

# HYDROGEN

Symbol : H

1 proton, 1 electron, 0 neutrons

## Interesting Facts

- Hydrogen is a gas at room temperature.
- With only 1 proton and 0 neutrons Hydrogen is a very light substance
- Hydrogen is abundant in water  $H_2O$
- The boiling point of Hydrogen is  $-252.9^{\circ}C$

## Bonding - 2 Types

Hydrogen is a Group I element, this means it can form an anion  $H^{+1}$  when it donates an electron to form an ionic bond.

Hydrogen bonding is covalent bonding by sharing valence electrons

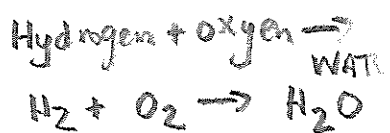


$H_2$  Hydrogen gas

## Discovery

Hydrogen is believed to have been discovered in 1766 by a chemist called Henry Cavendish and named by Antoine Lavoisier

The word Hydrogen comes from the Greek word 'hydros' which mean water and 'gennen' which mean to generate ... it makes sense because



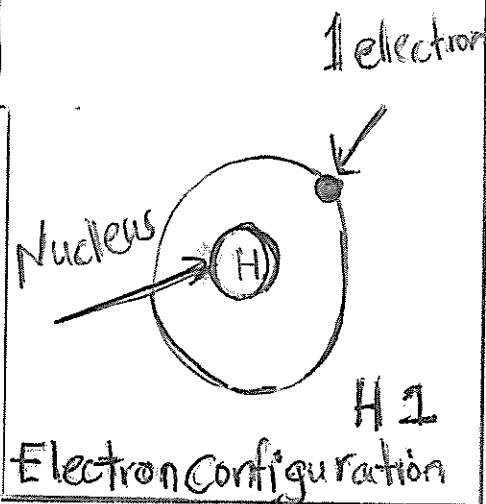
Hydrogen is a colourless, highly flammable gas.

Hydrogen is a non-metal

Atomic Number = 1

Mass Number = 1

Stars use Hydrogen as a fuel to produce energy this is called fusion.



Common Hydrogen Compounds are Acids

$HCl$  - Hydrochloric Acid

$HNO_3$  - Nitric Acid

$H_2SO_4$  - Sulfuric Acid

$H_2$  - Hydrogen Gas

$H_2O$  - Water

$H_2O_2$  - Hydrogen Peroxide

DO NOT RIDE IN HYDROGEN PASSENGER AIRSHIP



The Hindenburg M39 exploded when Hydrogen gas was ignited 35 died

## References

[www.elementalmatter.info](http://www.elementalmatter.info)

element-hydrogen.htm

[www.chemteam.info/Bonding](http://www.chemteam.info/Bonding)

Bucat, R B & Australian Academy of Science (1989) Elements of Chemistry: Earth, Air, Fire & Water

Vol. 2. Aust. Academy of Science, Canberra