

^{270}Mt

The first identification of ^{270}Mt 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}Zn beam from the RIKEN linear accelerator facility RILAC and ^{270}Mt was populated by α -decays 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 α -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}Mt , ^{266}Bh , and ^{262}Db .” A single decay chain was observed and the observed decay time measured between ^{270}Mt and ^{266}Bh was 7.16 ms.

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).

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)”