Metal

There are total 118 elements found till today. Out of them, 92 elements are naturally found and 26 elements are artificially discovered. They have their own properties. Depending upon their properties, they are classified as metals, non- metals and metalloids. Among them, metals are widely used. Those elements which have positive electric charge typically with a shiny surface and a good conductor of heat and electricity are known as metals. Metals are malleable and ductile. Generally, metals have high boiling points. Metals lie on D-Block of the periodic table.

Gold

Gold is a soft, lustrous yellow metal. It is a 'D' block transition element in the periodic table. It belongs to the period 6 and group IB. Some important ores of gold are:

1. Calaverite
2. Sylvanite
3. Nagyagite
4. Petzite
5. Krennerite

Source: www.funonsite.com
Fig: Gold

Physical properties of gold

1. Gold possesses a lustrous yellow color.
2. It has a melting point 1063°C and boiling point of 2610°C
3. It is a heavy metal with specific gravity 19.3.
4. It is a good conductor of heat and electricity.
5. It is less reactive metal.

Uses of gold

1. It is used for making jewelry, coins, and medals.
2. It is used for making gold leaf electroscope.
3. It is used for making alloys.

Silver

Silver is the "D" block transition element. It belongs to the group IB of the periodic table. Some important ores of silver are:

1. Argentite
2. Horn silver
3. Silver copper glance
4. Pyrolite

Source: dreamsrecycled.com
Fig: Silver

Physical properties of silver

1. Silver is white lustrous metal.
2. Its specific gravity is 10.52.
3. Its melting point is 960^0C and boiling point is 1955^0C.
4. It is a good conductor of heat and electricity.
5. It is malleable and ductile in nature.

Uses of silver

1. It is used to make coins, jewelry, and decorative articles.
2. Silver bromide is used in photography. It is used in electroplating.

Copper

Copper belongs to Group IB and period 4 of the periodic table. It is and' block element. It is also known as a transition element. Important ores of copper are:

1. Cuprite (Ruby copper)
2. Copper pyrite (Chalcopyrite)
3. Copper glance (Chalcocite)
4. Malachite

Source; pazmetals.com
Fig: Copper

Physical properties of copper

1. Copper is a red brownish metal with a metallic luster.
2. It is a good conductor of heat and electricity.
3. Its specific gravity is 8.95.
4. It is highly malleable and ductile in nature.
5. Its melting point is 1083°C and its boiling point is 2350°C.

Uses of copper

1. Copper is used for making electrical goods and cables.
2. It is used for making copper leaf electroscope.
3. It is used for making utensils, coins, jewelry, etc.
4. It is used in the manufacture of dyes and pesticides.

Iron

Iron is a transitional element and known as "d" block element. It belongs to Group VIII of the periodic table. It is the first transition series in the fourth period. On the left side of it, manganese is located whereas on the right-hand side, cobalt is found. Important ores of iron are:

1. Hematite
2. Magnetite
3. Siderite
4. Limonite
5. Iron pyrite

Source; pixabay.com
Fig: Iron

Physical properties of Iron

1. Pure iron is a silvery white metal and lustrous metal.
2. Its specific gravity is 7.86.
3. Iron melts at 1550°C and boils at 2400°C.
4. Iron is a good conductor of heat and electricity.
5. It is malleable and ductile in nature.

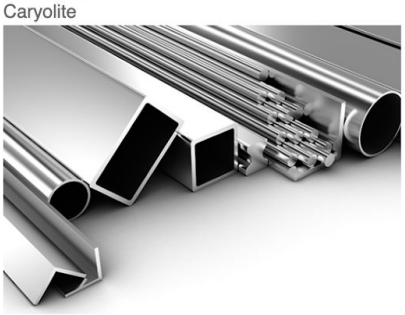
Uses of Iron

1. It is used in the manufacture of steel.
2. It is used in making household utensils.
3. It is used as a catalyst in different chemical reactions.
4. It is used in making rods, pipes, chains, vehicles, railway tracks, etc.

Aluminium

Aluminum is a 'p' block element. It belongs to the period 3 and group III A of the periodic table. Some important ores of aluminum are:

1. Bauxite
2. Feldspar
3. China clay
4. Caryolite



Source: www.dhk.be
Fig: Aluminium

Physical properties of aluminium

1. Aluminum is a bluish-white shining metal.
2. It is the lightest metal and its specific gravity is 2.7.
3. Its melting point is 660^0C and boiling point is 1800^0C.
4. It is a good conductor of heat and electricity.
5. It is malleable and ductile in nature.

Uses of aluminum

1. Aluminium is used for making utensils, frames, electrical appliances, etc.
2. It is used for making electrical wire.
3. It is used for making alloys and coins.
4. Its alloys are used for making sailboats, aircraft, etc.
5. It is used for making aluminum foils which are used for wrapping food, cigarette, etc.

Non-Metals

Non-metals are the elements in groups 14-16 of the periodic table. Non-metals are the bad conductor of electricity or heat. As opposed to metals, non-metallic elements are very brittle and cannot be rolled into wires or pounded into sheets. Non-metals have low melting and boiling points.

Silicon

Silicon is not found in the pure state. Silicon is the most abundant electropositive element in the earth's crust. It's a metalloid with a marked metallic lustre and very brittle. Some important ores of silicon are:

1. Silica
2. Feldspar
3. Kaolinite
4. Mica

Source: www.thinglink.com
Fig: Silicon

Properties

1. It is grey solid non-metal.
2. It is found in both crystalline and amorphous formed.
3. It is a weak electrolyte in crystalline form but strong electrolyte in amorphous form.
4. It doesn't react with air, water and acid.

Uses

1. It is used to make glasses.
2. It is used to make the clay pot.
3. It is used to make statue and buildings.
4. Silicon chip is used to make semiconductors.
5. It is used to make polish and paints.

Sulphur

Sulphur is a chemical element with symbol S and atomic number 16. It is an abundant, multivalent non-metal. Some important ores of sulphur are:

1. Dolomite
2. Gypsum
3. Calcite
4. Quartz
5. Pyrite

Source: www.pbase.com
Fig: Sulphur

Properties

1. Sulphur is found in both crystalline and amorphous form.
2. It is not soluble in water.
3. It is the bad conductor of heat and electricity.
4. Sulphur dioxide is formed when sulphur is burnt in the presence of air.
5. It doesn't react easily with acid.

Uses

1. Milk of sulphur is used in medicine.
2. Sulphur is used in the manufacture of matches, gunpowder etc.
3. It is also used as disinfectant.
4. It is also used in the vulcanization of rubber.