

## $^{281}\text{Cn}$

Ellison et al. described the discovery of  $^{281}\text{Cn}$  in 2010 in “New superheavy element isotopes:  $^{242}\text{Pu}(^{48}\text{Ca}, 5\text{n})^{285}114$ ” (2010EI06).  $^{242}\text{PuO}_2$  targets were bombarded with a 247 MeV  $^{48}\text{Ca}$  beams from the Berkeley 88-in. cyclotron and  $^{285}114$  was produced in (5n) fusion-evaporation reactions.  $^{281}\text{Cn}$  was populated by subsequent  $\alpha$  decay. Residues were separated with the Berkeley Gas-Filled Separator BGS and detected in multiwire proportional counters and silicon strip detectors. Subsequent radioactive decay events were recorded in the strip detectors and additional silicon chips forming a five-sided box. “The chain continued with four subsequent  $\alpha$ -like events... after 140 ms, 8.21 ms, 346 ms, and 185 s with energies of 10.31, 10.57, 9.59, and 8.57 MeV, which are interpreted as the successive  $\alpha$  decays of  $^{281}_{112}\text{Cn}$ ,  $^{277}_{110}\text{Ds}$ ,  $^{273}_{108}\text{Hs}$ , and  $^{269}_{106}\text{Sg}$ , respectively.” A single decay chain was observed. A previously reported observation of  $^{281}\text{Cn}$  (1999Ni03) was later retracted (2002Ni10).

Adapted from reference (2013Th02)

- 1999Ni03 V. Ninov, K. E. Gregorich, W. Loveland, A. Ghiorso *et al.*, Phys. Rev. Lett. **83**, 1104 (1999).  
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2010EI06 P. A. Ellison, K. E. Gregorich, J. S. Berryman, D. L. Bleuel *et al.*, Phys. Rev. Lett. **105**, 182701 (2010).  
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”