

Abstract Submitted
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Total and Total ionization Cross sections for Germanium hydrides GeH_x ($x=1-4$) on electron impact from 0.1 eV to 5 keV¹ MINAXI VINODKUMAR, V.P. Science College, V V Nagar, CHETAN LIMBACHIYA, P.S. Science College, Kadi - 382715, KIRTI KOROT, V.P. Science College, V V Nagar, K.N. JOSHIPURA, Dept. of Physics, S.P. University, V V Nagar, NIGEL MASON, Dept. of Physics and Astronomy, Open University, MK76AA, UK — Germanium hydrides, in particular germane, GeH_4 , are widely used as feed gases in plasma deposition and doping processes in the semiconductor industries. In this paper we report electron impact total cross sections from 0.1 eV to 5 keV for GeH_x ($x=1-4$). We employed R-matrix method using Quantemol N[1] till 15 eV and spherical complex optical potential formalism (SCOP) [2-3] beyond 15 eV. We also report total ionization cross sections using our Complex Scattering Potential – ionization contribution (CSP-ic) [2,3] for these targets. **Ref.** [1] J.Tennyson, D.B. Brown, J.Munro I.Rozum, H.Varambhia, N.Vinci Journal of Physics: Conference Series **86** (2007) 012001 [2] M. Vinodkumar, C. Limbachiya, K.N. Joshipura, K. Korot, Eur. J. Phys. D. (2008) DOI: 10.1140/epjd/e2008-00106-3 [3] M. Vinodkumar, C. Limbachiya, K.N.Joshipura, K. Korot, Nigel Mason Int. J. Mass Spectrom 273 (2008) 145.

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