

²⁵⁰No

Oganessian et al. identified ²⁵⁰No in the 2001 article “Measurements of cross sections for the fusion-evaporation reactions ^{204,206,207,208}Pb+⁴⁸Ca and ²⁰⁷Pb+³⁴S: Decay properties of the even-even nuclides ²³⁸Cf and ²⁵⁰No” (2001Og08). Enriched ²⁰⁶Pb and ²⁰⁴Pb targets were bombarded with 213.5–242.5 MeV ⁴⁸Ca beams from the Dubna U400 cyclotron forming ²⁵⁰No in (4n) and (2n) fusion-evaporation reactions, respectively. Recoil products were separated with the Dubna Gas-filled Recoil Separator and implanted in a position sensitive detector array which also measured subsequent α and spontaneous fission decay. Escaping α -particles were also recorded with eight additional detectors arranged in a boxlike configuration. “The spontaneously fissioning even-even isotope ²⁵⁰No, with a half-life $T_{1/2} = 36 \mu\text{s}$, was identified for the first time in this experiment.” The observed level corresponds to an isomeric state and the ground state half-life ($5.6_{-0.7}^{+0.9} \mu\text{s}$) was first observed two years later by Belozerov (2003Be18). A spontaneous fission half-life of 250 μs reported earlier (1975Te01) was incorrect.

Adapted from reference (2013Th02)

- 1975Te01 G. M. Ter-Akopyan, A. S. Iljinov, Y. T. Oganessian, O. A. Orlova *et al.*, Nucl. Phys. A **255**, 509 (1975).
- 2001Og08 Yu. Ts. Oganessian, V. K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin *et al.*, Phys. Rev. C **64**, 054606 (2001).
- 2003Be18 A. V. Belozerov, M. L. Chelnokov, V. I. Chepigin, T. P. Drobina *et al.*, Eur. Phys. J. A **16**, 447 (2003).
- 2013Th02 M. Thoennessen, At. Data Nucl. Data Tables **99**, 312 (2013).

Please cite this abstract as: “FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:[10.11578/frib/2279152](https://doi.org/10.11578/frib/2279152)”