

Molecular arrangement in solid, liquids and gas

Content

Molecular
arrangement

- SOLIDS

Molecular
arrangement

- LIQUIDS

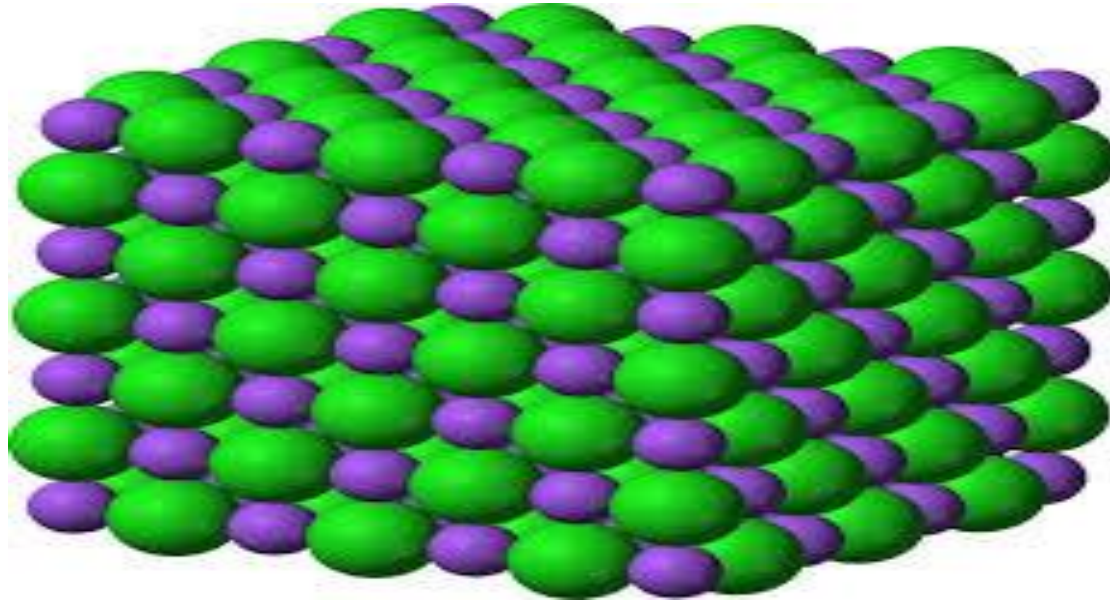
Molecular
arrangement

- GASES

Characteristics of solids

1. **Mass**: solids have definite mass eg: a large piece of stone has more mass than a small piece
2. **Volume shape ,rigidity**:they has definite shape,volume and rigidity
3. **Intermolecular space** between particles is minimum
4. **Force of attraction** between particles is **maximum**
5. **Particles vibrate** only about their **mean position**
6. **Density**:They have **high** density,The number of particles are more
7. **Free surfaces** :solids have **infinite** free surface
8. **Miscibility/Diffusible**:Particles **do not diffuse** with other solid particles

