Free Reading Sample

Magical Elements of the Periodic Table Book Series

Element 107

Bohrium, Presented By Blaadlak, From The Magical Elements of the Periodic Table Book Series

Bohrium

By Sybrina Durant with Illustrations by Pranavva et al.

Blaadlak Presents Bohrium

This Element 107 book features the periodic table element, Bohrium. It is presented by Blaadlak, a Radioactive Goblin who is fueled by the powers of this periodic table element.

Blaadlak is just one of the 118 elementals who will present all of the Magical Elements of the Periodic Table to readers who are curious about the wonders of the world.

Blaadlak introduces the very magical element, Bohrium, in his book. And it is the very opposite of "boring".

The Radioactive Goblins and their other techno-magical friends are the perfect group to introduce you to the elements in the Periodic Table. Hopefully, this Magical Elements of the periodic table book will spark an interest in the magical and real world properties of all the elements known today. You may be surprised at how prominently they feature in our every day lives.

Each page in this book contains terms that might not be completely familiar to the reader. Refer to the definitions in the back of the book to get a clear understanding of each meaning.

There is also a fun elemental themed Periodic Table at the back of the book. It features 118 elements presented by fanciful characters like unicorns, dragons, wizards, knights and goblins.. They want you to remember that if there's no metal...there's no magic or technology.

Remember, "No metal - No Magic. . .and No Technology".

It's Techo-Magical.

Note: Sybrina Publishing websites are Sybrina.com and MagicalPTElements.com. Follow sybrinapublishing on Instagram, Magical Elements of the Periodic Table on Facebook, @sybrinad on Pinterest, Sybrina_SPT on Twitter; and Sybrina Durant on LinkedIn.

Bohrium is a Super Heavy—Radioactive Element

Bohrium (atomic number 107) was first synthesized in 1981 by a German team led by Peter Armbruster and Gottfried Münzenberg at the Gesellschaft für Schwerionenforschung (GSI) in Darmstadt, Germany. Schwerionenforschung is pronounced shvair-ee-OH-nen-forsch-oong, meaning "heavy ion research" in German.

Bohrium is predicted to be a solid Transition Metal like Rhenium or Technetium in Group 7.

The shortest isotope half-life for Bohrium is 10 milliseconds and the longest is 2.4 minutes. There are reports of an unconfirmed isotope, bohrium-278 (), which may have a half-life of about 11.5 to 19 minutes.

If scientists could make Bohrium last long enough, theoretical evaluations suggest it will be malleable and ductile, allowing it to be shaped, hammered, or drawn into wires. .

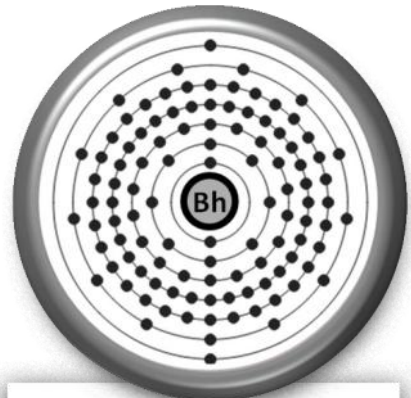
As a metal in Group 7, it is expected to be a solid that can conduct heat and electricity under normal conditions.

While not a typical ferromagnetic material like iron, bohrium is classified within research contexts as a heavy metal with potential for use in specialized applications, including magnetic nanoparticle technology.

LEGEND

- Alkali Metals
- Alkali Earth Metals
- Transition Metals
- Post-Transition (or Other Metals)
- Metalloids
- Non-Metals
- Halogens
- Noble Gases
- Rare Earth Lanthanide Metals
- Actinide Metals
- Super Heavy—Radioactive

Bohrium Element



Atomic Structure

Super Heavy—Radioactive—Superheavy elements are those elements with a large number of protons in their nucleus. Elements with more than 92 protons are unstable; they decay to lighter nuclei with a characteristic half-life. They do not occur in large quantities (if at all) naturally on earth, and only exist briefly under highly controlled circumstances. They include lawrencium, rutherfordium, dubnium, seaborgium, bohrium, hassium, meitnerium, darmstadtium, roentgenium, copernicium, nihonium, flerovium, moscovium, livermorium, tennessine, and oganesson.

