

Abstract Submitted
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Electron interactions with DNA components¹ STEFANO TONZANI, Department of Chemistry and JILA, University of Colorado, Boulder, CHRIS H. GREENE, Department of Physics and JILA, University of Colorado, Boulder — The growing interest in radiation damage to DNA by low energy electrons, has spurred our efforts to understand and explain the experimental data and more generally the various processes involved in such a complex environment. We have started by performing calculations for electron scattering from DNA bases (S. Tonzani and C. H. Greene, J. Chem. Phys., in press) and now we are looking at other components of the DNA filament, like the sugar and phosphate group. Methods such as finite element R-matrix using static exchange and the local density approximation are employed in an effort to give an accurate prediction of resonance positions and widths and also to discuss possible mechanisms for the processes observed in the experiments.

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