GEC08-2008-000134

Abstract for an Invited Paper
for the GEC08 Meeting of
the American Physical Society

Electron- Molecule Collisions: Recent results for "large" polyatomic molecules[1]

STEPHEN BUCKMAN, Australian National University

Electron interactions with molecular targets, particularly large polyatomic systems, pose a significant challenge for scattering theory and experiment alike. Many targets, such as those of relevance to radiation damage in the body, are difficult to model as they are generally large, polar systems, which are also highly polarisable. They can also be difficult to produce experimentally as they are either liquids or powders at room temperature. This talk will discuss some recent results for elastic scattering and vibrational excitation of molecules such as formic acid, tetrahydrofuran and 3-hydroxy tetrahydrofuran – all of which can be considered as useful analogues to studies of the larger molecular constituents of DNA. Work done in collaboration with Violaine Vizcaino, James Sullivan, Michael Brunger, Jason Roberts, Vincent McKoy and Carl Winstead.

[1]Supported by the Australian Research Council.