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The Discovery of the Isotopes of the Platinum Group of Elements: Update 2024

Correction to the number of known isotopes

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NON-PEER REVIEWED FEATURE

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Further to the 2020 review (1) no new platinum group elements isotopes were discovered between January 2020 and November 2023. However the previous optimistic suggestion by Zhang *et al*. (2) that they had discovered platinum isotopes of mass 209 to 212 is now considered to be incorrect as was proved by the absence of these isotopes in the 2020 NUBASE databases (3, 4). Evidence for the existence of the rhodium isotope of mass 89 is also highly tentative and strongly suggests that this isotope has not actually yet been discovered. It is therefore removed from **Table I** which gives the correct number of isotopes for each of these elements at the time of writing this update.

Table I Total Number of Isotopes and Mass Ranges for Each Platinum Group Element for 2023

Element	Number of known isotopes	Mass number range
Ru	41	85–125
Rh	39	90–128
Pd	42	90–131
Os	43	161–203
Ir	42	164–205
Pt	44	165–208

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The Author

John W. Arblaster is interested in the history of science and the evaluation of the thermodynamic and crystallographic properties of the elements. Now retired, he previously worked as a metallurgical chemist in a number of commercial laboratories and was involved in the analysis of a wide range of ferrous and non-ferrous alloys.