



Black-brown Boron

Boron

B

5

10,811

2.0

[He] $2s^2 2p^1$

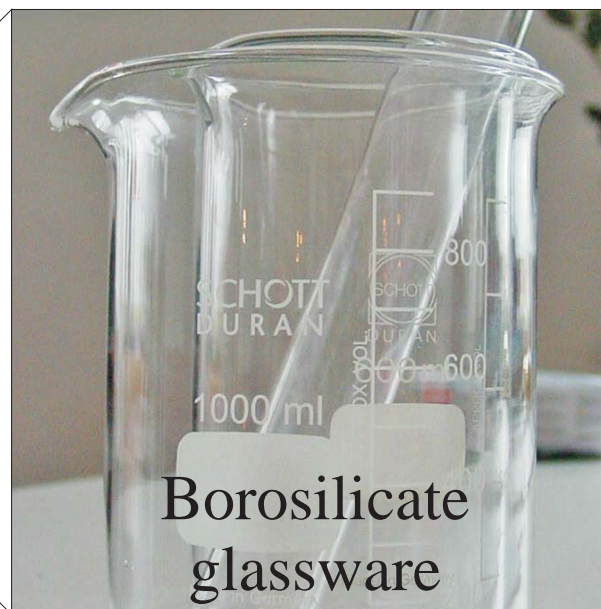
Boron

is derived from the Persian
"burah" referring to borax.

Nonmetal

Nonmetal

×



Borosilicate
glassware

Solid

Pure boron is not found naturally; but as a compound in tourmaline, borax and kernite.

Used in laboratory glass ware.

Graphite



Carbon

C

6

12,011

2.5

[He] 2s² 2p²

Nonmetal

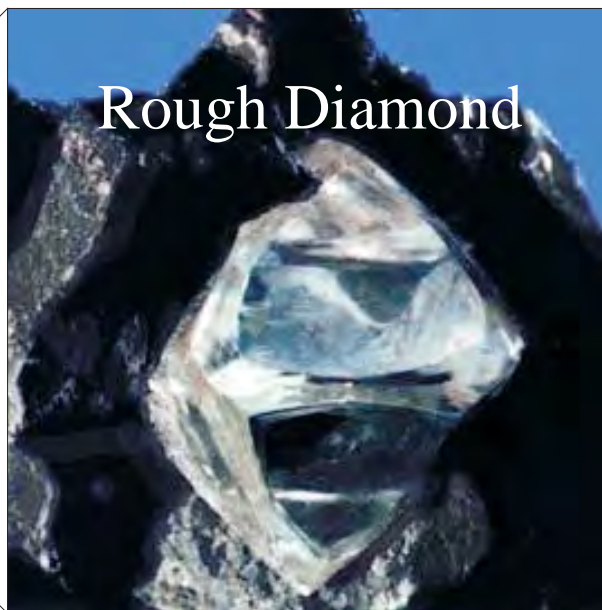


Carbon

is derived from the French, "charbone", which in turn came from Latin "carbo", meaning "charcoal".

Nonmetal

Rough Diamond



Solid

Hard as diamonds,
soft as graphite.

Carbon is the basis
of life's organic
molecules.



