

Accepted Manuscript

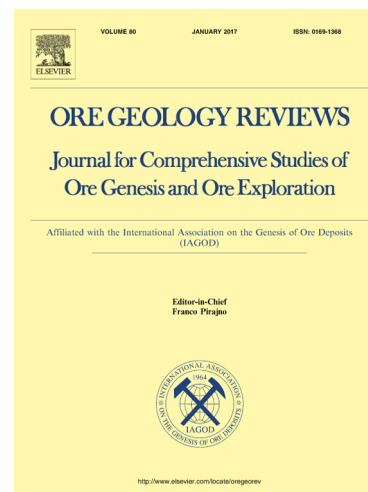
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PII: S0169-1368(18)30229-4
DOI: <https://doi.org/10.1016/j.oregeorev.2018.05.016>
Reference: OREGEO 2590

To appear in: *Ore Geology Reviews*

Received Date: 24 March 2018
Revised Date: 16 May 2018
Accepted Date: 22 May 2018



Please cite this article as: C. Wang, L. Bagas, J. Deng, M. Dong, Crustal architecture and its controls on mineralisation in the North China Craton, *Ore Geology Reviews* (2018), doi: <https://doi.org/10.1016/j.oregeorev.2018.05.016>

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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 $\epsilon_{\text{Hf}}(t)$ values and Hf crustal model ages (T_{DM}^{C}) of 3 to 5.8 and 2580–2600 Ma for the

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