

## **Metallogeny of the circum-Japan Sea region: A comparison with other regions of the Pacific Rim**

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Major mineral resources in the circum-Japan Sea region were derived from the ore deposits formed in relation to the Cretaceous-Paleogene granitoid magmatism. Granitoids and related ore deposits in this region show a systematic variation in terms of redox state of granitoids and abundance of ore elements, forming granitoid and metallogenic provinces. Reduced-type granitoids accompanied by Sn-W mineralization formed in the regions of accretionary complexes, while oxidized-type granitoids accompanied by Au or Mo mineralization formed in the regions where previous magmatism prevailed. Granitoid magmatism in a given region tends to be of the oxidized type with time. This correlation may be due to depletion of sedimentary carbon in the source region of granitoid magmatism.

Granitoid types and associated mineralization in time and space were examined in other regions of the Pacific Rim: (a) Magadan area in Far East Russia, (b) Lachlan Fold Belt in southeast Australia, and (c) Bolivia in the Andes, where reduced- and oxidized-granitoid provinces are distributed. In these three regions as well, reduced-type granitoids accompanied by Sn mineralization formed in the crust dominated by sedimentary rocks which were not subjected significant granitoid magmatism, and oxidized-type granitoids appear to have formed in the crust of igneous affinity.