

Calcium ions could be used as an alternative technology to **lithium-ion batteries (LIBs)**, bringing benefits as a result of their abundance and low cost. **Serbia could be one of the top suppliers of calcium carbonate for battery production** as it has the highest confirmed quality of calcite deposits of 99% pureness even attractive for high tech pharmaceutical and chemical industry.

Due to a significant disturbances in the supply chain in Europe, there was an interruption in the consistent delivery of materials. [Serbian calcite and graphite mine Belkalhan.eu](https://www.belkalhan.eu), its availability and cost effective exploitation makes this project highly attractive for investment and R&D JV project.

Time to Take a Calcium Battery Seriously

Calcium is 2,000 times more abundant than lithium, and is available locally in Europe. We find it in anything from bones to chalk in fact. Calcite / calcium carbonate is one the most abundant elements on the earth's crust,' adds Dr. Palacín of Instituto de Ciencia de Materiales de Madrid.

'It's not as geographically concentrated as lithium is. This could make a battery inexpensive because the raw material is cheap.' His team's calcium battery prototype is already proving promising. Europa.Eu reports the material forms a successful negative cathode with twice the electron exchange as lithium.

'As any calcium travels through the electrolyte, two electrons would travel outside (instead of one with lithium),' Dr. Palacín explains. 'One could imagine that for the same battery size, the range would be higher if you used it in an electric vehicle.'

Why Develop a Calcium Battery Now?

Lithium batteries are making a significant contribution to stored energy. However, their success could become their downfall as scarce lithium prices skyrocket, and the green circular economy becomes paramount. Moreover, the silvery metal is dangerous to handle according to Europa.Eu, questioning its sustainability further.

Europe alone may demand 60 times more lithium by 2050 to fulfill the need for electric vehicle batteries. Not to mention renewable energy storage that will form the backbone of reaching its emissions goals. Meanwhile lithium mines, many in remote locations are struggling to meet 2022 demands and are opposing serious environmental opposition.

Calcite batteries are surely becoming more attractive for industry usage but also for investors seeking sustainable returns. Serbian academic and technology institutions could serve as excellent ground base for joint venture R&D projects and later its industrial usage. Competitiveness of local Serbian market could be another driver for Joint venture with calcite mine developer Belkalhan company which has all the preconditions meet including permits and location infrastructure managed.