

- *The properties of gases*
 - *The perfect gas*
 - *The states of gases a) Pressure b) Volume c) Temperature*
 - *The zeroth law of thermodynamics*
 - *The individual gas laws*
 - *Boyle's law*
 - *Charles's law*
 - *Gay-Lussac's law*
 - *The combined gas law*
 - *Limiting gas law*
 - *Mixture of gases*
 - *Dalton's law*
 - *Partial pressure*
 - *Total pressure*
 - *Mole fraction*
 - *The kinetic theory of gases*
 - *Assumption of the kinetic theory of gases*
 - *Pressure*
 - *Molecular speeds*
 - *Root mean square speed*
 - *Mean speed*
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 - *Collisions*
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 - *Collision per unit volume per unit time*
 - *The real gases*
 - *Molecular introduction*
 - *Compression factor*
 - *Virial equation of state*
 - *Condensation of gases*
 - *Critical constant Vander Waal's of state The principle of Corresponding states*
 - *Reduced variables*

- Thermodynamics

- *The first law of thermodynamics*
- *The basic concepts , system, surrounding*
- *Work*
- *Heat*
- *Internal energy*
- *The conservation of energy*
- *The formal statement of the first law*
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- *Relation between enthalpy and internal energy*
- *The variation of enthalpy with temperature*
- *Adiabatic changes*
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- *Kirchhoff's law*
- *The Joule experiment*
- *Expansion coefficient isothermal compressibility*
- *Joule-Thomson coefficient*
- *The change of internal energy with expansion*

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