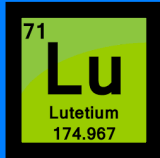


71

2016

Lutetium

By: Michael Braeden McMillan



Lu

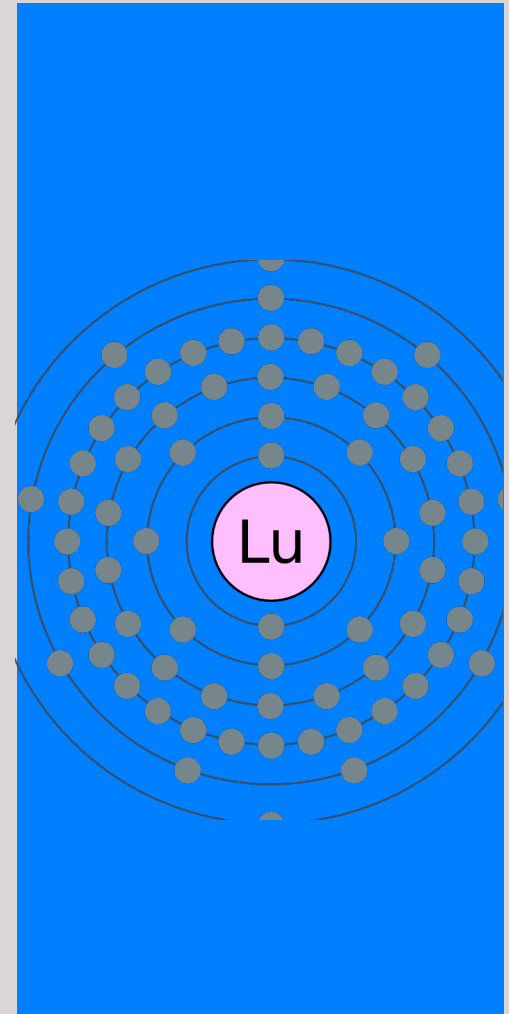
Lutetium

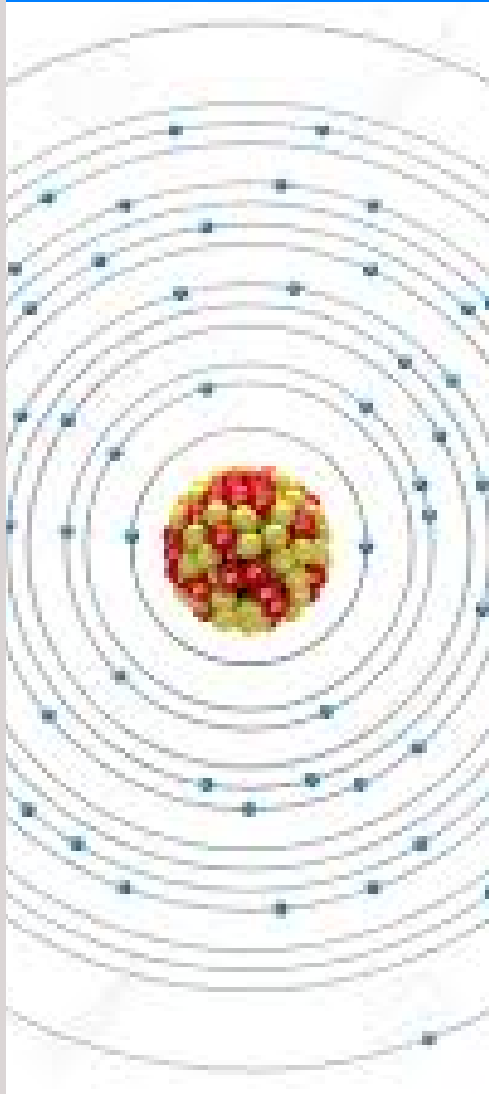
174.967

Lutetium

Lutetium

Do you know what lutetium is? Probably not, Lutetium is element number 71 on the periodic table. It has 71 protons, 104 neutrons, and 71 electrons. Read on to find more information on this amazing atom!





Structure

Lutetium has 6 shells. Shells are what the electrons go on. Lutetium has 2 valence electrons, Those are the electrons that lutetium can take in and give out. Lutetium is a lanthanide, Which is a group on the periodic table.

Lutetium is a solid with a silvery white color. Its melting point is 1652°C , and its boiling point is 3327°C . Its density is 8.49 grams per cubic centimeter. Lutetium is slightly toxic, flammable, and explosive

LUTETIUM WAS ACTUALLY DISCOVERED BY 3 DIFFERENT SCIENTISTS

Discovery

Lutetium was named after the ancient name for the city of Paris, Lutetia. It was discovered when scientists found an impurity in the element ytterbium, that impurity was lutetium. It was discovered in 1907 by French scientist Georges Urbain, Austrian mineralogist Baron Carl Auer von Welsbach, and American chemist Charles James. even though we know where to find it, it is still highly rare.

Periodic Table of the Elements

1	IA																18	He				
2	IIA												10A	11A	12A	13A	14A	15A	16A	17A	18	Ne
3	Li	Be											Al	Si	P	S	Cl	Ar				
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr				
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe				
6	Cs	Ba	*La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn				
7	Fr	Ra	+Ac	Rf	Ha	Sg	Nh	Hs	Mt	110	111	112	113									
Lanthanide Series			Ca	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Y	Lu						
Actinide Series			Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr						

Fun facts

It's worth \$75 per gram.

Its metal dust will explode when it is mixed with fire.

lutetium can not be found in nature by itself.

compounds and uses

lutetium is little used outside of research though it may be used for commercial purposes. If lutetium is ingested it is toxic. The metal dust that comes off lutetium is flammable and explosive. Its compounds are Lutetium aluminum garnet ($\text{Al}_5\text{Lu}_3\text{O}_{12}$), Lutetium bromide (LuBr_3), Lutetium chloride (LuCl_3), Lutetium fluoride (LuF_3), Lutetium iodide (LuI_3), Lutetium oxide (Lu_2O_3), and Lutetium sulfide (Lu_2S_3).