Print

NENIMF: NENIMF Publications

Related Links

» Complete list of the NENIMF users during 2007-2009

2014

[287] Bennett, N.R., Brenan, J.M., and Koga, K.T., 2014. The Solubility of platinum in silicate melt under reducing conditions: Results from experiments without metal inclusions, Geochimica et Cosmochimica Acta, 133, 422-442.

[286] Blusztajn, J., Shimizu, N., Warren, J.M., and Dick, HJB (2014), In-situ Pb isotopic analysis of sulfides in abyssal peridotites: New insights into heterogeneity and evolution of the oceanic upper mantle, Geology, 42, 159-162.

[285] Callegaro, S., Baker, D.R., De Min, A., Marzoli, A., Geraki, K., Bertrand, H., Viti, C., and Nestola, F. (2014) Microanalyses link sulfur from large igneous provinces and Mesozoic mass extinctions, Geology, 42, 895-898 doi: 10.1130/G355983.1

[284] Chi, H., Dasgupta, R., Duncan, M., and Shimizu, N. (2014) Partitioning of Carbon between Fe-rich Alloy Melt and Silicate Melt in a Magma Ocean-Implications for the Abundance and Origin of Volatiles in Earth, Mars, and the Moon, Geochimica et Cosmochimica Acta, 139, 447-471.

[283] Dedert, M., Stoll, H., Saskia, K., Young, J.R., Shimizu, N., Kroon, D., Lourens, L., and Ziveri, P., Temporally variable diagenetic overgrowth on deep-sea nannofossil carbonates across Palaeogene hyperthermals and implications for isotopic analyses. Marine Micropaleontology, in press.

[282] Fiege, A., Holtz, F., Shimizu, N., Mandeville, C.W., Behrens, H., and Knipping, L. (2014), Sulfur isotope fractionation between fluid and andesitic melt: an experimental study, Geochimica et Cosmocchimica Acta, in press.

[281] Gaetani, G.A., O'Leary, J.A., Koga, K.T., Hauri, E.H., Rose-Koga, E.F., and Monteleone, B.D. (2014) Hydration of mantle olivine under variable water and oxygen fugacity conditions, Contributions to Mineralogy and Petrology 167:965 DOI 10.1007/s00410-014-0965-y.

[280] Gilbert, S., Danyushevsky, L., Rodeman, T., Shimizu, N., Gurenko, A., Meffre, S., Thomas, H., Large, R., and Death, D. (2014) Optimisation of laser parameters for the analysis of sulphur isotopes in sulphide minerals by Laser Ablation ICP-MS. Journal of Analytical Atomic Spectrometry, DOI: 10.1039/C4JA00011K

[279] Esposito, R., Hunter, J. Schiffbauer, J.D., Shimizu, N. and Bodnar, R.J. (2014) An assessment of the reliability of melt inclusions as recorders of the pre-eruptive volatile content of magmas, American Mineralogist, in press.

[278] Maneta, V. and Baker, D.R. (2014) Exploring the effect of lithium on pegmatitic textures: An experimental study, American Mineralogist, v. 99(7), 1193-1520.

[277] Marschall, H.R. and Monteleone, B.D. (2014) Boron Isotope Analysis of Silicate Glass with Very Low Boron Concentrations by Secondary Ion Mass Spectrometry, Geostandards and Geoanalytical Research, DOI: 10.1111/j.1751-908X.2014.00289.x

[276] Nachlas, W.O., Whitney, D.L., Teyssier, C., Bagley, B., and Mulch, A. (2014) Titanium concentration in quartz as a record of multiple deformation mechanisms in an extensional shear zone. Geochemistry, Geophysics, Geosystems. DOI: 10.1002/2013GC005200

[275] Renedo, R.N., Nachlas, W.O., Whitney, D.L., Teyssier, C., Piazolo, S., Gordon, S.M., and Fossen, H. (2014) Fabric development during exhumation from ultrahigh-pressure in an eclogite-bearing shear zone, Western Gneiss Region, Norway, Journal of Structural Geology, in press.

[274] Rose-Koga, E.F., Koga, K.T., Hamada, M., Helouis, T., Whitehouse, M.J., and Shimizu, N. (2014) Volatile (F and Cl) concentrations in Iwate olivine-hosted melt inclusions indicating low-temperature subduction, Earth, Planets and Space, 66:81.

[273] Wanless, V.D., Behn, M.D., Shaw, A.M., and Plank, T. (2014) Variations in melting dynamics and mantle compositions along the Eastern Volcanic Zone of the Gakkel Ridge: insights from olivine-hosted melt inclusions, Contrib. Mineral. Petrol, 167, 1005. DOI 10.1007/s00410-014-1005-7

2013

[272] Ashley, K.T., Webb, L.E., Spear, F.S., and Thomas, J.B. (2013) P-T-D histories from quartz: A case study of the application of the TitaniQ thermobarometer to progressive fabric development in metapelites, Geochemistry, Geophysics, Geosystems, 14-9, 3821-3843.

[271] Bucholz, C.E., Gaetani, G.A., Behn, M.D., and Shimizu, N. (2013) Post-entrapment modification of volatiles and oxygen fugacity in olivine-hosted melt inclusions, *Earth and Planetary Science Letters 374: 145-155*.

[270] Dasgupta, R., Chi, H., Shimizu, N., Buono, A.S. and Walker, D. (2013) Carbon solution and partitioning between metallic and silicate melts in a shallow magma ocean: Implications for the origin and distribution of terrestrial carbon. *Geochimica et Cosmochimica Acta* 102: 191-121.

[269] Lever, M.A., Rouxel, O.R., Alt, J.C., Shimizu, N., Ono, S., Coggon, R.M., Shanks III, W.C., Lapham, L., Elvert, M., Prieto-Mollar, X., Hinrichs, K-U, Inagaki, F., and Teske, A. (2013) Evidence for Microbial Carbon and Sulfur Cycling in Deeply Buried Ridge Flank Basalt, *Science* 15, 339(6125): 1305-1308: DOI: 10.1126/science.1229240

[268] McFarlane, D.A. and Lundberg, J. (2013) On the occurrence of the scimitar-toothed cat, *Homotherium latidens* (Carnivora; Felidae), at Kents Cavern, England. *Journal of Archaeological Science* 40: 1629-1635.

[267] Mejia, L.M., Isensee, K., Mendez-Vicente, A., Pisonero, J., Shimizu, N., Gonzalez, C., Monteleone, B., and Stoll, H. (2013) B content and Si/C ratios from cultured diatoms (Thalassiosira pseudonana and Thalassiosira weissflogii): Relationship to seawater pH and diatom carbon acquisition Ceochimica et Cosmochimica Acta, 123: 322-337.

[266] Nadeau, O., Williams-Jones, A.E., and Stix , J. (2013) Magmatic-hydrothermal evolution and devolatilization beneath Merapi volcano, Indonesia, Journal of Volcanology and Geothermal Research, 261, 50-68.

[265] Ribeiro, J., Stern, R. J., Kelley, K.,Martinez, F., Ishizuka, O., Manton, W. I. (2013) Nature and distribution of the slab-derived fluids and the mantle source along the Southeast Mariana Forearc Rift Geochemistry Geophysics Geosystems, 14(10): 4585–4607, doi: 10.1002/ggge.20244.

[264] Sarafian, A.R., Roden, M.F., and Patino-Douce, A.E. (2013) The volatile content of Vesta: Clues from apatite in eucrites, *Meteoritics and Planetary Science*: 1-20, doi: 10.1111/maps.12124

[263] Shimizu, K., Shimizu, N., Sano, T., and Matsubara, N. (2013) Paleo-elevation and subsidence of Shatsky Rise inferred from CO2 and H2O in fresh volcanic glass, Earth and Planetary Science Letters, 383, 37-44.

[262] Sims, K.W.W., Pichat, S., Reagan, M.K., Kyle, P.R., Dulaiova, H., Dunbar, N.W., Prytulak, J., Sawyer, G., Layne, G.D., Blichert-Toft, J., Gauthier, P.J., Charette, M.A., and Elliott, T.R. (2013) On the time scales of magma genesis, melt evolution, crystal growth rates and magma degassing in the Erubus Volcano magmatic system using the 238U, 235U, and 232Th decay series, *Journal of Petrology* 54-2: 235-271.

2012

[261] Blackburn, T., Shimizu, N., Bowring, S.A., Schoene, B. and Mahan, K. H.

(2012) Zirconium in rutile speedometry: new constraints on lower crustal cooling rates and residence temperatures. *Earth and Planetary Science Letters* 317-318:231-240.

[260] Brounce, M., Feineman, M., LaFemina, P., and Gurenko, A. (2012) Insights into Crustal Assimilation by Icelandic Basalts from Boron Isotopes in Melt Inclusions from the 1783-1784 Lakagígar Eruption. *Geochimica et Cosmochimica Acta*, 94:164-180.

[259] Dalou, C., Koga, K. T., Shimizu, N., Boulon, J. and Devidal, J.L. (2011) Experimental determination of F and Cl partitioning between lherzolite and basaltic melt. *Contributions to Mineralogy and Petrology* 163:591-609, DOI 10.1007/s00410-011-0688-2.

