

BIOGRAPHICAL SKETCH

Ronald Victor Fodor

Professor of Geology

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Born: June 10, 1944 -- Cleveland, Ohio (U.S. citizen)

Employment

1977-present:

Department of Marine, Earth, and Atmospheric Sciences North Carolina State University

Position: Professor of Geology

Research: Igneous petrology and mineralogy: volcanic and gabbroic rocks and mafic and ultramafic xenoliths, largely from Hawaii, Arizona, Brazil, and eastern Europe; plutons of North Carolina. Trace-element geochemistry. Application of x-ray fluorescence and electron microprobe analytical techniques.

1972-1977:

Department of Geology and Institute of Meteoritics University of New Mexico, Albuquerque, New Mexico

Position: Post-doctoral Research Associate (under Dr. Klaus Keil)

Research: Application to studies of the chemistry, mineralogy, and petrology of volcanic rocks of Hawaii and from the S. Atlantic Ocean (Deep-Sea Drilling Project); the chemistry, mineralogy, and petrology of chondritic meteorites and lithic inclusions in chondritic meteorites.

Education

PhD (Geology) University of New Mexico, 1972

MS (Geology) Arizona State University, 1968

BS (Geology) Ohio University, 1966

1968-1972:

University of New Mexico, Ph.D. (advisor: Dr. Wolfgang Elston), *Research:* Chemistry, mineralogy, and petrology of basalts and andesites; geologic mapping, southwestern New Mexico.

1966-1968:

Arizona State University, MS (advisor: Dr. M.F. Sheridan), *Research:* Petrology and petrography of silicic lavas and ash-flow tuffs; geologic mapping.

Recent Publications

Recently accepted for publication:

Fodor, R. V., Diorite segregations in gabbro: geochemical characteristics, conditions for origins, and MELTS modeling. *Jour. Geology*

Representative recent publications:

1. McCarter, R.L., Fodor, R.V., Trusdell, F., 2006. Perspectives on basaltic magma crystallization and differentiation: lava-lake blocks erupted at Mauna Loa volcano summit, Hawaii. *Lithos* v. 90: 187-213
2. Chen, S, Frey, F.A., Bichert-Toft, J., Fodor, R.V., Bauer, G.R., Xu, G., 2005. Enriched components in the Hawaiian plume: evidence from Kahoolawe volcano, Hawaii, *Geochemistry, Geophysics, Geosystems*, v. 6, Q11006, 21 pages (on-line journal)
3. Weinstein, J.P, Fodor, R.V., Bauer, G.R., 2004. Koolau shield basalt as xenoliths entrained during rejuvenated-stage eruptions: perspectives on magma mixing. *Bull. Volcanology* 66, 182-199.
4. Fodor, R.V., Sial, A.N., Gandhok, G., 2002. Petrology of spinel peridotite xenoliths from northeastern Brazil: lithosphere with a high geothermal gradient imparted by Fernando de Noronha plume. *Jour. South Amer. Earth Sci* 15: 199-214.
5. Fodor, R.V., 2001. The role of tonalite and diorite in Mauna Kea volcano, Hawaii, magmatism: petrology of summit-region leucocratic xenoliths. *Jour. Petrol.* 42: 1685-1704.
6. Fodor, R.V., Hanan, B.B., 2000. Geochemical evidence for the Trindade hotspot trace: Columbia seamount ankaramite. *Lithos* 51: 293-304.
7. Fodor, R.V., 2000. Plagioclase of Hawaiian tholeiitic and alkalic magma parentages: distinctions based on REE, Sr, Ba, Hf, and Ta. *Mineralogy and Petrology* 69: 213-225.
8. Fodor, R.V., Mukasa, S.B., and Sial, A.N., 1998. Isotopic and trace-element indications of lithospheric and asthenospheric components in Tertiary alkalic basalts, northeastern Brazil. *Lithos* 43: 197-217.
9. Fodor, R.V., Bauer, G.R., and Jacobs, R.S., 1998. Alkalic magma modified by incorporation of diverse tholeiitic components: 'complex' hybridization on Kahoolawe Island, Hawaii. *Mineralogy and Petrology* 63: 73-94.
10. Fodor, R.V., and Galar, P., 1997. A view into the subsurface of Mauna Kea volcano, Hawaii: crystallization processes interpreted through the petrology and petrography of gabbroic and ultramafic xenoliths. *Jour. Petrology* 38: 581-624.
11. Hoover, S.R., and Fodor, R.V., 1997. Magma-reservoir crystallization processes: small-scale dikes in cumulate gabbros, Mauna Kea volcano, Hawaii. *Bull. Volcanol.* 59: 186-197.
12. Kosecki, J., and Fodor, R.V., 1997. Petrology, mineralogy, and geochemistry of the Rolesville granitic batholith, eastern Piedmont, North Carolina. *Southeastern Geol.* 37: 91-107.
13. Dobosi, G., Fodor, R.V., and Goldberg, S.A., 1995. Late-Cenozoic alkalic basalt magmatism in northern Hungary and Slovakia: petrology, source compositions, and relationship to tectonics. *Acta Vulcanologica* 7: 199-207.
14. Fodor, R.V., Dobosi, G., and Sial, A.N., 1995. Zoned clinopyroxenes in alkalic basalt: clues to fractionation and magma-mixing histories for seemingly primitive magmas. *Chem. Erde* 55, 133-148.
15. Fodor, R.V., Jacobs, R.S., and Bauer, G.R., 1994. Hollandite in Hawaiian basalt: a relocation site for weathering-mobilized elements. *Mineral. Mag.* 58: 589-596.

Past collaborators in research and publications:

A.N. Sial (Brazil); G. Dobosi (Hungary); Fred Frey (MIT); Dave Clague (Monterey Bay Marine Lab); R.B. Moore (USGS); Sam Mukasa (Michigan); Barry Hanan (UCSD); Glenn Bauer (Haw. Water Res); R.S. Jacobs (Encore Assoc. Ft. Worth); Skip Stoddard (NCSU); Steve Goldberg (UNC; Argonne Labs); Sarah Hoover (Clackamus Coll.); Drew Coleman (UNC); Frank Trusdell (USGS); Scott Vetter (Centenary College); Sichun Chen (FSU)

Graduate Advisors:

M.F. Sheridan (MS; Arizona State University)

W.E. Elston (PhD; University of New Mexico)