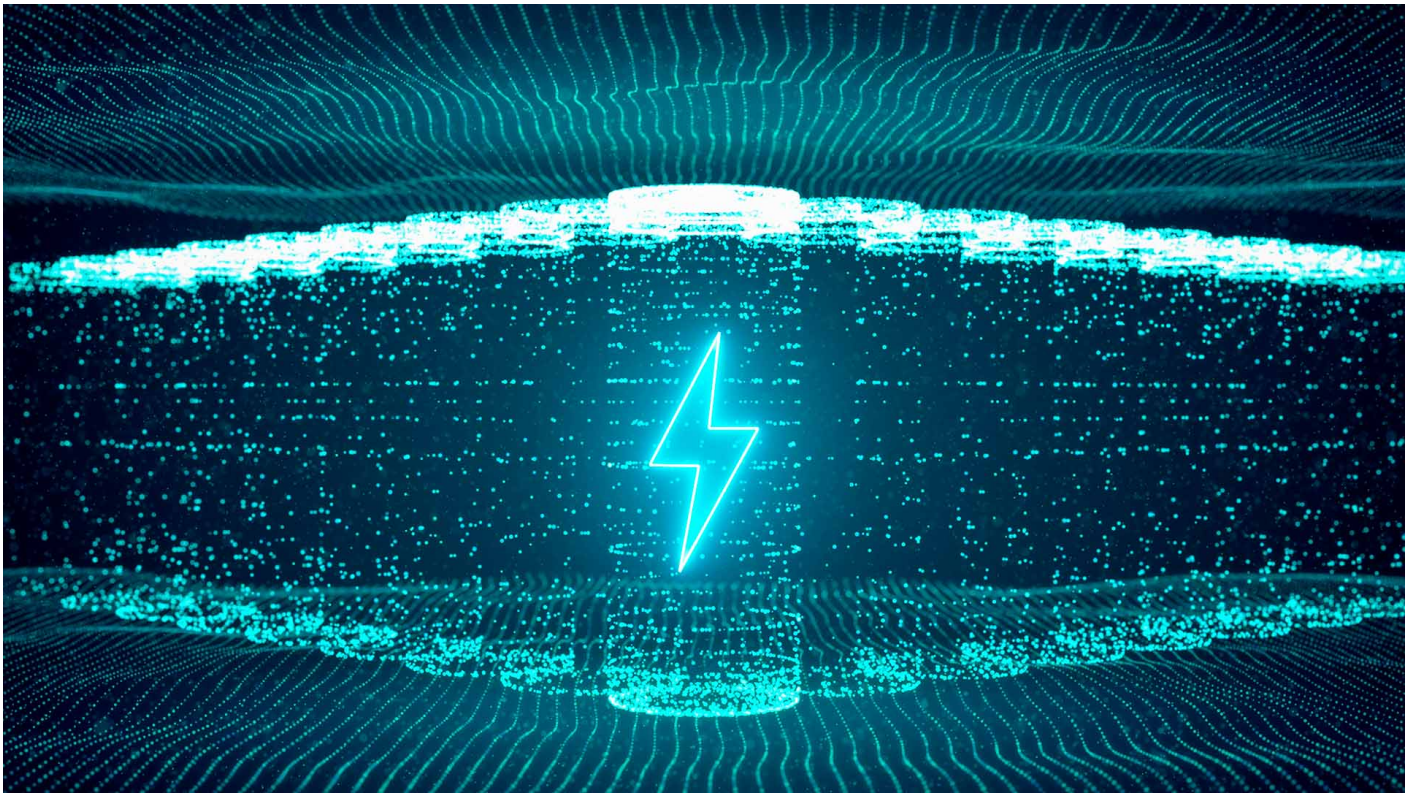
Lithium: its role and importance in Mexico and around the world



Rogelio Bustamante Bello, a professor in the *Intelligent Electromobility* area and researcher at the Tec's **Mexico City campus**, spoke about the **importance and use of lithium in Mexico and around the world**.

The academic explained that **lithium** is a ductile and light alkaline metal which can be found mixed with other compounds in nature. **It's used in the manufacture of batteries, cell phones, ceramics, glass, lubricants**, and even in some medicines used for **treating** bipolar conditions.

*"The **uses of lithium are hugely varied** and that is why we are working together to search for it,"* said the researcher.

Currently, one of its **main uses** is in the manufacture of **electric car batteries**, about which the Tec professor pointed out that:

*"A **lead battery** could drive a car 200 kilometers before being recharged, whereas a **lithium battery** can allow the same car to go 600 kilometers before recharging*.


width="900" loading="lazy">

*"**Lithium's** important because it **can store large amounts of electrical charge in small spaces**, meaning it's very useful for massive energy storage.*

However, it's expected that a combination of technologies such as fuel cells using water and other **physical-chemical processes** will generate **hydrogen** to power electric vehicles in the future.

According to Professor Bustamante, this means that a minimum amount of **lithium batteries** will be required for processes like this.

Other purposes for this element include **the use of lithium** in personal computers, giving them a longer operating time. Lithium carbonate is used on kitchen tables as it's resistant to high temperatures.

In addition, **lithium hydroxide** is used by the **maritime and space industries** to purify air by removing carbon dioxide from the environment.

"Lithium's important because it can store large amounts of electrical charge in small spaces."

Lithium and the situation in Mexico

Rogelio Bustamente explained that Mexico has a limited **amount of lithium** which can be processed and extracted. He said that the density is small, but still usable.

He added that the **Mexican Geological Survey** has identified deposits in Sonora, Chihuahua, Zacatecas, and San Luis Potosí. The United States Geological Survey says that **Mexico ranks 10th for lithium resources out of 34 nations worldwide**.

However, he said that **there is neither the industry nor the infrastructure to extract and exploit this resource in Mexico**.

According to the School of Engineering and Sciences professor, private and public organizations would be responsible for attracting sufficient funding to carry out all **the steps in the extraction process and analyze its cost benefit.**

width="900" loading="lazy">

*“Right now, **Mexico isn’t prepared to commercially exploit lithium**.*

*“**Extraction processes vary**,* depending on how it’s found: different processes and infrastructures are often needed,” explained the academic.

He added that **the process of cleaning the lithium can have an impact on drinking water resources**. Therefore, he notes that the process must be thought out correctly so that extraction doesn’t affect residential areas or the states involved.

The **Chamber of Deputies** recently approved a reform to the Mining Law that nationalizes the exploitation and use of this mineral, as well as establishing the creation of a decentralized body to administrate it.

YOU'LL DEFINITELY WANT TO READ THIS TOO:

https://conecta.tec.mx/en/news/mexico-city/entrepreneurs/mexicans-create-electric-car-cutting-edge-technology