

# química nova

ISSN:0100-4042  
ISSN:1678-7064 on line

Volume 42, Número 10, 2019

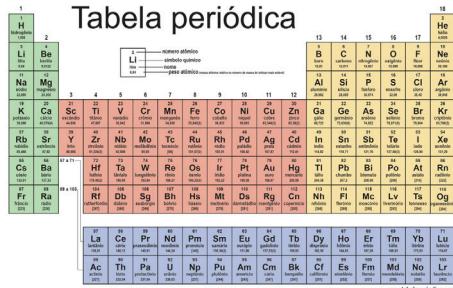
## Editorial

- 1123 Elementos Químicos Estratégicos para o Brasil  
*Nelson H. Morgen e Rossimiriam P. de Freitas*

## Artigos

- 1125 Origens e consequências da tabela periódica, a mais concisa enciclopédia criada pelo ser humano  
*Geraldo M. de Lima, Luiz C. A. Barbosa e Carlos A. L. Filgueiras*

Tabela periódica



The table is a standard periodic table with 18 groups and 7 periods. It includes element names, symbols, atomic numbers, and some physical properties. A legend at the top left explains the color coding: green for alkali metals, blue for alkaline earth metals, red for transition metals, purple for post-transition metals, yellow for halogens, and orange for noble gases.

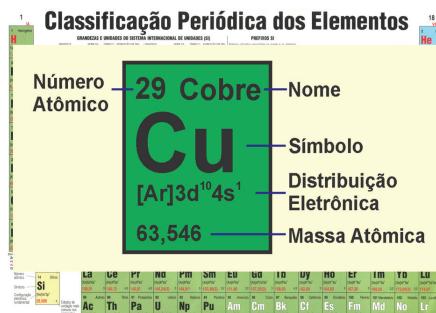
A celebration of the sesquicentennial of the Periodic Table of the Elements, from the origins to the 63 elements in Mendeleev's table and its evolution to the present 118-element table.

- 1146 Ferro – um elemento químico estratégico que permeia História, Economia e Sociedade  
*Hélio A. Duarte*



The importance of the steel for the industrial development of a country makes the iron ore extraction strategic. Brazil is one of the largest iron producers in the world and an approach for the sustainable prosperity of the region is required.

- 1154 Cobre: produção industrial e aplicações  
*Luciana A. Silva, Mauricio M. Victora, Wilson A. Lopes e Silvio Cunha*



The mineral exploration and processing of copper, the structure of the chemical element and its inorganic aspects and uses are described. The importance of the copper element in biological systems and organic reactions are exemplified.

**1162 Índio: uma visão científica e tecnológica de um metal estratégico**

*Ana P. M. Monteiro, Antônio B. M. de Sousa, Ana K. S. Rossetti, Djalma L. de S. Maia, Carlos H. Z. Martins e Oswaldo L. Alves*



This review presents a general view of the scientific and technological aspects of Indium and the economic importance regarding the evolution of its applications in our way of life.

**1172 Manganês no Brasil: descoberta, extração, consumo e comercialização numa perspectiva histórica**

*Júlio C. Afonso*



Manganese: a relevant mineral resource of Brazil from the end of the XIX<sup>th</sup> century.

**1184 Nióbio: um elemento químico estratégico para o Brasil**

*Carlos G. O. Bruziquesi, Jose G. Balena, Márcio C. Pereira, Adilson C. Silva e Luiz C. A. Oliveira*



Niobium compounds can be transformed into materials with high added value bringing wealth and reducing Brazil's prowess.

**1189 Estanho: um metal estratégico ontem e hoje**

*Geraldo M. de Lima*



Tin has found applications in the most diverse human activities and in different eras. Its strategic significance is supported by archaeological, historical and technological evidences.

## 1199 NPK: essentials for sustainability

*Fernando Galembeck, André Galembeck and Leandra P. dos Santos*

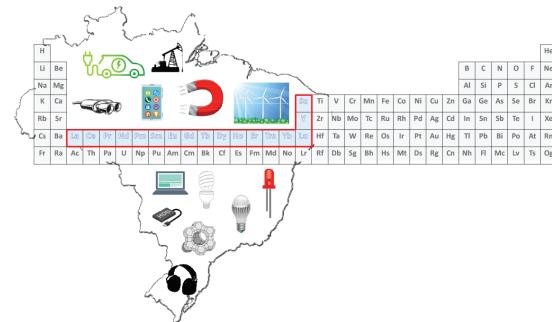
A promising strategy towards a more sustainable economy is to increase the synergy between the uses of biomass for food, energy and industrial raw materials production. This depends critically on higher productivity brought by NPK fertilizers.



## 1208 Terras Raras: Tabela Periódica, descobrimento, exploração no Brasil e aplicações

*Paulo C. de Sousa Filho, Ayla R. B. S. Galaço e Osvaldo A. Serra*

We provide a short discussion about the historical path of the rare earths in the Periodic Table and exploration of these resources in Brazil, detailing some of the extractive activities since the 19<sup>th</sup> century and some prospects for the use of these elements in different fields.



## 1225 Algumas estruturas do carbono elementar e sua importância para o desenvolvimento e soberania do Brasil

*Aldo J. G. Zarbin e Elisa S. Orth*

The paper highlights the importance of four sp<sup>2</sup>-based elemental carbon structures, namely graphite, carbon black, carbon nanotubes and graphene, in the economical, industrial and scientific sovereignty of Brazil.

