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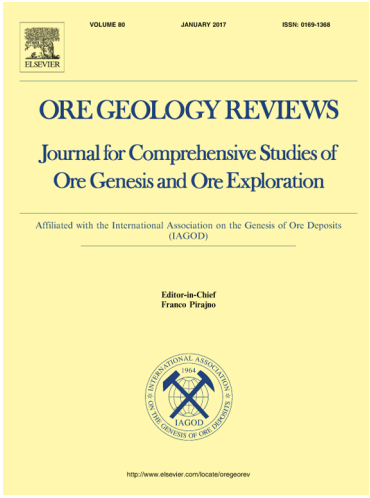

Crustal architecture and its controls on mineralisation in the North China Craton

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Crustal architecture and its controls on mineralisation in the North China Craton

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Abstract

Knowledge of the history of the Earth's continents and the genesis of mineral deposits is poorly understood on a crustal-scale. This contribution combines geological and zircon Hf-isotopic data collected from igneous rocks associated with mineralisation to gain a better understanding of the nature of the growth of, and mineral genesis in the North China Craton. The new zircon U–Pb dates reported here are 2587 ± 62 Ma for syenogranite at Zanhuang in the northeast part of craton, 2552 ± 24 Ma for trondhjemitic gneiss and 2554 ± 29 Ma for metadiorite at Dengfeng in the eastern and central part of, and 2820 ± 6 and 2821 ± 32 Ma for tonalite at Lushan in the southeast part of the craton. Lu-Hf isotopic data collected from granitic rocks for this study yield εHf(t) values and Hf crustal model ages (T_{DM}^{C}) of 3 to 5.8 and 2580–2600 Ma for the

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