

¹³⁹Gd

Nitschke et al. discovered ¹³⁹Gd in the 1983 paper “New beta-delayed proton emitter in the lanthanide region” ([1983Ni05](#)). A ⁵⁰Cr beam from the Berkeley SuperHILAC bombarded a gas-cooled ⁹²Mo target. ¹³⁹Gd was identified with the on-line isotope separator OASIS. “The identification of this isotope as ¹³⁹Gd is well supported by the (Q_{EC-SP}) value of 6.50 MeV, a large cross section of 70 mb, and the good agreement between the experimental half-life of 4.9 ± 1.0 s and the calculated value of 6.4 s.”

Adapted from reference ([2013Ma01](#))

[1983Ni05](#) J. M. Nitschke, M. D. Cable, and W. D. Zeitz, *Z. Phys. A* **312**, 265 (1983).

[2013Ma01](#) E. May and M. Thoennessen, *At. Data Nucl. Data Tables* **99**, 1 (2013).

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