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Electron Scattering from Pyrazine compared with Pyrimidine and Benzene[1] P.D. PALIHAWADANA, J.P. SULLIVAN, S.J. BUCKMAN, The Australian National University, Canberra, Australia, M.J. BRUNGER, Flinders University, Adelaide, Australia, C. WINSTEAD, V. MCKOY, Caltech, CA, USA, G. GARCIA, CSIC, Madrid, Spain, F. BLANCO, Universidad Complutense de Madrid, Madrid, Spain — Pyrazine ($C_4H_4N_2$) is a model molecule for studying electron interactions with nucleases. Also pyrazine is an ideal target, due to its high symmetry (D_{2h}), for theoreticians to investigate electron collisions with complex DNA/RNA bases. In this work we present absolute elastic differential cross sections and elastic excitation functions for scattering of low-energy electrons by pyrazine measured using a crossed electron-target beam apparatus at the Australian National University. A comparison is also made between pyrazine cross sections with previously measured pyrimidine and benzene cross sections. Since all those molecules are similar in structure and considered as analogues to nucleobases, we intend to discuss similarities and differences in electron scattering results between three molecules.

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