^{80}Zr

^{80}Zr was discovered by Lister et al. in their 1987 paper "Gamma Radiation from the N = Z Nucleus $^{80}_{40}Zr_{40}$" (1987Li14). A magnesium target was bombarded with a 190 MeV ^{58}Ni beam and ^{80}Zr was produced in the fusion-evaporation reaction ^{24}Mg(^{58}Ni,2n). The residues were separated with the Daresbury recoil separator and γ rays were detected with an array of bismuth germanate-shielded germanium detectors. "Coincidence measurements between the isolated isotope and prompt gamma radiation allowed the identification of decays from low-lying states at E = 290 and 828 keV which indicate that ^{80}Zr has an extremely large quadrupole deformation of $\beta_2 \sim 0.4$."

Adapted from reference (2012Ny02)

1987Li14 C. J. Lister, M. Campbell, A. A. Chishti, W. Gelletly *et al.*, Phys. Rev. Lett. **59**, 1270 (1987).

2012Ny02 A. Nystrom and M. Thoennessen, At. Data Nucl. Data Tables **98**, 95 (2012).

Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"