Moscovium (Mc)

Element 115 — Complete Summary

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115
Mc
Moscovium
[289]

Key Properties

Atomic Mass	[289]
Category	unknown-properties
State at 20°C	solid
Melting Point	null
Boiling Point	null
Density	13.5*
Electron Config	[Rn] 5f146d107s27p3
Electronegativity	null
Year Discovered	2003
Discovered By	JINR & Lawrence Livermore National Laboratory (LLNL)

✨ Did You Know?

1. It is named in honor of the Moscow Oblast (region) in Russia, where the Joint Institute for Nuclear Research (JINR) is located.
2. It was created by a joint team of Russian scientists at JINR and American scientists at the Lawrence Livermore National Laboratory.
3. It is a member of Group 15, below bismuth, and is expected to be a volatile post-transition metal.
4. Its most stable isotope has a half-life of less than a second (about 650 milliseconds).
5. Its existence was famously part of Bob Lazar's controversial UFO claims years before it was officially synthesized.

APPEARANCE
Moscovium is a synthetic, highly radioactive element.

SUPERHERO PERSONA
"The Moscow Marvel, a hero named for the region that is a powerhouse of nuclear research."

EVERYDAY CONNECTION
Moscovium has no everyday connection, used only in research.

POP CULTURE
Moscovium was famously mentioned in UFO conspiracy theories years before its actual discovery.

Overview of Moscovium: The Superheavy Synthetic Metal

Moscovium (Mc) is a synthetic, highly radioactive metal with atomic number 115. It belongs to the group of superheavy elements and exists only for fractions of a second before decaying. Its name honors the Moscow region of Russia, where it was first created.

Because only a few atoms have ever been produced, moscovium has no everyday uses — but it plays an important role in helping scientists probe the outer limits of the periodic table.

How Is Moscovium Made?

Moscovium does not occur naturally. It must be synthesized in a particle accelerator through nuclear fusion.

In 2003, scientists at the Joint Institute for Nuclear Research (JINR) in Dubna, Russia, and the Lawrence Livermore National Laboratory (LLNL) in the USA collaborated to create the element.

They bombarded americium-243 with calcium-48 ions, fusing the nuclei together to form a new, superheavy element.

The most stable isotope known, Moscovium-290, has a half-life of only about 220 milliseconds.

Biological Role and Uses

Due to its extreme instability, moscovium has:

No biological role – it does not occur in living organisms.

No practical applications – its atoms decay almost instantly.

Scientific importance – it allows researchers to test predictions about the behavior of superheavy elements and to explore the possible “island of stability.”

History of Discovery

The creation of moscovium was the result of international collaboration:

2003 – First Synthesis: A joint JINR–LLNL team successfully created atoms of element 115.

2015 – Official Recognition: The International Union of Pure and Applied Chemistry (IUPAC) confirmed the discovery.

2016 – Naming: The element was officially named moscovium (Mc) to honor the Moscow region, home to the Dubna research facility where it was first produced.