

Volcanic rocks from Mt. Popa, Union of Myanmar: an introduction

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Petrology of volcanic rocks from Mt. Popa, central Myanmar, is introduced to Japanese earth scientists who are supposed to have rare chance to visit there. The presentation is given based on geological and petrological information in the literature (Chhiber, M.D., 1934; Stephenson, D. & Marshall, T.R., 1984; Whitford-Stark, J.L., 1987) in addition to petrological data obtained by the presenter. Mt. Popa (H=1518m, 95.2 degree E/21 degree N) is a slightly dissected composite volcano (35 km north-south, 20 km east-west) with a summit crater. The last eruption of the volcano was probably in 442 BC. The extrusives are separated into Pliocene-aged Older Volcanics and Pleistocene-aged Younger Volcanics. The Older Volcanics are basaltic andesite, andesite and dacite having 55-67 wt. % SiO₂, while the Younger Volcanics are basalt and basaltic andesite having 50-55 wt. % SiO₂. The rocks are, regardless of their ages, calc-alkaline rocks rather rich in K₂O. All the available analyses have high LILE/HFSE values and show MORB- and primitive mantle-normalized incompatible element abundance patterns having distinct negative Nb anomalies. The Popa magmas are suggested to have formed under the influence of subduction of the Indian-Australian plate beneath the Eurasian plate.

References

- Chhiber, M.D. (1934), *Geology of Burma*. Macmillan, London, pp. 538.
Stephenson, D. & Marshall, T.R. (1984), The petrology and mineralogy of Mt. Popa Volcano and the nature of the late-Cenozoic Burma volcanic arc: *J. Geol. Soc. London*, **141**, 747-762.
Whitford-Stark, J.L. (1987), A Survey of Cenozoic Volcanism on Mainland Asia. *Geol. Soc. Amer. Spec. Pap.*, **213**, pp. 74.