

# N-TYPE SEMICONDUCTOR

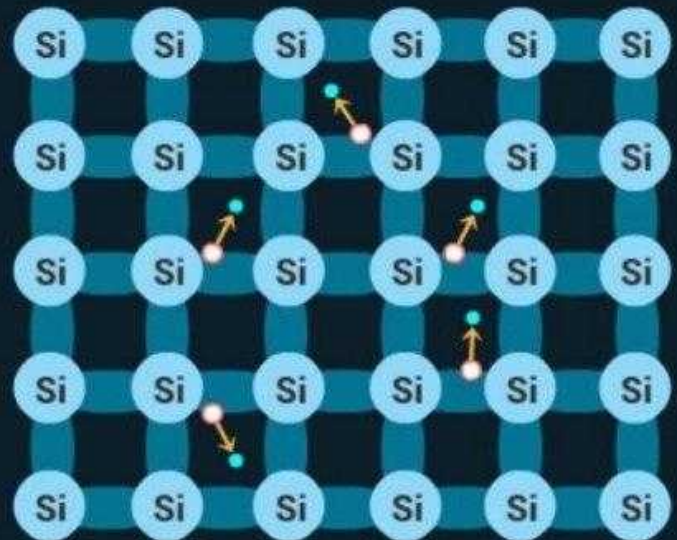
# P-TYPE

## SEMICONDUCTOR

A periodic table where elements in the 4th group (IV A) are highlighted in red. These elements are Boron (B), Carbon (C), Nitrogen (N), Oxygen (O), Fluorine (F), Helium (He) in the first row; Aluminum (Al), Silicon (Si), Phosphorus (P), Sulfur (S), Chlorine (Cl), Argon (Ar) in the second row; Gallium (Ga), Germanium (Ge), Arsenic (As), Selenium (Se), Bromine (Br), Krypton (Kr) in the third row; and Indium (In), Tin (Sn), Antimony (Sb), Tellurium (Te), Iodine (I), Xenon (Xe) in the fourth row. The rest of the elements are in yellow circles.

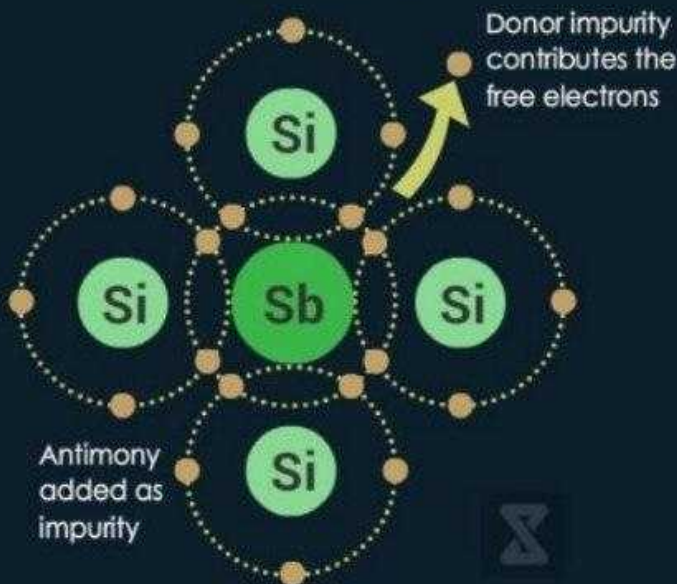
The elements of 4th group of the periodic table are called semiconductors.  
Eg: Germanium, Silicon, etc.

## INTRINSIC SEMICONDUCTOR



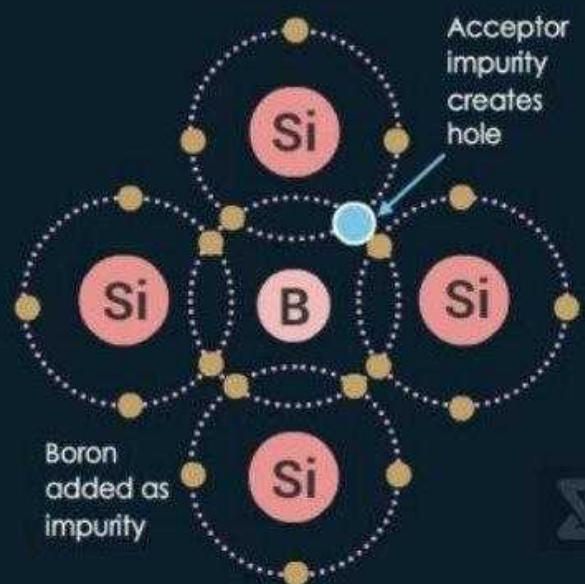
Pure semiconductor is called intrinsic semiconductor.

## N-Type



When impurity of 5th group is added in an intrinsic semiconductor, then N-type semiconductor is formed.

## P-Type



When impurity of 3rd group is added in an intrinsic semiconductor, then P-type semiconductor is formed.