

REFERÊNCIAS

- ALMEIDA, F.F.M. Relações tectônicas das rochas alcalinas mesozóicas da Região Meridional da Plataforma Sul-Americana. *Rev. Bras. Geoc.*, v. 13, p. 139-158, 1983.
- ALMEIDA F.F.M. Distribuição regional e relações tectônicas do magmatismo pós-Paleozóico no Brasil. *Rev. Bras. Geoc.*, v. 16, p. 325-349, 1986.
- ALMEIDA F.F.M. *Geologia e Petrologia do Arquipélago de Fernando de Noronha*. Rio de Janeiro: DGM/DNPM. 1955. 181. p. (Monografia 13).
- ALMEIDA F.F.M. Geologia e Petrologia da Ilha da Trindade. Rio de Janeiro. *DGM/DNPM*. p. 206, Monografia 18, 1961.
- ALMEIDA, F.F.M. Arquipélago de Fernando de Noronha - Registro de monte vulcânico do Atlântico Sul. p. 361-368. In: SCHOBENHAUS, C.; D.A. CAMPOS, D.A.; QUEIROZ, E.T.; M.; WINGE, M.; BERBERT-BORN, M.L.C. (Ed.). *Sítios Geológicos e Paleontológicos do Brasil*. Brasília,DF: DNPM/CPRM - Comissão Brasileira de Sítios Geológicos e Paleobiológicos (SIGEP), 2002.
- ALMEIDA F.F.M. *Origem e Evolução da Plataforma Brasileira*. Rio de Janeiro. *Boletim da Divisão de Geologia Mineral (DNPM)*, v. 241, p. 1-36, 1967.
- ALMEIDA, F.F.M. As ilhas oceânicas brasileiras e suas relações com a tectônica do Atlântico Sul. *Terræ didactica* v. 2, n. 1, p. 3-18, 2006.
- ARENA, M.C. *Petrologia da sucessão magmática do Arquipélago de Abrolhos*. 2008. 113f. Dissertação (Mestrado em Geologia) – Faculdade de Geologia, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, 2008.
- ASSUMPÇÃO, M.; ESCALANTE, C.; SCHIMMEL, M. Initial impact of the Trindade Plume, Goiás, reviewed by seismic tomography? In: SIMPÓSIO SOBRE VULCANISMO E AMBIENTES ASSOCIADOS, 2., 2002, Belém. *Boletim de resumos...* Belém, 2002. v. 77.
- BECCHIO, R. et al. Trace element and isotopic geochemistry of lavas from Trindade and Martin Vaz, South Atlantic Magmatic Diversity: Volcanoes and their Roots. In: IAVCEI INTERNATIONAL VOLCANOLOGICAL CONGRESS, 1998, Cape Town. Abstracts...Cape Town, 1998. p. 6.
- BOETTCHER, A.L. et al. Metasomatism and the genesis of kimberlites and alkali basalts. In Proc. Second International Kimberlite Conference: Washington, D.C., *American Geophysical Union*. v. 37, p. 401-408, 1979.
- CAMPOS, T.F.C. et al. Modificações metassomáticas das rochas milonitizadas do complexo ultramáfico do arquipélago de São Pedro e São Paulo, Atlântico Equatorial. *Geochimica Brasiliensis*, v. 17, n. 2, p. 81-90, 2003.

CARTER, S. R. et al. Continental volcanics derived from enriched and depleted source regions: Nd and Sr isotopic evidence. *Earth and Planetary Science Letters*, v. 37, p. 401-408, 1978.

CAVALCANTE, J. C. *Limites e evolução do sistema Jaguaribeano. Província Borborema, Nordeste do Brasil*. 1999. 183f. Dissertação (Mestrado em Geologia) – Centro de Ciências Exatas e da Terra. Universidade Federal do Rio Grande do Norte, Natal, 1999.

