Geochemistry and tectonic setting of volcanic rocks in Cheltan area, SW of Bardsir, Kerman, Iran

[1]HASHEM BAGHERI, [2]ALI GHASEMI

Department of Geology, Faculty of Sciences, University of Isfahan, Isfahan, Iran, Hm_Bagheri@gmail.com

[2]Iranian Academic Center for Education, Culture and Research (ACECR), Isfahan, I.R. IRAN, A_ghasemi@acecr.ac.ir

In southeast of Kerman Province, there is a volcanic complex belongs to Uromieh-Dokhtar volcanic belt.This complex mainly contains basaltic-andesite and basalt lava flows with the Eocene age, alternative with pyroclastic rocks. Petrographic evidences include zoning, sieve texture and rounded crystal in plagioclase and pyroxene phenocrysts disequilibrium conditions between crystals and host melts during crystalization. Geochemical characteristics indicate that these rocks belong to calcalkaline domain. The highly enrichment of LREE compared to HREE, high contents of LILE relative to HFSE and significant anomalies of Nb, Ti and P suggest a subduction-related volcanism. These features indicate that these rocks have probably been generated in an enriched mantle with a low degree of partial melting in a subduction zone. Mineralogical, textural and geochemical investigations on volcanic successtions in this area show that systematic chemical changes have been occurred in shallow magma chamber and these changes have been affected on mineralogy, texture and chemistry of related lava flows.

[1] Peng, T., Wang, Y., Zhao, G., Fan, W. and Peng, B.,2007 Arc-like volcanic rocks from the Southern Lancangtion Zone, SW china: Geochronological and geochemical constraint on their petrogenesis and tectonic implication. *Lithos* **102**: 358-373