[258] Dedert, M., Stoll, H.M., Kroon, D., Shimizu, N., Kanamaru, K. and Ziveri, P. (2012) Productivity response of calcareous nannoplankton to Eocene Thermal Maximum 2 (ETM2). Climate of the Past 8:977-993.

[257] Filiberto, J., Wood, J., Dasgupta, R., Shimizu, N., Le, L. and Treiman, A.H. (2012) Effect of fluorine on near-liquidus phase equilibria of an Fe-Mg rich basalt. *Chemical Geology* 312-313:118-126.

[256] Gaetani, G.A., O'Leary, J.A., Shimizu, N., Bucholz, C.E., and Newville, M. (2012) Rapid re-equilibration of H_2O and oxygen fugacity in olivine-hosted melt inclusions. *Geology*, 40:915-918.

[255] Hayden, T.A., Limburg, K.E. and Pine III, W.E. (2012) Using otolith chemistry tags and growth patterns to distinguish movements and provenance of native fish in the grand canyon. *River Research and Applications*, DOI: 10.1002/rra.2627

[254] Koleszar, A.M., Kent, A.J., Wallace, P.J. and Scott, W.E. (2012) Controls on long-term low explosivity at andesitic arc volcanoes: Insights from Mount Hood, Oregon, *Journal of Volcanology and Geothermal Research* 219- 220:1-14.

[253] Rose-Koga, E.F., Koga, K.T., Schiano, P., Le Voyer, M., Shimizu, N., Whitehouse, M.J., and Clocchiatti, R. (2012) Pb isotope variations and halogen concentrations in olivine-hosted melt inclusions from South Tyrrhenian magmas, *Chemical Geology*, in press.

[252] Shaw, A.M., Hauri, E.H., Behn, M.D., Hilton, D.R., Macpherson, C.G. and Sinton, J.M. (2012) Long-term Preservation of slab signatures in mantle inferred from hydrogen isotopes. *Nature Geoscience* 5:224-228.

[251] Soule, S.A., Nakata, D.D., Fornari, D.J., Fundis, A.T., Perfit, M.R. and Kurz, M.D. (2012) CO_2 variability in mid-ocean ridge basalts from syn-emplacement degassing: Constraints on eruption dynamics. *Earth and Planetary Science Letters* 327:39-49.

[250] Stoll, H., Langer, G., Shimizu, N. and Kanamaru, K. (2012) B/Ca ratios in coccoliths and relationship to calcification vesicle pH and dissolved inorganic carbon concentrations. Geochim. Cosmochim. Acta 80, 143-157.

[249] Wanless, D, and Shaw, A.M. (2012) Lower crustal crystallization and melt evolution at mid-ocean ridges. *Nature Geoscience*, 5, 651-655.

2011

[248] Esposito, R., Bodnar, R. J., Danyushevsky, L., De Vivo, B., Fedele, L., Hunter, J., Lima, A. and Shimizu, N. (2011) Volatile evolution of magma associated with the Solchiaro eruption in the Phlegrean Volcanic District (Italy). *Journal of Petrology* 52:2431-2460.

[247] Gaetani, G.A., Cohen, A.L., Wang, Z. and Crusius J. (2011) Rayleigh- based, multi-element coral thermometry: A biomineralization approach to developing climate proxies, *Geochimica et Cosmochimica Acta* 75:1920- 1932.

[246] Gurenko, A.A. and Kemenetsky, V.S. (2011) Boron isotopic composition of olivine-hosted melt inclusions from Gorgona komatiites, Colombia: New

evidence supporting wet komatiite origin, *Earth and Planetary Science Letters* 312:201-212.

[245] Head, E.M., Shaw, A.M., Wallace, P.J., Sims, K.W.W. and Carn, S.A. (2011) Insight into volatile behavior at Nyamuragira volcano (D.R. Congo, Africa) through olivine-hosted melt inclusions, *Geochemistry, Geophysics, Geosystems* 12: Q0AB11, doi:10.1029/2011GC003699.

[244] Helo, C., Longpre, M.A., Shimizu, N., Clague, D.A. and Stix, J. (2011) Explosive eruptions at mid-ocean ridges driven by CO_2-rich magmas. *Nature Geoscience* 4:260-263.

[243] McCoy, S. J., Robinson, L. F., Pfister, C. A., Wooten, J. T. and Shimizu, N. (2011) Exploring B/Ca as a pH proxy in bivalves: relationships between Mytilus colifornianus B/Ca and environmental data from the northeast Pacific. *Biogeosciences* 8:2567-2579.

[242] Parman, S.W., Grove, T.L., Kelley, K.A. and Plank, T. (2011) Along-arc variations in the pre-eruptive H_2O contents of Mariana Arc magmas inferred from fractional paths, *Journal of Petrology*. 52(2):257-278.

[241] Ripley, E.M., Li, C., Moore, C.H., Elswick, E.R., Maynard, J.B., Paul, R.L., Sylvester, P., Seo, J.H. and Shimizu, N. (2011) Analytical Methods for Sulfur Determination in Glasses, Rocks, Minerals and Fluid Inclusions, *Reviews in Mineralogy and Geochemistry* 73:9-39.

[240] Sayani, H.R., Cobb, K.M., Cohen, A.L., W.C. Elliott, W.C., Nurhati, I.S., Dunbar, R.B., Rose, K.A. and Zaunbrecher, L.K. (2011) Effects of diagenesis on paleoclimate reconstructions from modern and young fossil corals, *Geochimica et Cosmochimica Acta* 75:6361-6373.

[239] Webster, J.D., Goldoff, B. and Shimizu, N. (2011) C-O-H-S fluids and granitic magma: how S partitions and modifies CO_2 concentrations of fluid- saturated felsic melt at 200 MPa. *Contributions to Mineralogy and Petrology* 162:849-865, DOI:10.1007/s00410-011-0628-1.

2010

[238] Cohen, A.L., and Gaetani, G.A. (2010) Ion partitioning and the geochemistry of coral skeletons: solving the mystery of the vital effect. *In Ion Partitioning in Ambient-Temperature Aqueous Systems* edited by Prieto, M. and Stoll, H. M., pp. 377-397 European Mineralogical Unions Notes v. 11.

[237] Hanghøj K., Kelemen P.B., Hassler, D. and Goddard, M. (2010) Composition and genesis of depleted mantle peridotites from the Wadi Tayn massif, Oman peridotite: major and trace element geochemistry and Os isotope and PGE systematics. *Journal of Petrology 51:201-227*.

[236] Le Voyer, M., Rose-Koga, E.F., Shimizu, N., Grove, T.L. and Schiano, P. (2010) Two contrasting H_2O-rich components in primary melt inclusions from Mount Shasta. *Journal of Petrology* 51:1571-1595.

[235] Schipper, C.I., White, J.D.L., Houghton, B.F., Shimizu, N., Stewart, R.B. (2010) Explosive submarine eruptions driven by volatile-coupled degassing at Loihi Seamount, Hawaii. *Earth and Planetary Science Letters* 295:497-510.

[234] Schipper, C.I., White, J.D.L., Houghton, B.F., Shimizu, N. and Stewart, R.B. (2010) “Poseidic” explosive eruptions at Loihi Seamount, Hawaii. *Geology* 38:291-294.

[233] Shaw A.M., Behn, M.D., Humphris, S.E., Sohn, R.A. and Gregg, P.M. (2010) Deep pooling of low degree melts and volatile fluxes at the 85°E segment of the Gakkel Ridge: Evidence from olivine-hosted melt inclusions and glasses. *Earth and Planetary Science Letters* 289:311-322.

[232] Stefano, C.J., Mukasa, S.B., Andronikov, A. and Leeman, W.P. (2010) Water

and other volatile systematics of olivine-hosted melt inclusions from the Yellowstone hotspot track. *Contributions to Mineralogy and Petrology* 161(4):615-633.

[231] Sundberg M, Hirth G, Kelemen PB (2010) Trapped melt in the Josephine peridotite: implications for permeability and melt extraction in the upper mantle. J Petrology , 51, 185-200.

[230] Warren JM, Shimizu N (2010) Cryptic variations in abyssal peridotite compositions: Evidence for shallow-level melt infiltration in the oceanic lithosphere. J Petrology 51, 395-423.

2009

[226] Webster, J.D., Sintoni, M.F., De Vivo, B. (2009) The partitioning behavior of Cl and S in aqueous fluid- and saline-liquid saturated phonolitic and trachytic melts at 200 MPa. Chemical Geology 263, 19-36.

[225] Mandeville, C.W., Webster, J.D., Tappen, C., Taylor, B.E., Timbal, A., Sasaki, A., Hauri, E., Bacon, C.R. (2009) Stable isotopic and petrologic evidence for open-system degassing during the climactic and pre-climactic eruptions of Mt. Mazama, Crater Lake, Oregon. Geochimica et Cosmochimica Acta 73, 2978-3012.

[224] Banas, A., Stachel, T., Phillips, D., Shimizu, N., Viljoen, K.S., Harris, J.W. (2009) Ancient metasomatism recorded by ultra-depleted garnet inclusions in diamonds from DeBeers Pool, South Africa. Lithos 112S: 736-746.

[223] Bea, F., Pesquera, A., Montero, P., Torres_Ruiz, J., and Gil-Crespo, P.P. (2009) Tourmaline 40Ar/39Ar chronology of tourmaline-rich rocks from Central Iberia dates the main Variscan deformation phases. Geol Acta 7:399-412.

