

II. MOLECULAR COLLISIONS*

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RESEARCH OBJECTIVES

Our interest is in molecular collisions at thermal energies. These phenomena are studied mainly through crossed molecular beam scattering experiments. Two kinds of collision processes are of interest to this group: (i) collisions which can lead to chemical reactions; (ii) elastic and inelastic nonreactive collisions.

In the chemical studies our aim is to determine some of the finer details of reactive collisions, such as the anisotropy of product velocities and the distribution of available amounts of energy, momentum, and angular momentum among the various accessible modes. The nonreactive studies are mainly concentrated on processes that have some relevance to chemical processes or energy transfer processes.

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