Have you ever heard of elements so heavy and so rare that scientists can only make a few atoms of them at a time? One of those elements is called Bohrium, and it is one of the most fascinating and mysterious substances ever created by human hands. Although it is almost never mentioned in everyday conversation, bohrium represents one of the great achievements of modern chemistry and physics because it helps us explore the limits of the periodic table and the structure of matter itself.

Bohrium is a chemical element with the symbol Bh and the atomic number 107. This means that each atom of bohrium has 107 protons in its nucleus, which gives the element its place on the periodic table. The periodic table is more than just a chart of elements; it is a map of the known building blocks of the universe. Bohrium sits near the far end of that map, in a region filled with extremely heavy elements that are usually unstable and short-lived. These elements are often called superheavy elements because their nuclei contain so many protons and neutrons packed into such a tiny space that they struggle to stay together.

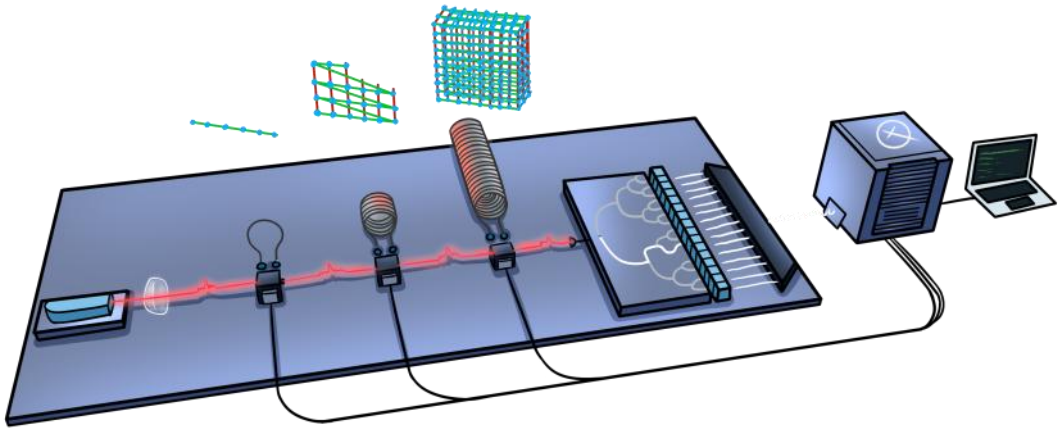
Bohrium is classified as a transition metal, placing it in the same broad family as familiar elements such as iron, nickel, copper, and gold. That classification suggests that, in theory, it should have some of the typical metallic qualities of those elements, such as conductivity and a tendency to form ions. However, bohrium is not like the metals people encounter in daily life. Its enormous atomic weight and intense radioactivity make it far more unusual and far less stable than ordinary metals. In fact, scientists have never been able to collect a visible piece of bohrium or study it in the way they might examine a sample of iron or aluminum. Everything known about it comes from observing just a few atoms at a time before they vanish.

Bohrium was first created in 1981 by a team of scientists working at the GSI Helmholtz Centre for Heavy Ion Research in Darmstadt, Germany. The lead scientist on the team was Peter Armbruster, and he worked with Gottfried Münzenberg and other researchers in the group. Their work was part of a larger scientific effort to create and identify new elements beyond those that occur naturally on Earth. Discovering a new element is not as simple as finding a rock or a mineral. It requires advanced equipment, careful measurements, and often a great deal of patience because the atoms are produced in incredibly small numbers and may survive for only moments. Bohrium's discovery was therefore an important milestone in the history of nuclear science.

