# Special Issue

# Geochemistry, Petrogenesis and Exploration of Li-Rich Granite-Pegmatite Systems

## Message from the Guest Editors

Lithium-rich granites, and their very coarse-grained variants, pegmatites (also referred to as lithium-cesiumtantalum (LCT) pegmatites), are magmatic rock types generated from highly evolved, typically peraluminous, silicic melts. The high Li concentrations in granitic melts can accumulate through fractional crystallization leading to Li enrichment in residual melts. Lithium-rich pegmatites can crystallize from the residual melts of larger granitic plutons, or from low-degree partial melting of metasedimentary rocks during high-grade metamorphism (anatexis). Lithium-rich granitepegmatites can host a variety of magmatic to hydrothermal deposit types containing Li minerals such as spodumene, petalite, eucryptite, amblygonite, lepidolite and zinnwaldite, and are also commonly rich in a range of other rare metals of economic importance. Lithium-rich granite-pegmatites have gained notable interest in the past decade due to the demand for battery-grade lithium. The aim of this Special Issue is to spotlight studies on the geochemical and petrological attributes of Li-rich granite-pegmatite systems and their exploration.

### **Guest Editors**

Dr. William Keyser

Dr. Benedikt Steiner

Dr. Benjamin Hines

#### Deadline for manuscript submissions

30 November 2025



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Minerals welcomes submissions that report basic and applied research in mineralogy. Research areas of traditional interest are mineral deposits, mining, mineral processing and environmental mineralogy. The journal footprint also includes novel uses of elemental and isotopic analyses of minerals for petrology, geochronology and thermochronology, thermobarometry, ore genesis and sedimentary provenance. Contributions are encouraged in emerging research areas such as applications of quantitative mineralogy to the oil and gas, manufacturing, forensic science, climate change, geohazard and health sectors.

## **Fditor-in-Chief**

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