CHAFFEY, D.J., CLIFF, R.A.; WILSON, B.M. Characterization of the St Helena magma source. *Geological Society Special Publication*, v. 42, p. 257–276, 1989.

CONCEIÇÃO, J.C.J. et al. Controle tectônico do magmatismo do Complexo Vulcânico de Abrolhos, Bacia do Espírito Santo. In CONGRESSO BRASILEIRO DE GEOLOGIA, 39., Camboriú, *Anais...*, Camboriú, 1996. v. 5, p. 384-387.

CORDANI, U.G. Idade do vulcanismo no Oceano Atlântico Sul. *Boletim IGA*, v. 1, p. 9–75, 1970.

CROUGH, S.T., MORGAN, W.J., HARGRAVES, R.B. Kimberlites: their relation to mantle hot spots. *Earth and Planetary Science Letters*, v. 50, p. 260–274, 1980.

DEINO, A. & POTTS, R. Age-probability spectra from examination of single-crystal $^{40}\text{Ar}/^{39}\text{Ar}$ dating results: Examples from Olorgesailie, Southern Kenya Rift. *Quaternary International*, v. 13-14, p. 47-53, 1992.

DONNELLY, K.E. et al. Origin of enriched ocean ridge basalts and implications for mantle dynamics. *Earth and Planetary Science Letters*, v. 226, p. 347-366, 2004.

ERNESTO, M. *Determinação da curva de deriva polar aparente para o Mesozóico da América do Sul*. 1996. 56f. Tese (Doutorado em Geologia) - IAG/USP, São Paulo, 1996.

ERNESTO, M. et al. Parana magmatic province - Tristan da Cunha plume system: fixed versus mobile plume, petrogenetic considerations and alternative heat sources. *Journal of Volcanology and Geothermal Research*. v. 118, p. 15–36, 2002.

FERRARI, A.L. & RICOMINI, C. Campo de esforços Plio-Pleistocênico na Ilha da Trindade (Oceano Atlântico Sul, Brasil) e sua relação com a tectônica regional. *Revista Brasileira de Geociências*. v. 9, n. 2, p. 195-202, 1999.

FLEITOUT, L.; MORICEAU, C. How many hotspots? In: REUNION CONFERENCE. INSTITUT DE PHYSIQUE DU GLOBE DE PARIS, 1999, Paris. *Abstracts...* Paris, 1990. p. 6.

FRANCIS, D. M. The origin of amphibole in ilerzomite xenoliths from Nunivak Island, Alaska. *Journal of Petrology*, v. 17, p. 357-378, 1976.

ABLEY, G.J. et al. Basanite-Phonolite lineages of Teide-Pico Viejo volcanic complex, Tenerife, Canary Islands. *Journal of Petrology*, v. 39, p. 905-936, 1998.

GIBSON, S.A. et al. The Late Cretaceous Impact of the Trindade Mantle Plume: Evidence from Large-volume, Mafic, Potassic Magmatism in SE Brazil. *Journal of Petrology*, v. 36, p. 189-229, 1995a.

GIBSON S.A. et al. Late Cretaceous rift-related upwelling and melting of the Trindade starting mantle plume head beneath western Brazil. *Contributions to Mineralogy and Petrology*, v. 126, p. 303-314, 1997.

GORINI, M.A. & CARVALHO, J.C. Geologia da margem continental inferior brasileira e do fundo oceânico adjacente. In SCHOBENHAUS, C., CAMPOS, D.A., DERZE, G.R., ASMUS, H.A. (Coord.). *Geologia do Brasil: Texto Explicativo do Mapa Geológico do Brasil e da área Oceânica Adjacente Incluindo Depósitos Minerais Brasília*, DF: DNPM, 1984. Escala 1:2500000. p. 473–489.

GRIFFIN, W. L. Lherzolite nodules from the Fen Alkaline Complex, Norway: *Contributions to Mineralogy and Petrology*, v. 38, p. 135-146, 1973.

