
[EE] Evening Poster | S (Solid Earth Sciences) | S-MP Mineralogy & Petrology

[S-MP34]Oceanic and Continental Subduction Processes

convener:REHMAN Ur Hafiz(Department of Earth and Environmental Sciences, Graduate School of Science and Engineering, Kagoshima University), Tatsuki Tsujimori(Tohoku University), Chin Ho Tsai
Sun. May 20, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

This international session aims at bringing earth scientists from Japan and overseas to present their research related to the processes of oceanic and continent subduction, continent-continent collisions, metamorphism of crustal rocks, formation of the oceanic/continental arcs, and accretion/ tectonic erosion of material along subduction boundaries.

Topics such as role of the fore- and back-arcs in the subduction zones, process of accretion of volcanoclastic and terrigenous sediments along the subduction/collision boundaries, deformation and metamorphism of subducted crust, recycling of material via tectonic erosion and exhumation will be the main focus of the session. Exchange of ideas among geoscientists applying different approaches on problems related to the theme of the session are most welcome.

[SMP34-P10]Observations on structure of Vein structure in term of X-ray CT and deformation pattern of unconsolidated mudstone

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Keywords:silt stone, shear test, Vein structure

Vein structure is a blackish vein and is able to observe at the siltstone parts in the alternated sandstone and siltstone layers. The width of vein is a millimeter unit, the height is generally a few centimeters, and the each veins are arranged in parallel and at the regular interval (about a few mm interval).It had reported that the vein structure could be observed mainly the subduction around the oceanic plate margin (e.g. Brother et al., 1996)., and the formation mechanism of vein structure has been discussed from various viewpoints. For example, Brother et al. (1996) reported that the vein structure was formed by the deformation due to down slope creep or the shear wave from earthquake since the vein structure was formed by the deformation due to down slope creep or the shear wave from earthquake since the features of vein structure in the outcrop sample to the vein structure generated by the shaking experiment using powder. In addition, Ogawa et al. (2006) suggested that the vein structure was created when the consolidation and cementation progresses in the silt layer. The degree of saturation, consolidation and cementation are important to elucidate the formation mechanism of the vein structure. Although the vein structure observed outcrops and the surface of the samples, in this study, we analyzed the three-dimensional structure using the X - ray CT images of the samples, and try to discuss the formation mechanism. Furthermore, we made samples reproducing the degree of silt rock cementation. The silt sample was mixed with cement at various ratios and was consolidated before the cement solidified. The sample was sheared and the inner structure after deformation was observed.