

Periodic table expands with elements named after Japan, Moscow, Tennessee

December 1 2016



Credit: CC0 Public Domain

The periodic table got larger Wednesday after four new elements were officially named and added to the chart, including 'nihonium'—the first ever to be discovered by Japanese scientists.

The new name for element 113, a highly radioactive element with an extremely short half-life, comes from Japan's name in Japanese—'nihon', literally 'the land of the rising sun'.

"The element, named for the first time by Japanese and in Asia, will

occupy a place in the periodic table—an intellectual asset of mankind," Kosuke Morita, who led the team that created the element, said in a statement.

The periodic table, pored over by science students the world over, arranges [chemical elements](#) in the order of their atomic number.

Some [elements](#), such as hydrogen, carbon or magnesium, are found in nature while others, including nihonium—official symbol Nh—are synthesised in laboratories.

All the discovered elements after 104 are synthetic ones produced through laboratory experiments.

Tradition dictates that newly discovered elements be named after a place, geographical region, or scientist, according to the International Union of Pure and Applied Chemistry (IUPAC), which made the announcement on the names Wednesday.

A joint team of Russian and US scientists named element 115 moscovium—symbol Mc—after the Russian capital, where much of the relevant research was conducted.

For similar reasons, they also named element [117 tennessine](#)—symbol Ts—after the US state of Tennessee.

The third one they discovered, element 118, was named oganesson—symbol Og—in homage to Russian nuclear physicist Yuri Oganessian, in recognition of his "pioneering contributions" in elements research.

North Carolina-based IUPAC said that the names were officially accepted after a 5-month public review period.

"The names of the new elements reflect the realities of our present time," IUPAC president Natalia Tarasova said on its website, citing the "universality of science" as well as "the pivotal role" of Oganessian.

With the latest discoveries, the [periodic table](#) is now complete down to the seventh row.

Underscoring the importance of the discoveries, the scientists behind the four new elements had been seen as strong candidates for this year's Nobel Chemistry Prize.

Japan has a proud research tradition and its citizens have won about 20 Nobel prizes in science and medicine, including Yoshinori Ohsumi who won the Nobel Medicine Prize this year.

© 2016 AFP

Citation: Periodic table expands with elements named after Japan, Moscow, Tennessee (2016, December 1) retrieved 27 April 2024 from <https://phys.org/news/2016-12-periodic-table-elements-japan-moscow.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
