

WHOI ICP-MS Facility Bibliography

1998 (1)

1. Saal, A.E., R.L. Rudnick, G.E. Ravizza, and S.R. Hart (1998) Re-Os isotope evidence for the composition, formation and age of the lower continental crust. *Nature*, 393, 58-61.

1999 (3)

2. Woodhouse, O.B., G. Ravizza, K. Kenison Falkner, P.J. Statham, and B. Peucker-Ehrenbrink (1999) Osmium in seawater: concentration and isotopic composition in a vertical profile from the Eastern Pacific Ocean. *Earth Planet. Sci. Lett.*, 173, 223-233.
3. Ravizza, G., R. M. Sherrell, and M.P. Field (1999) The geochemistry of the Margi umbers, Cyprus and the Os isotopic composition of mid-Cretaceous seawater. *Geology*, 27, 971-974.
4. Sholkovitz, E., H. Elderfield, R. Szymczak, and K. Casey (1999) Island weathering: river sources of rare earth elements to the western Pacific Ocean. *Marine Chem.*, 68, 39-57.

2000 (12)

5. Hassler, D.R., B. Peucker Ehrenbrink, and G. Ravizza (2000) Rapid determination of Os isotopic compositions by microwave oven digestion and sparging into a magnetic sector ICP-MS. *Chem. Geol.*, 166, 1-14.
6. Peucker-Ehrenbrink, B., and R.E. Hannigan (2000) Effects of black shale weathering on the mobility of rhenium and platinum group elements. *Geology*, 28, 475-478.
7. Blusztajn, J., S.R. Hart, G. Ravizza, and H.J.B. Dick (2000) Platinum group element and osmium isotopic characteristics of the lower oceanic crust, *Chem. Geol.*, 168, 113-122.
8. Tuit, C.B., G. Ravizza, and M.H. Bothner (2000) Anthropogenic platinum and palladium in the sediments of Boston Harbor. *Environ. Sci. Technol.* 34, 927-932.
9. Kreutz, K.J., and E.R. Sholkovitz (2000) Major element, rare earth element, and sulfur isotopic composition of a high elevation firn core: sources and transport of mineral dust in Central Asia. *Geochem., Geophys., Geosyst.*, 1, (2000GC000082).
10. Sholkovitz, E.R., and R. Szymczak (2000) The estuarine chemistry of rare earth elements: comparison of the Amazon, Fly, Sepik and the Gulf of Papua systems. *Earth Planet. Sci. Lett.*, 179, 299-309.
11. Honjo, S., R. Francois, S. J. Manganini, J. Dymond and R. Collier (2000) Particle fluxes to the interior of the Southern Ocean in the Western Pacific sector along 170°W. *Deep-Sea Res. II.*, 47, 3521-3548.
12. Peucker-Ehrenbrink, B., and G. Ravizza (2000) The marine osmium isotope record. *Terra Nova*, 12, 205-219.
13. Hart, S.R., H. Staudigel, A.A.P. Koppers, J.S. Blusztajn, E.T. Baker, R. Workman, M. Jacson, E. Hauri, M. Kurz, K. Sims, D. Fornari, A. Saal, and S. Lyons (2000) Vailuú undersea volcano: the new Samoa. *Geochem., Geophys., Geosyst.*, 1, (2000GC000108).
14. Martin, C.E., B. Peucker-Ehrenbrink, G.J. Brunskill, and R. Szymczak (2000) Sources of unradiogenic osmium runoff from Papua New Guinea. *Earth Planet. Sci. Lett.*, 183, 261-274.
15. Clift, P., P. Degnan, R. Hannigan, and J.S. Blusztajn (2000) Sedimentary and geochemical evolution of the Dras forearc basin, Indus suture, Ladakh Himalaya, India. *Geol. Soc. Am. Bull.*, 112, 450-466.
16. Norris, R.D., J. Firth, J.S. Blusztajn, and G. Ravizza (2000) Mass failure of the North Atlantic Margin triggered by the Cretaceous/Paleogene bolide impact. *Geology*, 28, 1119-1122.

2001 (11)

17. Hannigan, R.E., and E.R. Sholkovitz (2001) The development of middle rare earth element enrichments in freshwaters: weathering of phosphate minerals. *Chem. Geol.*, 175, 495-508.
18. Saal, A.E., E. Takazawa, F.A. Frey, N. Shimizu, and S.R. Hart (2001) Re-Os isotopes in the Horoman peridotite; evidence for refertilization? *J. Petrol.*, 42, 25-37.
19. Hanghoj, K., P. Kelemen, S. Bernstein, J. Blusztajn, and R. Frei (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, (2000GC000085).
20. Ravizza, G., J.S. Blusztajn, and H.M. Prichard (2001) Re-Os systematics and platinum group element distribution in metalliferous sediments from the Troodos ophiolite. *Earth Planet. Sci. Lett.*, 188, 369-381.
21. Peucker-Ehrenbrink, B., and B.-m. Jahn (2001) Rhodium-osmium isotope systematics and platinum group element concentrations: Loess and upper continental crust. *Geochem., Geophys., Geosyst.*, 2, (2001GC000172).
22. Draut, A.E., and P.D. Clift (2001) Geochemical evolution of arc magmatism during arc-continent collision, South Mayo, Ireland. *Geology*, 29, 543-546.
23. Schmitz, B., M. Tassinari, and B. Peucker-Ehrenbrink (2001) A rain of ordinary chondritic meteorites in the early Ordovician. *Earth Planet. Sci. Lett.*, 194, 1-15.
24. Standish, J.J., S.R. Hart, J. Blusztajn, H.J.B. Dick, and K.L. Lee (2001) Abyssal peridotite osmium isotopic compositions from Cr-spinel. *Geochem., Geophys., Geosyst.*, 3, doi: 10.1029/2001GC000161.
25. Ravizza, G., R.N. Norris, J.S. Blusztajn, and M.-P. Aubry (2001) An osmium isotope excursion associated with the late Paleocene thermal maximum: Evidence of intensified chemical weathering. *Paleoceanography*, 16, 155-163.
26. Choi, M.S., R. Francois, K.W.W. Sims, M. Bacon, S. Brown-Leger, A. Fleer, L. Ball, D. Schneider (2001) A Rapid Determination of ^{230}Th and ^{231}Pa in seawaters using desolvated micronebulization inductively coupled plasma magnetic sector mass spectrometry. *Marine Chem.*, 76, 99-112.
27. Saal, A.E., E. Takazawa, F.A. Frey, N. Shimizu, and S.R. Hart (2001) Re-Os isotopes in the Horoman peridotites: evidence of Refertilization? *J. Petrol.*, 42, 25-37.

