



Statistical Mechanics

[Pressure]

- Other links between partition function and thermodynamic properties can be determined.
- Average pressure, $\langle P \rangle$, defined in terms of microscopic properties

[Pressure]

- Use partition function for a monoatomic ideal gas

- $\langle P \rangle$

[Partition functions]

- Hard part of statistical mechanics is writing the partition function.
- Number of states can be very large
- Translational states

[Partition functions]

- Translational states

[Molecular partition function]

- Molecular partition function, q_i , is simpler to write.
- For identical, distinguishable particles

[Molecular partition function]

- What about identical, indistinguishable particles?