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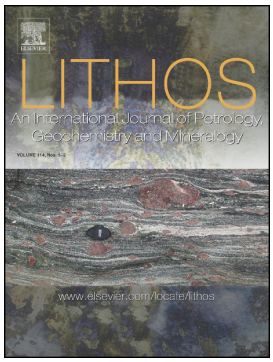

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Origin of dioritic magma and its contribution to porphyry Cu–Au mineralization at Pulang in the Yidun arc, eastern Tibet

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Abstract

The giant Pulang porphyry Cu–Au deposit in the Yidun arc, eastern Tibet, formed due to westward subduction of the Garze–Litang oceanic plate in the Late Triassic. The deposit is hosted in an intrusive complex comprising primarily coarse-grained quartz diorite and cored quartz monzonite. Here, we investigate a suite of simultaneous (216.6 ± 1.9 Ma) diorite porphyries within the complex. The diorite porphyries are geochemically similar to mafic magmatic enclaves (MME) hosted in