The element was named in honor of the famous Danish physicist Niels Bohr, whose ideas transformed our understanding of the atom. Bohr made major contributions to atomic theory in the early 1900s, especially through his model of the atom and his work on quantum theory. Naming an element after him was a way of recognizing the importance of his scientific legacy. It is a special distinction to have an element bear your name, and Bohrium is one of several elements that honor a great scientist. The name also reflects how closely modern discoveries are connected to the earlier foundations of physics and chemistry.

Potential Future Uses For Bohrium

If scientists are ever able to create long-lasting isotopes of Bohrium, the element is predicted to behave somewhat like Rhenium or Technitium. With that in mind, futurists have come up with some potential future uses:



Bohrium isotopes might one day be used in quantum processors, enabling ultra-fast calculations that could transform computing. Their unique nuclear properties may support highly specialized qubits, improve stability, or enhance experimental control in advanced systems. If researchers can safely produce and manipulate these isotopes, they may contribute to breakthroughs in materials science, cryptography, and complex simulations.

A future isotope of Bohrium could potentially serve as a high-energy fuel source for advanced experimental reactors. Because Bohrium is a synthetic, highly unstable element, any practical use would depend on discovering or engineering an isotope with unusual stability, predictable decay behavior, and sufficient energy release. If such an isotope could be produced and controlled safely, it might offer a valuable new option for research into next-generation reactor designs, nuclear physics experiments, and specialized energy systems.

