

= Europium =

Europium is a chemical element with symbol Eu and atomic number 63 . It was isolated in 1901 and is named after the continent of Europe . It is a moderately hard , silvery metal which readily oxidizes in air and water . Being a typical member of the lanthanide series , europium usually assumes the oxidation state + 3 , but the oxidation state + 2 is also common : all europium compounds with oxidation state + 2 are slightly reducing . Europium has no significant biological role and is relatively non @-@ toxic compared to other heavy metals . Most applications of europium exploit the phosphorescence of europium compounds . Europium is one of the least abundant elements in the universe ; only about 5×10^{-8} % of all matter in the universe is europium .

= = Characteristics = =

= = = Physical properties = = =

Europium is a ductile metal with a hardness similar to that of lead . It crystallizes in a body @-@ centered cubic lattice . Some properties of europium are strongly influenced by its half @-@ filled electron shell . Europium has the second lowest melting point and the lowest density of all lanthanides .