Figure DR1. A: The microstructures in the gneiss do not display any change towards the contact (XPL). Plagioclase does not show mechanical twins. B: Contact between pseudotachylyte generation vein and mylonitic gneiss host-rock. The microstructures in the gneiss do not display any change towards the contact (XPL). Calcite and feldspar do not show mechanical twins. C: Back-scattered electron microscopy image of a representative sample of Hoping River pseudotachylytes. The plagioclase snow flake-shaped microcrystallites attest of frictional melt rapid quenching.