

# NOTICIAS CIENTÍFICAS

## DEBATE SOBRE EL WOLFRAMIO

En la última revisión del "Red Book" de la IUPAC *Nomenclature of Inorganic Chemistry. Recommendations 2004* que se encuentra en fase de preparación, se ha eliminado el nombre de *wolfram* y sólo aparece el de *tungsten* para el elemento de número atómico 74. Únicamente se hace una mención a pie de tabla al *wolfram* para justificar su símbolo (W).

La Real Sociedad Española de Química (RSEQ), alertada de este hecho por el Dr. Pascual Román, acordó en su Junta General Ordinaria celebrada el 10 de julio de 2004, que la Dra. Pilar Goya, en su condición de representante española en el *Union Advisory Committee*, de reciente creación, enviase un escrito a distintas instancias de IUPAC reivindicando el nombre de *wolfram* y sus voces derivadas en inglés junto con el de *tungsten* (Carta N° 1).

Esta es la primera de una serie de iniciativas encaminadas a informar a la comunidad científica internacional sobre este hecho que consideramos lesivo para los

intereses de la ciencia española, como se explica en detalle en el artículo de Pascual Román titulado: "Wolframio, sí; tungsteno, no" que aparece en este mismo número de Anales.

Se han realizado diferentes gestiones ante la IUPAC y recabado distintos apoyos entre los que cabe señalar los de Roald Hoffmann, Premio Nobel de Química, y Oliver Sacks, autor entre otros de "*Uncle Tungsten: Memories of a Chemical Boyhood*" cuya carta se recoge a continuación (Carta N° 2).

De momento no hemos obtenido una respuesta positiva a esta reivindicación, por lo que desde la Junta de Gobierno de la RSEQ y su Presidencia continuamos haciendo gestiones ante la IUPAC y ante otras instancias de la comunidad científica internacional de las que continuaremos informando.

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### Carta N° 1. De la Dra. Pilar Goya, representante de España en la IUPAC-UAC, al Dr. Neil G. Connelly

Prof. N. G. Connelly  
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28th July 2004

Dear Professor Connelly,

As Spanish member of the IUPAC Union Advisory Committee, and on behalf of the Spanish Royal Society of Chemistry (RSEQ), let me express our surprise and concern about the fact that in the "*Nomenclature of Inorganic Chemistry. Recommendations 2004*" the name *wolfram* has been removed from the tables and for the element with atomic number 74, with symbol W, the only name left is **tungsten**, with a footnote which says "the element symbol W derives from the name *wolfram*."

This rule of leaving only one name and a footnote for those elements that had a second name in brackets, cannot be applied in this case, since it does not refer to a latin root or traditional name but it is directly linked to the discovery of the element.

Therefore, we strongly disagree with this proposal of the IUPAC, and request that the name **wolfram** is maintained based on the following issues:

#### Historical facts

It is well-known and accepted by IUPAC, that the true discoverers of element 74 were J. J. and F. Delhuyar who were the first to isolate the **pure metal** from wolframite (Fe, Mn)WO<sub>4</sub> in Spain in 1783 (see below).

It is also a fact that C. W. Scheele and T. O. Bergman were the first to obtain the **trioxide** (WO<sub>3</sub>) from scheelite (CaWO<sub>4</sub>) two years before, but they did not isolate the pure element.

#### Wolfram or tungsten

The word *wolfram* derives from the German *wolf's rahm*, literally meaning wolf's foam or *spuma lupi* which is how wolframite was traditionally known by the saxon miners and from which the pure element was isolated.

*Tungsten* is derived from the Swedish *tung* (heavy) and *sten* (stone) meaning heavy stone in reference to the mineral scheelite from which the trioxide was isolated.

