

6
C
Carbon

14
Si
Silicon

32
Ge
Germanium

50
Sn
Tin

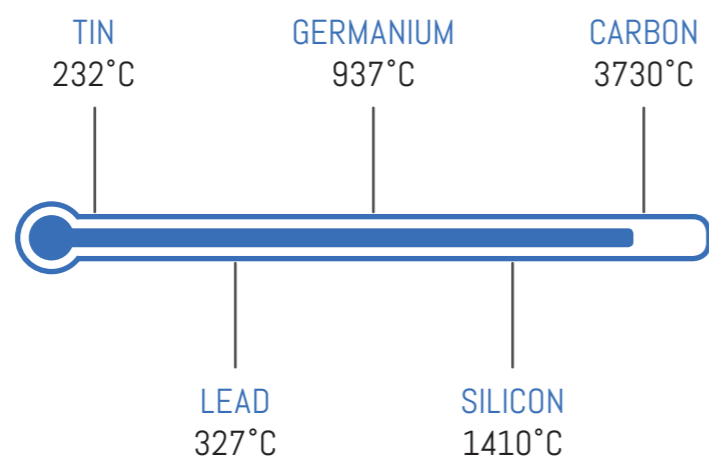
82
Pb
Lead

114
Fl
Flerovium

Group 4 - The Crystallogens

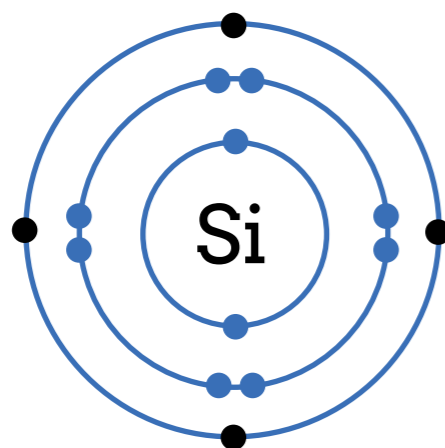
THE GROUP 4 ELEMENTS ARE A MIX OF METALS, METALLOIDS & NON-METALS, AND SHOW CONSIDERABLE DIVERSITY IN THEIR PROPERTIES

MELTING POINTS



SILICON IS THE SECOND MOST ABUNDANT ELEMENT IN THE EARTH'S CRUST AT

25.7%



ALL OF THE GROUP 4 ELEMENTS HAVE **FOUR** VALENCE ELECTRONS

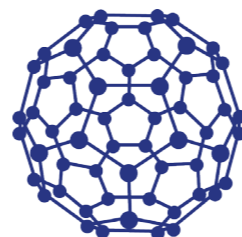
EXPOSURE TO LEAD CAN CAUSE **LEAD POISONING**



FLEROVIUM IS ONE OF THE MAN-MADE ELEMENTS DISCOVERED IN **1999**

8

THE NUMBER OF ALLOTROPES OF CARBON INCLUDING DIAMOND, GRAPHITE & BUCKMINSTER FULLERINE



¹¹²Sn ¹¹⁴Sn ¹¹⁵Sn ¹¹⁶Sn ¹¹⁷Sn

10

¹¹⁸Sn ¹¹⁹Sn ¹²⁰Sn ¹²²Sn ¹²⁴Sn

TIN IS THE ELEMENT WITH THE **LARGEST NUMBER OF STABLE ISOTOPES**

THE GROUP FOUR ELEMENTS FORM HYDRIDES WITH HYDROGEN



TETRAHALIDES WITH HALOGENS



AND A VARIETY OF OXIDES WITH OXYGEN

CARBON MAKES UP **18.5%** OF THE HUMAN BODY



IT ALSO FORMS **ORGANIC COMPOUNDS** THE STUDY OF WHICH IS KNOWN AS **ORGANIC CHEMISTRY**

USES OF THE CRYSTALLOGENS



CARBON
DIAMONDS
CARBON DATING



SILICON
GLASS
ELECTRONICS



GERMANIUM
MICROSCOPE & CAMERA LENSES



TIN
TIN CANS



LEAD
RADIATION SHIELDING
LEADED PETROL