

Crystal

Solid in which the particles of which it is composed (atoms, ions, molecules) are arranged in a regular 3D structure

Sodium chloride or any alkali halide such as potassium fluoride

Example of ionic crystal

Iodine, ice or solid carbon dioxide

Example of molecular crystal

Quartz

Example of covalent macromolecular crystal

Sodium or copper
or iron

Example of
metallic crystal

Buckminsterfullerine

Allotrope of carbon
containing 60
atoms covalently
bonded together

William and
Lawrence Bragg

Used diffraction
patterns to
determine crystal
structure

Dorothy Hodgkin

This scientist worked
out the structure of
pencillin using X-ray
crystallography

Polymer

Made up of many
monomers

Low density
polythene

Used in plastic
shopping bags

High density
polythene

Used in plastic
buckets and
lunch boxes

PVC

Used in gutters
and garden hoses

Polystyrene

Used in
packaging and
insulation

Teflon

Used in non-stick
frying pans and
plumber's tape

Polypropene

Used in stacking
chairs

Fawcett and
Gibson

They discovered
polythene

Karl Ziegler

Discovered High density polythene

Roy Plunkett

Discovered PTFE

Properties of metals

Malleable, ductile, have lustre and are good conductors of heat and electricity

Alloy

A mixture of at least two elements, at least one of which must be a metal.

Brass

Made from
copper and zinc

Bronze

Made from
copper and tin

Stainless steel

Made from iron,
nickel, chromium
and carbon