

Abstract Submitted  
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**Electron Scattering Time-of-Flight Studies of Electron Impact Excitation of CO, N<sub>2</sub> and H<sub>2</sub>O**<sup>1</sup> M ZAWADZKI, Gdansk University of Technology, Gdansk, Poland, M. A. KHAKOO, California State University, Fullerton — Experimental inelastic to elastic scattering ratios of electron scattering from gaseous CO, N<sub>2</sub> and H<sub>2</sub>O are presented from near-threshold excitation incident electron energies to 30eV and for scattering angles of 20° to 130°. The measurements were taken with a time-of-flight electron spectrometer [1]. They will be presented together with existing high resolution electrostatic electron spectrometer measurements of our laboratory and those of [2,3,4]. Comparisons to existing theoretical cross sections will also be presented [5]. [1] M. Zawadzki *et al.* Phys. Rev. A **97** 050702(R) (2018). [2] J. Zobel et al., J. Phys. B, **29** 813 (1996). [3] P. W. Zetner et al., J. Phys. B, **31** 2395 (1998). [4] A. G. Middleton et al., J. Phys. B, **26** 1743 (1993). [5] On-going collaboration: R-Matrix calculations of Drs. Jonathan Tennyson (UCL, London), Amar Dora (N. Orrisa University, India) and Zdenek Masin (Charles University, Prague).

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