

SCG090-P02

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Fluctuation of fluid chemistry at depth of accretionary prism

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Fluid inclusion studies on ancient accretionary prisms such as Shimanto and Kodiak complexes, have reconstructed P-T-d paths of accretionary prisms. However, chemical features of fluids in deep portion of subduction zones are not well constrained. In recent years, geochemical investigations on co-seismic chemical reactions have been developed. Anomalies of trace element concentrations of slip zone samples obtained from Taiwan Chulungpu Fault show the evidence of high-temperature water-rock interactions during earthquake (Ishikawa et al., 2008). Mineral assemblages, carbon and oxygen isotopes, REE patterns, and ⁸⁷Sr/⁸⁶Sr ratios of fault-related mineral veins show temporal changes in fluid source and redox state between inter- and co-seismic stages of seismic cycles (Yamaguchi et al., submitted). Taking these recent progresses into account, we reconsider fluid inclusion as a strong tool for exploring chemical features of syn-tectonic fluids in accretionary prisms. In this presentation, we plan to show the results of trace element and isotope geochemistry along the Nobeoka Thrust, Shimanto accretionary complex, and discuss fluctuations of fluid chemistry during faulting processes in seismogenic subduction zones.