[222] Cohen, A. L., McCorkle, D. C., de Putron, S., Gaetani, G. A., and Rose, K. A., (2009) Morphological and compositional changes in the skeletons of new coral recruits reared in acidified seawater: Insights into the biomineralization response to ocean acidification. Geochem, Geophys, Geosys 10, Q07005, doi:10.1029/2009GC002411.

[221] Dalou C, Koga KT, Hammouda T, Poitrasson F (2009) Trace element partitioning between carbonatitic melts and mantle transition zone minerals: implications for the source of carbonatites. Geochim Cosmochim Acta 73: 239-255

[220] Holcomb, M., Cohen, A. L., Gabitov, R. I., and Hutter, J. L., (2009) Compositional and morphological features of aragonite precipitated experimentally from seawater and biogenically by corals. Geochim Cosmochim Acta 73, 4166-4179.

[219] Jackson MG Hart SR, Shimizu N, Blusztajn JS (2009) 87Sr/86Sr and 143Nd/144Nd disequilibrium between Polynesian hotspot lavas and the clinopyroxenes they host: Evidence complementing isotopic disequilibrium in melt inclusions. Geochem Geophys Geosyst 10, doi:10.1029/2008GC002324

[218] Konter JG, Staudigel H, Blichert-Toft J, Hanan BB, Polvé M, Davies GR, Shimizu N, Schiffman P (2009) Geochemical stages at Jasper Seamount and the origin of intraplate volcanoes. Geochem, Geophys, Geosyst 10, Q02001, doi:10.1029/2008GC002236

[217] Layne GD, Kent AJR, Bach W (2009) ?37Cl systematics of a backarc spreading system: The Lau Basin. Geology 37: 427-430

[216] Matter JM, Kelemen PB (2009) Permanent storage of carbon dioxide in geological reservoirs by mineral carbonation. Nature Geosci, doi:10.1038/ngeo683

[215] Shimizu K, Shimizu N, Komiya T, Suzuki K, Maruyama S, Tatsumi Y (2009) CO2-rich komatiitic melt inclusions in Cr-spinels within beach sand from Gorgona Island, Colombia. Eart Planet Sci Lett, doi:10.1016/j.epsl.2009.09.005

[214] Stoll HM, Shimizu N (2009) Micropicking of nannofossils in preparation for analysis by secondary ion mass spectrometry. Nature Protocol, doi: 10.1038/nprot.2009.83

2008

[213] Choi, S.H., Mukasa, S.B., Zhou, X.-H., Xian, X.H., Andronikov, A.V. (2008) Mantle dynamics beneath East Asia constrained by Sr, Nd, Pb and Hf isotopic systematics of ultramafic xenoliths and their host basalts from Hannuoba, North China. Chem Geol 248:40-61.

[212] Curry WB Marchitto TM (2008) A secondary ionization mass spectrometry calibration of *Cibicidoides pachyderma* Mg/Ca with temperature. Geochem Geophys Geosyst 9, Q04009, doi:10.1029/2007GC001620

[211] Elkins, L. J., Gaetani, G. A., and Sims, K. W. W., (2008) Partitioning of U and Th during garnet pyroxenite partial melting: Constraints on the source of alkaline ocean island basalts. Earth Planet Sci Lett 265, 270-286.

[210] Gabitov, R. I., Gaetani, G. A., Watson, E. B., Cohen, A. L., and Ehrlich, H. L., (2008) Experimental determination of growth rate effect on U6+ and Mg2+ partitioning between aragonite and fluid at elevated U6+ concentration. Geochim Cosmochim Acta 72, 4058-4068.

[209] Hayden, L.A., Watson, E.B., and Wark, D.A. (2008) A thermobarometer for sphene (titanite). Contrib Mineral Petrol 155:529-540.

[208] Le Voyer M, Rose-Koga EF, Laubier M, Schiano P (2008) Petrogenesis of arc lavas from the Rucu Pichincha and Pan de Azucar volcanoes (Ecuadorian arc): Major, trace element, and boron isotope evidences from olivine-hosted melt inclusions. Geochem Geophys, Geosyst 9: doi:10.1029/2008GC002173

[207] Lo Cascio M, Liang Y, Shimizu N, Hess P (2008) An experimental study of the grain-scale processes of peridotite melting: implications for major and trace element distribution during equilibrium and disequilibrium melting. Contrib Mineral Petrol 156: 87-102

[206] Kelemen PB, Matter J (2008) In situ carbonation of peridotite for CO2 storage. PNAS 105: 17295-17300

[205] Médard E and Grove TL (2008) The effect of H2O on the olivine liquidus of basaltic melts: experiments and thermodynamic models. Contrib Mineral Petrol, doi:10.1007/s00410-007-0250-4

[204] Médard E, McCammon, C.A., Barr, J.A., and Grove, T.L. (2008) Oxygen fugacity, temperature reproducibility, and H2O contents of nominally anhydrous piston-cylinder experiments using graphite capsules. Am Mineral 93:1838-1844.

[203] Mercer, C.N. and Johnston, A.D. (2008) Experimental studies of the P–T–H2O near-liquidus phase relations of basaltic andesite from North Sister Volcano, High Oregon. Contrib Mineral Petrol 155:571-592.

[202] Morgan Z, Liang Y, Kelemen PB (2008) Significance of the concentration gradients associated with dunite bodies in the Josephine and Trinity ophiolites. Geochem Geophys Geosyst 9, Q07025, doi:10.1029/2008GC001954

[201] Rapp RP, Irifune T, Shimizu N, Nishiyama, N, Norman MD, Inoue T (2008) Subduction recycling of continental sediments and the origin of geochemically enriched reservoirs in the deep mantle. Earth Planet Sci Lett 271: 14-23

[200] Sims, K.W.W., Blichert-Toft, J., Kyle, P.R., Pichat, P.-J., Blusztajn, J., Kelly, P., Ball, L., and Layne, G.D. (2008) A Sr, Nd, Hf, and Pb isotope perspective on the genesis and long-term evolution of alkaline magmas from Erebus volcano, Antarctica. J Volcan Geoth Res 177:606-618.

[199] Spear FS, Cheney JT, Pyle JM, Harrison TM, Layne G (2008) Monazite geochronology in central New England: Evidence for a fundamental terrane

boundary. J Metamorph Geol 26: 317-329

[198] Whitney, D.L., Tepper, J.H., Hirschmann, M.M., and Hurlow, H.A. (2008) Late orogenic mafic magmatism in the North Cascades, Washington: Petrology and tectonic setting of the Skymo layered intrusion. Geol Soc Am Bull 120:531-542.

2007

[197] Donnelly, C.L., Stachel, T., Creighton, S., Muehlenbachs, K., and Whiteford, S. (2007) Diamonds and their mineral inclusions from the A154 South pipe, Diavik Diamond Mine, Northwest territories, Canada. Lithos 98:160-176.

[196] Grimes CB, John BE, Kelemen PB, Mazdab FK, Wooden JL, Cheadle MJ, Hanghøj K (2007) The trace element chemistry of zircons from oceanic crust: A method for distinguishing detrital zircon provenance. Geology 35: 643-646

[195] McCanta, M.C., Rutherford, M.J., and Hammer, J.E. (2007) Pre-eruptive and syn-eruptive conditions in the Black Butte, California dacite: Insight into crystallization kinetics in a silicic magma system. J Volc Geoth Res 160:263-284.

[194] Monders, A.G., Medard, E., and Grove, T.L. (2007) Phase equilibrium investigations of the Adirondack class basalts from Gusev plains, Gusev crater, Mars. Meteor Planet Sci 42:131-148.

[193] Mukasa, S.B., Blatter, D.L., and Andronikov, A.V. (2007) Mantle peridotite xenoliths in andesite lava at El Peñon, central Mexican Volcanic Belt: Isotopic and trace element evidence for melting and metasomatism in the mantle wedge beneath an active arc. Earth Planet Sci Lett 260: 37-55.

[192] Stoll HM, Shimizu N, Ziveri P and Archer D (2007) Coccolithophore productivity response to greenhouse event of the Paleocene-Eocene Thermal Maximum. Earth Planet Sci Lett 258: 192-206

[191] Stoll HM, Ziveri P, Shimizu N, Conte M and Theroux S (2007) Relationship between coccolith Sr/Ca ratios and coccolithophore production and export in the Arabian Sea and Sargasso Sea. Deep Sea Research Part II - Topical Studies in Oceanography 54: 581-600

[190] Stoll HM, Arevalos A, Burke A, Ziveri P, Mortyn PG, Shimizu N and Unger D (2007) Seasonal cycle of coccolithophorid and biogenic carbonate productivity in Northern Bay of Bengal sediment traps. Deep Sea Research Part II - Topical Studies in Oceanography 54: 558-580

[189] Stoll HM, Shimizu N, Arevalos A, Matell N, Banasiak A and Zeren S (2007) Insights on coccolith chemistry from a new ion probe method for analysis of individually picked coccoliths. Geochem Geophys Geosyst 8, Q06020, doi:10.1029/2006GC001546

[188] Trail D, Mojzsis SJ, Harrison TM, Schmitt AK, Watson EB and Young ED (2007) Constraints on Hadean zircon protoliths from oxygen isotopes, Ti-thermometry, and rare earth elements. Geochem Geophys Geosyst 8, doi:10.1029/2006GC001449

[187] Wark DA, Hildreth W, Spear FS, Cherniak DJ and Watson EB (2007) Pre-eruption recharge of the Bishop magma system. Geology 35 (3): 235-238

[186] Yogodzinski GM, Kelemen PB (2007) Trace elements in clinopyroxenes from Aleutian xenoliths: Implications for primitive subduction magmatism in an island arc. Earth Planet Sci Lett 256: 617-632

2006

[185] Ahmed, A.H., Hanghoj, K., Kelemen, P.B., Hart, S.R., Arai, Shoji (2006) Osmium isotope systematics of the Proterozoic and Phanerozoic ophiolitic chromitres: In situ ion probe analyses of primary Os-rich PGM. Earth Planet Sci Lett 245:777-791

[184] Bernstein, S. (2006) In situ fractional crystallization of a mafic pluton: Microanalytical study of a palaeogene gabbronorite plug in East Greenland. Lithos 92:222-237.

