Comparative analysis in Li_2CO_3 precipitation between experimental data and simulation results.

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Abstract

Lithium is utilized in several applications, mostly to power electromobility. It increasing demand has led to a risky supply chain and high prices. For that reason, since 2020 the European Union has considered lithium as a critical metal. In order to find other alternatives, lithium recovery from second sources had been explored widely in the recent years. Hydrometallurgy have demonstrated to be an effective process to extract cobalt, copper, manganese, nickel and lately lithium from spent Li-ion batteries. This work describes the experimental data obtained in the Li_2CO_3 precipitation compared between simulated results by PHREEQC. These results were evaluated in terms of lithium yield which were consistent with the reported in literature. Therefore, PHREEQC could be a useful tool to understand more precisely the thermodynamics of the studied system and the reaction kinetics.