^{204}Ac

In 2022, M. H. Huang et al. discovered ^{204}Ac in "α-decay of the new isotope ^{204}Ac" (2022Hu12). The China Accelerator Facility for superheavy Elements (CAFE2) produced a 200 MeV ^{40}Ca beam which was focused on a rotating target wheel of twenty 450 μg/cm^2 ^{169}Tm targets. Evaporation residues from the reaction ^{169}Tm(^{40}Ca,5n)^{204}Ac were detected and identified with the gas-filled recoil separator SHANS2 (Spectrometer for Heavy Atoms and Nuclear Structure-2). The deposited ions and their subsequent α-decay were measured with silicon strip detectors. "Nineteen ER - $\alpha_1 - \alpha_2 - \alpha_3$ decay chains which include eleven chains observed at SHANS2 were assigned to ^{204}Ac.

Adapted from reference (2023Th03)

2022Hu12 M. H. Huang, Z. G. Gan, Z. Y. Zhang, L. Ma *et al.*, Phys. Lett. B **834**, 137484 (2022).

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