HALLIDAY, A.N. et al. Incompatible trace elements in OIB and MORB source enrichment in the sub-oceanic mantle. *Earth and Planetary Science Letters*, v. 133, pp. 379– 395, 1995.

HEIZLER, M. T. & Harrison, T. M. Multiple trapped argon components revealed by $^{40}\text{Ar}/^{39}\text{Ar}$ analysis. *Geochimica et Cosmochimica Acta*, v. 52, p. 295-1303, 1988.

HERZ, N. Time of spreading in the south atlantic: information from Brazilian alkalic rocks. *Geological Society of American Bulletin*. n. 88, p. 101-112, 1977.

HOFMANN, A.W. Mantle geochemistry: The message from oceanic volcanism. *Nature*, v. 385, p. 219-229, 1997.

HOFMANN, A.W. & WHITE, W.M. Mantle plumes from ancient oceanic crust. *Earth and Planetary Science Letters*, v. 57, p. 421-436, 1982.

HUMPHREYS, E.R. & NIU, Y.L. On the composition of ocean island basalts (OIB): The effects of lithospheric thickness variation and mantle metasomatism. *Lithos*, v. 112, p. 118-136, 2009.

IRVINE, T.N. & BARAGAR, W.R.A. A guide to the chemical classification of common volcanic rocks. *Canadian Journal of Earth Sciences*, v. 8, p. 523-547, 1971.

JAHNERT, R.J. Gradiente geotérmico da Bacia de Campos. *Boletim de Geociências da Petrobras*. v. 1, n. 2, p. 183–189, 1987.

KAY, R.W. & HUBBARD, N. J. Trace elements in ocean ridge basalts. *Earth and Planetary Science Letters*, v. 38, p. 95-116, 1978.

LEÃO, Z. M. A. N. 2002. Abrolhos, Bahia - O complexo recifal mais extenso do Atlântico Sul. In: SCHOBENHAUS, C.; CAMPOS, D. A. ; QUEIROZ, E. T.; WINGE, M.; BERBERT-BORN, M. L. C. (Ed.) *Sítios Geológicos e Paleontológicos do Brasil*. Brasília, DF: DNPM/CPRM - Comissão Brasileira de Sítios Geológicos e Paleobiológicos (SIGEP), 2002. v. 1, p. 345-359.

MARQUES, L.S. et al. Petrology, geochemistry and Sr–Nd isotopes of the Trindade and Martin Vaz volcanic rocks (Southern Atlantic Ocean). *Journal of Volcanology and Geothermal Research*, v. 93, p. 191–216, 1999.

LLOYD, F.E. & BAILEY, D.K. Light element metasomatism of the continental mantle: the evidence and the consequences. *Physics and Chemistry of the Earth*, v. 9, p. 389–416, 1975.

MARQUES, L.S. et al. Petrology, geochemistry and Sr–Nd isotopes of Trindade and Martin Vaz volcanic rocks (Southern Atlantic Ocean). *Journal of Volcanology and Geothermal Research*, v. 93, p. 191–216, 1999.

MCDUGALL, I.; HARRISON, T.M. *Geochronology and thermochronology by the ^{40}Ar – ^{39}Ar method*. 2. ed. Oxford: Oxford University Press, 1999.

MCKENZIE, D. & O'NIONS, R.K. The source regions of oceanic island basalts. *Journal of Petrology*, v. 36, p. 133–159, 1995.

MERRIHUE, C. & TURNER, G. Potassium–Argon dating by activation with fast neutrons. *Journal of Geophysical Research*, v. 71, p. 2852–2857, 1966.

MOHRIAK, W. U.; BARROS, A. Z. N.; FUJITA, A. Magmatismo e tectonismo cenozóico na região de Cabo Frio, RJ. In: CONGRESSO BRASILEIRO DE GEOLOGIA, 37., 1990, Natal. *Anais...*, Natal: SBG, 1990. v. 6, p. 2873–2884.