2002 (11)

28. Rabinowitz, M.B. (2002) Isotopic characterization of various brands of corroding grade refined lead metal. *Environ. Contam. Toxicol.*, 69, 501-508.
29. Rabinowitz, M.B. (2002) Isotopic characterization of six major brands of white basic lead carbonate paint pigments. *Environ. Contam. Toxicol.*, 69, 617-623.
30. Sims, K.W.W., S.J. Goldstein, J. Blichert-Toft, M.R. Perfit, P. Kelemen, D.J. Fornari, P. Michael, M.T. Murrel, S.R. Hart, D.J. DePaolo, G. Layne, L. Ball, M. Jull, and J. Bender (2002) Chemical and isotopic constraints on the generation and transport of magma beneath the East Pacific Rise. *Geochim. Cosmochim. Acta*, 66(19), 3481-3504.
31. Clift, P.D., R. Hannigan, J. Blusztajn, and A.E. Draut (2002) Geochemical evolution of the Dras-Kohistan Arc during collision with Eurasia; evidence from the Ladakh Himalaya, India. *The Island Arc*, 11 (4), 255-273.
32. Draut, A.E., P.D. Clift, R. Hannigan, G.D. Layne, and N. Shimizu (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.

33. Draut, A.E., and P.D. Clift (2002) The origin and significance of the Delaney Dome Formation, Connemara, Ireland. *J. Geol. Soc., London*, 159, 95-103.
34. Kenna, T. (2002) Determination of plutonium isotopes and neptunium-237 in environmental samples by inductively coupled plasma mass spectrometry with total sample dissolution. *J. Anal. Atom. Spectroscopy*, 17, 1471-1479.
35. Jaffe, L.A., B. Peucker-Ehrenbrink, and S. Petsch (2002) Effects of weathering of black shales on the mobility of Re, PGE and C_{org}. *Earth Planet. Sci. Lett.*, 198, 339-353.
36. Koeberl, C., B. Peucker-Ehrenbrink, W.U. Reimold, A. Shukolyukov, and G.W. Lugmair (2002) Comparison of the osmium and chromium isotopic methods for the detection of meteoritic components in impactites: Examples from the Morokweng and Vredefort impact structures, South Africa. In: Catastrophic events and mass extinctions: Impacts and beyond (C. Koeberl and K. MacLeod, Eds.), *Geol. Soc. Am., Spec. Publ.*, 356, 607-618.
37. Choi, M.S., R. Francois, K.W. Sims, M.P. Bacon, S. Leger-Brown, A.P. Fleer, L. Ball, D. Schneider and S. Pichat (2002) Rapid determination of ²³⁰Th and ²³¹Pa in seawater by inductively coupled plasma mass spectrometry. *Marine Chem.*, 76, 99-112.
38. Kenna, T.C., and F.L. Sayles (2002) The distribution and history of nuclear weapons related contamination in sediments from the Ob River, Siberia, as determined by isotope ratios of plutonium and neptunium. *J. Environm. Radioact.*, 60, 105-137.

2003 (12)

39. Bach, W., B. Peucker-Ehrenbrink, S.R. Hart, and J.S. Blusztajn (2003) Geochemistry of hydrothermally altered oceanic crust: Hole 504B - Implications for seawater-crust exchange budgets and Sr- and Pb-isotopic evolution of the mantle. *Geochem., Geophys., Geosyst.*, 4 (3), doi: 10.1029/2002GC000419.
40. Bach W., S. Roberts, D.A. Vanko, R.A. Binns, C.J. Yeats, P.R. Craddock, and S.E. Humphris (2003) Controls of fluid chemistry and complexation on rare earth element contents of anhydrite from the PACMANUS subseafloor hydrothermal system, Manus Basin, Papua New Guinea. *Mineralium Deposita*, 38 (8), 916-935.
41. Cave, R.R., G.E. Ravizza, C.R. German, J. Thomson, and R.W. Nesbitt (2003) Deposition of osmium and other platinum-group elements beneath the ultramafic-hosted Rainbow hydrothermal plume. *Earth Planet. Sci. Lett.*, 210, 65-79
42. Clift, P.D., A.E. Draut, G. Layne, R. Hannigan, and J. Blusztajn (2003) Trace element and Pb isotopic constraints on the provenance of the Rosroe and Derrylea Formations, South Mayo, Ireland. *Trans. Roy. Soc. Edinburgh, Earth Sci.*, 93, 101-110.
43. Ganeshram, R.S., R. Francois, J. Commeau, and S.L. Brown Leger (2003) An experimental investigation of barite formation in seawater. *Geochim. Cosmochim. Acta*, 67 (14), 2599-2605.
44. Hart, S.R., H. Staudigel, R. Workman, A.A.P. Koppers, and A.P. Girard (2003) A fluorescein tracer release experiment in the hydrothermally active crater of Vailulu'u volcano, Samoa. *J. Geophys. Res., Solid Earth*, 108 (B8), 2377.
45. Morford, J., L. Kalnejais, W. Martin, R. Francois, and I.-M. Karle (2003) Sampling marine pore waters for Mn, Fe, U, Re, and Mo: Modifications on DET (Diffusional Equilibration Thin Film) gel probes. *J. Exp. Mar. Biol. and Ecol.*, 285, 85-103.
46. Peucker-Ehrenbrink, B., W. Bach, S.R. Hart, J.S. Blusztajn, and T. Abbruzzese (2003) Rhenium-osmium isotope systematics and platinum group element concentrations in oceanic crust from DSDP/ODP Sites 504 and 417/418. *Geochem., Geophys., Geosyst.*, 4 (7), doi: 10.1029/2002GC000414.

47. Ravizza, G.E., and B. Peucker-Ehrenbrink (2003) The marine $^{187}\text{Os}/^{188}\text{Os}$ record of the Eocene-Oligocene transition: The interplay of weathering and glaciation. *Earth Planet. Sci. Lett.*, 210, 151-165.
48. Ravizza, G. and B. Peucker-Ehrenbrink (2003) Chemostratigraphic evidence of Deccan volcanism from the marine osmium isotope record. *Science*, 302, 1392-1395.
49. Reagan, M.K., K.W.W. Sims, J. Erich, R.B. Thomas, H. Cheng, R.L. Edwards, G. Layne, and L. Ball (2003) Time-scales of differentiation from mafic parents to rhyolite in North American continental arcs. *J. Petrol.*, 44 (9), 1703-1726.
50. Sims, K.W.W., J. Blichert-Toft, D.J. Fornari, M.R. Perfit, S. Goldstein, P. Johnson, D.J. DePaolo, S.R. Hart, M.T. Murrell, P. Michael, G. Layne, and L. Ball (2003) Aberrant youth: Chemical and isotopic constraints on the origin of young off-axis lavas from the East Pacific Rise, 9-10°N. *Geochem., Geophys., Geosyst.*, 4, 8621.

