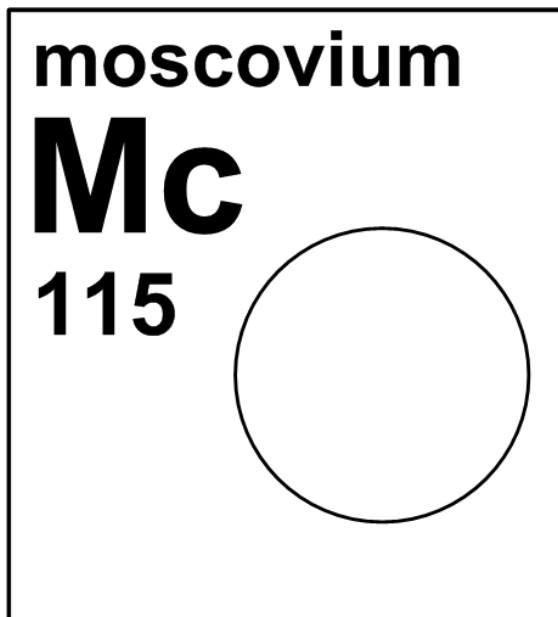


IUPAC

4.115 moscovium



Stable isotope	Relative atomic mass	Mole fraction
(none)		

²⁸⁷ Mc	²⁸⁸ Mc	²⁸⁹ Mc	²⁹⁰ Mc
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Half-life of radioactive isotope
 Less than 1 hour

Moscovium does not occur naturally in the Earth's crust. The name moscovium and the symbol, Mc, are the accepted ones for **element 115**. The name is in recognition of the Moscow region and honors the ancient Russian land that is home of the Joint Institute for Nuclear Research (JIRN), where the discovery experiments were conducted using the Dubna gas filled recoil separator in combination with the heavy ion accelerator capabilities of the Flerov Laboratory of Nuclear Reactions.

⁴⁸Ca and ²⁴³Am were bombarded together in a **cyclotron** during a series of experiments from July 14, 2003 to August 10, 2003 (Figure 4.115.1). In February 2004, the results from these experiments were released in a report that stated ununpentium had been synthesized. This initial name means "115" in the IUPAC systematic naming scheme, which combines Latin and Greek names to produce un-un-pentium for 115. Moscovium has no known isotopic applications aside from scientific research.

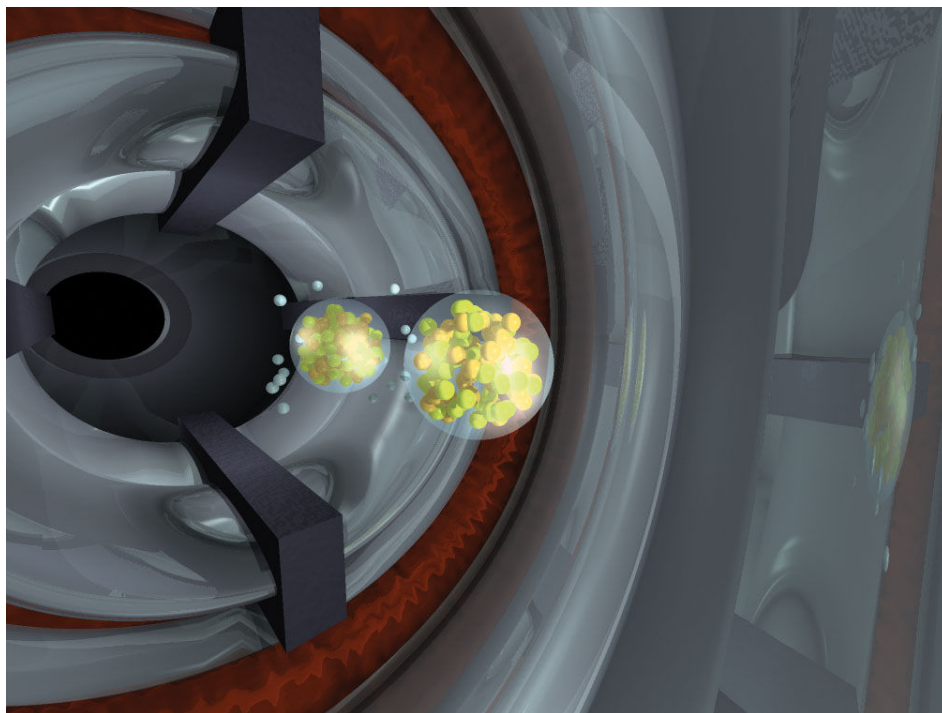


Fig. 4.115.1: Accelerated ^{48}Ca ion colliding with a ^{243}Am atom in a **cyclotron** creating moscovium and nihonium. (Diagram Source: Thomas Tegge, Lawrence Livermore National Laboratory) [669, 670].