# High ductility of K-feldspar and development of granitic banded ultramylonite in Ryoke metamorphic belt, SW Japan

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Granitic mylonites from a greenschist facies mylonite zone in Ryoke metamorphic belt, SW Japan show three types of microstructure with increasing mylonitization: (1) mylonites, (2) banded mylonites and (3) banded ultramylonites. The banded structure is composed of quartz layers, biotite layers, K-feldspar layers, plagioclase + K-feldspar (+ quartz + biotite) layers and K-feldspar + plagioclase + quartz layers. Microstructural and textural investigations by cathodoluminescence (CL), scanning electron microscope (SEM) and electron back-scatter diffraction (EBSD) techniques show that different kind of layer was deformed by different processes including dislocation creep of quartz and K-feldspar and interstitial filling the space between clasts by K-feldspar from solution. Dominant processes of the grain-size reduction were fracturing of plagioclase, myrmekite formation around K-feldspar and dynamic recrystallization of quartz. The development of the banded structure was promoted by high mobility (solution transfer) and ductility (dislocation creep) of K-feldspar.