[183] Bice KL, Birgel D, Meyers PA, Dahl KA, Hinrichs K and Norris RD (2006) A multiple proxy and model study of Cretaceous upper ocean temperatures and atmospheric CO2 concentrations. Paleoceanography 21, PA2002, doi:10.1029/2005PA001203

[182] Cohen AL, Gaetani GA, Lundälv T, Corliss BH, George RY (2006) Compositional variability in a cold-water scleractinian, Lophelia pertusa: New insights into “vital effects”. Geochem Geophys Geosyst 7, Q12004, doi:10.1029/2006GC001354

[181] Gaetani GA and Cohen AL (2006) Element partitioning during precipitation of aragonite from seawater: A framework for understanding paleoproxies. Geochim Cosmoch Acta 70: 4617-4634

[180] Greene, A.R., DeBari, S.M., Kelemen, P.B., Blusztajn, J., and Clift, P.D. (2006) A detailed geochemical study of island arc crust: the Talkeetna arc section, south-central Alaska. J. Petrol 47: 1051-1093.

[179] Koga-Rose, Sheppard, S.M.F., Chaussidon, M., Carignan, J. (2006) Boron isotopic composition of atmospheric precipitations and liquid–vapour fractionations. Geochim Cosmochim Acta 70: 1603-1615.

[178] Layne GD (2006) Application of secondary ion mass spectrometry to the detection of traditional and non-traditional light isotopes in melt inclusions. In: Webster JD (ed), Melt Inclusions in Plutonic Rocks, Min Assoc Canada Short Course 36: 27-50

[177] Spear, F.S., Wark, D.A., Cheney, J.T., Schumacher, J.C., Watson, E.B. (2006) Zr-in-rutile thermometry in blueschists from Sifnos, Greece. Contrib Mineral Petrol 152:375-385.

[176] Tappert, R., Stachel, T., Harris, J.W., Muehlenbachs, K., and Brey, G.P. (2006) Placer diamonds from Brazil: Indicators of the composition of the Earth’s mantle and the distance to their kimberlitic sources. Econ Geol 101:453-470.

[175] Wark DA and Watson EB (2006) TitaniQ: a titanium-in-quartz geothermometer. Contrib Mineral Petrol 152: 743-754

[174] Watson ED, Wark DA and Thomas J (2006) Crystallization thermometers for zircon and rutile. Contrib Mineral Petrol 151: 413-433

2005

[173] Bice KL, Layne G and Dahl K (2005) The application of SIMS for measuring Mg/Ca in rare, delicate or altered planktonic foraminifera: examples from the Holocene, Paleogene and Cretaceous. Geochem Geophys Geosyst 6, doi:10.1029/2005GC000974

[172] Bond ZA, Cohen AL, Smith SR and Jenkins WJJ (2005) Growth and composition of high-Mg calcite in the skeleton of a Bermudian gorgonian (Plexaurella dichotoma): Potential for paleothermometry. Geochem Geophys Geosyst 6, Q08010, doi:10.1029/2005GC000911

[171] Clift PD, Layne GD, Chan LH, Blusztajn J, Kastner M and Kelly RR (2005) Pulsed subduction accretion and tectonic erosion reconstructed since 2.5 Ma from the tephra record offshore Costa Rica. Geophys Geochem Geosyst 6, Q09016, doi:10.1029/2005GC000963

[170] Pyle JM Spear FS Cheney JT Layne GD (2005) Monazite ages in the Chesham Pond nappe, S. W. New Hampshire, USA: Implications for assembly of central New England thrust sheets. Amer Mineral 90: 592-606

[169] Ruzicja, A., Killgore, M., Mittlefehldt, D.W., and Fries, M.D. (2005) Portales Valley: Petrology of a metallic-melt meteorite breccia. Meteor Planet Sci

40:151-332.

[168] Saal, A.E., Hart, S.R., Shimizu, N., Hauri, E.H., Layne, G.D., and Eiler, E.M. (2005) Pb isotopic variability in melt inclusions from the EMI–EMII–HIMU mantle end-members and the role of the oceanic lithosphere. Earth Planet Sci Lett 240:605-620.

[167] Tappert, R., Stachel, T., Harris, J.W., Shimizu, N., and Brey, G.P. (2005) Eur J Mineral 17:423-440.

[166] Watson and Harrison (2005) Zircon thermometer reveals minimum melting conditions on earliest Earth. Science 308: 841-844

2004

[165] Bodinier J-L, Menzies MA, Shimizu N, Frey FA and McPherson E (2004) Silicate, hydrous and carbonate metasomatism at Lherz, France: contemporaneous derivatives of silicate melt-harzburgite reaction. J Petrol 45: 299-320

[164] Clift PD, Layne GD and Blusztajn J (2004) The erosional record of Tibetan uplift in the East Asian marginal seas. In: Clift PD, Wang P, Hayes D and Kuhnt W (eds), Continent-Ocean Interactions in the East Asian Marginal Seas, Amer Geophys Union, Monograph, vol 149, 255-282

[163] Cohen AL and Hart SR (2004) Deglacial SSTs of the Western Tropical Pacific: a new look at old coral. Paleoceanography 19, PA4031, doi:0.1029/2004PA001084

[162] Cohen AL and Reves-Sohn RA (2004) Tidal modulation of Sr/Ca in a Pacific reef coral. Geophys Res Lett 31: L16310

[161] Cohen AL, Smith SR, McCartney MS and van Etten J (2004) How brain corals record climate: an integration of skeletal structure, growth and chemistry in Diploria labyrinthiformis on Bermuda. Marine Ecology Progress Series 271: 147-158

[160] Godon A, Webster JD, Layne GD, Jendrzejewski N and Pineau F (2004) Secondary ion mass spectrometry for the determination of ?37Cl. Part II. Intercalibration of SIMS and IRMS for aluminosilicate glasses. Chem Geol 207 (3-4): 291-303

[159] Hirose K, Shimizu N, van Westrenen W and Fei Y (2004) Trace element partitioning in Earth's lower mantle and implications for geochemical consequences of partial melting at the core-mantle boundary. Phys Earth Planet Int 146: 249-260

[158] Johnston AD and Schwab BE (2004) Constraints on clinopyroxene/melt partitioning of REE, Rb, Sr, Ti, Cr, Zr, and Nb during mantle melting: First insights from direct peridotite melting experiments at 1.0 GPa. Geochim Cosmochim Acta 68: 4949-4962

[157] Kvassnes, A.J.S., Strand, A.H., Moen-Eikeland, H., and Pederson, R.B. (2004) The Lyngen Gabbro: the lower crust of an Ordovician incipient arc. Contrib Mineral Petrol 148:358-379.

[156] Layne GD, Godon A, Webster JD and Bach W (2004) Secondary ion mass spectrometry for the determination of ?37Cl. Part I. Ion microprobe analysis of glasses and fluids. Chem Geol 207 (3-4): 277-289

[155] McCanta, M.C., Rutherford, M.J., and Jones, J.H. (2004) An experimental study of rare earth element partitioning between a shergottite melt and pigeonite: implications for the oxygen fugacity of the martian interior. Geochim Cosmochim Acta 68:1943-1952.

[154] Pettke T, Halter WE, Webster JD, Aigner-Torres M and Heinrich CA (2004) Accurate quantification of melt inclusion chemistry by LA-ICPMS: A comparison with EMP and SIMS and advantages and possible limitations of either method.

