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新疆富蕴可可托海—二台断裂带中假玄武玻璃及其围岩的年代学研究 [点此下载全文](#)

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摘要:

发育在新疆富蕴可可托海—二台断裂带中的假玄武玻璃是古地震断裂快速滑移形成的构造岩。地质产状、显微构造研究表明,这些假玄武玻璃主要由发生重结晶的玻璃质熔融体形成。假玄武玻璃基质的全岩 $^{40}\text{Ar}/^{39}\text{Ar}$ 阶段升温方法主阶段和K Ar年龄分别为 282.8 ± 3.8 Ma和 76.4 ± 7.4 Ma。假玄武玻璃所在母岩(黑云母花岗岩和钾长花岗岩)的锆石U-Pb年龄分别为 390.4 ± 1.0 Ma和 396.3 ± 0.1 Ma,表明二台断裂带中的假玄武玻璃是在二叠世早期形成的,也说明二台断裂带古地震活动至少可以追溯到晚古生代(早二叠世早期)。尽管二台断裂带是现今仍然活动的地震构造带,但目前所见到的假玄武玻璃是早二叠世时期古地震活动的产物。1931年的富蕴8.0级地震仅仅是沿着二台断裂带发生的多次构造活动的一次活动,与假玄武玻璃之间没有成因上的联系。

关键词: [40Ar-9Ar 阶段升温](#) [K-Ar年代学](#) [假玄武玻璃](#) [可可托海—二台断裂带](#) [新疆](#)

Ages of Pseudotachylite and Its Wall Rocks from the Keketuohai—Ertai Fault Zone, Xinjiang, Northwest China [Download Fulltext](#)

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Abstract:

The pseudotachylite developed along the Keketuohai—Ertai fault zone in Xinjiang, northwest China, is one of the friction—melt derived tectonites by the rapid faulting of ancient seismic zone, which is testified by the characteristics of microstructure, e.g. the presence of glassy pseudotachylites and differently morphological microlites, such as skeletal, dendritic, acicular and globular in the matrix of pseudotachylites. The bulk ages of both K Ar and $^{40}\text{Ar}/^{39}\text{Ar}$ step heating of the pseudotachylite matrix yielded 282.8 ± 3.8 Ma and 76.4 ± 7.4 Ma, respectively; and the ages of U Pb of zircons from the two granitoids being the wall rocks of the pseudotachylite are 390.4 ± 1.0 Ma and 396.3 ± 0.7 Ma, respectively. These results show that the pseudotachylites from the Keketuohai—Ertai fault zone formed in the early Permian period, and the occurrences of pseudotachylite may probably indicate the most earliest paleoseismic event during the early Permian times along the Keketuohai—Ertai fault zone. The Fuyun magnitude 8.0 earthquake in 1931 is just one of the multi seismic activities along the Keketuohai—Ertai fault zone, which has no any genetic relationship with the pseudotachylites developed in the fault.

Keywords: [40Ar/39Ar stepwise incremental heating method](#) [K-Ar technique](#) [pseudotachylite](#) [Keketuohai—Ertai fault zone](#) [Xinjiang](#)

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