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Room:302

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Petrology of the Hakone volcano ; on the bases of rock forming minerals

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My petrological studies of the Hakone volcano were initiated by the late Professor Hisashi KUNO.

The Hakone volcano is composed of island-arc type tholeiite magma, which is not dry but moderately hydrous. The following subjects were recognized. The hydrous tholeiite magma can produce arc-tholeiite series and calc-alkali series through fractional crystallization in the magma reservoir under open-system condition and closed-system hydrous condition for water, respectively.

Crystallization trends of rock forming minerals (pyroxene, feldspar etc.) in the individual lava flow of the hydrous tholeiitic magma are represented by chemical zoning from phenocryst through microphenocryst to the groundmass in each lava. Those trends indicate degassing (or dehydrating) trends of erupted lava.

Crystallization trend of minerals of hydrous magma in the subvolcanic magma reservoir is represented by core of phenocrysts throughout lava-flow strata in each volcano. Those trends indicate water-enrichment (or hydrating) trend in the magma reservoir.

Keywords: Hisashi KUNO, Hakone volcano, pyroxene, fractional crystallization, tholeiite, calc-alkali