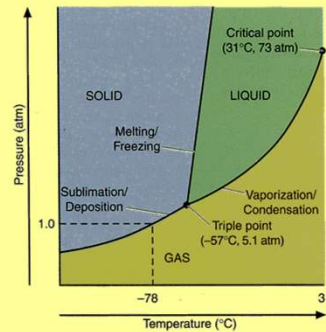
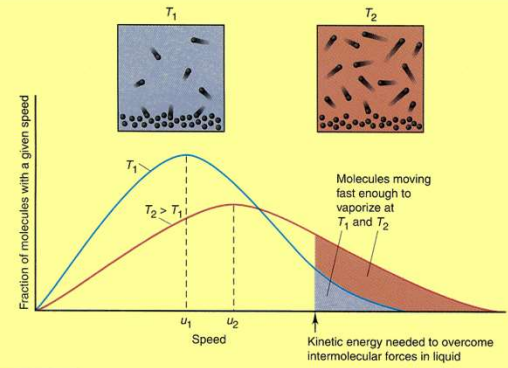


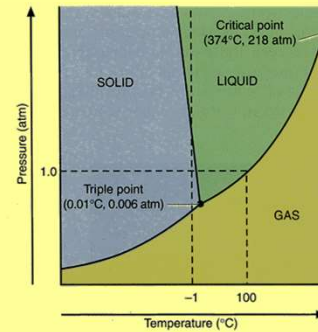
C

Chapter 11

Intermolecular Forces: Solids, Liquids, Gases and Phase Changes.



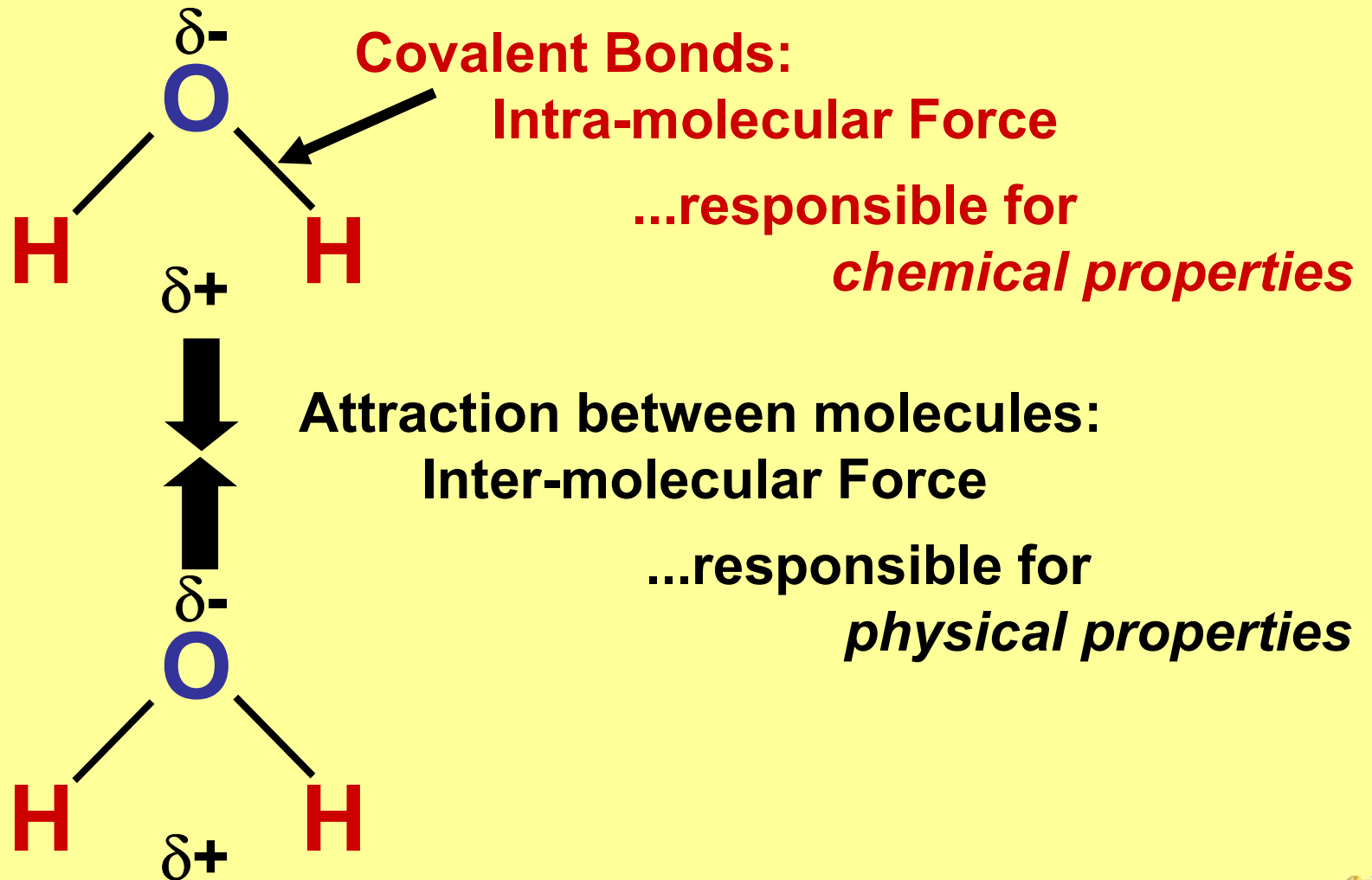
A CO₂



B H₂O



Inter vs. *Intra* Molecular Force

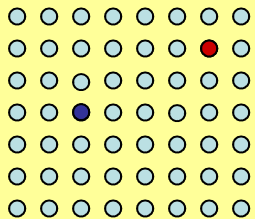


Phase Changes

Solid Ice
($T < -0^{\circ}\text{C}$)

+ q

*Heating
Ice*

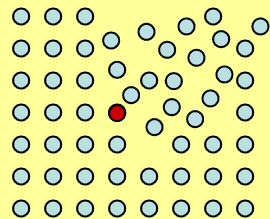


**Vibrational
Motion**
Increases w/T

Solid Ice
(0°C)

+ q

*Melting
Ice*

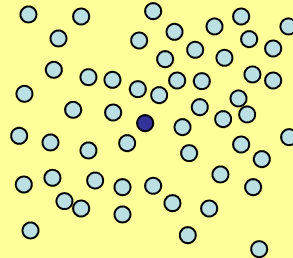
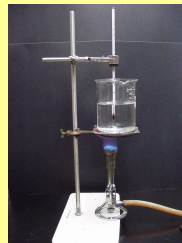


**Breakdown of
the crystal
lattice**

**Warm
Liquid**

+ q

*Heating
Water*

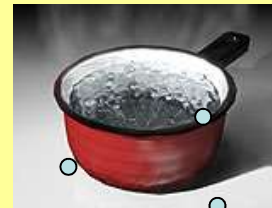


**Tumbling
Motion**
Slow \Rightarrow Fast

**Vaporize
Liquid**

+ q

*Vaporizing
Water*

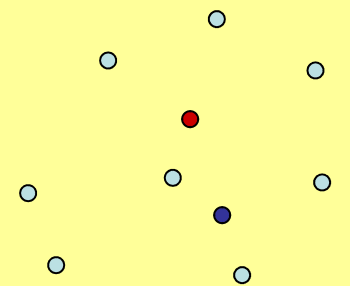


**Breakdown of
intermolecular
forces**

**Warm
Vapor**

+ q

*Heating
Vapor*



**Translational
Motion**
Slow \Rightarrow Fast



Phase Changes: Terminology

