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Geochemistry and petrogenesis of Late Carboniferous igneous rocks from southern Mongolia: Implications for the post-collisional extension in the southeastern Central Asian Orogenic Belt

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ABSTRACT

Late Carboniferous is a critical period in terms of the tectonic evolution of the Central Asian Orogenic Belt (CAOB). In this study, we report the petrology, geochronology and geochemistry of Late Carboniferous mafic to felsic rocks from southern Mongolia, to better characterize the Late Carboniferous magmatism in the southeastern CAOB. Three types of igneous rocks have been identified, including diabase dykes, porphyritic granites and quartz monzonite dykes. LA-ICP MS zircon U-Pb dating of these rocks shows that the diabase dykes and porphyritic granites were

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