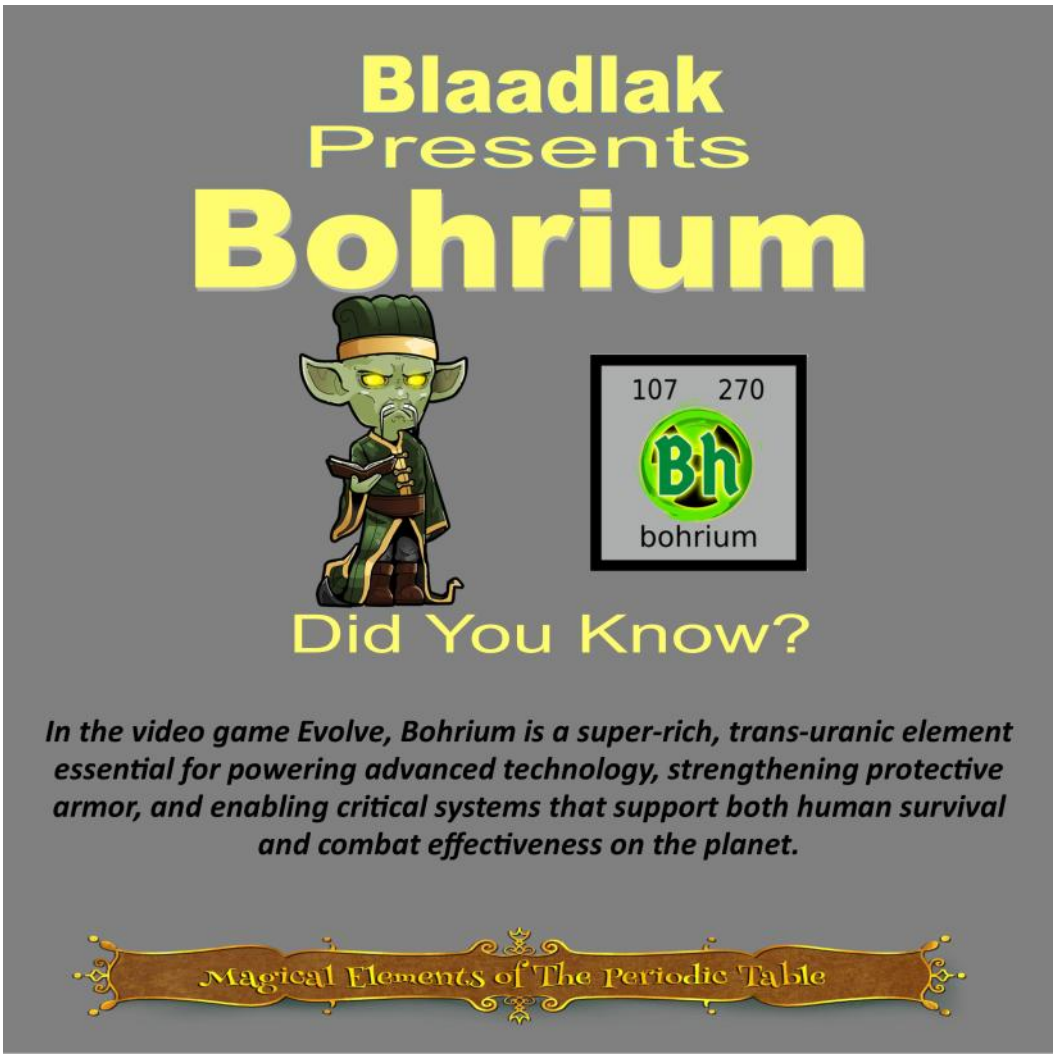
The Source of Bohrium

Element 107 (Bohrium) is synthesized by bombarding a target made of the post-transition metal element bismuth-209 with accelerated nuclei of the transition metal element chromium-54.

Bohrium is a strange, man-made metal. It is not found in nature. It only exists because scientists worked patiently, used advanced equipment, and followed clever ideas to create something that had never been seen before. Let's learn how Bohrium is made and about some of the people who helped bring it into existence.

Bohrium is a very heavy element. It belongs far out on the periodic table, in the group of elements that are difficult to make and even harder to study. Scientists do not find Bohrium in rocks, water, or air. Instead, they have to produce it in laboratories using special machines. Making it is not like mixing ingredients in a kitchen. It is more like setting up an extremely precise and powerful experiment where atoms are forced to collide. Scientists must plan every detail carefully, because if even one part goes wrong, the element will not form.

One common way to create Bohrium is through a nuclear reaction. In this process, scientists shoot a beam of one kind of atom at another kind of atom. You can think of it like trying to snap two tiny Lego bricks together, except the bricks are atoms and the force needed is much greater. The beam atom is usually a lighter element, and the target atom is much heavier. For Bohrium, researchers have used atoms such as chromium as the beam and heavy target atoms such as bismuth or similar materials. These atoms are sped up in a particle accelerator,