MOHRIAK, W.U. Interpretação geológica e geofísica da bacia do Espírito Santo e da região de Abrolhos: petrografia, datações radiométricas e visualização sísmica das rochas vulcânicas. *Boletim de Geociências da PETROBRAS*, v. 14, p. 133–142, 1989.

MORGAN, W.J. Plate motions and deep mantle convection. *Geological Society of America Memoir*, v. 132, p. 7–22, 1972.

MOTOKI, A. & SISCHER, S.E. Hydraulic fracturing as a possible mechanism of dyke-sill transitions and horizontal discordant intrusions in trachytic tabular bodies of Arraial do Cabo, State of Rio de Janeiro, Brazil. *Geofísica Internacional*, México, v. 47, n. 1, p. 13–25, 2008.

MOTOKI, A. et al. Intrusion mechanism of tabular intrusive bodies of subhorizontal discordant emplacement of the Cabo Frio Island and the neighbour areas, State of Rio de Janeiro, Brazil. *Geociências*, Rio Claro, v. 27, n. 2, p. 207–218, 2008a.

MOTOKI, A. et al. Taxa de soerguimento atual do arquipélago de São Pedro e São Paulo, Oceano Atlântico Equatorial. Minas Gerais, Ouro Preto. *REM.*, v. 62, n. 3, p. 331–342, 2009.

NIU, Y.L. The origin of alkaline lavas. *Science*, v. 320, p. 883–884, 2008.

NIU, Y.L. Some basic concepts and problems on the petrogenesis of intra-plate ocean island basalts. *Chinese Science Bulletin*, v. 54, p. 4148–4160, 2009.

NIU, Y.L. & O'HARA, M.J. Origin of ocean island basalts: A new perspective from petrology, geochemistry and mineral physics considerations. *Journal of Geophysical Research*, v. 108, n. B4, 2209, Apr. c2003.

NIU, Y.L. & O'HARA, M.J. MORB mantle hosts the missing Eu (Sr, Nb, Ta and Ti) in the continental crust: New perspectives on crustal growth, crust-mantle differentiation and chemical structure of oceanic upper mantle. *Lithos*, v. 112, p. 1-17, 2009.

NIU, Y.L.; O'HARA, M.J.; PEARCE, J.A. Initiation of subduction zones as a consequence of lateral compositional buoyancy contrast within the lithosphere: A petrologic perspective. *Journal of Petrology*, v. 44, p. 851-866, 2003.

NIU, Y.L. et al. The origin of E-Type MORB at ridges far from mantle plumes: The East Pacific Rise at 11°20'. *Journal of Geophysical Research*, v. 104, pp. 7067- 7087, 1999.

NIU, Y.L. et al. A trace element perspective on the source of ocean island basalts (OIB) and fate of subducted ocean crust (SOC) and mantle lithosphere (SML). *Episodes*, v. 35, n. 2, 2012.

NIU, Y.L. et al. Geochemistry of near-EPR seamounts: Importance of source vs. process and the origin of enriched mantle component. *Earth and Planetary Science Letters*, v. 199, p. 327-345, 2002.

NIU, Y.L. et al. Mantle source heterogeneity and melting processes beneath seafloor spreading centers: The East Pacific Rise, 18°-19°S. *Journal of Geophysical Research*, v. 101, p. 27711-27733, 1996.

NIU, Y.L. et al. The Origin of Intra-plate Ocean Island Basalts (OIB): The lid effect and its geodynamic implications. *Journal of Petrology*, v. 52, p. 1443-1468, 2011.

NOVAIS, L. C. C. *Lineamentos Transversais nas Porções Centro e Norte da Bacia do Espírito Santo e na Faixa Proterozóica Adjacente: Influência na Sedimentação e na Compartimentação Estrutural*, Rio de Janeiro, 2005. Dissertação (Mestrado em Análise de Bacias e Faixas Móveis) – Departamento de Geologia, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, 2005.

