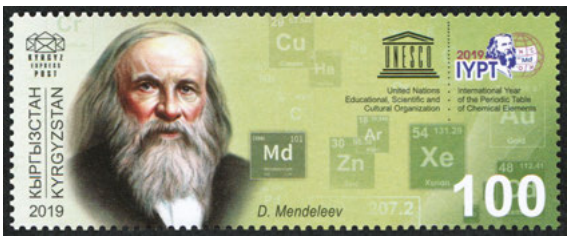
See also www.iupac.org/publications/ci/indexes/stamps.html

IYPT and The Mother of All Tables

A few years ago, the International Year of Chemistry (2011) was celebrated throughout the world with the organization of thematic conferences and symposia, special activities for children, the publication of a myriad of articles and reviews, and, of course, the release of postage stamps by many countries. Likewise, the International Year of the Periodic Table (IYPT) presents now another rare opportunity to relate the history of chemistry and showcase its societal benefits to a worldwide audience. As originally proclaimed by the United Nations and UNESCO, the IYPT also offers an incentive to promote international cooperation in the basic sciences for sustainable development and science education.

The first country to philatelically recognize the IYPT was Algeria, where a stamp with a rather mundane design was issued shortly after New Year's Day, on 2 January 2019. The stamp simply features the IYPT logo, with the likeness of Dmitri Mendeleev and a globe incorporating the chemical symbols of mendelevium and the four most common elements found in living organisms (hydrogen, carbon, nitrogen, oxygen) prominently displayed.

A week later, a much more interesting stamp highlighting the chemical symbols of vanadium, tungsten, and platinum, the three elements whose discoveries have strong ties to Spain, was issued by *Correos*, the Spanish postal service. It turns out that the discovery of vanadium is usually credited to the Spanish mineralogist Andrés Manuel del Río (1764-1849), who spent most of his professional life in Mexico. In 1801 he analyzed a series of lead-containing mineral specimens from the state of Hidalgo's Purísima del Cardenal mine and ascertained the presence of the new metallic element, which he initially named panchromium and later erythronium. The identity of the new element was confirmed some 30 years later by the Swedish chemist Nils Gabriel Sefström (1787-1845), who named it vanadium in honor of Vanadis, the Scandinavian goddess of love and beauty.



Tungsten, the only chemical element to be actually discovered in the Spanish mainland, was isolated in 1783 by the Spanish chemist Juan José Delhuyar (1754-1796) and his younger brother Fausto (1755-1833). The symbol of the element (W), of course, reminds us of wolfram, the original name proposed by the Delhuyar brothers, which is still the preferred name for element 74 in Spain, Germany, Scandinavia, and other countries.

Platinum, a relatively rare element usually found associated with nickel and copper ores, was already known to pre-Columbian natives in the area of present-day Colombia and Ecuador. However, the "European" or "modern" discovery of platinum is often ascribed to the Spanish scientist and explorer Antonio de Ulloa (1716-1795), who was a member of the Geodesic Mission to South America sponsored by the French Academy during 1735-1744. Upon his return to Spain, de Ulloa wrote extensively about the expedition and described for the first time in 1748 some of the physical and chemical properties of the noble metal.

The IYPT was also commemorated with colorful stamps issued by Kyrgyzstan and the Republic of Moldova on April 12 and May 23, respectively. Both depict the logos of the IYPT and UNESCO, the latter being not only a key stakeholder of this year's events but also the site of the Opening Ceremony that was held in Paris on 29 January. In addition, the stamp from Kyrgyzstan

shows a portrait of Mendeleev and the chemical symbols of mendelevium, zinc, copper, helium, argon, and xenon, among other elements. In turn, the one from Moldova includes a picture of a Rubik's cube with different elemental symbols in each of its faces, an appealing tribute to the periodic table since it solved the puzzle of organizing the chemical elements!

Last but not least, Hungary and Bulgaria also released IYPT stamps, on June 3 and 24, respectively. Both present images of Mendeleev and different versions of the periodic table. Whereas the Hungarian stamp includes a small illustration of Mendeleev's original (1869) manuscript of the periodic table, the Bulgarian one displays in the foreground the symbols of all the elements, from hydrogen to oganesson.

It remains to be seen which other countries issue stamps to honor the sesquicentennial of the periodic table later this year. And I have to wonder if some of the *other* chemistry anniversaries taking place in 2019, such as the centennials of IUPAC or Primo Levi's birth, or perhaps the discovery of phosphorus 350 years ago, will also be publicly acknowledged with the release of postage stamps. In the meantime, to all chemophiles and periodic table enthusiasts out there, happy IYPT!