Lithos 78: 333-361

[153] Schatz OJ, Dolejs D, Stix J, Williams-Jones AE and Layne GD (2004) Partitioning of boron among melt, brine and vapor in the system haplogranite-H2O-NaCl at 800 °C and 100 MPa. Chem Geol 210: 135-147

[152] Spear FS (2004) Fast cooling and exhumation of the Valhalla metamorphic core complex, southeastern British Columbia. Int Geol Rev 46 (3): 193-209

[151] Straub SM, Layne GD, Schmidt A and Langmuir CH (2004) Volcanic glasses at the Izu arc volcanic front: new perspectives on fluid and sediment melt recycling in subduction zones. Geochem Geophys Geosyst 5 (Q01007), doi:10.1029/2002GC000408

[150] Tepley FJ III, Lundstrom CC, Sims KWW and Hékinian R (2004) U-series disequilibria in MORB from the Garrett Transform and implications for mantle melting. Earth Planet Sci Lett 223 (1-2): 79-97

[149] Webster JD, Thomas R, Förster H-J, Seltmann R and Tappen C (2004) Geochemical evolution of halogen-enriched, granite magmas and mineralizing fluids of the Zinnwald tin-tungsten mining district, Erzgebirge, Germany. Mineralium Deposita 39: 452-472

[148] Webster JD (2004) The exsolution of magmatic hydrosaline melts. Chem Geol 210: 33-48

2003

[147] Bourdon B and Sims KWW (2003) U-series constraints on intraplate magmatism. In: Bourdon B, Henderson GM, Lundstrom CC and Turner SP (eds), Uranium Series Geochemistry. Rev Mineral Geochem 52: 215-253

[146] Cervantes P and Wallace P (2003) The role of water in subduction zone magmatism: new insights from melt inclusions in high-Mg basalts from central Mexico. Geology 31: 235-238

[145] Clift PD, Layne GD, Najman YMR, Koph A, Shimizu N and Hunt J (2003) Temporal evolution of boron flux in the NE Japan and Izu arcs measured by ion microprobe from the forearc tephra record. J Petrol 44: 1211-1236

[144] Clift PD, Draut AE, Layne G and Blusztajn J (2003) Trace element and Pb isotopic constraints on the provenance of the Rosroe and Derryveeny Formations, South Mayo, Ireland. Trans R Soc Edinburgh, Earth Sci 93: 101-110

[143] Cohen AL and McConnaughey TA (2003) A geochemical perspective on coral mineralization. In: Dove PM, Weiner S, deYoreo JJ (eds) Biomineralization. Rev Mineral Geochem 54: 151-187

[142] De Vivo B, Ayuso RA, Belkin HE, Fedele L, Lima A, Rolandi G, Somma R and Webster JD (2003) Chemistry, fluid/melt inclusions and isotopic data of lavas, tephra and nodules from >25 Ka to 1944 A.D. of the Mt. Somma-Vesuvius volcanic activity. Open-file report 1-2003

[141] Draut AE, Clift PD, Hannigan R, Layne GD and Shimizu N (2002) A model for continental crust genesis by arc accretion: rare earth element evidence from the Irish Caledonides. Earth Planet Sci Lett 203: 861-877

[140] Gonfiantini R, Tonarini S, Gröning M, Adorni-Braccesi A, Al-Ammar AS, Astner M, Bächler S, Barnes RM, Bassett RL, Cocherie A, Deyhle A, Dini A, Ferrara G, Gaillardet J, Grimm J, Guerrot C, Krähenbühl U, Layne GD, Lemarchand D, Meixner A, Northington DJ, Pennisi M, Reitznerová E, Rodushkin I, Sugiura N, Surberg R, Tonn S, Wiedenbeck M, Wunderli S, Xiao Y and Zack T (2003) Intercomparison of boron isotope and concentration measurements, Part II: Evaluation of results. Geostand Newslett: J Geostand Geoanalys 27 (1): 41-57

[139] Heinrich, C.A., Pettke, T., Halter, W.E., Augner-Torres, M., Audetat, A., Gunther, D., Hattendorf, B., Bleiner, D., Guillong, M., and Horn, I. (2003)

Quantitative multi-element analysis of minerals, fluid and melt inclusions by laser-ablation inductively-coupled-plasma mass-spectrometry. Geochim Cosmochim Acta 67:3473-3496.

[138] Lee JI, Clift PD, Layne G, Blum J and Khan AA (2003) Sediment flux in the modern Indus River traced by the trace element composition of detrital amphibole grains. Sed Geol 160: 243-257

[137] Maclennan J, McKenzie D, Hilton F, Gronvold K and Shimizu N (2003) Geochemical variability in a single flow fron northern Iceland. J Geophys Res 108 (B1), doi:10.1029/2000JB000142

[136] Maclennan J, McKenzie D, Gronvold K, Shimizu N, Eiler JM and Kitchen N (2003) Melt mixing and crystallization under Theistareykir, NE Iceland. Geochem Geophys Geosyst 4, doi:10.1029/2003GC000558

[135] Parman, S.W., Shimizu, N., Grove, T.L., and Dann, J.C. (2003) Constraints on the pre-metamorphic trace element composition of Barberton komatiites from ion probe analyses of preserved clinopyroxene. Contrib Mineral Petrol 144:383-396.

[134] Rapp RP, Shimizu N and Norman MD (2003) Growth of early crust by partial melting of eclogite. Nature 425: 605-609

[133] Reagan MK, Sims KW, Erich J, Thomas RB, Cheng H, Edwards RL, Layne GD and Ball L (2003) Timescales of differentiation from mafic parents to rhyolite in North American continental arcs. J Petrol 44 (9): 1703-1726

[132] Sims KW, Blichert-Toft J, Fornari DJ, Perfit MR, Goldstein SJ, Johnson P, DePaolo DJ, Hart SR, Murrel MT, Michael PJ, Layne GD and Ball L (2003) Aberrant youth: Chemical and isotopic constraints on the origin of off-axis lavas from the East Pacific Rise, 9°–10° N. Geochem Geophys Geosyst 4 (1), doi:10.1029/2002GC000443

[131] Stix, J., Layne, G.D., and Williams, S.N. (2003) Mechanisms of degassing at Nevado del Ruiz volcano, Colombia. J Geol Soc. 160:507-521.

[130] Straub SM and Layne GD (2003) Decoupling of fluids and fluid-mobile elements during shallow subduction: Evidence from halogen-rich andesite melt inclusions from the Izu arc volcanic front. Geochem Geophys Geosyst 4 (7), doi:10.1029/2002GC000349

[129] Straub SM and Layne GD (2003) The systematics of chlorine, fluorine and water in Izu arc front volcanic rocks: Implications for volatile recycling in subduction zones. Geochim Cosmochim Acta 67 (21): 4179-4203

[128] Taylor, L.A., Snyder, G.A., Keller, R., Remley, D.A., Anand, M., Weisli, R., Valley, J., and Sobolev, N.V. (2003) Petrogenesis of group A eclogites and websterites: evidence from the Obnazhennaya kimberlite, Yakutia. Contrib Mineral Petrol 145:424-443.

[127] Thomas JB, Bodnar RJ, Shimizu N and Chesner CA (2003) Melt inclusions in zircon. Rev Mineral Geochem 53: 63-87

[126] Webster JD, DeVivo B and Tappen C (2003) Volatiles, magmatic degassing and eruptions of Mt. Somma-Vesuvius: constraints from silicate melt inclusions, solubility experiments and modeling. In: De Vivo B and Bodnar RJ (eds) Melt Inclusions in Volcanic Systems: Methods, Applications and Problems. Developments in Volcanology 5, Elsevier, Amsterdam, 207-226

[125] Webster JD, Raia F, Tappen C and DeVivo B (2003) Pre-eruptive geochemistry of the ignimbrite-forming magmas of the Campanian volcanic zone, southern Italy, determined from silicate melt inclusions. Mineral Petrol 79: 99-125

2002

[124] Borisova AY, Nikogosian IK, Scoates JS, Weis D, Damasceno D, Shimizu N and Touret JLR (2002) Melt, fluid and crystal inclusions in olivine phenocrysts

from Kerguelen plume-derived picritic basalts; evidence for interaction with the Kerguelen Plateau lithosphere. Chem Geol 183: 195-220

[123] Clift PD, Draut AE, Williams M, Hannigan R, Layne GD and Blusztajn J (2002) Trace element and Pb isotopic constraints on the provenance of the Rosroe and Derryveeny Formations, South Mayo, Ireland, Trans Roy Soc Edinburgh: Earth Sci 93: 101-110

[122] Clift PD, Lee J, Hildebrand P, Shimizu N, Layne GD, Blusztajn J, Blum JD, Garzanti E and Khan AA (2002) Nd and Pb isotope variability in the Indus River System: implications for sediment provenance and crustal heterogeneity in the Western Himalaya. Earth Planet Sci Lett 200: 91-106

[121] Cohen AL, Owens KE, Layne GD and Shimizu N (2002) The effect of algal symbiosis on the accuracy of Sr/Ca paleotemperatures from coral. Science 296: 331-333

[120] Draut A, Clift PD, Hannigan R, Layne GD and Shimizu N (2002) A model for continental crust genesis by arc accretion: rare earth element evidence from the Irish Caledonides. Earth Planet Sci Lett 203 (3-4): 861-877

[119] Dick HJB, Ozawa K, Meyer PS, Niu Y, Robinson PT, Constantin M, Hebert R, Maeda J, Natland JH, Hirth G and Mackie S (2002) Primary silicate mineral chemistry of a 1.5-km section of very slow spreading lower ocean crust: ODP Hole 735B, Southwest Indian Ridge. In: Natland JH, Dick HJB, Miler DJ and Von Herzen R (eds.), Proc ODP, Sci Res: College Station, TX, Ocean Drilling Program, 1-60 [CD-ROM]

[118] Hellebrand E, Snow JE, Hoppe E and Hofmann AW (2002) Garnet-field melting and late-stage refertilization in ‘residual’ abyssal peridotites from the Central Indian Ridge. J Petrol 43: 2305-2338

[117] Natland JH and Dick HJB (2002) Stratigraphy and composition of gabbros drilled Ocean Drilling Program Hole 735B, Southwest Indian Ridge: A synthesis of geochemical data. In: Natland JH, Dick HJB, Miler DJ and Von Herzen R (eds.), Proc ODP, Sci Res: College Station, TX, Ocean Drilling Program, 1-69

[116] Ohara, Y., Stern, R.J., Ishii, T., Yurimoto, H., Yamazaki, T., Yurimoto, H., and Yamazaki, T. (2002) Peridotites from the Mariana Trough: first look at the mantle beneath an active back-arc basin. Contrib Mineral Petrol 143:1-18.