2004 (10)

51. Clift, P.D., G. Layne, and J. Blusztajn (2004) Marine sedimentary evidence for monsoon strengthening, Tibetan uplift and drainage evolution in East Asia. *Am. Geophys. Union, Monogr.*, 149, 255-282.
52. Drakos, P., K. Sims, J. Riesterer, J. Blusztajn, and J. Lazarus (2004) Chemical and isotopic constraints on source-waters and connectivity of basin-fill aquifers in the southern San Luis basin, New Mexico. *New Mexico Geol. Soc. Guidebook*, 405-414.
53. Hart, S.R., M. Coetzee, R.K. Workman, J. Blusztajn, K.T.M. Johnson, J.M. Sinton, B. Steinberger, and J.W. Hawkins (2004) Genesis of the Western Samoa Seamount Province: Age, geochemical fingerprint and tectonics. *Earth Planet. Sci. Lett.*, 227, 37-56.
54. McManus, J. F., R. Francois, et al. (2004) Collapse and rapid resumption of Atlantic meridional circulation linked to deglacial climate changes. *Nature*, 428, 824-837.
55. Pichat, S., K.W.W. Sims, R. Francois, J.F. McManus, and F. Albarede (2004) Lower export production during glacial periods in the equatorial Pacific derived from $(^{231}\text{Pa}/^{230}\text{Th})_{xs,0}$ measurements in deep-sea sediments. *Paleoceanography*, 19 (4), PA4023.
56. Rauch, S., H.F. Hemond, and B. Peucker-Ehrenbrink (2004) Source characterisation of atmospheric platinum group element deposition into an ombrotrophic peat bog. *J. Environ. Monit.*, 6 , 355-343, doi: 10.1039/b316547g.
57. Rauch, S., H.F. Hemond, and B. Peucker-Ehrenbrink (2004) Recent changes in platinum group element concentrations and osmium isotopic composition in sediments from an urban lake. *Environ. Sci. Technol.*, 38 (2), 396-402.
58. Schmitz, B., B. Peucker-Ehrenbrink, C. Heilmann-Clausen, G. Åberg, F. Asaro, and C.-T.A. Lee (2004) Basaltic explosive volcanism, but no comet impact, at the Paleocene-Eocene boundary: high-resolution chemical and isotopic records from Egypt, Spain and Denmark. *Earth Planet. Sci. Lett.*, 225, 1-17.
59. Staudigel, H., S.R. Hart, A.A.P. Koppers, C. Constable, R. Workman, M. Kurz, and E.T. Baker (2004) Hydrothermal venting at Vailulu'u seamount: The smoking end of the samoa chain. *Geochem., Geophys., Geosyst.*, 5, Q02003.
60. Workman, R.K., S.R. Hart, M. Jackson, M. Regelous, J. Blusztajn, M. Kurz, K. Farley, and H. Staudigel (2004) Recycled metasomatized lithosphere as the origin of the enriched mantle II (EM2) end-member: Evidence from the Samoan volcanic chain. *Geochem. Geophys. Geosyst.*, 5, doi: 10.1029/2003GC000623.

2005 (12)

61. Charette, M.A., E.R. Sholkovitz, and C. Hansel (2005) Trace element cycling in a subterranean estuary: Part 1. Geochemistry of the permeable sediments. *Geochim. Cosmochim. Acta*, 69, 2095-2109.
62. Clift, P.D., A.E. Draut, P.B. Kelemen, J. Blusztajn, and A. Greene (2005) Stratigraphic and geochemical evolution of an oceanic arc upper crust section: the Jurassic Talkeetna volcanic formation, South Central Alaska. *Geol. Soc. Am.*, 117, 902-925.
63. Clift, P.D., G.L. Layne, L.-H. Chan, J. Blusztajn, M. Kastner, and R.R. Kelly (2005) Pulsed subduction accretion and tectonic erosion reconstructed since 2.5 Ma from the tephra record offshore Costa Rica. *Geochem., Geophys., Geosyst.*, 6, Q09016, doi: 10.1029/2005GC000963.
64. Clift, P.D. and J. Blusztajn (2005) Neogene drainage capture and climate evolution of the Indus river basin. *Nature*, 438, 1001-1003.
65. Gherardi, J.-M., L. Labeyrie, et al. (2005) Evidence from the Northeastern Atlantic basin for variability in the rate of the meridional overturning circulation through the last deglaciation. *Earth Planet. Sci. Lett.*, 240, 710-723.
66. Greene, A.R., S. M. Debari, P.B. Kelemen., J. Blusztajn, and P.D. Clift (2006) A detailed geochemical study of island arc crust: The Talkeetna arc section, South-central Alaska. *J. Petrol.*, 47, 1051-1093.
67. Pike, S.M., K.O. Buesseler, J. Andrews, and N. Savoye (2005) Quantification of ^{234}Th recovery in small volume sea water samples by inductively coupled plasma mass spectrometry. *J. Radioanal. Nucl. Chem.*, 263(2), 355-360.
68. Rauch, S., H.F. Hemond, B. Peucker-Ehrenbrink, K.H. Ek, and G. M. Morrison (2005) Platinum group element concentrations and osmium isotopic composition in urban airborne particles from Boston, Massachusetts. *Environm. Sci. Technol.*, 39, 9464-9470.
69. Rauch, S., H.F. Hemond, C. Barbante, M. Owari, G.M. Morrison, B. Peucker-Ehrenbrink, and U. Wass (2005) Importance of automobile exhaust catalyst emissions for the deposition of platinum, palladium, and rhodium in the Northern Hemisphere. *Environ. Sci. Technol.*, 39 (21), 8156-8162.
70. Rosenheim, B.E., P.K. Swart, S.R. Thorrold, A. Eisenhauer, and P. Willenz (2005) Salinity change in the subtropical Atlantic: Secular increase and teleconnections to the North Atlantic Oscillation. *Geophys. Res. Lett.*, 32, L02603, doi: 10.1029/2004GL021499.
71. Rouxel, O., A. Bekker, and K. Edwards (2005) Iron isotope constraints on the Archean and Paleo-Proterozoic ocean redox state. *Science*, 307, 1088-1091.
72. Thompson, W.G. and S.L. Goldstein (2005) Open-System Coral Ages Reveal Persistent Suborbital Sea-Level Cycles. *Science*, 308 (5720), 401-404.

2006 (27)

73. Ambrose, W.G. Jr., M.L. Carroll, M. Greenacre, S.R. Thorrold, and K. McMahon (2006) Variation in *Serripes groenlandicus* (Bivalvia) growth in a Norwegian high-Artic fjord: Evidence for local and large-scale climatic forcing. *Global Change Biol.*, 12, 1595-1607.
74. Anbar, A. and O. Rouxel (2006) Metal Isotopes in Paleoceanography. *Ann. Rev. Earth. Planet. Sci.*, 35, 717-746.
75. Bone, S.E., M.E. Gonnea, and M.A. Charette (2006) Geochemical cycling of arsenic in a coastal aquifer. *Environm. Sci. Technol.*, 40, 3273-3278.
76. Charette, M.A., and E.R. Sholkovitz (2006) Trace element cycling in a subterranean estuary: Part 2. Geochemistry of the pore water. *Geochim. Cosmochim. Acta*, 70, 811-826.