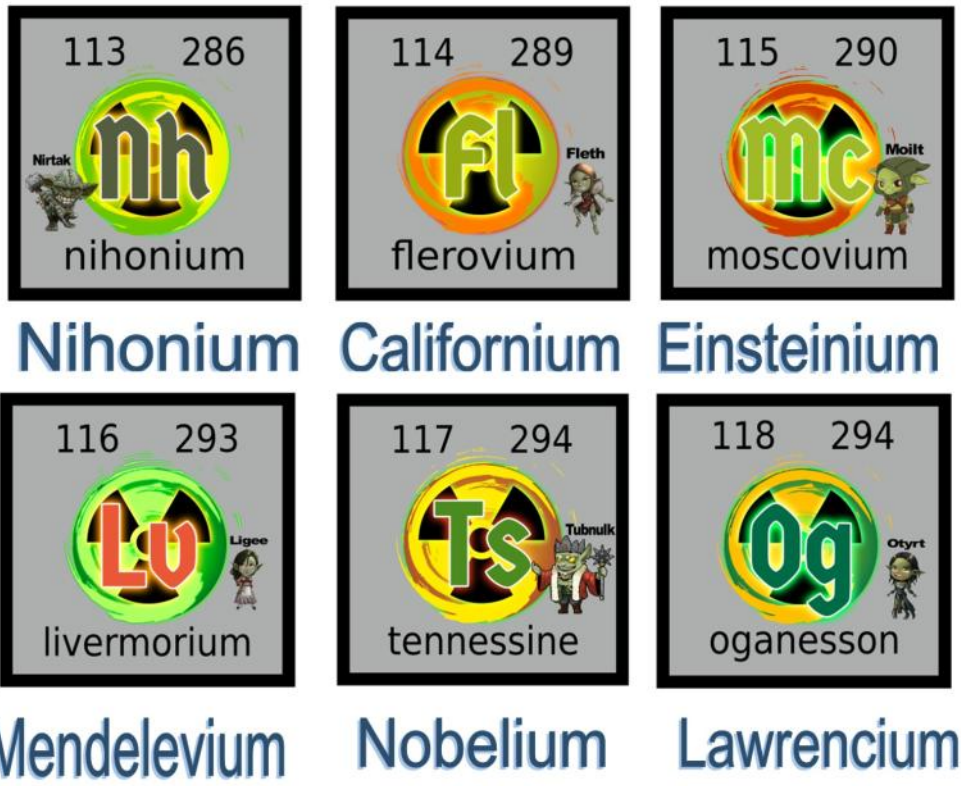


- Peter Armbruster, one of the people who helped create Bohrium, was an important nuclear physicist. Later in his career, he spent much of his time studying how particle accelerators could be used to change and break down dangerous nuclear waste that lasts a very long time. His work helped develop ideas for making radioactive materials less dangerous and less long-lasting.
- Bohrium is predicted to behave like Rhenium and Technetium on the periodic table because they are all in Group 7. A group on the periodic table is a vertical column of elements. Elements in the same group have similar chemical properties because they have the same number of valence electrons. This helps predict how they react and what compounds they form. The periodic table has 18 groups, numbered from 1 to 18.
- Bohrium was the first element made using a cold fusion process instead of a hot fusion process, where two nuclei are joined together. This method uses less energy, which helped scientists make the element in a more controlled way. Successfully making bohrium was an important step in nuclear chemistry and helped scientists learn more about how superheavy elements can be created.

The "Island of Stability"

Normally, as elements become heavier, they become more unstable and decay instantly. The Island of Stability theory predicts a region of superheavy elements with "magic numbers" of protons and neutrons (like 114 protons and 184 neutrons) that would be significantly more stable, having longer half-lives (minutes, days, or even millions of years) than the fleeting microseconds of the highly unstable elements currently known beyond uranium. These special isotopes, though still radioactive, are expected to have longer lifetimes because their "doubly magic" nuclei are bound more strongly, potentially allowing scientists to study their unique chemical properties.

Elements 113 to 118, including Nihonium, Flerovium, Moscovium, Livermorium, Tennessine, and Oganesson, are currently the radioactive elements closest to the center of the theoretical Island of Stability, with isotopes showing slightly increased stability compared to their neighbors. Some predictions suggest that isotopes of these elements could have long enough half-lives to be studied extensively or even exist naturally, potentially making them useful for future technologies.



Scientists are actively synthesizing superheavy elements and measuring their properties, searching for evidence of this island, with recent discoveries showing promising, longer-than-expected half-lives that encourage the search. This finding could unlock entirely new types of matter, enable practical applications, and revolutionize chemical understanding.