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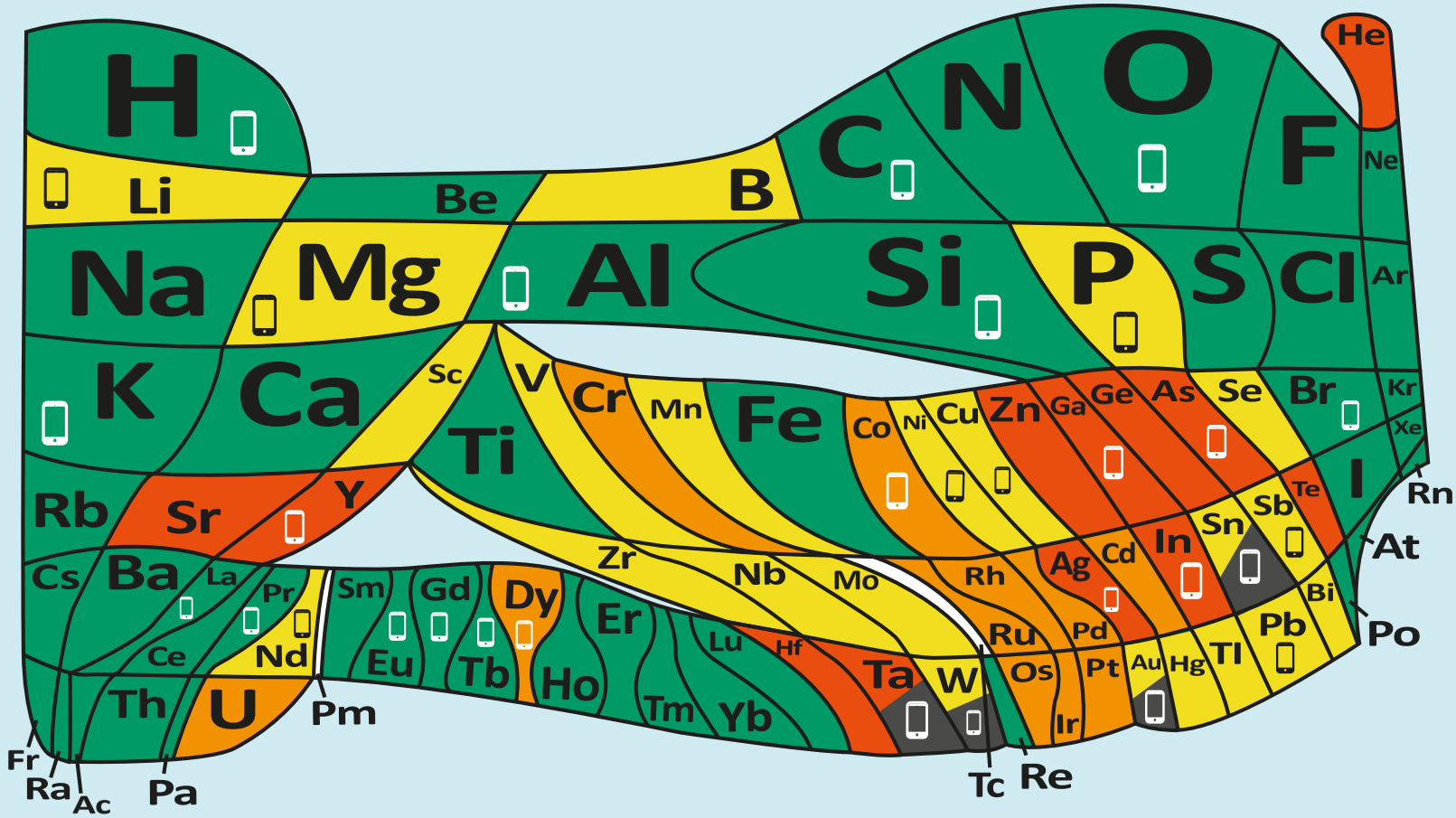
United Nations Educational, Scientific and Cultural Organization

2019 IYPT International Year of the Periodic Table of Chemical Elements

The 90 natural elements that make up everything

How much is there? Is that enough?



Serious threat in the next 100 years

Rising threat from increased use

Limited availability, future risk to supply

Plentiful Supply

Synthetic

From conflict minerals

Elements used in a smart phone

Read more and play the video game **http://bit.ly/euchems-pt**

EuChemS European Chemical Society

Inspired by WF Sheehan's 'A Periodic Table with Emphasis' published in Chemistry, 1976, 49, 17-18'