77. Clift, P.D., J. Blusztajn, and A.D. Nguyen (2006) Large-scale drainage capture and surface uplift in eastern Tibet-SW China before 24 Ma inferred from sediments of the Hanoi Basin, Vietnam. *Geophys. Res. Lett.*, 33, L19403, doi:10.1029/2006GL027772.
78. Cohen A.L., G.A. Gaetani, T. Lundälv, B.H. Corliss, and R.Y. George (2006) Compositional variability in a cold-water scleractinian, *Lophelia pertusa*: New insights into “vital effects”. *Geochem. Geophys. Geosyst.*, 7, Q12004, doi:10.1029/2006GC001354.
79. Dalai, T.K., G.E. Ravizza, and B. Peucker-Ehrenbrink (2006) The Late Eocene $^{187}\text{Os}/^{188}\text{Os}$ excursion: Chemostratigraphy, cosmic dust flux and the early Oligocene glaciation. *Earth Planet. Sci. Lett.*, 241, 477-492.
80. Dauphas, N. and O. Rouxel (2006) Mass spectrometry and natural variations of iron isotopes. *Mass Spectrom. Rev.*, 25, 515-550 (DOI 10.1002/mas.20078).
81. Gaetani G.A. and A.L. Cohen (2006) Element partitioning during precipitation of aragonite from seawater: a framework for understanding paleoproxies. *Geochim. Cosmochim. Acta*, 70, 4617-4634.
82. Hart, S.R. and J. Blusztajn (2006) Age and geochemistry of the mafic sills, ODP Site 1276, Newfoundland margin. *Chem. Geol.*, 235, 222-237.
83. Jackson, M.G. and S.R. Hart (2006) Strontium isotopes in melt inclusions from Samoan basalts: Implications for heterogeneity in the Samoan plume. *Earth Planet. Sci. Lett.*, 245, 260-277.
84. Mollenhauer, G., J.F. McManus, et al. (2006) Rapid lateral particle transport in the Argentine Basin: Molecular ^{14}C and $^{230}\text{Th}_{\text{xs}}$ evidence. *Deep-Sea Res. I*, 53, 1224-1243.
85. Panter, K.S., J. Blusztajn, S.R. Hart, P.R. Kyle, R. Esser, and W.C. McIntosh (2006) The origin of HIMU in the SW Pacific: Evidence from intraplate volcanism in Southern New Zealand and Subantarctic Islands. *J. Petrol.*, 47, 1673-1704.
86. Rauch, S., B. Peucker-Ehrenbrink, L.T. Molina, M.J. Molina, R. Ramos, and H.F. Hemond (2006) Platinum group elements in airborne particles in Mexico City. *Environ. Sci. Technol.*, 40, 7554-7560.
87. Rioux, M., B. Hacker, J. Mattinson, P. Kelemen, J. Blusztajn and G. Gehrels (2007) The magmatic development of an intra-oceanic crustal section: High-precision U-Pb zircon and whole rock isotopic analyses from the accreted Talkeetna arc, south-central Alaska. *Geol. Soc. Am. Bulletin*, v. 119, 1168-1184
88. Rouxel, O., A. Galy and H. Elderfield (2006) The geochemistry of germanium isotopes in igneous rocks and marine sediments. *Geochim. Cosmochim. Acta*, 70, 3387-3400.
89. Rouxel, O., A. Bekker and K. Edwards (2006) Response to comment on “Iron isotope constraints on the Archean and Paleo-Proterozoic ocean redox state” by Yamaguchi K. and Ohmoto H. *Science*, 311, 177b.
90. Saito, M.A., and D.L. Schneider (2006) Examination of precipitation chemistry and improvements in precision using the $\text{Mg}(\text{OH})_2$ preconcentration inductively coupled plasma mass spectrometry (ICP-MS) method for high-throughput analysis of open-ocean Fe and Mn in seawater. *Anal. Chim. Acta*, 565 (2), 222-233.
91. Schmitz, B., B.B. Ellwood, B. Peucker-Ehrenbrink, A. El Hassani, and P. Bultynck (2006) Platinum group elements and $^{187}\text{Os}/^{188}\text{Os}$ in a purported impact ejecta layer near Eifelian-Givetian stage boundary, Middle Devonian. *Earth Planet. Sci. Lett.*, 249, 162-172.
92. Sims, K.W.W., and S.R. Hart (2006) Comparison of Th, Sr, Nd and Pb isotopes in oceanic basalts: Implications for mantle heterogeneity and magma genesis. *Earth Planet. Sci. Lett.*, 245, 743-761.
93. Spiteri, C., P. Regnier, C.P. Slomp, and M.A. Charette (2006) pH-dependent iron oxide precipitation in a subterranean estuary. *J. Geochem. Explor.*, 88, 399-403.
94. Staudigel, H., S.R. Hart, A. Pile, B.E. Bailey, E.T. Baker, S. Brooke, D.P. Connelly, L. Haucke, C.R. German, I. Hudson, D. Jones, A.A.P. Koppers, J. Konter, R. Lee, T.W. Pietsch, B.M. Tebo, A.S.

- Templeton, R. Zierenberg, and C.M. Young (2006) Vailulu'u Seamount, Samoa: Life and death on an active submarine volcano. *Proc. Natl. Acad. Sci.*, 103, 6448-6453.
95. Thompson, W.G. (2006) U-series Dating. In *Encyclopedia of Quaternary Science*, Vol. 4, S. Elias (Ed.), Elsevier, Oxford, UK.
 96. Thompson, W.G. and S.L. Goldstein (2006) A radiometric calibration of the SPECMAP timescale. *Quart. Sci. Rev.*, 25, 3207-3215.
 97. Thorrold, S.R., G.P. Jones, S. Planes, and J.A. Hare (2006) Transgenerational marking of embryonic otoliths in marine fishes using barium stable isotopes. *Can. J. Fish. Aquat. Sci.*, 63, 1193-1197.
 98. Walther, B.D. and S.R. Thorrold (2006) Water, not food, contributes the majority of strontium and barium deposited in the otoliths of a marine fish. *Mar. Ecol. Prog. Ser.*, 311, 125-130.
 99. Workman, R.K., E. Hauri, S.R. Hart, J. Wang, and J. Blusztajn (2006) Volatile and trace elements in basaltic glasses from Samoa: Implications for water distribution in the mantle. *Earth Planet. Sci. Lett.*, 241, 932-951.

2007 (11)

100. Almany, G.R., M.L. Berumen, S.R. Thorrold, S. Planes, and G.P. Jones (2007) Local replenishment of coral reef fish populations in a marine reserve. *Science*, 316, 742-744.
101. Bone, S.E., M.A. Charette, C.H. Lamborg, and M.E. Gonnea (2007) Has submarine groundwater discharge been overlooked as a source of mercury to coastal waters? *Environm. Sci. Technol.*, 41, 3090-3095.
102. Came, R.E., D.W. Oppo, et al. (2007) Amplitude and timing of temperature and salinity variability in the sub-polar North Atlantic over the past 10 k.y. *Geology*, 35(4), 315-318.
103. Cohen, A.L. and S.R. Thorrold (2007) Recovery of temperature records from slow-growing corals by fine scale sampling of skeletons. *Geophys. Res. Lett.*, 34, L17706, doi: 10.1029/2007GL030967.
104. Jackson, M.G., S.R. Hart, A.A.P. Koppers, H. Staudigel , J. Konter, J. Blusztajn , M. Kurz, and J.A. Russell (2007) The return of subducted continental crust in Samoan lavas. *Nature*, 448, 684-687.
105. Jackson, M.G., M.D. Kurz, S.R. Hart, and R.K. Workman (2007) New Samoan lavas from Ofu Island reveal a hemispherically heterogeneous high ^3He / ^4He mantle. *Earth Planet. Sci. Lett.*, 264, 360-374, 2007.
106. McDonald, I., B. Peucker-Ehrenbrink, L. Coney, L. Ferriere and W.U. Reimold, and C. Koeberl (2007) Search for a meteoritic component in drill cores from the Bosumtwi impact structure, Ghana: Platinum-group element contents and osmium isotopic characteristics. *Meteor. Planet. Sci.*, 42, 743-753.
107. Rosner, M., L. Ball, B. Peucker-Ehrenbrink, J. Blusztajn, W. Bach, and J. Erzinger (2007) A simplified, accurate and fast method for Li isotope analysis of rocks and fluids, and $d^7\text{Li}$ values of seawater and rock reference materials. *Geostand. Geoanal. Res.*, 31, 77-88.
108. Saal, A.E., M.D. Kurz, S.R. Hart, J. Blusztajn, J. Blichert-Toft, and D.J. Geist (2007) The role of lithospheric gabbros on the composition of Galapagos lavas. *Earth Planet. Sci. Lett.*, 257, 391-406.
109. Strasser, C.A., S.R. Thorrold, V.R. Starczak, and L.S. Mullineaux (2007) Laser ablation ICP-MS analysis of larval shell in softshell clams (*Mya arenaria*) poses challenges for natural tag studies. *Limnol. Oceanogr. Methods*, 5, 241-249.
110. Thorrold, S.R., D.C. Zacherl, and L.A. Levin (2007) Population connectivity and larval dispersal using geochemical signatures in calcified structures. *Oceanography*, 20, 32-41.

