

²⁷⁴Bh

In the 2010 paper “Synthesis of a new element with atomic number $Z = 117$ ”, Oganessian et al. reported the first observation of ²⁷⁴Bh ([2010Og01](#)). A ²⁴⁹Bk target was bombarded with a 252 MeV ⁴⁸Ca beam from the Dubna U400 cyclotron to form ²⁹⁴117 in the (3n) evaporation reaction. ²⁷⁴Bh was populated by subsequent α -decay. The residues were separated with a gas-filled recoil separator and implanted in a semiconductor detector array. Alpha particle decay and spontaneous fission events were recorded in this array and in eight detectors arranged in a box configuration around the implantation detector. ²⁷⁴Bh is not specifically mentioned in the text but an α -energy of 9.55(19) MeV with a lifetime of 1.3 min is quoted in the figure displaying the single observed decay chain.

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

[2010Og01](#) Yu. Ts. Oganessian, F. Sh. Abdullin, P. D. Bailey, D. E. Benker *et al.*, Phys. Rev. Lett. **104**, 142502 (2010).

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

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