

102

No

Nobelium

[259]

Key Properties

Atomic Mass	[259]
Category	actinide
State at 20°C	solid
Melting Point	827°C
Boiling Point	null
Density	null
Electron Config	[Rn] 5f147s2
Electronegativity	1.3
Year Discovered	1966
Discovered By	Joint Institute for Nuclear Research (JINR)

Did You Know?

- 1 It is named in honor of Alfred Nobel, the inventor of dynamite and the founder of the Nobel Prizes.
- 2 The element's discovery was complex and controversial, with competing claims from research teams in Sweden, the United States, and the Soviet Union (now Russia).
- 3 It is the 10th transuranic element to be synthesized.
- 4 Experiments have shown that nobelium behaves differently in solution than other actinides, sometimes showing properties more like alkaline earth metals.
- 5 Its most stable isotope has a half-life of only 58 minutes.

APPEARANCE

Nobelium is a synthetic, highly radioactive metal.

SUPERHERO PERSONA

"The Prizefighter, a hero named for the inventor of dynamite and founder of the ultimate scientific prize."

EVERYDAY CONNECTION

Nobelium has no everyday connection, used only in research.

POP CULTURE

Nobelium's discovery sparked a long and heated dispute between laboratories.

Nobelium: The Element of Controversy

Nobelium is a synthetic, radioactive metal that doesn't occur in nature. Only tiny amounts—just a few atoms at a time—have ever been made. With a half-life of only 58 minutes, it quickly decays and has no practical uses outside of scientific research. The element is named after Alfred Nobel, the inventor of dynamite and founder of the Nobel Prizes.

A Man-Made Element

Nobelium is created in a particle accelerator, where scientists bombard curium atoms with carbon ions. This fuses the nuclei together to form a new, heavier element: nobelium.

History of Nobelium

The discovery of nobelium is one of the most disputed stories in chemistry, with multiple teams claiming credit:

1956: A Russian group led by Georgy Flerov produced element 102 by bombarding plutonium with oxygen, but they did not officially report their results.

1957: Scientists at the Nobel Institute of Physics in Stockholm announced they had discovered the element, but their claim was later shown to be incorrect.

1958: At the Lawrence Berkeley Laboratory (USA), Albert Ghiorso and his team claimed discovery, but the Russians challenged this.

1962–63: The Russian team at the Joint Institute for Nuclear Research (JINR) in Dubna successfully created and identified several isotopes of nobelium, confirming their earlier work.

1997: The International Union of Pure and Applied Chemistry (IUPAC) officially credited the JINR team as the true discoverers.