2008 (32)

- 111.Bourquin M., P. van Beek, J.-L. Reyss, M. Souhaut, M. Charette, and C. Jeandel (2008) Testing methods to separate radium isotopes from seawater. *Marine Chem.*, 109, 226-237.
- 112.Buesseler, K.O., C. Lamborg, P. Cai, R. Escoube, R. Johnson, S. Pike, P. Masque, D. McGillicuddy, and E. Verdeny (2008) Particle fluxes associated with mesoscale eddies in the Sargasso Sea. *Deep-Sea Res. II*, 55, 1426-1444.
- 113.Clift P.D., H.V. Long, R. Hinton, R.M. Ellam, R. Hannigan, M.T. Tan, J. Blusztajn, and N.A. Duc (2008) Evolving east Asian river systems reconstructed by trace element and Pb and Nd isotope variations in modern and ancient Red River-Song Hong sediments. *Geochem. Geophys. Geosyst.*, 9, Q04039, doi:10.1029/2007GC001867.
- 114.Clift, P.D., L. Giosan, J. Blusztajn, I.H. Campbell, C. Allen, A.R. Tabrez, M. Danish, M.M. Rabbani, A. Alizai, A. Carter, and A. Lückge (2008) Holocene erosion of the Lesser Himalaya triggered by intensified summer monsoon. *Geology*, 36 (1), 79-82.
- 115.Craddock, P., O. Rouxel, L. Ball, and W. Bach (2008) Sulfur isotope measurement of sulfate and sulfide by high-resolution MC-ICP-MS. *Chem. Geol.*, 253, 102–113.
- 116.Dulaiova, H.D., M.E. Gonnea, P.B. Henderson, and M.A. Charette (2008) Geochemical and physical sources of radon variation in a subterranean estuary – Implications for groundwater radon activities in submarine groundwater discharge studies. *Marine Chem.*, 110, 120-127.
- 117.Elsdon, T.S., B.K. Wells, S.E. Campana, B.M. Gillanders, C.M. Jones, K.E. Limburg, D.H. Secor, S.R. Thorrold, and B.D. Walther (2008) Otolith chemistry to describe movements and life-history parameters of fishes: Hypotheses, assumptions, limitations, and inferences. *Oceanogr. Mar. Biol. Ann. Rev.*, 46, 297-330.
- 118.Gabitov, R.I., G.A. Gaetani, E.B. Watson, A.L. Cohen, and H.L. Ehrlich (2008) Experimental determination of growth rate effect on U⁶⁺ and Mg²⁺ partitioning between aragonite and fluid at elevated U⁶⁺ concentration. *Geochim. Cosmochim. Acta*, 70, 4617-4634.
- 119.Geist D., B.A. Diefenbach, D.J. Fornari, M.D. Kurz, K. Harpp, and J. Blusztajn (2008) Construction of the Galápagos platform by large submarine volcanic terraces. *Geochem. Geophys. Geosyst.*, 9, Q03015, doi:10.1029/2007GC001795.
- 120.Gonnea, M.E., P. Morris, H. Dulaiova, and M.A. Charette (2008) New perspectives on radium behavior within a subterranean estuary. *Marine Chem.*, 109, 250-267.
- 121.Jackson, M.G., S.R. Hart, A.E. Saal, N. Shimizu, M.D. Kurz, J.S. Blusztajn, and A. Skovgaard (2008) Globally elevated titanium, tantalum and niobium (TITAN) in ocean island basalts with high ³He/⁴He. *Geochem. Geophys. Geosyst.*, 9, Q04027, doi: 10.1029/2007GC001876.
- 122.S.G John., O.J. Rouxel, P.R. Craddock, A.M. Engwall, and E.A. Boyle (2008) Zinc isotope composition and fractionation in hydrothermal vent fluids and chimneys. *Earth Planet. Sci. Lett.*, 269, 17-28.
- 123.Lamborg, C.H., K.O. Buesseler, and P.J. Lam (2008) Sinking fluxes of minor and trace elements in the North Pacific Ocean measured during the VERTIGO program. *Deep Sea Res. II*, 55 (14-15), 1564-1577.
- 124.Lamborg, C.H., K.O. Buesseler, J. Valdes, C.H. Bertrand, R. Bidigare, S. Manganini, S. Pike, D. Steinberg, T. Trull and S. Wilson (2008) The flux of bio- and lithogenic material associated with sinking particles in the mesopelagic "twilight zone" of the northwest and North Central Pacific Ocean. *Deep Sea Res. II*, 55 (14-15), 1540-1563.
- 125.Noble, A.E., M.A. Saito, K. Maiti, and C.R. Benitez-Nelson (2008) Cobalt, manganese, and iron near the Hawaiian Islands: A potential concentrating mechanism for cobalt within a cyclonic eddy and implications for the hybrid-type trace metals. *Deep-Sea Res. II: Topical Studies Oceanogr.*, 55 (10-13), 1473-1490.