Liquid Nitrogen

Nitrogen

N

7

14,007

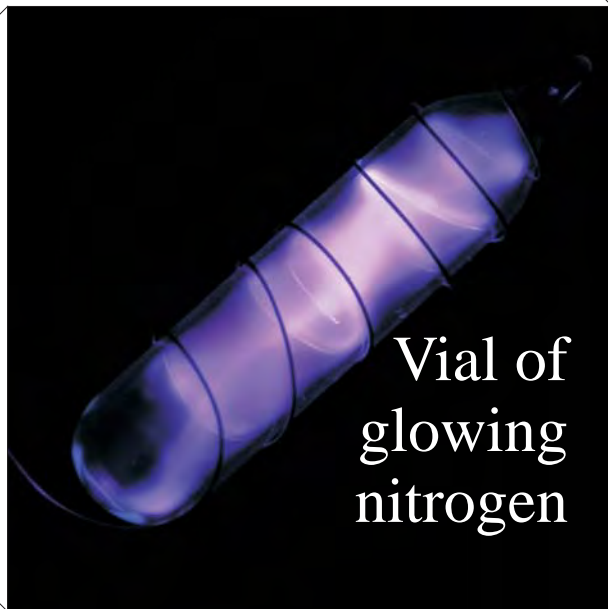
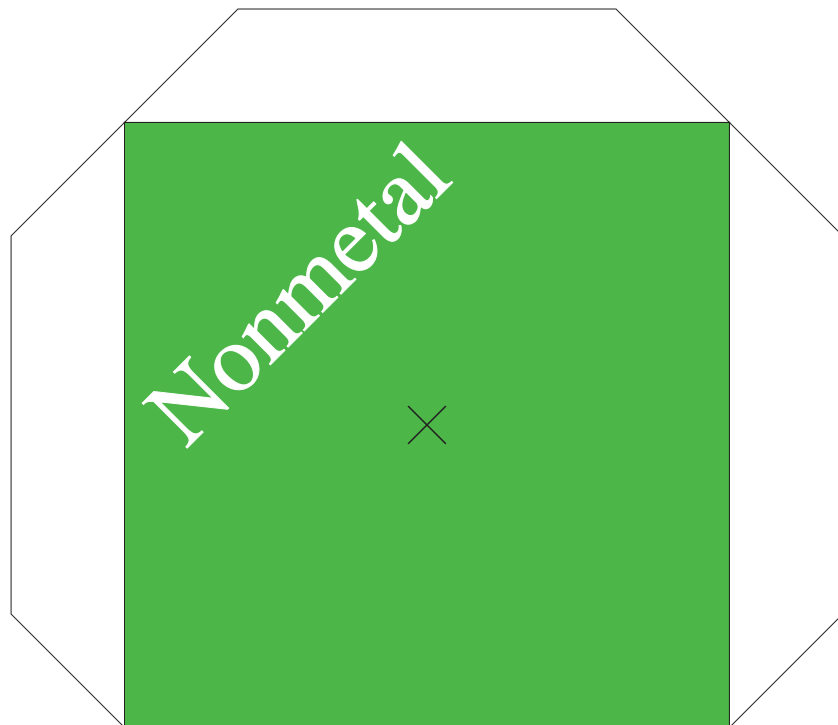
3,15

[He] 2s² 2p³

Nitrogen

is derived from the French
“nitrogène” and the Latin
“nitrum -genes”, meaning “I
form/beget native-soda”.

Nonmetal



Vial of
glowing
nitrogen

Gas

It is colourless; a
liquid at -196 °C and
makes up 78% of air.

It is found in protein,
muscles, fertiliser,
DNA, explosives.

Liquid Oxygen



Oxygen

O

8

15,999

3,5

[He] 2s² 2p⁴

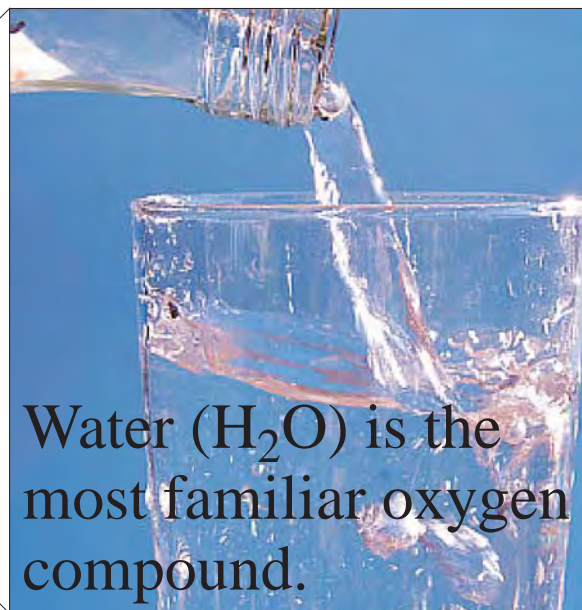
Oxygen

is derived from the Greek
“oxy geinomai”, meaning
“bring forth acid”; it was
believed to be an essential
component of acids.