O'CONNOR, J.M. & DUNCAN, R.A. Evolution of the Walvis Ridge — Rio Grande Rise hot spot system: implications for African and South American plate motions over plumes. *Journal of Geophysics. Research*, v. 95, p. 17475–17502, 1990.

O'REILLY, Y.S. & GRIFFIN, W.L. Mantle metasomatism beneath western Victoria, Australia: I, Metasomatic processes in Cr-diopside lherzolites. *Geochimica et Cosmochimica Acta*, v. 52, p. 433–447, 1988.

PILET, S. et al. Monte Carlo Simulations of Metasomatic Enrichment in the Lithosphere and Implications for the Source of Alkaline Basalts. *Journal of Petrology*, v. 52, p. 1415-1442, 2011.

PILET, S.; BAKER, M.B.; STOLPER, E.M. Metasomatized lithosphere and the origin of alkaline lavas. *Science*, v. 320, p. 916-919, 2008.

PILET, S. et al. The metasomatic alternative for ocean island basalt chemical heterogeneity: *Earth and Planetary Science Letters*, v. 236, p. 148-166, 2005.

RICCOMINI, C.; RODRIGUES FRANCISCO, B.H. Idade potássio-argônio do derrame de ankaramito da Bacia de Itaboraí, Rio de Janeiro, Brasil: implicações tectônicas. In: CONGRESSO BRASILEIRO DE GEOLOGIA, 37., 1992, São Paulo. *Resumos Expandidos...* São Paulo: SBG, 1992. v. 1, p. 469-470.

SCHOBENHAUS, C.; CAMPOS, D.A.; DERZE, G.R.; ASMUS, H.E. (Coord.), *Geologia do Brasil: Texto Explicativo do Mapa Geológico do Brasil e da área oceânica adjacente incluindo depósitos minerais.. Brasília, DF: DNPM, 1984. Escala 1:2500.000. p. 9-53.*

SICHEL, S.E. et al. Geophysical and geochemical indications for existence of cold upper mantle beneath the Equatorial Atlantic Ocean. *Revista de Sociedade Brasileira de Geofísica*, v. 26, n. 1, p. 69-86, 2008a.

SICHEL, S.E. et al. Subvolcanic vent-filling welded tuff breccia of the Cabo Frio Island, State of Rio de Janeiro, Brazil. *REM - Revista Escola de Minas, Ouro Preto*, v. 61, n. 4, 423-432, 2008b.

SICHEL, S.E. et al. *Rocha ultramáfica do manto abissal: Os dez anos da Estação Científica do arquipélago de São Pedro e São Paulo*. Brasília, DF: SECIRM, 2009.

SIEBEL, W. et al. Trindade and Martin Vaz Islands, South Atlantic: isotopic (Sr, Nd, Pb) and trace elements constraints on plume related magmatism. *Journal of South American Earth Sciences*. v. 13, p. 79-103, 2000.

SILVA, J. M. R. et al. Geologia. In: LEVANTAMENTO de Recursos Naturais, Folha SE 24, Rio Doce. Rio de Janeiro: IBGE, 1987. v. 34

SKOLOTNEV, S.G.; PEYVE, A.; TRUKO, N.N. New data on the structure of the Vitoria-Trindade seamount chain (western Brazil basin, South Atlantic). *Doklady Earth Sciences*, v. 431, n. 2, p. 435-440, 2010.

SMITH, W.H.F. & SANDWELL, D.T. Global seafloor topography from satellite altimetry and ship depth soundings. *Science*, v. 27, p. 1956–1962, 1997.

SUN, S.-S. & HANSON, G.N. Origin of Ross Island basanitoids and limitations upon the heterogeneity of mantle sources for alkali basalts and nephelinites. *Contributions to Mineralogy and Petrology*, v. 52, p. 77–106, 1975.

