

68 Er

167.3 Er

Erbium



Density = 9.066 g/cm^3
Melting point = $1529 \text{ }^\circ\text{C}$
Boiling point = $2868 \text{ }^\circ\text{C}$
Electronegativity = 1.24
Ionization energy = 589.3 kJ/mol

Electron shell: $[\text{Xe}] 4f^{12} 6s^2$

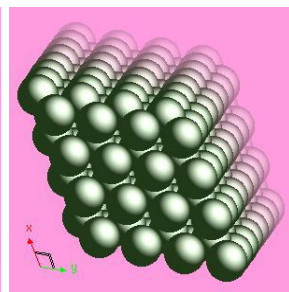
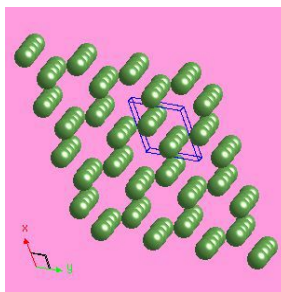
Oxidation states: +3

Abundance on Earth: 4%

Isotopes: 6 stable isotopes,
 ^{162}Er , ^{164}Er , ^{166}Er , ^{167}Er , ^{168}Er ,
 ^{170}Er plus 23 radioisotopes.

Cost: \$650/kg

Crystal structure: hexagonal close-packed
Space group: P63/mmc



- Discovered: Erbium was discovered by Carl Gustaf Mosander in 1843.
- Origin: Mosander named the new element for the city Ytterby in Sweden, where large amounts of the element are located.
- Description: It is a silvery-white metal, it is one of the lanthanide rare Earth metals. It is also soft and malleable. Its salts are rose colored.
- Uses: It is commonly used in photographic filters and it is useful as metallurgical additive. It is also used in nuclear technology as a neutron absorber and as dopants in fiber amplifiers. Erbium oxide, has a pink color and is used to make glass which often used in sunglasses and cheap jewelry.
- Precautions & health effects: As with the other lanthanides, erbium compounds are of low to moderate toxicity, although their toxicity has not been investigated in detail. Erbium is mostly dangerous in the working environment, due to the fact that fumes and gasses can be inhaled with air. This can cause lung embolisms, especially during long-term exposure. Erbium can be a threat to the liver when it accumulates in the human body.
- Notable characteristics: It is thought by many to stimulate metabolism.