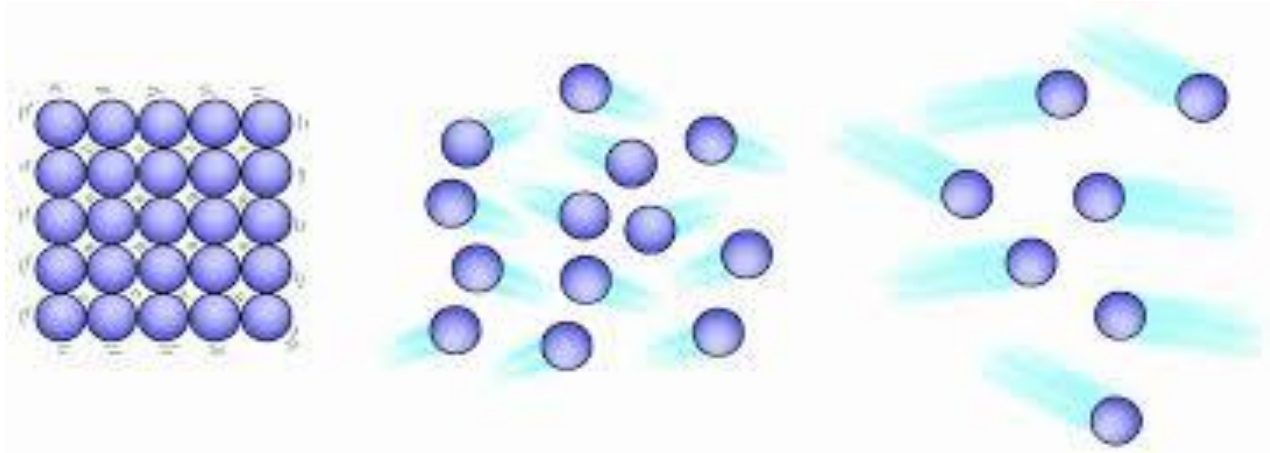
Molecular structure of solid



Characteristics of Liquids

1. **Mass**: liquids also have a definite mass eg:a large bucket of water has more mass than a small one.
2. **Volume shape ,rigidity** :they have a definite volume,no definite shape and less rigidity
3. **Intermolecular space** between particles is slightly more
4. **Force of attraction** between particles is **less than solids**
5. **Particles are free to move around liquid**
6. **Density**:They have **less** density,The number of particles are less
7. **Free surfaces** :liquid have **more upper** free surface
8. **Miscibility/Diffusible**:Particles **may diffuse** with other liquid particles

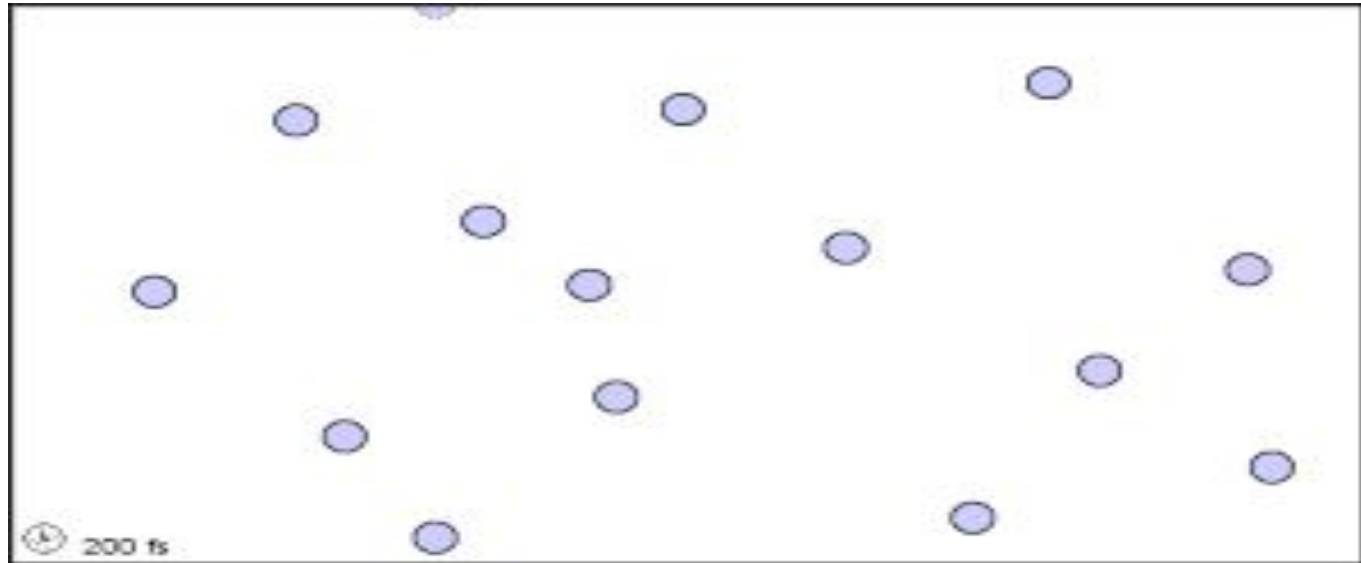
Molecular structure of Liquid



Characteristics of gases

1. **Mass**: gases also have a definite mass eg: an inflated balloon has more mass than deflated balloon
2. **Volume shape ,rigidity**:they have a no definite volume,no definite shape and no rigidity
3. **Intermolecular space** between particles is maximum
4. **Force of attraction** between particles is **negligible**
5. **Particles** are free to move around in the **space and any direction**
6. **Density**:They have **least** density,The number of particles are least
7. **Free surfaces** :gases have **no** free surface
8. **Miscibility/Diffusible**:Particles **diffuse rapidly** with other gas particles

Molecular structure of gases



Assignment

Distinguish between solids, liquids and gases with respect to following points

1. Mass
2. Volume, shape rigidity
3. Intermolecular space
4. Force of attraction
5. Particle movement
6. Density
7. Free surface
8. Diffusibility