL-HAGAN, DON MADISON, Missouri University of Science and Technology, JAMES COLGAN, Los Alamos National Laboratory, CHRISTIAN KAISER, ANDREW MURRAY, University of Manchester (UK) — We had recently investigated the nuclear structure effect for the fully differential electron impact ionization cross sections of H₂ and He measured in the perpendicular plan where the two outgoing electrons have equal energies of 10 eV (20eV excess energy). For this case we demonstrated that He had a maximum for back-to-back scattering and H₂ had a minimum due to the different nuclear configurations. We have extended our investigation for H₂ to lower excess energies down to 2eV (both final state electrons have 1eV energy). We will show that, as the excess energy decreases, the effective impact parameter increases and molecular cross sections start to look like the atomic ones as the nuclear separation becomes less important.

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