Nonmetal

Nonmetal

×



Water (H₂O) is the
most familiar oxygen
compound.

Gas

Colourless, odourless,
tasteless gas;
pale blue liquid at
-183°C; 21% of air.

Highly reactive, vital
for combustion.



Silicon rod

Silicon

Si¹⁴

28,086

1,7

[Ne] 3s² 3p²

Silicon

is derived from the Latin
"silex" or "silicis", meaning
"flint", a kind of stone.

Nonmetal

Nonmetal



Silicon wafer
with mirror finish

Solid

It is the second most
abundant element
(25.7%) on Earth.

Found as silicon
oxides in dust, sand,
rock crystal, flint.

Phosphorus,



yellow and red

Phosphorus

P

15

30,974

2,1

[Ne] 3s² 3p³

Phosphorus

is named after the Greek
“phos” + “-phoros”, meaning
“light bearer”.

Nonmetal

Nonmetal



Match

Solid

White or red. Found in nervous tissue, bones, cell protoplasm. Used in fireworks, fertilizers, matches, detergents.



Sulfur

Sulfur

S

16

32,066

2,4

[Ne] 3s² 3p⁴

Sulfur

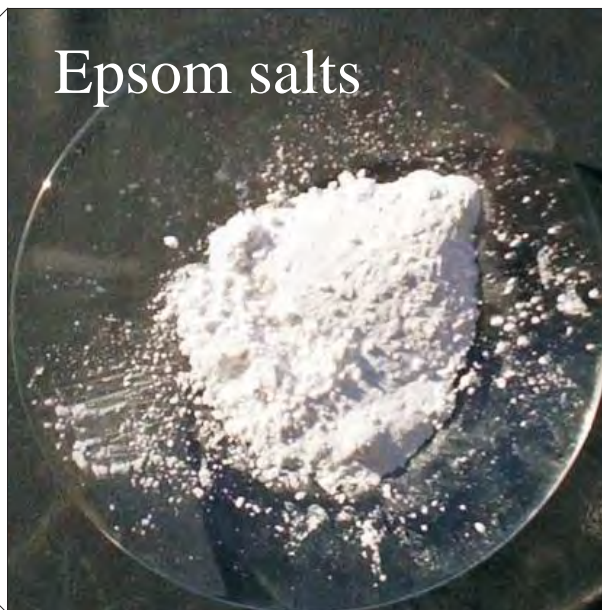
is named after the Arabic
"sufra", meaning yellow, for
the bright colour of the
naturally occurring element.

Nonmetal

Nonmetal

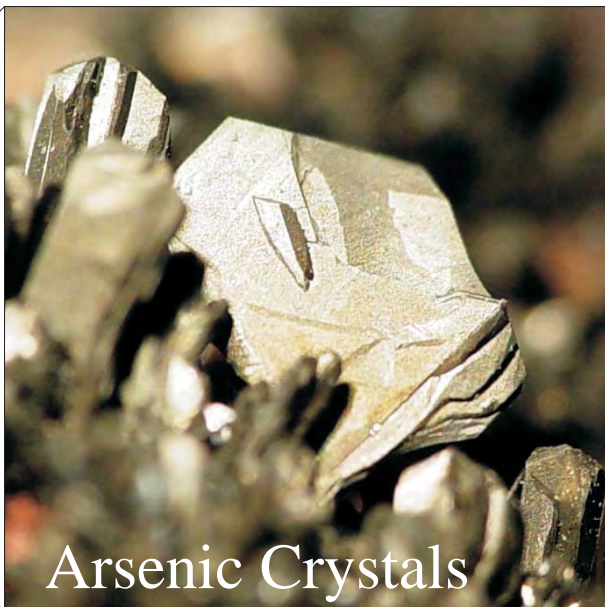


Epsom salts



Solid

Pale yellow, odourless and brittle. It is found in volcanoes, hot springs, and in galena, gypsum, Epsom salts, barite.



