Charged particle interaction with biomolecules

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We present in this work a theoretical study of double (DDCSs) as well as triple differential cross sections (TDCSs) for electron- and positron-induced ionization of the Water, CH4 thymine and the tetrahydrofuran (THF) molecules. The cross section calculations of these biomolecules will performed in a coplanar geometry by using partial wave analysis as well as in the second-order distorted wave Born approximation (DWBA2) for ejection electron and positron at low incident energy energies[1-4] .

References

1. P. Singh, G. Purohit, C. Champion and V. Patidar, Phys. Rev. A 89, 032714 (2014).
2. A. H. Kelkar, L.C Tribedi. Journal of electron spectroscopy and related Phenomena 258,147220,2022.
3. Bellm S M, Colyer C J, Lohmann B and Champion C 2011 Proc. Int. Symp. on (e,2e) Double Photoionization and Related Topics and 16th Int. Symp. on Polarization and Correlation in Electronic and Atomic Collisions (Dublin, Ireland) p 74
4. C. J. Colyer, S. M. Bellm, B. Lohmann,G. F. Hanne, O. Al-Hagan, D. H. Madison, and C. G. Ning, "Dynamical ((e,2e) studies using tetrahydrofuran" THE JOURNAL OF CHEMICAL PHYSICS 133, 124302 2010