



#### ACROSS

- 3 The \_\_\_\_\_ enthalpy of combustion is the change in enthalpy of the total reacting system when one mole of a substance completely reacts with oxygen, and is observed at 298K and 1 atmospheric pressure
- 4 The \_\_\_\_\_-Haber Cycle is an approach to analyzing reaction energies involving the formation of an ionic compound from the reaction of a group I or group II metal with a non-metal.
- 9 \_\_\_\_\_ is the study of the heat evolved or absorbed in chemical reactions.
- 10 \_\_\_\_\_ describes a process or reaction that absorbs energy in the form of heat.
- 12 Standard temperature and \_\_\_\_\_ is a standard set of conditions for experimental measurements, to enable comparisons to be made between sets of data.
- 13 A reaction \_\_\_\_\_ is an instrument that enables the energy being released or absorbed by a reaction to be measured.
- 14 The standard enthalpy of \_\_\_\_\_ of a compound is the change of enthalpy that accompanies forming 1 mole of a substance in its standard state from its constituent elements in their standard states

#### DOWN

- 1 The \_\_\_\_\_ or heat content is a quotient or description of thermodynamic potential of a system equivalent to the sum of the internal energy of the system plus the product of its volume multiplied by the pressure exerted on it by its surroundings.
- 2 The heat of \_\_\_\_\_ is the energy released when a compound undergoes complete combustion with oxygen.
- 5 \_\_\_\_\_ describes a process or reaction that releases energy in the form of heat.
- 6 A \_\_\_\_\_ is a device used for measuring the heat of chemical reactions or physical changes as well as heat capacity.
- 7 Bond \_\_\_\_\_ energy is defined as the standard enthalpy change when a bond is cleaved by homolysis, with reactants and products of the homolysis reaction at 0K (absolute zero).
- 8 \_\_\_\_\_ is the science of measuring the heat of chemical reactions or physical changes.
- 11 Developed through conceptualizing cyclic reaction processes in which the return path is different than the forward path, \_\_\_\_\_'s Law of Heat Summation is used to predict the enthalpy change regardless of the path through which it is to be determined.