Arsenic Crystals

Arsenic

As³³

74,922

2,2

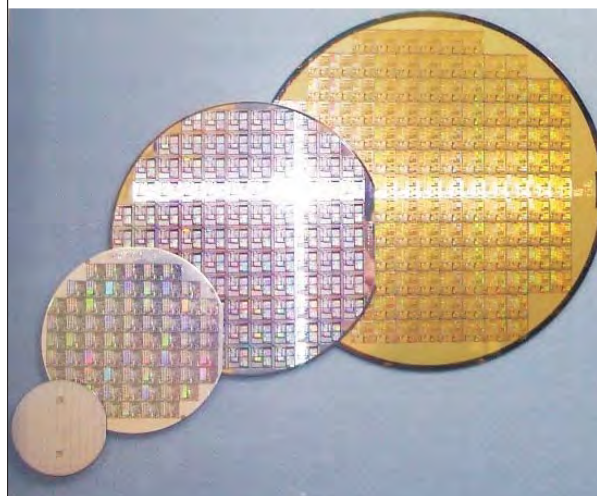
[Ar] 3d¹⁰4s²4p⁴

Arsenic

is named after the Greek
“arsenikon”, that was adapted
from the Syriac and Persian
word meaning “yellow
pigment”.

Nonmetal

Nonmetal



Semiconductor wafers

Solid

Grey and toxic.

Used in semicon-
ductor devices, as
wood preservative,
in weed killers and
in medication.



Native Selenium

Selenium **Se** ³⁴
78,96
2,5
[Ar] 4d¹⁰4s²4p⁴

Selenium

derives from the Greek,
"Selene", meaning "Moon",
also moon-goddess Selene.

Nonmetal

Nonmetal



Selenium rectifiers

Solid
Black, gray, and red
allotropes.
Used in photo-
copiers, robotics and
light meters.



Tellurium

Tellurium **Te** ³⁴

127,6

2,0

[Ar] 4d¹⁰4s²5p⁴

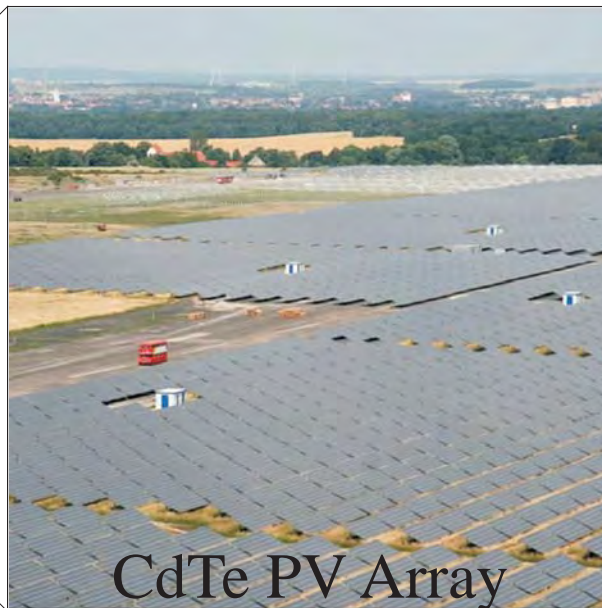
Tellurium

derives from the Latin
"Tellus", meaning "Earth".

Nonmetal

Nonmetal

×



CdTe PV Array

Solid

Brittle, mildly toxic,
silver-white grey.

Used in vulcaniza-
tion of rubber, metal
alloys; bonds with
gold.