

## $^{254}\text{Fm}$

“Further production of transcurium nuclides by neutron irradiation” was the first unclassified publication reporting the observation of  $^{254}\text{Fm}$  in 1954 by Harvey et al. from Berkeley ([1954Ha73](#)). Targets of heavy californium isotopes were irradiated with neutrons in the Materials Testing Reactor. Alpha-particle spectra were measured following chemical separation. “The isotope of element 100 emitting the approximately 7.2-Mev alpha particles is tentatively assigned as  $100^{254}$ , and a possible reaction sequence leading to its production might be the following:  $\text{Cf}^{252}(\text{n},\gamma)\text{Cf}^{253} \xrightarrow{\beta^-} 99^{253}(\text{n},\gamma)99^{254} \xrightarrow{\beta^-} 100^{264}$ . Because of the existence of unpublished information on element 100 the question of its first preparation should not be prejudged on the basis of this paper.”

Adapted from reference ([2013Th02](#))

[1954Ha73](#) B. G. Harvey, S. G. Thompson, A. Ghiorso, and G. R. Choppin, Phys. Rev. **93**, 1129 (1954).

[2013Th02](#) M. Thoennessen, At. Data Nucl. Data Tables **99**, 312 (2013).

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