**Since the symbol of the element is W it is logical and self-explanatory that it derives from wolfram and not from tungsten.**

In page 88 of the scientific paper published in 1783 by the Delhuyar brothers (we could provide you with a copy of this article upon request):

DE LUYART, Juan José y DE LUYART, Fausto, "Análisis químico del volfram, y exámen de un nuevo metal, que entra en su composición" *Extractos de las Juntas Generales celebradas por la Real Sociedad Bascongada de los Amigos del País*, Vitoria, Septiembre 1783, pp. 46-88) they claim the name **volfran** as follows:

"We will call this new metal volfram, taking the name from the matter of which it has been extracted.... This name is more suitable than tungst or tungsten which could be used as a tribute to tungstene or heavy stone from which its lime was extracted, because volfram is a mineral which was known long before the heavy stone, at least among the mineralogists, and also because the name volfram is accepted in almost all European languages, including Swedish".

(Please note that, at that time, the letter w did not exist in the Spanish alphabet but appeared for the first time in 1914 and is now included).

#### IUPAC policy on the elements names

The IUPAC recommends that the name and symbol of a new element should be proposed by its discoverers. Two recent examples include element number 110, darmstadtium, and element number 111 which has been proposed by its discoverers to be roentgenium. Usually the discoverers propose a name to the Inorganic Chemistry Division Committee and the opinion of the scientific community is taken into account and this takes some time (elements 110 and 111 were discovered in 1994 and the name darmstadtium was only confirmed in August 2003).

As we understand, there is also the policy of using the name proposed by those who isolated the element itself and not compounds containing the element in their formula, as is the case of the trioxide.

On the basis of all the above we cannot understand why the name wolfram has been removed from the periodic table, and we claim that the name proposed by its discoverers, which had been accepted since the beginning by the scientific community, should be kept following the Delhuyar brothers' wishes.

In line with this, in reference textbooks such as N. N. Greenwood and E. Earnshaw, "Chemistry of the Elements" it is mentioned: "The name 'wolfram', from which the symbol of the element is derived, is still widely used in the German literature and is recommended by IUPAC, but the allowed alternative 'tungsten' is used in the English-speaking world." N. N. Greenwood and E. Earnshaw, Chemistry of the Elements, 2nd edn., Butterworth-Heinemann, Oxford, 1997, p. 1002.

I hope you will study our request and that you will understand that my statements represent the strong feelings that the vast majority of the Spanish chemical community have on this matter since wolfram is the only element that was discovered in the Iberian Peninsula.

Yours sincerely,

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#### Carta Nº 2. De los Drs. Oliver W. Sacks y Roald Hoffmann al Dr. Neil G. Connelly

September 15, 2004

Prof. N.G. Connelly  
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Dear Prof. Connelly,

We write to you about the suggestion of the IUPAC, in its provisional 2004 "Nomenclature of Inorganic Chemistry," to remove the alternative name "wolfram" for element 74 from the tables, relegating that time-honored alternative to a footnote. We appreciate the necessity of standard names. But, fascinated by the rich history of our subject, moved, simply said, by a love for chemistry, its words, its culture, we think this would be an ill-advised decision.

"Wolfram" has been an alternative name for tungsten for more than two hundred years, ever since the d'Elhuyar brothers obtained the pure metal from the mineral wolframite, and named it "wolfram" in consequence.

The IUPAC itself recommends that the name and symbol of an element should be that proposed by its discoverer(s), and it would be not only contrary to their own policy, but a historical injustice to delete the name "wolfram." Irrational too, to do this while retaining the symbol "W"; for if the name is deleted, everyone -particularly future generations of students- will be bewildered by the symbol, and wonder what it stands for; whereas if the name "wolfram" is retained, in brackets, it will be perfectly clear.

Furthermore, retaining the name "wolfram" will prevent any disjunction between the English and other literatures, several of which continue to use names derived from "wolfram." For instance, a book written by one of us, "Uncle Tungsten: Memories of a Chemical Boyhood," was entitled in German "Onkel Wolfram," similarly in a Dutch translation. Finally, to remove the name "wolfram" would, as Dr. Goya brings out in her letter to you (which she kindly showed to us), be discourteous and upsetting to the Spanish chemical community (and the still larger Spanish-speaking community worldwide), who are keenly conscious and justifiably proud of the discovery of element 74 by their founder figures, and in their own land.

For these reasons we wish to add our voices to Professor Goya's in suggesting that the IUPAC reconsider their decision.

Sincerely yours,

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