

## $^{139}\text{Cs}$

The identification of  $^{139}\text{Cs}$  was reported in 1939 by Heyn et al. in the article “Transmutation of uranium and thorium by neutrons” ([1939He01](#)). An uranyl nitrate solution was irradiated with a strong neutron source of the Philips X-Ray Laboratory at Eindhoven, Netherlands. Resulting activities were measured following chemical separation. “Cæsium, precipitated after 15 minutes with antimony chloride dissolved in hydrochloric acid, shower periods of 10 minutes, 30 minutes and a longer period... Based on the experiments described we suggest the following processes:  $^{139}\text{Xe} \xrightarrow{(\sim 0.5m.)} ^{139}\text{Cs} \xrightarrow{10m.} ^{139}\text{Ba} \xrightarrow{87m.} ^{139}\text{La}$  (stable).” Only a week earlier Hahn and Strassmann reported the observation of a cesium activities with an upper limit of 8 min ([1939Ha17](#)) which they assigned to  $^{139}\text{Cs}$  with a half-life of 6 min four months later ([1939Ha14](#)).

Adapted from reference ([2012Ma48](#))

- [1939Ha14](#) O. Hahn and F. Strassmann, *Naturwissenschaften* **27**, 529 (1939).
- [1939Ha17](#) O. Hahn and F. Strassmann, *Naturwissenschaften* **27**, 163 (1939).
- [1939He01](#) F. A. Heyn, A. H. W. Aten Jun, and C. J. Bakker, *Nature* **143**, 516 (1939).
- [2012Ma48](#) E. May and M. Thoennessen, *At. Data Nucl. Data Tables* **98**, 960 (2012).

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