[115] Pertermann, M. and Hirschmann, M. (2002) Trace-element partitioning between vacancy-rich eclogitic clinopyroxene and silicate melt. Amer Mineral 87:1365-1376.

[114] Thomas JB, Bodnar R.J, Shimizu N and Sinha AK (2002) Determination of zircon/melt trace element partition coefficients from SIMS analysis of melt inclusions in zircon. Geochim Cosmochim Acta 66: 2887-2901

[113] Salters VJM and Dick HJB (2002) Mineralogy of the mid-ocean-ridge basalt source from neodymium isotopic composition of abyssal peridotites. Nature 418: 68-72

[112] Sims KW, Goldstein SJ, Blichert-Toft J, Perfit MR, Kelemen P, Fornari DJ, Michael P, Murrell MT, Hart SR, DePaolo DJ, Layne GD, Ball L, Jull M and Bender J (2002) Chemical and isotopic constraints on the generation and transport of magma beneath the East Pacific Rise. Geochim Cosmochim Acta 66 (19): 3481-3504

[111] Straub SM and Layne GD (2002) The systematics of boron isotopes in Izu arc front volcanic rocks. Earth Planet Sci Lett 198 (1-2): 25-39

[110] Van Orman JA, Grove TL, Shimizu N and Layne GD (2002) Rare earth element diffusion in a natural pyrope single crystal at 2.8 GPa. Contrib Mineral Petrol 142: 416-424

[109] Wallace P (2002) Volatiles in submarine basaltic glasses from the Northern Kerguelen Plateau (Site 1140): Implications for source region compositions,

magmatic processes, and plateau subsidence. J Petrol 43: 1311-1326

[108] Webster JD and De Vivo B (2002) Experimental and modeled solubilities of chlorine in aluminosilicate melts, consequences of magma evolution, and implications for exsolution of hydrous chloride melt at Mt. Somma-Vesuvius. Am Mineral 87: 1046-1061

2001

[107] Clift PD, Rose E, Shimizu N, Layne G, Draut AE and Regelous M (2001) Tracing the evolving flux from the subducting plate in the Tonga-Kermadec arc system using boron in volcanic glass. Geochim Cosmochim Acta 65: 3347-3364

[106] Clift PD, Shimizu N, Layne GD, Blusztajn JS (2001) Tracing patterns of erosion and drainage in the Paleogene Himalaya through ion probe Pb isotope analysis of detrital K-feldspars in the Indus Molasse, India. Earth Planet Sci Lett 188: 475-491

[105] Clift PD, Shimizu N, Layne GD, Blusztajn JS, Gaedicke C, Schluter H-U, Clark MK and Amjal S (2001) Development of the Indus Fan and its significance for the erosional history of the Western Himalaya and Karakoram. Geol Soc Am Bull 113 (8): 1039-1051

[104] Cohen AL, Layne GD, Hart SR and Lobel PS (2001) Kinetic control of skeletal Sr/Ca in a symbiotic coral: implications for the paleotemperature proxy. Paleoceanography 16: 20-26

[103] Gillis KM and Meyer PS (2001) Metasomatism of oceanic gabbros by late stage melts and hydrothermal fluids: evidence from the rare earth element composition of amphiboles. Geochem Geophys Geosyst 2, doi:10.1029/2000GC000087

[102] Grieco G, Ferrario A, von Quadt A, Koeppel V and Mathez E (2001) The zircon bearing chromitites of the phlogopite peridotite of Finero (Ivrea Zone, southern Alps): Evidence and geochronology of a metasomatized mantle slab. J Petrol 42: 89-101

[101] Hanghøj K, Kelemen PB, Bernstein S, Blusztajn J and Frei R (2001) Osmium isotopes in the Wiedemann Fjord mantle xenoliths, a unique record of cratonic mantle formation by melt depletion in the Archaean. Geochem Geophys Geosyst 2, doi:10.1029/2000GC000085.

[100] Hellebrand E, Snow JE, Dick HJB and Hofmann AW (2001) Coupled major and trace elements as indicators of the extent of melting in mid-ocean ridge peridotites. Nature 410: 677-681

[99] Koga K, Kelemen PB and Shimizu N (2001) Petrogenesis of the crust-mantle transition zone (MTZ) and the origin of lower crustal wehrlite in the Oman ophiolite. Geochem Geophys Geosyst 2, doi:10.1029/2000GC000132

[98] McBirney AR (2001) The Skaergaard Layered Series, Part VI. Excluded trace elements. J Petrol 43: 535-556

[97] Natland JH and Dick HJB (2001) Formation of the lower ocean crust and the crystallization of gabbroic cumulates at a very slow spreading ridge. J Volcan Geotherm Res 110: 191-233

[96] Rose EF, Shimizu N, Layne GD and Grove TL (2001) Melt production beneath Mt. Shasta from boron data in pristine melt inclusions. Science 293: 281-283

[95] Schmidberger, S.S., and Francis, D. (2001) Constraints on the trace element composition of the Archean mantle root beneath Somerset Island, Arctic Canada. J Petrol 42:1095-1117.

[94] Shimizu K, Komiya T, Hirose K, Shimizu N and Maruyama S (2001) Cr-spinel, an excellent micro-container for retaining primitive melts: implications for a hydrous plume origin for komatiites. Earth Planet Sci Lett 189: 177-188

[94] Slater L, McKenzie D, Gronvold K and Shimizu N (2001) Melt generation and movement beneath Theistareykir, N.E. Iceland. J Petrol 42: 321-354

[93] Van Orman JA, Grove TL and Shimizu N (2001) Rare earth element diffusion in diopside: Influence of temperature, pressure and ionic radius and an elastic model for diffusion in silicates. Contrib Mineral Petrol 141: 687-703

[92] Wang, W., and Gasparik, T. (2001) Metasomatic clinopyroxene inclusions in diamonds from the Liaoning province, China. Geochim Cosmochim Acta 65:611-620.

[91] Webster JD and Rebbert CR (2001) The geochemical signature of fluid-saturated magma determined from silicate melt inclusions in Ascension Island granite xenoliths. Geochim Cosmochim Acta 65: 123-136

[90] Webster JD, Raia F, De Vivo B and Rolandi G (2001) The behavior of chlorine and sulfur during differentiation of the Mt. Somma-Vesuvius magmatic system. Mineral Petrol 73: 177-200

2000

[89] Arnason, J.G. and Bird, D.K. (2000) A gold- and platinum-mineralized layer in gabbros of the Kap Edvard Holm Complex: Field, petrologic, and geochemical relations. Econ Geol 95:945-970.

[88] Bernstein S and Bird DK (2000) Formation of wehrlites through dehydration of metabasalt xenoliths inlayered gabbros of the Noe-Nygaard Intrusion (SE Greenland). Geol Mag 137: 109-128

[86] Bizimis M, Salters VJM and Bonatti E (2000) Trace and REE content of clinopyroxenes from supra-subduction zone peridotites. Implications for melting and enrichment processes in island arc. Chem Geol 165: 67-85

[86] Clift P, Layne GD, Shimizu N, Gaedicke C, Schluter H-U, Clark M and Amjid S (2000) Fifty-five million years of Tibetan evolution recorded in the Indus fan. EOS 81 (25): 277-281

[85] Dietrich, A., Lehmann, B., and Wallianos, A. (2000) Bulk rock and melt inclusion geochemistry of Bolivian tin porphyry systems. Econ Geol 95:313-326.

[84] Farver JR and Yund RA (2000) Silicon diffusion in forsterite aggregates: implications for diffusion creep. Geophys Res Lett 27: 2337-2340

[83] Farver JR and Yund RA (2000) Silicon diffusion in a natural quartz aggregate: constraints on solution-transfer diffusion creep. Tectonophys 325: 191-203

[82] Klein M, Stosch H-G, Seck HA and Shimizu N (2000) Experimental partitioning of high field strength and rare earth elements between clinopyroxene and garnet in andesitic to tonalitic systems. Geochim Cosmochim Acta 64: 99-115

[81] Layne GD and Sims KW (2000) Secondary ion mass spectrometry for the measurement of 232Th/230Th in young volcanic rocks. Int J Mass Spect 203 (1-3): 187-198

[80] Lehmann B, Dietrich A, Heinhorst J, Metrich N, Mosbah M, Palacios C, Schneider HJ, Wallianos A, Webster J and Winkelmann L (2000) Boron in the Bolivian tin belt. Mineral Deposita 35: 223-232

[79] Raia F, Webster JD and De Vivo B (2000) Preeruptive volatile contents of Vesuvius magmas: contraints on eruptive history and behavior. I - the medieval and modern interplinian activities. Eur J Mineral 12: 179-193

[78] Roden MF and Shimizu N (2000) Trace element abundances in mantle-derived minerals which bear on compositional complexities in the lithosphere of the Colorado Plateau. Chem Geol 165: 283-305

[77] Thomas R and Webster JD (2000) Strong tin enrichment in a pegmatite-forming melt. Mineral Deposita 35: 570-582

[76] Wang, W. and Gasparik, T. (2000) Evidence for a deep mantle origin of a NaPX-EN inclusion in diamond. Intern Geol Rev 42:1000-1006.

