^{242}Bk

The identification of ^{242}Bk by Wolf and Unik was reported in the 1972 paper "Fissioning isomers of americium, curium and berkelium isotopes" (1972Wo07). ^{241}Am was bombarded with α particles from the Argonne 152 cm cyclotron forming ^{242}Bk in the (α,3n) reaction. ^{242}Bk was identified from excitation functions of the delayed fission activity. "[The figure] shows excitation functions obtained for the 9.5 ns and 600 ns half-life activities when ^{241}Am was bombarded with α particles. The energy dependences of these excitation functions are unique for (α,3n) reactions and indicate that both activities are due to isomeric states of ^{242}Bk." The half-life of the ground state (7.0(13) min) was first observed seven years later by Williams and Seaborg (1979Wi03).

Adapted from reference (2013Fr02)

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