

## $^{274}\text{Rg}$

The first identification of  $^{274}\text{Rg}$  was reported by Morita et al. in “Experiment on the synthesis of element 113 in the reaction  $^{209}\text{Bi}(^{70}\text{Zn},n)^{278}113$ ” in 2004 ([2004Mo42](#)). Bismuth targets were bombarded with a 352.6 MeV  $^{70}\text{Zn}$  beam from the RIKEN linear accelerator facility RILAC and  $^{274}\text{Rg}$  was populated by  $\alpha$ -decay from  $^{278}113$ . Recoil products were separated with the gas-filled recoil ion separator GARIS and detected with micro-channel plates and a silicon strip detector. Spontaneous fission and  $\alpha$ -decay events were recorded with a silicon semiconductor detector box consisting of the central detector plus four additional silicon strip detectors forming a box. “In conclusion, the reaction product, followed by the decay chain observed in our experiment, was considered to be most probably due to the  $^{209}\text{Bi}(^{70}\text{Zn},n)^{278}113$  reaction. As a result, the members of the decay chain were consequently assigned as  $^{278}113$ ,  $^{274}111$ ,  $^{270}\text{Mt}$ ,  $^{266}\text{Bh}$ , and  $^{262}\text{Db}$ .” A single decay chain was observed.

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

[2004Mo42](#) K. Morita, K. Morimoto, D. Kaji, T. Akiyama *et al.*, J. Phys. Soc. Jap. **73**, 2593 (2004).

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

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