



Precious Metals vs. Base Metals: Nature and Experiment

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Deadline for manuscript submissions:

closed (17 February 2023)

Message from the Guest Editors

Dear Colleagues,

Base metals including iron, lead, copper, nickel, aluminum, and zinc are widely used in industry. They are invaluable to the global economy due to their utility and ubiquity. Precious metals include gold and silver, as well as platinum group metals (PGM) Os, Ir, Ru, Rh, Pt, and Pd. Precious metals are rare and have a high economic value, used both in industry and in jewelry production.

However, the metallogenic associations of precious metals with base metals are well known. They appear both in Cu–Ni deposits with PGM and Au, and in gold deposits of various types.

PGE and Au(Ag) differentiation in silicate magma is mainly governed by variations in oxygen and sulfur fugacity, whereas in the sulfide melt it is controlled by the distribution coefficients of elements between MSS, ISS, and sulfide liquid, causing the mineralogical and geochemical zoning observed in igneous sulfide ore bodies. The ore-geochemical zoning of gold deposits is usually formed under the influence of one- or multi-stage processes with a change in the physicochemical parameters of ore-forming systems.





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Message from the Editor-in-Chief

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Journal Rank: JCR - Q2 (*Mining & Mineral Processing*) / CiteScore - Q2 (*Geology*)

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