126. Paquay, F.S., G.E. Ravizza, T.K. Dalai, and B. Peucker-Ehrenbrink (2008) Determining chondritic impactor size from the marine osmium isotope record. *Science*, 320, 214-218.
127. Reisberg, L., O. Rouxel, J. Ludden, H. Staudigel, and C. Zimmermann (2008) Re-Os results from ODP Site 801: Evidence for extensive Re uptake during alteration of oceanic crust. *Chem. Geol.*, 248, 256-271.
128. Robinson, L.F., T. Noble, J.F. McManus (2008) Measurement of adsorbed and total $^{232}\text{Th}/^{230}\text{Th}$ ratios from marine sediments. *Chem. Geol.*, 252, 169-179.
129. Rosenheim, B.E., S.R. Thorrold, and M.L. Roberts (2008) Accelerator mass spectrometer ^{14}C determination in CO_2 produced from laser decomposition of aragonite. *Rapid Comm. Mass Spectrom.*, 22, 3443-3449.
130. Rouxel, O., E. Sholkovitz, M. Charette, ad K. Edwards (2008) Iron isotope fractionation in subterranean estuaries. *Geochim. Cosmochim. Acta.*, 72, 3413-3430.
131. Rouxel, O., W. C. Shanks, W. Bach and K. Edwards (2008) Integrated Fe and S isotope study of seafloor hydrothermal vents at East Pacific Rise 9-10°N. *Chem. Geol.*, 252, 214-227.
132. Rouxel, O., S. Ono, J. Alt, D. Rumble, and J. Ludden (2008) Sulfur isotope evidence for microbial sulfate reduction in altered oceanic basalts at ODP Site 801. *Earth Planet. Sci. Lett.*, 268, 110-123.
133. Saenger, C.P., A.L. Cohen, D.W. Oppo, and D. Hubbard (2008) Interpreting sea surface temperature from strontium/calcium ratios in Montastrea corals: Link with growth rate and implications for proxy reconstructions. *Paleoceanography*, 23, PA3102, doi: 10.1029/2007PA001572.
134. Saito, M.A. and T.J. Goepfert (2008) Zinc-cobalt co-limitation in *Phaeocystis antarctica*. *Limnol. Oceanogr.*, 53(1), 266-275.
135. Schmitz, B., D.A.T. Harper, B. Peucker-Ehrenbrink, S. Stouge, C. Alwmark, A. Cronholm, S.M. Bergström, M. Tassinari, and W. Xiaofeng (2008) Asteroid breakup linked to the Great Ordovician Biodiversity Event. *Nature Geosci.*, 1 (1), 49-53, doi: 10.1038/ngeo.2007.xx.
136. Siddall, M., E.J. Rohling, W.G. Thompson, and C. Waelbroeck (2008) Marine isotope stage 3 sea level fluctuations: Data synthesis and new outlook, *Rev. Geophys.*, 46, RG4003, doi: 10.1029/2007RG000226.
137. Sims, K.W.W., S.R. Hart, M.K. Reagan, J. Blusztajn, R. Sohn, H. Staudigel, G. Layne, L. Ball, and J. Andrews (2008) ^{238}U - ^{230}Th - ^{226}Ra - ^{210}Pb - ^{210}Po , ^{232}Th - ^{228}Ra and ^{235}U - ^{231}Pa constraints on the ages and petrogenesis of Vailuluu and Malumalu Lavas, Samoa. *Geochem. Geophys. Geosyst.*, 9, doi: 10.1029/2007GC001651, 1-30.
138. Sims, K.W.W., J. Blichert-Toft, P. R. Kyle, S. Pichat, J. Blusztajn, P.J. Kelly, L. Ball, and G. Layne (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. Geotherm. Res.*, 177, 606-618.
139. Strasser, C.A., L.S. Mullineaux, and S.R. Thorrold (2008) Temperature and salinity effects on elemental uptake in the shells of larval and juvenile softshell clams (*Mya arenaria*). *Mar. Ecol. Prog. Ser.*, 370, 155-169.
140. Walther, B.D. and S.R. Thorrold (2008) Continental-scale variation in otolith geochemistry of juvenile American shad. *Can. J. Fish. Aquat. Sci.*, 65, 2623-2635.
141. Walther, B.D., S.R. Thorrold, and J.E. Olney (2008) Geochemical signatures in otoliths record natal origins of American shad. *Trans Am. Fish. Soc.*, 137, 57-69.
142. Xu, Y.-G., J. Blusztajn, J.-L. Ma, K. Suzuki, J.-F. Liu, and S.R. Hart (2008) Late Archean to Early Proterozoic lithospheric mantle beneath the western North China craton: Sr-Nd-Os isotopes of peridotite xenoliths from Yangyuan and Fansi. *Lithos*, 102, 25-42.

2009 (29)

143. Abe-Ouchi, A., M. Andersen, F. Antonioli, J. Bamber, E. Bard, J. Clark, P. Clark, P. Deschamps, A. Dutton, M. Elliot, C. Gallup, N. Gomez, J. Gregory, P. Huybers, K. Kawamura, M. Kelly, K. Lambeck, T. Lowell, J. Mitrovica, B. Otto-Bliesner, D. Richards, M. Siddall, J. Stanford, C. Stirling, T. Stocker, A. Thomas, B. Thompson, T. Törnqvist, N.V. Riveiros, C. Waelbroeck, Y. Yokoyama, and S. Yu (2010) The sea-level conundrum: Case studies from palaeo-archives. *J. Quat. Sci.* 25/1, 19-25.
144. Andersen, M.B., C.D. Gallup, D. Scholz, C.H. Stirling, and W.G. Thompson (2009) U-series dating of fossil coral reefs: consensus and controversy. *PAGES News*, 17, 54-56.
145. A. W. Schroth, J. Crusius, E. R. Sholkovitz and B. C. Bostick (2009). Iron solubility driven by speciation in dust sources to the ocean. *Nature Geoscience* 2, 337 - 340 .
146. Bekker, A., M.E. Barley, M.L. Fiorentini, O.J. Rouxel, D. Rumble, and S.W. Beresford (2009) Atmospheric sulfur in Archaean komatiite-hosted nickel deposits. *Science*, 326 (5956), 1086-1089.
147. Bennett, S.A., O.J. Rouxel, K. Schmidt, D. Garbe-Schönberg, P.J. Statham, and C.R. German (2009) Iron isotope fractionation in a buoyant hydrothermal plume, 5 degrees S, Mid-Atlantic Ridge. *Geochim. Cosmochim. Acta.*, 73 (19), 5619-5634.
148. Buesseler, K.O., S. Pike, K. Maiti, C.H. Lamborg, D.A. Siegel, and T.W. Trull (2009) Thorium-234 as a tracer of spatial, temporal and vertical variability in particle flux in the North Pacific. *Deep-Sea Res. I*, 56 (1143-1167), doi: 10.1016/j.dsr.2009.04.001.
149. Chakrabarti, R., K.W.W. Sims; A.R. Basu; M. Reagan, and J. Durieux (2009) Timescales of Magmatic Processes and Eruption Ages of the Nyiragongo volcanics from ^{238}U - ^{230}Th - ^{226}Ra - ^{210}Pb Earth Planet Sci. Lett., 288, 149-157.
150. Chan L-H., J.C. Lassiter, E.H. Hauri, S.R. Hart, and J. Blusztajn (2009) Lithium isotope systematics of lavas from the Cook–Austral Islands: Constraints on the origin of HIMU mantle. *Earth Planet. Sci. Lett.*, 277, 433-442.
151. Chang, Y.-P., M.-T. Chen, M.-T. Y. Yokoyama, H. Matsuzaki, W.G. Thompson, S.-J. Kao, and H. Kawahata (2009) Monsoon hydrography and productivity changes in the East China Sea during the past 100,000 years: Okinawa Trough evidence (MD012404). *Paleoceanography*, 24, PA3208.
152. Clarke, L.M., B.D. Walther, S.B. Munch, S.R. Thorrold, and D.O. Conover (2009) Chemical signatures in the otoliths of a coastal marine fish, Menidia menidia, from the northeastern United States: Spatial and temporal differences. *Mar. Ecol. Prog. Ser.*, 384, 261-271.
153. Cooper, K.M., J.M. Eiler, K.W.W. Sims, and C. H. Langmuir (2009) Distribution of recycled crust within the upper mantle: Insights from the oxygen isotope composition of MORB from the Australian-Antarctic Discordance. *Geochem. Geophys. Geosyst.*, 10, 12, Q12004; doi:10.1029/2009GC002728.
154. Draut A.E., P. Clift, J.M. Amato, J. Blusztajn, and H. Schouten (2009) Arc-continent collision and the formation of continental crust: a new geochemical and isotopic record from the Ordovician Tyrone Igneous Complex, Ireland. *J. Geol. Soc., London*, 166, 485-501.
155. Escoube, R., O. Rouxel, E. Sholkovitz, and O. Donard (2009) Iron isotope systematics in estuaries: The case of the North River, Massachusetts (USA). *Geochim. Cosmochim. Acta.*, 73, 4045-4059.
156. Fiege, K., C.A. Miller, L.F. Robinson, R. Figueroa, and B. Peucker-Ehrenbrink (2009) Strontium isotopes in Chilean rivers: The flux of unradiogenic continental Sr to seawater. *Chem. Geol.*, 268, 337-343.
157. Gherardi J.M., L. Labeyrie, S. Nave, R. Francois, J.F. McManus, and E. Cortijo (2009) Glacial-Interglacial circulation changes inferred from $^{231}\text{Pa}/^{230}\text{Th}$ sedimentary record in the North Atlantic region. *Paleoceanography*, 24, PA2204, 10.1029/2008PA001696.
158. Hoffmann, A., A. Bekker, O. Rouxel, D. Rumble, and S. Master (2009) Multiple sulphur and iron

