



#### ACROSS

- 1 A reaction \_\_\_\_\_ is the step by step sequence of elementary reactions by which overall chemical change occurs.
- 5 Chemical \_\_\_\_\_ is the study of reaction rates in a chemical reaction.
- 6 A \_\_\_\_\_ reaction is a chemical reaction in which one or more chemical species react directly to form products in a single reaction step and with a single transition state.
- 11 The \_\_\_\_\_ state of a chemical reaction is a particular configuration along the reaction coordinate defined as the state corresponding to the highest energy along this reaction coordinate.
- 13 \_\_\_\_\_ catalysis describes catalysis where the catalyst is in a different phase to the reactants.
- 14 A \_\_\_\_\_ complex is a transitional structure in a chemical reaction that results from an effective collision between molecules and that persists while old bonds are breaking and new bonds are forming.
- 16 A \_\_\_\_\_ in a chemical reaction is a molecular entity with a lifetime appreciably longer than a molecular vibration that is formed from the reactants and reacts further to give the products of a chemical reaction.
- 17 \_\_\_\_\_ catalysis describes catalysis where the catalyst is in the same phase as the reactants.

#### DOWN

- 2 \_\_\_\_\_ is the increase in rate of a chemical reaction by means of a substance called a catalyst.
- 3 A reaction \_\_\_\_\_ of a chemical reaction is defined as an elementary reaction, constituting one of the stages of a reaction in which a reaction intermediate is converted into the next reaction intermediate in the sequence between reactants and products.
- 4 The \_\_\_\_\_ of reaction with respect to a certain reactant is defined, in chemical kinetics, as the power to which its concentration term in the rate equation is raised.
- 7 \_\_\_\_\_ state theory is a conception of chemical reactions or other processes involving rearrangement of matter as proceeding through a continuous change in the relative positions and potential energies of the constituent atoms and molecules.
- 8 \_\_\_\_\_ energy, also called threshold energy, is a term defined as the energy that must be overcome in order for a chemical reaction to occur.
- 9 A reaction \_\_\_\_\_ is an abstract one-dimensional trajectory representing progress along a reaction pathway.
- 10 The rate \_\_\_\_\_ or rate equation for a chemical reaction is an equation which links the reaction rate with concentrations or pressures of reactants and constant parameters.
- 12 The rate-\_\_\_\_\_ step is a chemistry term for the slowest step in a chemical reaction.
- 15 The reaction \_\_\_\_\_ for a reactant or product in a particular reaction tells you how fast a reaction takes place.