

## PART VI. DYNAMICS

This unit deals with the fundamental chemical event, the chemical reaction. Three key questions regarding chemical reactions are: *where* are the reactants going, how *fast* do they get there, and what *paths* do they take? These questions began to be addressed quantitatively in the Nineteenth Century, with progress in understanding chemical behavior continuing to this day. When you finish this unit, you should be able to *balance* a chemical reaction and apply the laws of *stoichiometry*, *equilibrium* and *kinetics* to analyze and predict amounts of products produced.

The foundation concept for this unit is that *chemical reactions result from the rearrangement of the atoms of reactant molecules to the atoms of product molecules, following paths described by the laws of thermodynamics, kinetics and ultimately, wave mechanics.*