Curium Encyclopedia Article

Curium

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Contents

Curium Encyclopedia Article.....1

Contents.....2

Curium.....3

Curium

Curium is a transuranium element, one of the elements in Row 7 of the **periodic table** that follows **uranium** (atomic number 92). Curium's **atomic number** is 96, its atomic **mass** is 247.0703, and its chemical symbol is Cm.

Properties

All isotopes of curium are radioactive with curium-247 having the longest half life, about 16 million years. Relatively little is known about its physical and chemical properties, although its melting point has been measured to be 2,444°F (1,340°C) and its **density**, 13.5 grams per cubic centimeter.

Occurrence and Extraction

Very small amounts of curium are thought to exist in the Earth's crust as the result of the decay of uranium and other naturally occurring radioactive elements. The element has never actually been found in the earth, however, and it has only been seen as the product of **nuclear reactions** that occur in particle accelerators and **nuclear reactors**.

Discovery and Naming

Curium was discovered in 1944 by Glenn Seaborg, Ralph A. James, and **Albert Ghiorso**, researchers from the University of California at Berkeley. The discovery was made at the Metallurgical Research Laboratory at the University of Chicago, where work on the first atomic bomb was being conducted. The element was named in honor of the Polish-French physicist **Marie Curie** and her husband, Pierre who carried out pioneering research in the field of **radioactivity**.

Uses

One application of curium has been as a portable source of electrical power in certain highly specialized situations. One of those situations was the *Mars Pathfinder* spacecraft that was sent to that planet's surface in 1997. Curium is particularly useful for such applications since it generates a very large amount of **heat** per unit of mass.