

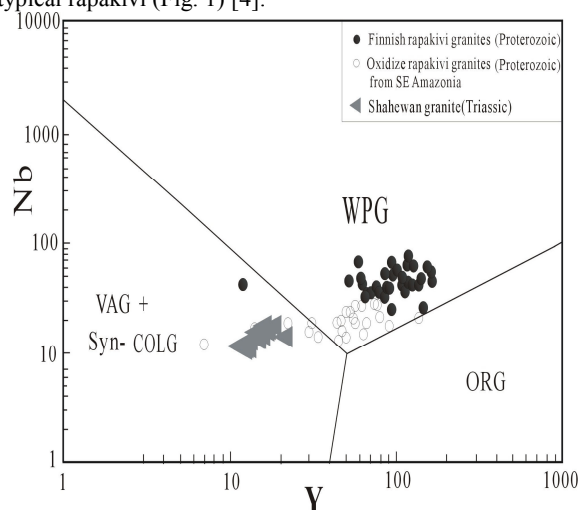
Shahewan pluton: implication on the evolution of the Qinling orogenic belt

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The Shahewan pluton is located near Shangzhou, in central China. It was regarded as typical rapakivi, forming a Triassic rapakivi belt along with several other granite found in the Qinling orogen. The age of these granites was taken as the end time of the main orogeny and beginning of the post-collision of Qinling orogen belt [1]. Rapakivi is usually formed ~150 Ma after collision. Therefore, a rapakivi belt in the Qinling orogen implies that the main collision between the South and North China blocks occurred much earlier than generally accepted (Triassic). This contradicts with many observations, e.g., sediments of the South Qinling are successive marine deposit from the Sinian to middle Triassic [2], syn-collisional granites were formed in Triassic (206-220 Ma) [3], which are the same as that of the Shahewan pluton (214Ma) [1], etc. In this study, we analyzed the major and trace element compositions of samples from Shahewan and nearby syn-collisional granites. Our results show that Shahewan batholith has the same geochemical characteristics as syn-collisional granites nearby and all along the South Qinling granite belt [3], which are obviously different from typical rapakivi (Fig. 1) [4].



References

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