



## **Pb isotope evidence for crust–mantle interactions at late Archean convergent continental margins**

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The global Pb isotope systematics and geochemical diversification of late Archean granitoids indicate a change in a tectonic regime towards the Archean - Proterozoic boundary. After a long-term episodic formation of sodic TTGs of oceanic origin, convergent continental margins with abundant batholiths of potassic granitoids emerged between 3.0–2.5 Ga. The Pb isotope compositions of granitoids reflect a presence of crustal segments of different ages and demonstrate, together with geochemical features, that the batholiths involve both mantle- and crust-derived material. It seems that the increase in crust–mantle interactions, probably as a consequence of frequent slab breakoffs or delamination at convergent continental margins, caused multisource magmatism by triggering melting, metasomatism and hydrothermal activity in the mantle and crust, possibly reflecting an assembling supercontinent towards the end of the Archean.