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Abstract for an Invited Paper
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Collisions involving Antimatter[1]

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Much progress in the understanding of the interactions between the matter and antimatter has been achieved through studies of collisions of positrons and positronium (Ps, the short-lived atom made of an electron and a positron) with atoms and molecules. In this talk, the focus will be on recent experiments performed at UCL concerning positronium formation [e.g. 1-3] and its scattering [e.g. 4-6]. Studies have now progressed to an exciting new phase. The finding of a similarity between the scattering probabilities of positronium and equivelocity electrons [5] has guided towards the observation of positronium resonant scattering [6] and the development of a positronium beam at incident energies below its break-up threshold [4], allowing searches in an energy regime which, for electrons, is rich in subtle quantum mechanical effects, including "target transparency" [4]. Possible avenues of future exploration will be indicated.

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