

# Lawrencium

*Lr*

## ***General Information***

### **Discovery**

Lawrencium was discovered by A. Ghiorso and co-workers in 1961 in California, USA.

### **Appearance**

Lawrencium is a radioactive metal. Only a few atoms have ever been made, so its appearance is unknown.

### **Source**

Lawrencium is produced by bombarding californium with boron nuclei.

### **Uses**

Lawrencium has no uses outside research.

### **Biological Role**

Lawrencium has no known biological role. It is toxic due to its radioactivity.

## Physical Information

Atomic Number	103
Relative Atomic Mass ( $^{12}\text{C}=12.000$ )	260 (radioactive)
Melting Point/K	Not available
Boiling Point/K	Not available
Density/kg m <sup>-3</sup>	Not available
Ground State Electron Configuration	[Rn]5f <sup>14</sup> 6d <sup>1</sup> 7s <sup>2</sup>
Electron Affinity (M-M <sup>-</sup> )/kJ mol <sup>-1</sup>	Not available

## Key Isotopes

Nuclide	$^{260}\text{Lr}$
Atomic mass	
Natural abundance	0%
Half-life	3 mins

### Ionisation Energies/kJ mol<sup>-1</sup>

M	- M <sup>+</sup>	Not applicable
M <sup>+</sup>	- M <sup>2+</sup>	
M <sup>2+</sup>	- M <sup>3+</sup>	
M <sup>3+</sup>	- M <sup>4+</sup>	
M <sup>4+</sup>	- M <sup>5+</sup>	
M <sup>5+</sup>	- M <sup>6+</sup>	
M <sup>6+</sup>	- M <sup>7+</sup>	
M <sup>7+</sup>	- M <sup>8+</sup>	
M <sup>8+</sup>	- M <sup>9+</sup>	
M <sup>9+</sup>	- M <sup>10+</sup>	

## Other Information

Enthalpy of Fusion/kJ mol <sup>-1</sup>	Not available
Enthalpy of Vaporisation/kJ mol <sup>-1</sup>	Not available

### Oxidation States

Lr<sup>III</sup>

### Covalent Bonds/kJ mol<sup>-1</sup>

Not applicable