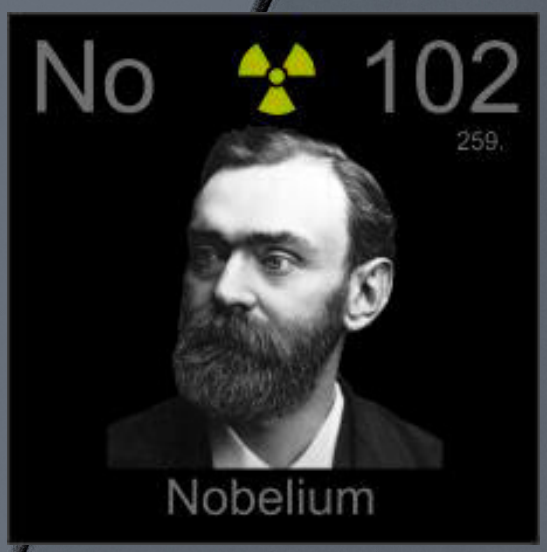
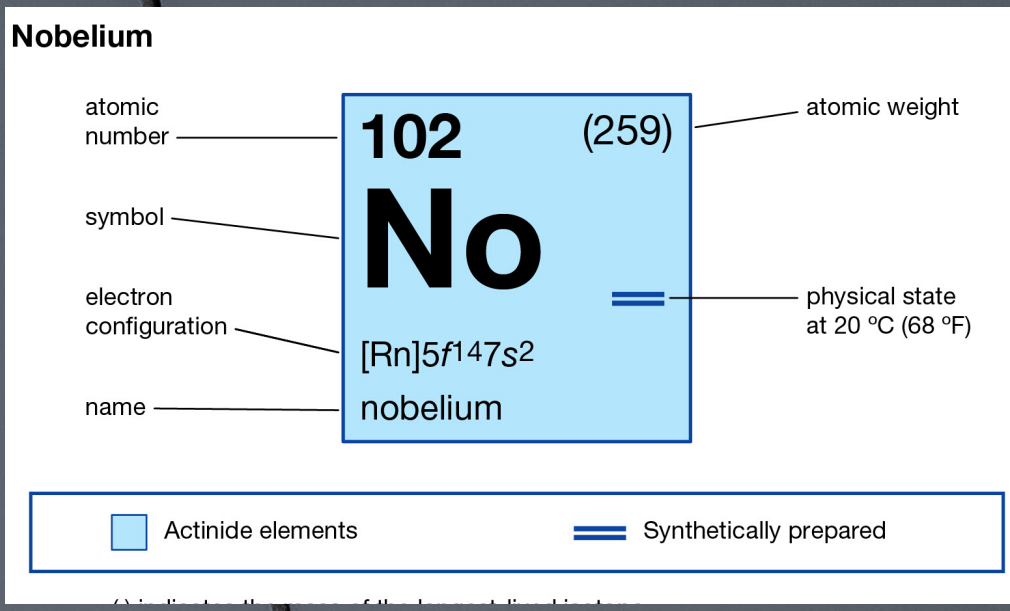
Nobelium