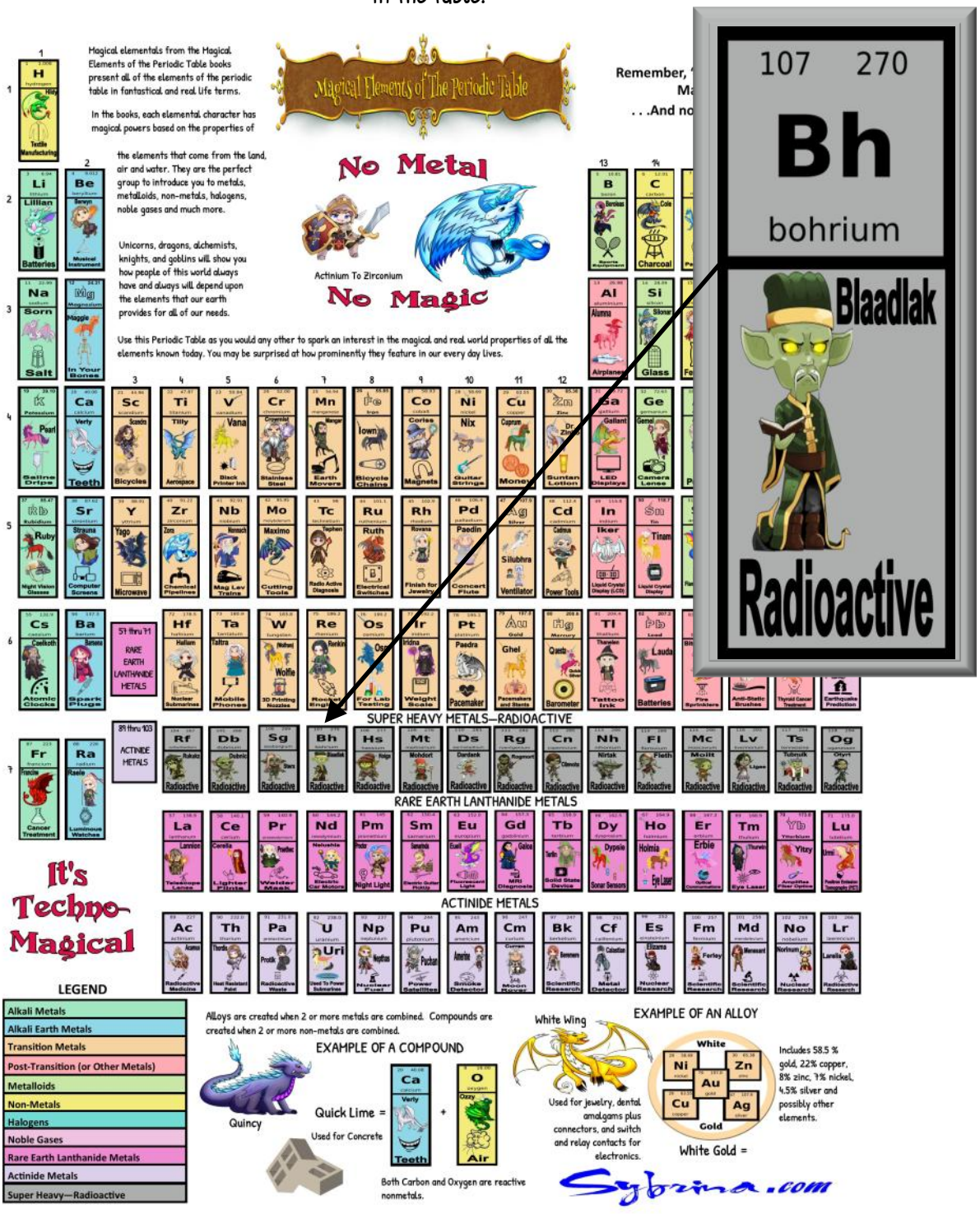
Blaadlak The Goblin Fueled By Bohrium

Symbol: Bh Atomic Number: 107 Atomic Mass: 270

Bohrium resides in Group 7 Period 7 on the Periodic Table.

The atomic symbol is Bh. Its Atomic Number is 107. Its Atomic Mass is 270

As a member of the 6d series of transition metals and a heavy homologue of rhenium, it is located below rhenium (Re) in the table.



