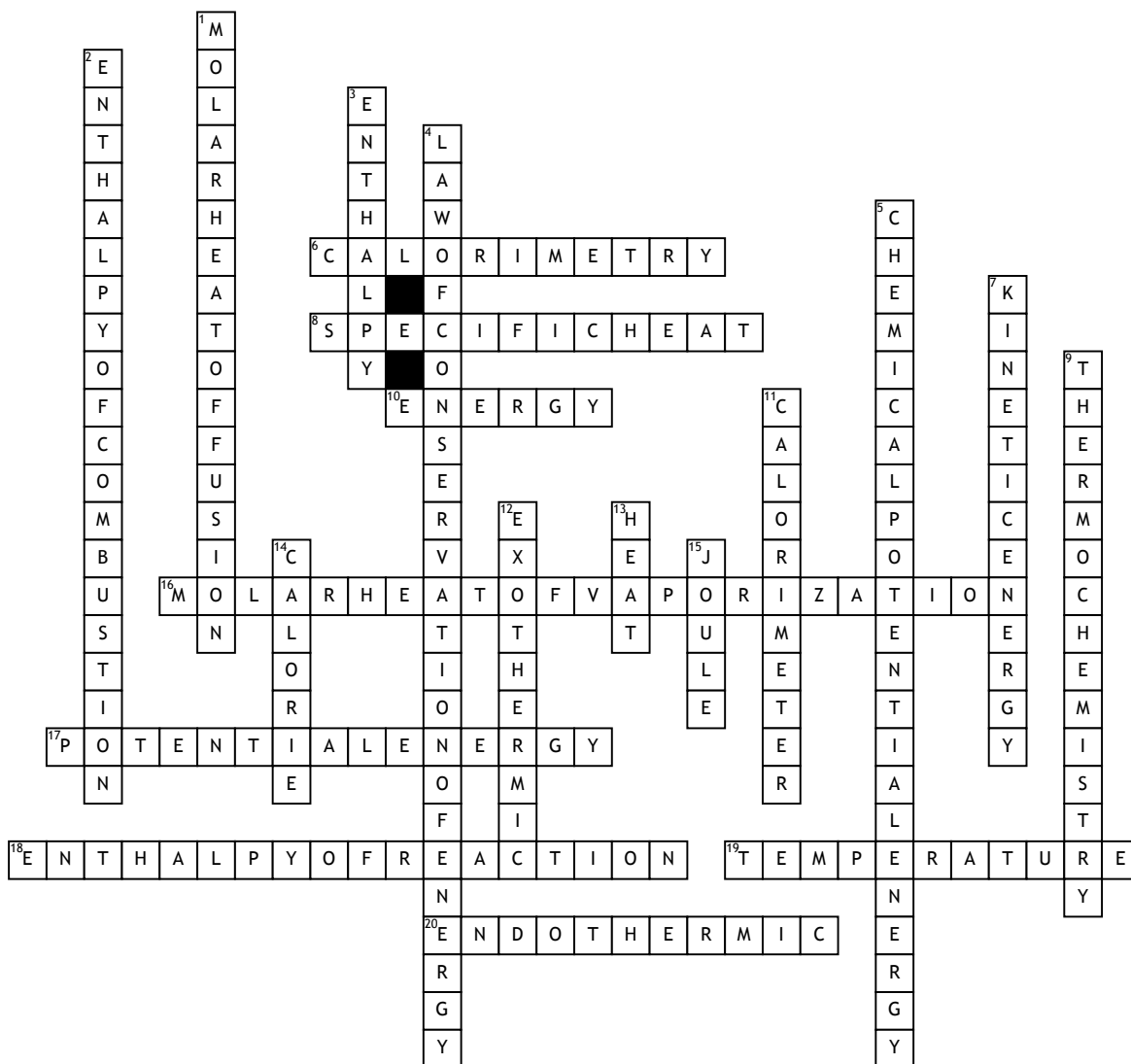


# Thermochemistry



## Across

6. the science or act of measuring changes in state variables of a body for the purpose of deriving the heat transfer associated with changes of its state due, for example, to chemical reactions, physical changes, or phase transitions under specified constraints  
8. the heat required to raise the temperature of the unit mass of a given substance by a given amount  
10. ability to do work  
16. the amount of heat necessary to boil 1 mole of a substance at its boiling point  
17. stored energy  
18. the enthalpy change that occurs in a system when one mole of matter is transformed by a chemical reaction under standard conditions

19. the degree or intensity of heat present in a substance or object

20. the absorption of heat

## Down

1. the amount of heat necessary to melt 1 mole of a substance at its melting point  
2. is the energy released by a combustion reaction between hydrocarbons, oxygen and a heat source  
3. a thermodynamic quantity equivalent to the total heat content of a system  
4. Energy can neither be created nor destroyed  
5. the energy stored in the chemical bonds of a substance  
7. energy due to motion

9. the study of energy transfer in the form of heat

11. an apparatus for measuring the amount of heat involved in a chemical reaction or other process

12. the release of heat

13. the quality of being hot; high temperature

14. the energy needed to raise the temperature of 1 gram of water through 1 °C

15. the SI unit of work or energy, equal to the work done by a force of one newton when its point of application moves one meter in the direction of action of the force, equivalent to one 3600th of a watt-hour.