



Key Properties

Atomic Mass	[294]
Category	Noble Gases
State at 20°C	solid
Melting Point	null
Boiling Point	null
Density	5.0*
Electron Config	[Rn] 5f146d107s27p6
Electronegativity	null
Year Discovered	2002
Discovered By	JINR & Lawrence Livermore National Laboratory (LLNL)

Did You Know?

- 1 It is the chemical element with the highest atomic number and atomic mass ever synthesized.
- 2 It is named in honor of the Russian-Armenian nuclear physicist Yuri Oganessian for his pioneering contributions to the research of superheavy elements.
- 3 It is one of only two elements named after a person who was still alive at the time of naming (the other being seaborgium). Yuri Oganessian is the only living person with an element named after them.
- 4 While it is placed in Group 18 with the noble gases, it is predicted to be significantly more reactive than any of them due to relativistic effects.
- 5 It is expected to be a solid at room temperature and may be a semiconductor.

APPEARANCE

Oganesson is a synthetic, highly radioactive element.

SUPERHERO PERSONA

"The Living Legend II, the heaviest hero ever created, named for a living scientist who pioneered its discovery."

EVERYDAY CONNECTION

Oganesson has no everyday connection, used only in research.

POP CULTURE

Oganesson is unique ✦ Yuri Oganessian is the only living person with an element named after him.

Oganesson: The Heaviest Synthetic Element

Oganesson is a man-made, highly radioactive element and the heaviest element on the periodic table (atomic number 118). Only a handful of atoms have ever been created, and they disappear in less than a millisecond. It is named after Russian physicist Yuri Oganessian, one of the world's leading researchers in superheavy elements.

A Man-Made Element 🧪

Oganesson doesn't exist in nature—it can only be made in a laboratory using a heavy ion accelerator. The first successful synthesis involved bombarding californium-249 with calcium-48 nuclei. When the two fused, they briefly formed an atom of oganesson before it decayed.

Biological Role & Uses 🧬

Because oganesson is so unstable and rare, it has no practical uses. Its atoms vanish in a fraction of a millisecond, so it exists only as a tool for scientists studying:

the chemistry of superheavy elements the limits of the periodic table how atomic structure changes at extreme sizes

Oganesson has no biological role and would be toxic due to its strong radioactivity.

History of Discovery 📖

The discovery of oganesson was a global collaboration:

2002: Scientists at the Joint Institute for Nuclear Research (Russia) and the Lawrence Livermore National Laboratory (USA) worked together to synthesize the element for the first time.

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

2016: The element was named oganesson, in honor of Yuri Oganessian.