

Special Issue

Critical Metals on Land and in the Ocean

Message from the Guest Editors

Critical metals commonly refer to rare metals (e.g., Li, Be, Rb, Cs, Nb, Ta, Zr, Hf, W, and Sn), rare earth metals (REEs), dissipated metals (e.g., Ga, Ge, Se, Cd, In, and Re), and noble metals (e.g., PEGs, Co and Cr). These metals are widely used and irreplaceable in modern industries, especially for advanced material, new energy and national defense. These metals are not only preserved on land but also hosted in oceans. This Special Issue covers critical metals on land and in the ocean, and the topics of interest include but are not limited to the mineral and/or deposit geochemistry, geochronology, petrogenesis, and metallogenic mechanisms for these metals. We also welcome contributions on iron manganese concretion, ferromanganese crusts, and marine sediments enriched with rare earth elements, as well as natural gas hydrate (NGS), which are found in oceans. In addition, studies on applications of new methods and/or techniques are also welcomed, e.g., non-traditional stable isotopes, and in situ mineral dating and/or isotopes. This Special Issue aims to provide an in-depth understanding of the ore- and/or rock-forming mechanisms of critical metals both on land and in the ocean.

Guest Editors

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Deadline for manuscript submissions

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About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

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Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.2 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).