

Abstract Submitted
for the GEC07 Meeting of
The American Physical Society

Total ionization cross sections for Benzene, Furan and Tetrahydrofuran on electron impact¹ C.G. LIMBACHIYA, P.S. Science College, Kadi, INDIA - 382 715, M. VINODKUMAR, V.P. Science College, V.V. Nagar, INDIA - 388 120, S. GANGOPADHYAY, K.N. JOSHIPURA, Dept.of Physics, S.P. Uni. V.V. Nagar, INDIA - 388 120 — Industrial society has increased human exposure to thousands of chemicals in the environment e.g. Benzene (C₆H₆), Furan (C₄H₄O) and Tetrahydrofuran (C₄H₈O). Of particular concern is the potential hazard of these chemicals to produce cancer. The molecules are thus biologically and industrially important. In this paper we have examined scattering of electrons (from threshold to 5 keV) from these targets and calculated the total ionization cross sections. We used complex optical potential formalism (SCOP) [1, 2] to calculate total inelastic cross section Q_{inel} . We have developed a method, Complex Scattering Potential – ionization contribution (CSP-ic) to extract ionization cross sections Q_{ion} from calculated Q_{inel} .

Ref. [1] M.Vinodkumar, K.N.Joshiyura, C.G.Limbachiya & B.K.Antony, Eur. J. Phys. D. **37** (2006) 67

[2] M.Vinodkumar, K.N.Joshiyura, C.G.Limbachiya & B.K.Antony, Phys. Rev A **74** (2006) 022721

¹CGL,MVK thank UGC,KNJ thanks ISRO-India for research grants.

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Date submitted: 18 Jun 2007

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