

Real vs. Ideal Gases

Ideal gases are those that meet the following:

- particles take up No space
- experience No intermolecular forces
- Are Not attracted to walls of their container
- particles are constantly & randomly moving only in straight lines.
- Collisions are perfectly elastic - No change in kinetic E.
- Follow all conditions of temp. & pressure

* In other words - NO Gas is ideal!

- however, most gases will act as ideal in a wide range of temp. & pressures

- In the right conditions, calculations can be made with gases that do follow the gas laws.

Real Gases

- Defined a gases that deviate from ideal gas behaviors at high pressures & low temps.

- Many gases will liquify at high pressure or low temps. - like propane

* due to forcing / pressurizing molecules together

- Polar molecules (like H_2O) and larger molecules (like C_4H_{10}) are more real gases than ideal.