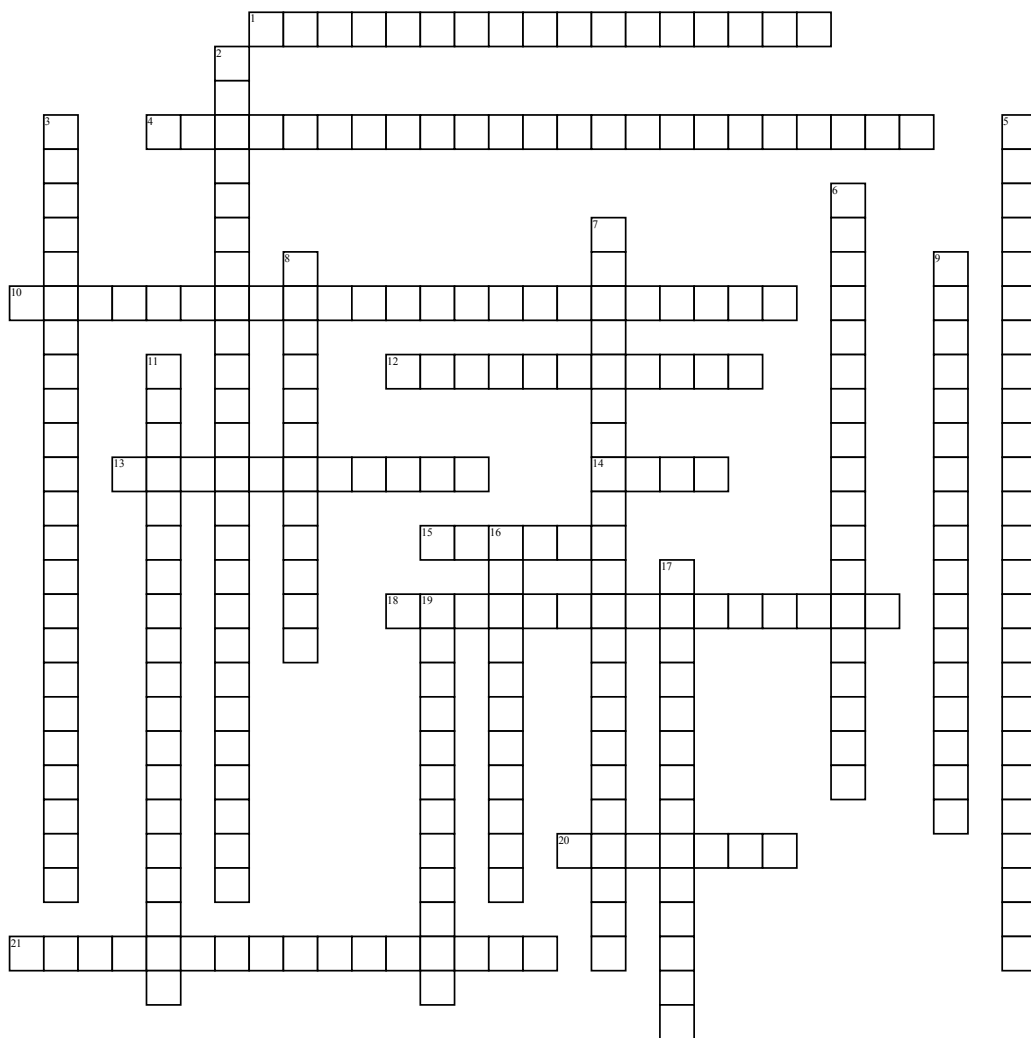


Thermochemistry



Across

1. reaction that releases energy from the system to its surroundings
4. the amount of heat necessary to boil
10. energy stored in the chemical bonds of a substance
12. act of measuring changes in state variables of a body for the purpose of deriving the heat transfer
13. an apparatus for measuring the amount of heat involved in a chemical reaction or other process
14. the quality of being hot
15. the part of the universe being studied

18. the branch of chemistry concerned with the quantities of heat evolved or absorbed during chemical reactions
20. thermodynamic quantity equivalent to the total heat content of a system
21. energy released as heat when a compound undergoes complete combustion with oxygen under standard conditions

Down

2. the heat lost when one mole of a liquid solidifies at a constant temperature
3. heat released by one mole of that substance as it is converted from gas to liquid
5. the total energy of an isolated system remains constant

6. a reaction in which the system absorbs energy from its surroundings
7. a balanced stoichiometric chemical equation that includes the enthalpy change
8. the heat required to raise the temperature of the unit mass of a given substance
9. tells you how much energy is needed to melt each mole of a substance
11. energy released or absorbed per mole of solute being dissolved in solvent
16. the rest of the universe that reacts with the system
17. change in the enthalpy of a chemical reaction that occurs at a constant pressure
19. the number of heat units needed to raise the temperature of a body by one degree

Word Bank

endothermic process
system

heat capacity

molar heat of vaporization

molar heat of solidification

calorimeter

thermochemical equation
surrounding

molar heat of fusion

chemical potential energy

thermochemistry

heat of combustion
heat

molar heat of solution

heat of reaction

enthalpy

molar heat of condensation
exothermic process

law of conservation of energy

specific heat

calorimetry