Meet Blaadlak, The Goblin

In the deep stacks beneath the ruined city of Vhorr, Blaadlak sat alone on a broken marble table, turning the pages of his weathered grimoire with careful hands. By the lantern's green glow, his mossy olive skin seemed to shift with every emotion, darkening when he frowned, brightening when he smiled. A tall ochre-wrapped headpiece crowned his bald skull, and his dark green velvet robe, trimmed in gold, made him look less like a common goblin than a scholar who had offended reality itself.

In his left hand was the grimoire. In his right, a small glass vial that pulsed with a sickly green light. Bohrium.

Few on the surface knew the name, and fewer still survived it. Blaadlak had found a distilled residue of the forbidden element hidden in a sealed chamber beneath the ruins, locked away by an empire long dead. The warning carved into the wall had been simple:

DO NOT WAKE WHAT THE METAL HAS SLEEPING IN IT.

Blaadlak had read it, smiled, and taken the vial anyway.

The first touch had nearly killed him. The second had changed him forever.

Now the bohrium lived in his blood like a caged star. It sharpened his mind, quickened his body, and surrounded him with a dangerous radiance that made the air shimmer and the bones ache. He was no longer merely clever or ambitious. He was something new: a goblin scholar with power enough to frighten armies.

And tonight, the ruined city had finally sent its answer.

Stone groaned overhead. Dust drifted from the ceiling. Far beyond the vault door, metal shrieked against metal.

"They found me," Blaadlak said, sounding almost pleased. "Late. Unprepared. Excellent."
The door burst inward.

Three mercenaries stumbled in first, shock-pikes raised. Behind them came a priest in hammered bronze armor and a white lacquer mask. Last entered Lady Seryth of the Ember Court, a human noblewoman in ash-colored gloves, elegant and cold, with the kind of smile that promised trouble. Her gaze went straight to the glowing vial.

"There you are," she said. "Our missing scholar."

Blaadlak gave her a precise little bow. "Your memory is generous."

"You stole from the Court."

"I borrowed from a tomb."

"You killed two of my men."

"I corrected their navigation."

The mercenaries shifted uneasily. Even from across the chamber, they could feel the bohrium's poison in the air. Lady Seryth did not flinch.

"Hand it over," she said.

Blaadlak looked at the vial, then at her. "You could ask more politely."

Enjoy This Coloring Page Featuring

Blaadlak The Radioactive Goblin Fueled By Bohrium

Magical Elements of The Periodic Table

Create Your Own Magical Goblin Elemental

Blaadlak The Goblin Fueled By Bohrium

Symbol: Bh Atomic Number: 107 Atomic Mass: 270

Bh

Magical Elemental Symbol

107 270
Bh
bohrium

Bohrium is a Super Heavy Radioactive Metal

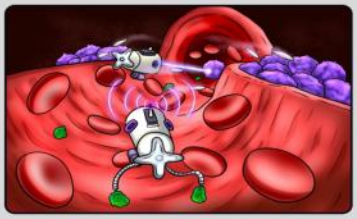
Synthesized by bombarding Bismuth-209 with Chromium-54 in nuclear reactors

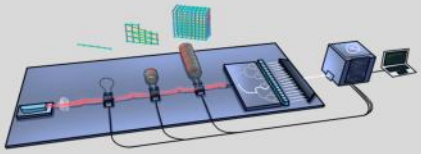
Blaadlak's Magical Abilities

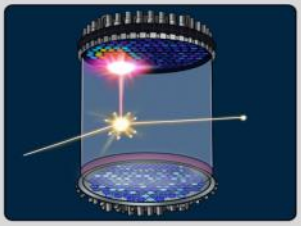
Blaadlak craves knowledge and power. He excels in alchemy and chemistry, crafting potent potions and poisons.

