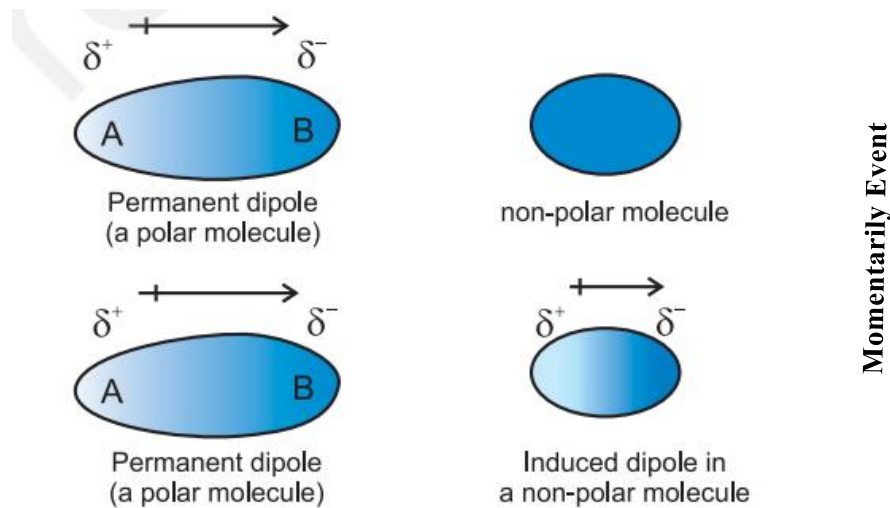


## Dipole–Induced Dipole Forces



### Dipole - induced dipole interaction between permanent dipole and induced dipole

In this case also interaction energy is proportional to  $1/r^6$  where  $r$  is the distance between two molecules

Induced dipole moment depends upon the dipole moment present in the permanent dipole and the polarisability of the electrically neutral molecule. Molecules of larger size can be easily polarized. High polarisability increases the strength of attractive interactions

What is Momentum?

$P = m v$   
 $P = 30\text{kg} \cdot 2.0\text{m/s}$   
 $P = 60\text{kgm/s}$

$m_1 \cdot v_1 = m_2 \cdot v_2$   
 $30\text{kg} \cdot (+2.0\text{m/s}) = 22\text{kg} \cdot v_2$   
 $v_2 = +2.73\text{m/s}$

How is Momentum Calculated?

momentum=Momentum can be defined as "mass in motion."