SUN, S.-S. & MCDONOUGH, W.F. Chemical and isotopic systematics in ocean basalt: Implication for mantle composition and processes. In *Magmatism in the Ocean Basins* edited by Saunders, A. D., Norry, M. J., *Geological Society Special Publication*, v. 42, p. 313-345, 1989.

SZATMARI, P & MOHRIAK, W. U. Plate model of post-breakup tectono-magmatic activity in the adjacent Atlantic. In: SIMPÓSIO NACIONAL DE ESTUDOS TECTÔNICOS, 5, 1995, Gramado, *Anais...* Gramado: SBG, 1995. v. 1, p. 213-214.

TAYLOR, J.R. *An Introduction to Error Analysis: The Study of Uncertainties in Physical Measurements*. Mill Valley, California: University Scientific Books, 1982. 270 p.

TILLEY, C.E. Dunite mylonite of St. Paul's rocks (Atlantic). *American Journal of Science*, v. 245, p. 483-491, 1947.

ULBRICH, M.N.C. Petrography of alkaline volcanic-subvolcanic rocks from the Brazilian Fernando de Noronha archipelago, Southern Atlantic Ocean. *Boletim do Instituto de Geociências da Universidade de São Paulo, Série Científica*, v. 24, p. 77-94, 1994.

WEAVE, B.L. Geochemistry of highlyundersaturated ocean island basalt suites from the South Atlantic Ocean: Fernando de Noronha and Trindade islands. *Contribution to Mineralogy and Petrology*, v. 105, p. 502-515, 1990.

WHITE, W.M. & DUNCAN, R.A. Geochemistry and geochronology of the Society Islands: New evidence for deep mantle recycling. *American Geophysical Union Geophysical Monograph*, v. 95, p. 183-206, 1996.

WORKMAN, R.K. et al. Recycled metasomatised lithosphere as the origin of the enriched mantle II (EM2) end-member: Evidence from the Samoan Volcanic Chain. *Geochemistry, Geophysics and Geosystems*, v. 5, 2004.

WYLLIE, P.J. Conditions for melting and metasomatism in the earth's mantle. In: INTERNATIONAL GEOLOGICAL CONGRESS, 27., 1984, Moscow. Proceedings...., Utrecht: VNU Science Press, 1984. v. 9, p. 581-604.

WYLLIE, P.J. Conditions for melting and metasomatism in the earth's mantle. *Geologica Carpathica*, v. 36, p. 323-335, 1985.

WYLLIE, P.J. Transfer of subcratonic carbon into kimberlites and rare earth carbonatites. In Magmatic Processes: Physicochemical Principles edited by Mysen, B. O. *The Geochemical Society Special Publication*, v. 1, p. 107-119, 1987b.

WYLLIE, P.J. Magma genesis, plate tectonics, and chemical differentiation of the Earth. *Reviews of Geophysics*, v. 26, p. 370- 404, 1988b.

WYLLIE, P.J. Metasomatism and fluid generation in mantle xenoliths: experimental. In: NIXON, P. H. (Ed.). *Mantle Xenoliths*. New York: Wiley, 1987c. p. 609-621.

WYLLIE, P.J. Solidus curves, mantle plumes, and magma generation beneath Hawaii. *Journal of Geophysical Research*, v. 93, p. 4171-4181, 1988a.

WYLLIE, P.J. Discussion of recent papers on carbonated peridotite, bearing on mantle metasomatism and magmatism. *Earth and Planetary Science Letters*, v. 82, p. 391-397; 401-402, 1987a.

YODER H.S.JR. & TILLEY, C.E. Origin of basalt magmas: an experimental study of natural and synthetic rock systems. *Journal of Petrology*, v. 3, p. 342-532, 1962.

YORK, D. Least squares fitting of a straight line with correlated errors, *Earth and Planetary Science Letters*, v. 5, p. 320-324, 1969.