- isotope composition of detrital pyrite in Archaean sedimentary rocks: a new tool for provenance analysis. *Earth Planet. Sci. Lett.*, 286 (3-4), 436-445.
159. Holcomb M.C., A.L. Cohen, R.I. Gabitov, and J. Hutter (2009) Compositional and morphological features of aragonite precipitated experimentally from seawater and biogenically by corals. *Geochim. Cosmochim. Acta*, 73, 4166-4179 doi: 10.1016/j.gca.2009.04.015.
160. Jackson, M.G., S.R. Hart, N. Shimizu, and J.S. Blusztajn (2009) $^{87}\text{Sr}/^{86}\text{Sr}$ and $^{143}\text{Nd}/^{144}\text{Nd}$ disequilibrium between Polynesian hotspot lavas and the clinopyroxenes they host: Evidence complementing isotopic disequilibrium in melt inclusions. *Geochem. Geophys. Geosyst.*, 10, Q03006, doi: 10.1029/2008GC002324.
161. Miller, C.A., B. Peucker-Ehrenbrink, and L.A. Ball (2009) Precise determination of rhenium isotopic composition by multi-collector inductively-coupled plasma mass spectrometry. *J. Anal. Atom. Spectrom.*, doi: 10.1039/B818631F.
162. Planavsky, N., O. Rouxel, A. Bekker, R. Shapiro, P. Fralick, and A. Knudsen (2009) Iron-oxidizing microbial ecosystems thrived in late Paleoproterozoic redox-stratified oceans. *Earth Planet. Sci. Lett.*, 286 (1-2), 230-242.
163. Chakrabarti, R., K.W.W. Sims, A.R. Basu, M. Reagan, J. Durieux (2009) Timescales of magmatic processes and eruption ages of the Nyiragongo volcanics from ^{238}U - ^{230}Th - ^{226}Ra - ^{210}Pb disequilibria. *Earth Planet. Sci. Lett.*, 288, 149-157.
164. Robinson, N., G. Ravizza, R. Coccioni, B. Peucker-Ehrenbrink, and R. Norris (2009) A high-resolution marine $^{187}\text{Os}/^{188}\text{Os}$ record for the late Maastrichtian: Distinguishing the chemical fingerprints of Deccan volcanism and the KP impact event. *Earth Planet. Sci. Lett.*, 281, 159-168.
165. Robinson, L.F., and T. van de Flierdt (2009) Southern Ocean evidence for reduced export of North Atlantic Deep Water during Heinrich Event 1. *Geology*, 37, 195-198.
166. Siddall, M., W.G. Thompson, and C. Waelbroeck (2009) Past ice-sheet dynamics and sea level: placing the future in context. *PAGES News*, 17, 51-52.
167. Thorrold, S.R., and S.E. Swearer (2009) Otolith chemistry. In: Tropical fish otoliths: Information for assessment, management and ecology (B. S. Green, B. D. Mapstone, G. Carlos, and G. A. Begg , Eds), Springer, pp. 249-295.
168. Toner, B. M., S.C. Fakra, S.J. Manganini, C.M. Santelli, M.A. Marcus, J.W. Moffett, O. Rouxel, C.R. German, and K.J. Edwards (2009) Preservation of iron(II) at hydrothermal vents within carbon-rich matrices. *Nature Geosci.*, doi: 10.1038/ngeo433.
169. Walther, B.D. and S.R. Thorrold (2009) Inter-annual variability in isotope and elemental ratios recorded in otoliths of an anadromous fish. *J. Geochem. Explor.*, 102 (3), 181-186.
170. Williamson, D.H., G.P. Jones, and S.R. Thorrold (2009) An experimental evaluation of transgenerational isotope labelling in a coral reef grouper. *Mar. Biol.*, 156, 2517-2525.
171. Williamson, D.H., G.P. Jones, S.R. Thorrold, and A.J. Frisch (2009) Transgenerational marking of marine fish larvae: stable isotope retention, physiological effects and health issues. *J. Fish Biol.*, 74, 891-905.

2010 (34)

172. Aciego, S.M., F. Jourdan, D.J. DePaolo, B.M. Kennedy, P.R. Renne, and K.W.W. Sims (2010) Combined U-Th/He and $^{40}\text{Ar}/^{39}\text{Ar}$ Geochronology of Post-shield Lavas from the Mauna Kea and Kohala volcanoes, Hawaii. *Geochim. Cosmochim. Acta*, 74, 1620-1635.
173. J. Ashford, M. La Mesa, B. A. Fach, C. Jones, and I. Everson (2010) Testing early life connectivity using otolith chemistry and particle-tracking simulations. *Can. J. Fish. Aquat. Sci.* 67: 1303–1315.
174. Benway, H.M., J.F. McManus, D.W. Oppo, J.L. Cullen (2010) Hydrographic changes in the eastern subpolar North Atlantic during the last deglaciation. *Quat. Sci. Rev.*, 29, 3336-3345.