[75] Wang, W., Gasparik, T., and Rapp, R.P. (2000) Partitioning of rare earth elements between CaSiO3 perovskite and coexisting phases: constraints on the formation of CaSiO3 inclusions in diamonds. 181:291-300.

1999

[74] Brabander DJ, Keon N, Stanley RHR and Hemond HF (1999) Intra-ring variability of Cr, As, Cd, and Pb in red oak revealed by secondary ion mass spectrometry (SIMS): Implications for environmental biomonitoring. Proc Nat Acad Sci USA 96: 14635-14640

[73] Clift PD and Blusztajn J (1999) The trace-element characteristics of Aegean and Aeolian volcanic arc marine tephras. J Volcan Geotherm Res 92: 321-347

[72] Farver JR and Yund RA (1999) Oxygen bulk diffusion measurements and TEM characterization of a natural ultramylonite: implications for fluid transport in mica-bearing rocks. J Metam Geol 17: 669-683

[71] Koga KT, Shimizu N and Grove TL (1999) Disequilibrium trace element re-distribution during garnet to spinel facies transformation. Proc 7th Intern Kimberlite Conf, JB Dawson Vol: 444-451

[70] Mattielli, N., Weis, D., Scoates, J.S., Shimizu, N., Mennessier, J.-P. Gregoire, M., Cottin, J.-Y., and Giret, A. (1999) Evolution of heterogeneous lithospheric mantle in a plume environment beneath the Kerguelen Archipelago. J Petrol 40:1721-1744.

[69] Mukasa, S.B. and Shervais, J.W. (1999) Growth of subcontinental lithosphere: evidence from repeated dike injections in the Balmuccia lherzolite massif, Italian Alps. Lithos 48:287-316.

[68] Pokhilenko NP, Sobolev NV, Kuligin SS and Shimizu N (1999) Peculiarities of distribution of pyroxenite paragenesis garnets in Yakutian kimberlites and some aspects of the evolution of the Siberian craton lithospheric mantle. Proc 7th Intern Kimberlite Conf, PH Nixon Vol: 689-698

[67] Rapp RP, Shimizu N, Norman MD and Applegate GS (1999) Reaction between slab-derived melts and peridotite in the mantle wedge: experimental constraints at 3.8 GPa. Chem Geol 160: 335-356

[66] Salters VJM and Longhi J (1999) Trace element partitioning during the initial stages of melting beneath mid-ocean ridges. Earth Planet Sci Lett 166: 15-30

[65] Shervais, J.W. and McGee, J.J. (1999) KREEP cumulates in the western lunar highlands: Ion and electron microprobe study of alkali-suite anorthosites and norites from Apollo 12 and 14. Am Mineral 84:806-820.

[64] Shimizu N (1999) Young geochemical features in cratonic peridotites from southern Africa and Siberia. In: (Joe) Boyd, Fei Y, Bertka CM and Mysen BO (eds), Mantle Petrology: Field Observations and High Pressure Experimentation: A Tribute to Francis R, Geochem Soc, Spec Publ, vol 6, 47-55

[63] Shimizu N, Pokhilenko NP, Boyd FR and Pearson DG (1999) Trace element characteristics of garnet dunites/harzburgites, host rocks for Siberian peridotitic diamonds. Proc 7th Intl Kimberlite Conf, PH Nixon Vol: 773-782

[62] Sours-Page, R., Johnson, K.T.M., Nielsen, R.L., and Karsten, J.L. (1999) Local and regional variation of MORB parent magmas: evidence from melt inclusions from the Endeavour Segment of the Juan de Fuca Ridge. Contrib Mineral Petrol 134:342-363.

[61] Takazawa E, Frey FA, Shimizu N, Saal A and Obata M (1999) Polybaric petrogenesis of mafic layers in the Horoman peridotite complex (Japan). J Petrol 40: 1827-1851

[60] Tepper, J.H., and Kuehner, S.M. (1999) Complex zoning in apatite from the Idaho Batholith: a record of magma mixing and intracrystalline trace element diffusion. Am Mineral 84:581-595.

[59] Webster JD, Kinzler RJ and Mathez EA (1999) Chloride and water solubility in basalt and andesite liquids and implications for magmatic degassing. Geochim Cosmochim Acta 63: 729-738

1998

[58] Belkin HE, De Vivo B, Torok K and Webster JD (1998) Pre-eruptive volatile content, melt inclusion chemistry, and microthermometry of interplinian Vesuvius lavas (pre-1631 AD). J Volcan Geotherm Res 82: 79-95

[57] Bernstein S, Kelemen PB, Tegner C, Kurz MD, Blusztajn J and Brooks KC (1998) Post break-up basaltic magmatism along the East Greenland Tertiary rifted margin. Earth Planet Sci Lett 160: 845-862

[56] Clift PD and Lee J (1998) Temporal evolution of the Mariana Arc during rifting of the Mariana Trough traced through the volcaniclastic record. The Island Arc 7: 496-512

[55] Farver JR and Yund RA (1998) Oxygen grain boundary diffusion in natural and hot-pressed calcite aggregates. Earth Planet Sci Lett 161: 189-200

[54] Friedland KD, Reddin DK, Shimizu N, Haas RE and Youngson AF (1998) Strontium-calcium ratios in Atlantic Salmon otoliths and observations on growth and maturation. Can J Fish Aquat Sci 55: 1158-1168

[53] Hart S and Blusztajn J (1998) Clams as recorders of ocean ridge volcanism and hydrothermal vent field activity. Science 280: 883-886

[52] Hemming NG, Reeder RJ and Hart SR (1998) Growth step-selective incorporation of Boron on the calcite surface. Geochim Cosmochim Acta 62: 2915-2922

[51] Johnson, K. T. M. (1998) Experimental determination of partition coefficients for rare earth and high-field strength elements between clinopyroxene, garnet, and basaltic melt at high pressures. Contrib Mineral Petrol 133:60-68.

[50] Layne GD and Shimizu N (1998) Measurement of lead isotope ratios in common silicate and sulfide phases using the Cameca IMS 1270 ion microprobe. In: Gillen G et al (eds), Secondary Ion Mass Spectrometry SIMS XI, John Wiley, 63-65

[49] McBirney AR (1998) The Skaergaard Layered Series, Part V. Included trace elements. J Petrol 39: 255-276

[48] Saal AE, Hart SR, Shimizu N, Hauri EH and Layne GD (1998) Pb isotopic variability in melt inclusions from oceanic island basalts, Polynesia. Science 282: 1481-1484

[47] Shervais, J.W. and McGee, J.J. (1998) Ion and electron microprobe study of troctolites, norite, and anorthosites from Apollo 14: evidence for urKREEP assimilation during petrogenesis of Apollo 14 Mg-suite rocks. Geochim Cosmochim Acta 62:3009-3023.

[46] Shi, L., Francis, D., Ludden, J., Frederiksen, A., and Bostock, M. (1998) Xenolith evidence for lithospheric melting above anomalously hot mantle under the northern Canadian Cordillera. Contrib Mineral Petrol 131:39-53.

[45] Shimizu N (1998) The geochemistry of olivine-hosted melt inclusions in a FAMOUS basalt ALV519-4-1. Phys Earth Planet Intl 107: 183-201

[44] Sobolev NV, Snyder GA, Taylor LA, Keller RA, Yefimova ES, Sobolev VN and Shimizu N (1998) Extreme chemical diversity in the mantle during eclogitic diamond formation: Evidence from 35 garnet and 5 pyroxene inclusions in a single diamond. Intl Geol Rev 40: 567-578

[43] Suhr G, Seck HA, Shimizu N, Gunther D and Jenner G (1998) Infiltration of refractory melts into the lowermost oceanic crust: evidence from dunite- and gabbro-hosted clinopyroxenes in the Bay of Islands Ophiolite. Contrib Mineral Petrol 131: 136-154

[42] Van Orman JA, Grove TL and Shimizu N (1998) Uranium and thorium diffusion in diopside. Earth Planet Sci Lett 160: 505-519

[41] Wagner, T.L., Clague, D.A., Hauri, E.H., and Grove, T.L., (1998) Trace element abundances of high-MgO glasses from Kilauea, Mauna Loa and Haleakala volcanoes, Hawaii. Contrib Mineral Petrol 131:13-21.

