

²⁹⁰Mc

In the 2010 paper “Synthesis of a new element with atomic number $Z = 117$ ”, Oganessian et al. reported the first observation of ²⁹⁰Mc ([2010Og01](#)). A ²⁴⁹Bk target was bombarded with 252 MeV and 247 MeV ⁴⁸Ca beams from the Dubna U400 cyclotron to form ²⁹³117 and ²⁹⁴117 in (4n) and (3n) evaporation reactions, respectively. ²⁹⁰Mc 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. “The decay properties of the neighboring isotopes ²⁹³117 and ²⁹⁴117, their daughters ²⁸⁹115 and ²⁹⁰115, as well as granddaughters ²⁸⁵113 and ²⁸⁶113, do not display substantial differences.” One chain involving ²⁹⁰Mc was observed.

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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