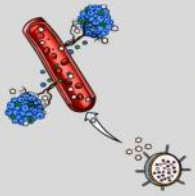
Bohrium Periodic Symbol

Atomic Structure









Symbol: Atomic Number: Atomic Mass:

Magical Elemental Symbol

Bohrium Periodic Symbol

Atomic Structure

Magical Abilities

Uses For

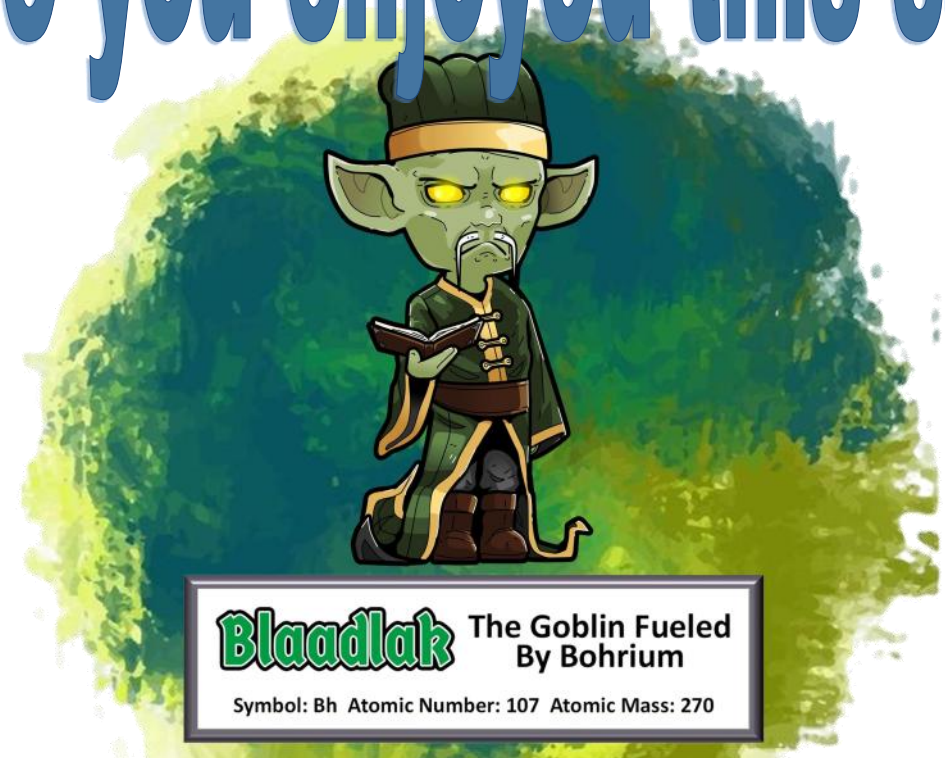
Magical Goblin Elemental Research Sheet

Before starting your Magical Goblin Elemental graphics page, do some research on your chosen element.

Name of Magical Goblin:	
Goblin's Magic Power Based on the Element's Properties:	
Magical Elemental Symbol:	
Element Name:	
Element Symbol:	
Atomic Number:	
Atomic Mass:	
What year and where was this Element discovered?	
Who discovered this Element?	
Element Group:	
Element Period:	
Element Family Name:	
State of Element At Room Temperature:	
How is the Element Created?	
Is Element Magnetic?	
Does Element Conduct Electricity?	
If this Element were metal, what would is it expected to look like?	
What is shortest life span of this Element?	
What is the longest life span of this Element?	
What element on periodic table is this one expected to behave most like?	
Name one real use for this Element:	
Invent a SciFi use for this Element:	
Interesting and Fun Facts about the discovery and creation of this element:	

Write a paragraph below to describe your magical goblin elemental. Based on the information obtained from research of your chosen element, how did you determine your goblin's name? What are your goblin's magic powers? What are their likes/dislikes, strengths/weaknesses, personality traits? What color are your goblin's armor and clothing and why did you pick that/those colors? What is your goblin's Magical Elemental Symbol?

I hope you enjoyed this sample



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Sybrina Publishing

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please spread the word to teachers,

home schoolers and anyone else who might enjoy it.