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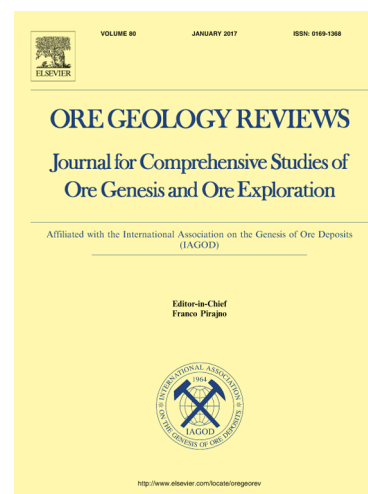
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**Sulfide chemistry and sulfur isotope characteristics of the Cenozoic volcanic-hosted Kuh-Pang copper deposit, Saveh county, northwestern Central Iran**

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**Abstract**

The several-hundred-m-thick Eocene-Oligocene volcanic units in the Urmia-Dokhtar magmatic arc in northwestern Central Iran host stratabound and fault-controlled copper mineralization. The Kuh-Pang deposit (2.8 Mt at 1.65 wt.% Cu, 0.52 g/t Au, 34 g/t Ag) has vein-style copper mineralization, with primary Cu-sulfides of chalcopyrite, bornite, chalcocite and digenite, and supergene Cu-sulfides of chalcocite, covellite, malachite and azurite, in a tectonic–hydrothermal breccia zone within rhyodacite and andesite flows. The mineralization is accompanied by a variety of alterations including silicic, carbonate, argillic and advanced argillic within a broad-scale propylitic halo. The main ore formation is related to hydrothermal breccias, and has a close association with silicic and argillic alterations. Sulfides formed during hydrothermal alteration, as indicated by: 1) the occurrence of disseminated sulfides in the groundmass of hydrothermally altered rocks, 2) the co-precipitation of sulfides and alteration minerals (e.g., kaolinite, alunite) in the cement of hydrothermal breccias, and 3) the occurrence of sulfides

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