

## CHAPTER OVERVIEW

### 20: Entropy and The Second Law of Thermodynamics

20.1: Energy Does not Determine Spontaneity

20.2: Nonequilibrium Isolated Systems Evolve in a Direction That Increases Their Energy Dispersal

20.3: Unlike heat, Entropy is a State Function

20.4: The Second Law of Thermodynamics

20.5: The Famous Equation of Statistical Thermodynamics is  $S = k \ln W$

20.6: We Must Always Devise a Reversible Process to Calculate Entropy Changes

20.7: Thermodynamics Provides Insight into the Conversion of Heat into Work

20.8: Entropy Can Be Expressed in Terms of a Partition Function

20.9: The Statistical Definition of Entropy is Analogous to the Thermodynamic Definition

20.E: Entropy and The Second Law of Thermodynamics (Exercises)

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