

Thermodynamics and Statistical Physics

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The basic concepts in Thermodynamics

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1.1.3 Equation of state

1.2 Thermodynamic processes

1.2.1 Reversibility versus irreversibility

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1.3 The laws of thermodynamics at a glance

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2.1.4 The work: A noble form of energy exchange

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2.2 Intermezzo: Construction of a temperature scale

2.2.1 General approach

2.2.2 Celsius scale

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2.2.5 How to measure a temperature (old fashion)

2.3 The second law: Entropy

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Universal thermodynamic identities

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3.3 Calorimetric and thermoelastic coefficients

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4.2.2 Closed isochoric systems (or mechanically isolated)

4.2.3 Closed isobaric systems

4.3 Generalization and application to open systems

4.3.1 Generic thermodynamic system

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4.3.3 Stability of thermodynamic equilibrium and consequences