[40] Webster JD and Rebbert CR (1998) Experimental investigation of H2O and Cl solubilities in F-enriched silicate liquids: implications for volatile saturation of topaz rhyolite magmas. Contrib Mineral Petrol 132: 198-207

[39] Webster JD, Thomas R, Veksler I, Rhede D, Seltmann R and Forster H-J (1998) Late-stage processes in P- or F-rich granitic magmas. Acta Universitatis Carolinae-Geologica 42: 181-188

[38] Yang H-J, Sen G and Shimizu N (1998) Mid-ocean ridge melting: Constraints from lithospheric xenoliths at Oahu, Hawaii. J Petrol 39: 277-295

[37] Yogodinski GM and Kelemen PB (1998) Slab melting in the Aleutians: implications of an ion probe study of clinopyroxene in primitive adakite and basalt. Earth Planet Sci Lett 158: 53-65

1997

[37] Arnason JG, Bird DK, Bernstein S and Kelemen PB (1997) Gold and platinum-group element mineralization in the Kruuse Fjord Gabbro Complex, East Greenland. Econ Geol 92: 490-501

[36] Arnason JG, Bird DK, Bernstein S, Rose NM and Manning CE (1997) Petrology and geochemistry of the Kruuse Fjord Gabbro Complex, East Greenland. Geol Mag 134: 67-89

[35] Cohen AL and Hart SR (1997) The effect of colony topography on climate signals in coral skeleton. Geochim Cosmochim Acta 61: 3905-3912

[34] Gaetani, G. A. and Grove, T. L. (1997) Partitioning of moderately siderophile elements among olivine, silicate melt, and sulfide melt; constraints on core formation in the Earth and Mars. Geochim Cosmochim Acta 61:1829-1846

[33] Giletti, B.J., and Shanahan, T.M. (1997) Alkali diffusion in plagioclase feldspar. Chem Geol 139:3-20.

[32] Gregoire, M., Lorand, J.-P., Cottin, J.-Y., Giret, A., Mattielli, N., and Weiss, D. (1997) Xenoliths evidence for a refractory oceanic mantle percolatedby basaltic melts beneath the Kerguelen archipelago. Eur J Mineral 9:1085-1100.

[31] Hart SR, Cohen AL and Ramsay P (1997) Microscale analysis of Sr/Ca and Ba/Ca in porites. In: Proc Eighth Intl Coral Reef Symp, Lessios H (ed) 2: 1707-1712

[30] Kelemen PB, Hirth G, Shimizu N, Spiegelman M and Dick HJB (1997) A review of melt migration processes in the adiabatically upwelling mantle beneath oceanic spreading ridges. Phil Trans R Soc London 355A: 283-318

[29] Kelemen PB, Koga K and Shimizu N. (1997) Geochemistry of gabbro sills in the crust-mantle transition zone of the Oman ophiolite: implications for the origin of the oceanic lower crust. Earth Planet Sci Lett 146: 475-488

[28] Klein, M., Stosch, H.-G., Seck, H.A. (1997) Partitioning of high field-strength and rare earth elements between amphibole and quartz-dioritic to tonalitic melts: an experimental study. Chem Geol 138:257-271.

[27] Korenaga J and Kelemen PB (1997) The origin of gabbro sills in the Moho transition zone of the Oman ophiolite: Implications for magma transport in the lower oceanic crust. J Geophys Res 1092: 27729-27749

[26] Mathez E, Hunter RH and Kinzler R (1997) Petrologic evolution of partially molten cumulate: the Atok section of the Bushveld complex. Contrib Mineral Petrol 129: 20-34

[25] Shimizu N, Pokhilenko NP, Boyd FR and Pearson DG (1997) Geochemical characteristics of mantle xenoliths from the Udachnaya kimberlite pipe. Proc 6th Intl Kimberlite Conf, Russian Geol Geophys 38: 205-217

[24] Shimizu N, Sobolev NV and Yefimova ES (1997) Chemical heterogeneities of peridotitic inclusion garnets and juvenility of diamonds. Proc 6th Intl Kimberlite Conf, Russian Geol Geophys 38: 356-372

[23] Smith, H.A., Giletti, B.J. (1997) Lead diffusion in monazite. Geochim Cosmochim Acta 61:1047-1055.

[22] Taylor RP, Jackson SE, Webster JD and Longerich HP (1997) In situ trace-element analysis of individual silicate melt inclusions by laser ablation microprobe-inductively coupled plasma-mass spectrometry (LAM-ICP-MS). Geochim Cosmochim Acta 61: 2559-2568

[21] Webster JD (1997) Exsolution of magmatic volatile phases from Cl-enriched mineralizing granitic magmas and implications for ore metal transport. Geochim Cosmochim Acta 61: 1017-1029

[20] Webster JD (1997) Chloride solubility in felsic melts and the role of chloride in magmatic degassing. J Petrol 38: 1793-807

[19] Webster JD, Thomas R, Rhede D, Foerster H-J and Seltmann R (1997) Melt inclusions in quartz from an evolved peraluminous pegmatite: geochemical evidence for strong tin enrichment in fluorine-rich and phosphorus-rich residual liquids. Geochim Cosmochim Acta 61: 2589-2604

1996

[18] Bernstein S, Kelemen PB and Brooks CK (1996) Evolution of the Kap Edvard Holm Complex: a mafic intrusion at a rifted continental margin. J Petrol 37: 497-519

[17] Brophy, J.G., Dorais, M.J., Donnelly-Nolan, J., and Singer, B.S. (1996) Plagioclase zonation styles in hornblende gabbro inclusions from Little Glass Mountain, Medicine Lake volcano, California: implications for fractionation mechanisms and the formation of compositional gaps. Contrib Mineral Petrol 126:121-136.

[16] Brueckner H, Blusztajn J and Bakun-Czubarow N (1996) Trace element and Sm-Nd “age” zoning from peridotites of the Caledonian and Variscan Mountains and tectonic implications. J Met Petrol 14: 61-73

[15] Clift PD and Vroon PZ (1996) Isotopic evolution of the Tonga Arc system during Lau Basin rifting; Evidence from the volcaniclastic record. J Petrol 37: 1153-1173

[14] Dick HJB and Natland JH (1996) Late stage melt evolution and transport in the shallow mantle beneath the East Pacific Rise. In: Gillis K, Mevel C, Allan J (eds), Sci Res, ODP, Texas A&M University, College Station, 103-134

[13] Farver JR and Yund RA (1996) Volume and grain boundary diffusion of calcium in natural and hot-pressed calcite aggregates. Contrib Mineral Petrol 123: 77-91

[12] Gillis KM (1996) Rare earth element constraints on the origin of amphibole in gabbroic rocks from Site 894, Hess Deep. In: Mevel C, Gillis KM, Allan JF, Meyer PS (eds), Proc ODP, Sci Res 147, Ocean Drilling Program, College Station, 59-77

[11] Hart SR and Cohen AL (1996) Sr/Ca in corals: an ionprobe study of annual cycles of Sr/Ca and other trace elements in corals. Geochim Cosmochim Acta 60: 3075-3084

[10] Hattori K, Hart SR and Shimizu N (1996) Melt and source mantle compositions in the Late Archaean: a study of strontium and neodymium isotope and trace elements in clinopyroxenes from shoshonitic alkaline rocks. Geochim Cosmochim Acta 60: 4551-4562

[9] Kepezhinskas, P., DeFant, M.J., and Drummond, M.S. (1996) Progressive enrichment of island arc mantle by melt-peridotite interaction inferred from Kamchatka xenoliths. Geochim Cosmochim Acta 60:1217-1229.

[8] McBirney AR (1996) The Skaergaard Intrusion. In: Cawthorn RG (ed), Layered Intrusions. Developments in Petrology, vol 15, Elsevier, 147-180

[7] Morishita Y, Giletti BJ and Farver JR (1996) Volume self-diffusion of oxygen in titanite. Geochem J 30: 71-79

[6] Natland JH and Dick HJB (1996) Melt migration through high-level gabbroic cumulates of the East Pacific Rise at Hess Deep: the origin of magma lenses and the deep crustal structure of fast-spreading ridges. In: Mevel C, Gillis KM, Allan JF and Meyer PS (eds), Proc ODP, College Station, TX, Ocean Drilling Program, 21-58

[5] Sen, Gautam, Macfarlane, A., and Srimal, N. (1996) Significance of rare hydrous alkaline melts in Hawaiian xenoliths. Contrib Mineral Petrol 122:415-427.

[4] Takazawa E, Frey F, Shimizu N and Obata M (1996) Evolution of the Horoman Peridotite (Hokkaido, Japan): Implications from pyroxene compositions. Chem Geol 134: 3-26

[3] Tullis J, Yund R and Farver J (1996) Deformation-enhanced fluid distribution in feldspar aggregates and implications for ductile shear zones. Geology 24: 63-66

[2] Stix J and Layne GD (1996) Gas saturation and evolution of volatile and light lithophile elements in the Bandelier magma chamber between two caldera-forming eruptions. J Geophys Res 101: 25181-25196

[1] Webster JD, Burt DM and Aguillon RA (1996) Volatile and lithophile trace-element geochemistry of Mexican tin rhyolite magmas deduced from melt inclusions. Geochim Cosmochim Acta 60: 3267-3283

Last updated: October 16, 2014

Copyright ©2007 Woods Hole Oceanographic Institution, All Rights Reserved.
Mail: Woods Hole Oceanographic Institution, 266 Woods Hole Road, Woods Hole, MA 02543, USA.
E-Contact: info@whoi.edu; press relations: media@whoi.edu, tel. (508) 457-2000
Problems or questions about the site, please contact webdev@whoi.edu