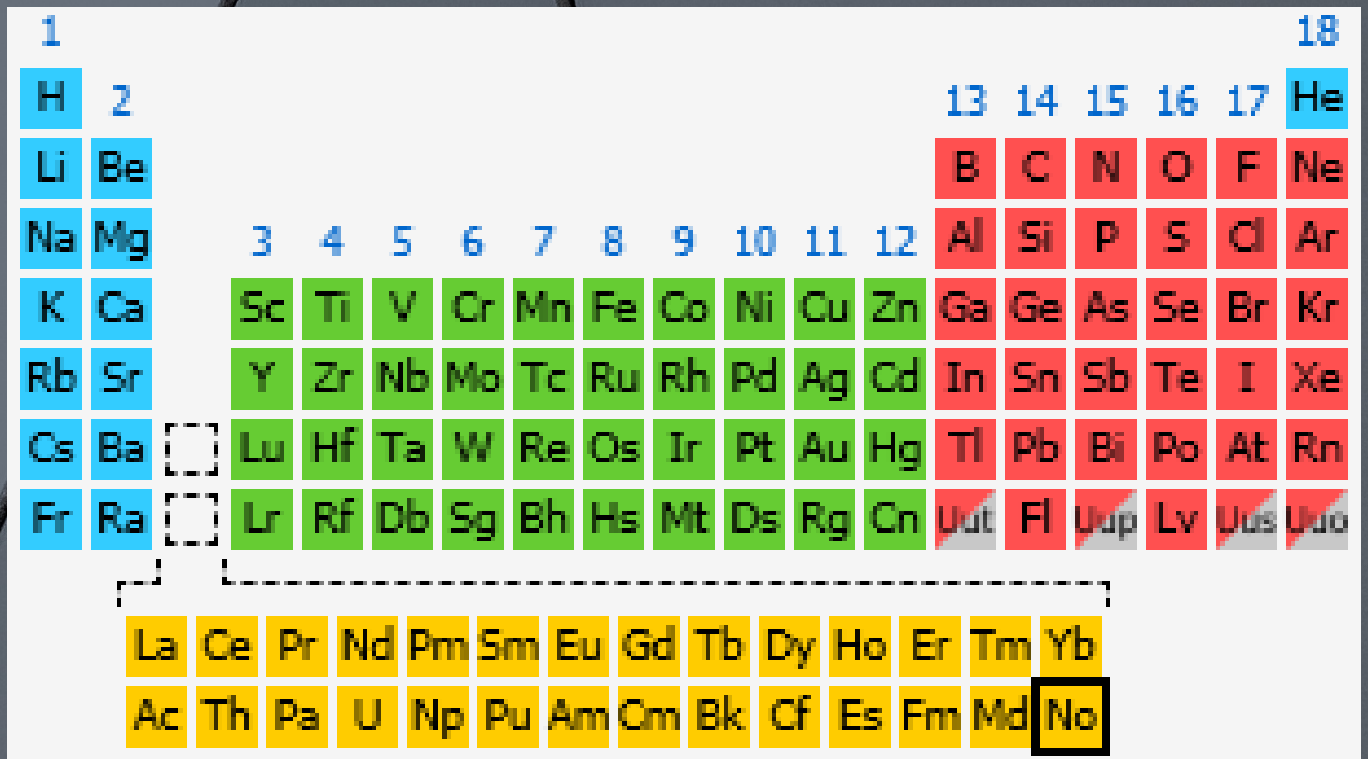
Nobelium was discovered independently by several teams of researchers, one in the Soviet Union, one in Stockholm, and one in Berkley.In 1957, the Stockholm team working at the Nobel Institute reported the creation of an isotope that they later decided was faulty background effects.A team at the University of California in Berkley announced the synthesis of the new element in 1958.The IUPAC declared in 1992 that the work performed by the Dubna team in 1966 was the more accurate finding of nobelium.While the element was possibly detected in both 1957 and 1958, the Dubna team is credited with the discovery.





#FACTS!

Despite naming the element joliotium (Jo) by the Dubna team, the IUPAC kept the 1958 designation, named after Alfred Nobel, the inventor of dynamite.So little nobelium has been produced that its appearance is unknown.Researchers believe due to its properties that it would have a silvery-white color if enough quantities were available to be seen.If enough nobelium were synthesized, however, it would pose a severe radiation threat.



Position In Periodic Table

Atomic number (Z): 102
Group: group n/a
Period: period 7
Block: f-block
Element category Actinide
Electron configuration:
[Rn] 5f14 7s2
Electrons per shell: 2, 8, 18, 32, 32, 8, 2

PHYSICAL PROPERTIES

PHASE AT STP:
SOLID (PREDICTED)
MELTING POINT: 1100 K (827 °C, 1521 °F) (PREDICTED)
DENSITY:9.9(4) G/CM3 (PREDICTED)

ATOMIC PROPERTIES

OXIDATION STATES:
+2, +3
IONIZATION ENERGIES:
1ST: 639 KJ/MOL
2ND: 1254.3 KJ/MOL
3RD: 2605.1 KJ/MOL

OTHER PROPERTIES

NATURAL OCCURRENCE:
SYNTHETIC

CRYSTAL STRUCTURE
FACE-CENTERED CUBIC (FCC)FACE-CENTERED CUBIC CRYSTAL STRUCTURE FOR NOBELIUM (PREDICTED)

CAS NUMBER 10028-14-5

ISOTOPES

TWELVE ISOTOPES OF NOBELIUM ARE KNOWN, WITH MASS NUMBERS 250–260 AND 262; ALL ARE RADIOACTIVE

THE LONGEST-LIVED ISOTOPE IS 259NO WITH A HALF-LIFE OF 58 MINUTES, AND THE LONGEST-LIVED ISOMER IS 251MNO WITH A HALF-LIFE OF 1.7 SECONDS.

NOBELIUM HAS NO USE OUTSIDE RESEARCH