

## <sup>292</sup>Lv

In the 2004 paper “Measurements of cross sections and decay properties of the isotopes of elements 112, 114, and 116 produced in the fusion reactions <sup>233,238</sup>U, <sup>242</sup>Pu, and <sup>248</sup>Cm+<sup>48</sup>Ca”, Oganessian et al. identified <sup>292</sup>Lv (2004Og12). A <sup>248</sup>Cm target was bombarded with a 247 MeV <sup>48</sup>Ca beam from the Dubna U400 cyclotron and <sup>292</sup>116 was produced in the (3n) fusion evaporation reaction. The residues were separated with a gas-filled recoil separator and implanted in a semiconductor detector array. Subsequent  $\alpha$  particle decay and spontaneous fission events were recorded in this array and in eight detectors arranged in a box configuration around the implantation detector. “We observed the new nuclide <sup>292</sup>116 ( $T_{\alpha} = 18_{-6}^{+16}$  ms,  $E_{\alpha} = 10.66 \pm 0.07$  MeV) in the irradiation of the <sup>248</sup>Cm target at a higher energy than in previous experiments.” 6 decay chains were observed. Previous assignments of <sup>292</sup>Lv (2001Og01, 2001Og06, 2002Og09) were reassigned to <sup>293</sup>Lv (2004Og07).

Adapted from reference (2013Th02)

- 2001Og01 Yu. Ts. Oganessian, V. K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin *et al.*, Phys. Rev. C **63**, 011301 (2001).
- 2001Og06 Yu. Ts. Oganessian, V. K. Utyonkov, and K. J. Moody, Phys. Atomic Nuclei **64**, 1349 (2001).
- 2002Og09 Y. T. Oganessian, V. K. Utyonkov, Y. V. Lobanov, F. S. Abdullin *et al.*, Eur. Phys. J. A **15**, 201 (2002).
- 2004Og07 Yu. Ts. Oganessian, V. K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin *et al.*, Phys. Rev. C **69**, 054607 (2004).
- 2004Og12 Yu. Ts. Oganessian, V. K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin *et al.*, Phys. Rev. C **70**, 064609 (2004).
- 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)”