Berkelium Encyclopedia Article

Berkelium

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Berkelium

Berkelium is the fifth transuranium element and is designated by the atomic number 97 and atomic symbol Bk. It was produced artificially at the University of California at Berkeley in 1949 by S. G. Thompson (1912-), Albert Ghiorso, and Glenn T. Seaborg. They created it by bombarding americium -241 with helium ions, producing an isotope which had an average atomic weight of 243. The name for this new element was chosen in a manner reflecting precedents set in naming other transuranium elements. For example, scientists had named element 95 americium both to honor the Americas and as a complement to the element above it in the periodic table-- europium. Similarly, the element above number 97 in the periodic table is terbium, named for the Swedish town of Ytterby where the rare earth elements were first discovered; thus, scientists decided to call element 97 berkelium after Berkeley, California, the city where it was first produced.

Pure elemental berkelium is expected to be a silvery metal that is soluble in mineral oil and readily reacted with oxygen to form a varietyof oxides. One isotope of berkelium, berkelium-249, has a half-life of 314 days, long enough to permit production of a measurable quantity of the isotope. The first of its compounds that could actually be measured was produced in 1962 and weighed 3 x 10 -9 g.

Berkelium exists in such small amounts that no useful applications have yet been developed for the element.