A veiw of intraoceanic thrusting from deformation of metamorphic sole of the Oman ophiolite in Al Wasist

Yasuo Kugimiya [1], Shusaku Mizokami [2], Yohei Yamaura [1], Toshiaki Masuda [1]

[1] Inst. of Geosciences, Shizuoka Univ., [2] Inst. Geosciences, Shizuoka Univ.

The Oman ophiolite extending about 100 km wide, 400 km long area lie on the Sultanate of Oman and United Arab Emirate, Arabian Peninsula. The metamorphic sole beneath the Oman ophiolite crops out sporadically over the whole range of the Oman Mountains. They are modeled to have been produced by an intraoceanic thrusting of a detached oceanic lithosphere emplaced onto an adjacent oceanic crust. The underthrusting oceanic materials were metamorphosed up to amphibolite and granulite facies by the heat from the overthrusting hotter mantle peridotite with influence of shear deformation due to their thrusting movement in the late Cretaceous. We present mineral lineations, quartz and amphibole microtextures, and porphyroclast systems of feldspar in metacherts and metabasites in this talk.

The Oman ophiolite is the largest scale ophiolite in the World, extending about 100 km wide, 400 km long area on the Sultanate of Oman and United Arab Emirate, north-eastern Arabian Peninsula. The metamorphic sole beneath the Oman ophiolite crops out sporadically as small slices over the whole range of the Oman Mountains. They are modeled to have been produced by an intraoceanic thrusting of a detached oceanic lithosphere emplaced onto an adjacent oceanic crust. The underthrusting oceanic materials were metamorphosed up to amphibolite and granulite facies by the heat from the overthrusting hotter mantle peridotite with influence of shear deformation due to their thrusting movement in the late Cretaceous. It consists of metabasites and metacherts with minor amount of metapelites and marbles. We present mineral lineations, quartz and amphibole microtextures, and porphyroclast systems of feldspar in metacherts and metabasites in this talk.