175. Berumen, M.L., H. J. Walsh, N. Raventos, S. Planes, G.P. Jones, V. Starczak, and S.R. Thorrold. (2010) Otolith geochemistry does not reflect dispersal history of clownfish larvae. *Coral Reefs*, 29, 883-891.
176. Case, D.L., L.F. Robinson, and M.E. Auro (2010) Environmental and biological controls on Mg and Li in deep-sea scleractinian corals. *Earth Planet. Sci. Lett.*, 300, 215-225.
177. Clarke, L.M., S. B. Munch, S.R. Thorrold, and D.O. Conover (2010) High connectivity among locally adapted populations of marine fish (*Menidia menidia*). *Ecology*, 91, 3526-3537.
178. Clift, P.D., L. Giosan, A. Carter, E. Garzanti, V. Galy, A.R. Tabrez, M. Pringle, I.H. Campbell, C. France-Lanord, J. Blusztajn, C. Allen, A. Alizai, A. Lückge, M. Danish, and M.M. Rabbani (2010) Monsoon control over erosion patterns in the Western Himalaya: possible feed-backs into the tectonic evolution, In: *Monsoon evolution and tectonic-climate linkage in Asia*, (Clift, P.D., Tada, R., and Zheng, H., Eds.), Geol. Soc. London, Spec. Publ., 342, 185-218.
179. Cohen A.L., and G.A. Gaetani (2010) Ion Partitioning and the Geochemistry of Coral Skeletons: Solving the Mystery of the “Vital Effect”. In: European Mineralogical Union, Notes in Mineralogy: On partitioning in low temperature aqueous systems: from fundamentals to applications in climate proxies and environmental geochemistry (M. Prieto and H. Stoll, Eds.)
180. Craddock, P.R., W. Bach, J.S. Seewald, O.J. Rouxel, E. Reeves, and M.K. Tivey (2010) Rare earth element abundances in hydrothermal fluids from the Manus Basin, Papua New Guinea: Indicators of sub-seafloor hydrothermal processes in back-arc basins. *Geochim. Cosmochim. Acta*, 74, 5494-5513, doi: 10.1016/j.gca.2010.07.003.
181. Craddock P.R., W. Bach (2010) Insights to magmatic-hydrothermal processes in the Manus back-arc basin as recorded by anhydrite Original Research Article. *Geochim. Cosmochim. Acta*, 74 (19), 5514-5536.
182. Galy, V., C. France-Lanord, B. Peucker-Ehrenbrink, and P. Huyghe (2010) Sr-Nd-Os evidence for a stable erosion regime in the Himalaya during the past 12 Myr. *Earth Planet. Sci. Lett.*, 290, 474-480.
183. Gherardi, J.-M., Y. Luo, et al. (2010) Reply to comment by S. Peacock on “Glacial-interglacial circulation changes inferred from $^{231}\text{Pa}/^{230}\text{Th}$ sedimentary record in the North Atlantic region”. *Paleoceanography*, 25, 7.
184. Glazer, B.T. and O.J. Rouxel (submitted) Redox speciation and distribution within diverse iron-dominated microbial habitats at Loihi Seamount. *Geomicrobiol. J.*, 26 (8), 606-622.
185. Hanghøj K., P.B. Kelemen, D. Hassler, and M. Godard (2010) Composition and Genesis of Depleted Mantle Peridotites from the Wadi Tayin Massif, Oman Ophiolite; Major and Trace Element Geochemistry, and Os Isotope and PGE Systematics. *J. Petrol.*, 51, 201-227.
186. Hendry, K.R., M.J. Leng, L.F. Robinson, H.J. Sloane, J. Blusztjan, R.E.M. Rickaby, R.B. Georg, and A. N. Halliday (2010) Silicon isotopes in Antarctic sponges: an interlaboratory comparison. *Antarctic Sciences*, 23, 34-42.
187. Humston R., B.M. Priest, W.C. Hamilton, and P.E. Bugas Jr. (2010) Dispersal between Tributary and Main-Stem Rivers by Juvenile Smallmouth Bass Evaluated Using Otolith Microchemistry, *Trans. Amer. Fisheries Soc.*, 139, 171-184, doi:10.1577/T08-192.1
188. Jackson, C.S., O. Marchal, Y. Liu, and W.G. Thompson (2010) A box model of the freshwater forcing hypothesis of abrupt climate change and the physics governing ocean stability. *Paleoceanography*, 25, PA4222, doi:10.1029/2010PA001936.
189. Jackson, M.G., R.W. Carlson, M.D. Kurz, P.D. Kempton, J. Francis, and J. Blusztajn (2010) Evidence for the survival of the oldest terrestrial mantle reservoir. *Nature*, 466, 853–856.
190. Jackson, M.G., S.R. Hart, J.G. Konter, A.A.P. Koppers, H. Staudigel, M.D. Kurz, J. Blusztajn, and J.M. Sinton (2010) Samoan hot spot track on a “hot spot highway”: Implications for mantle plumes and a deep Samoan mantle source. *Geochem. Geophys. Geosyst.*, 11, Q12009, doi:10.1029/2010GC003232.

191. Kalnejais L.H., W.R. Martin, M.H. Bothner (2010) The release of dissolved nutrients and metals from coastal sediments due to resuspension. *Marine Chem.*, 121, 224-235.
192. McGee, D., F. Marcantonio, J.F. McManus, G. Winckler (2010) The response of excess ^{230}Th and extraterrestrial ^3He to sediment redistribution at the Blake Ridge, western North Atlantic. *Earth Planet. Sci. Lett.*, 299, 138-149.
193. Mollenhauer, G., J.F. McManus, T. Wagner, I.N. McCave, T.I. Eglinton (2011) Radiocarbon and ^{230}Th data reveal rapid redistribution and temporal changes in sediment focussing at a North Atlantic drift. *Earth Planet. Sci. Lett.*, 301, 373-381
194. Planavsky N., A. Bekker, O. Rouxel, B. Kamber, A. Hofmann, A. Knudsen, T.W. Lyons (2010) Rare Earth Element and yttrium compositions of Archean and Paleoproterozoic Fe formations revisited: New perspectives on the significance and mechanisms of deposition. *Geochim. Cosmochim. Acta*, 74, 6387-6405, doi: 10.1016/j.gca.2010.07.021.
195. Planavsky N.J., O. Rouxel, A. Bekker, S.V. Lalonde, K.O. Konhauser, C.T. Reinhard, T.W. Lyons (2010) The evolution of the marine phosphate reservoir. *Nature*, 467(7319), 1088-1090, doi: 10.1038/nature09485.
196. Rauch, S., B. Peucker-Ehrenbrink, M.E. Kylander, D.J. Weiss, A. Martinez-Cortizas, D. Heslop, C. Olid, T.M. Mighall, and H.F. Hemond (2010) Anthropogenic forcings on the surficial osmium cycle. *Environ. Sci. Technol.*, 44, 881-887.
197. Ries J.B., A.L. Cohen, and D.C. McCorkle (2010) The zooxanthellate temperate coral *Oculina arbuscula* exhibits a nonlinear calcification response to pCO₂-induced ocean acidification. *Coral Reefs*, doi: 10.1007/s00338-010-0632-3.
198. Rioux, M., J. Mattinson, B. Hacker, P. Kelemen, J. Blusztajn, K. Hanghoj, and G. E. Gehrels (2010) Intermediate to felsic middle crust in the accreted Talkeetna arc, the Alaska Peninsula and Kodiak Island, south-central Alaska: An analogue for low velocity middle crust in modern arcs. *Tectonics*, 29, TC3001, doi:10.1029/2009TC002541.
199. Roberts, N.L., A.M. Piotrowski, et al. (2010) Synchronous deglacial overturning and water mass source changes. *Science*, 327(5961), 75-78.
200. Rouxel, O., and M. Auro (2010) Iron Isotope Variations in Coastal Seawater Determined by Multicollector ICP-MS. *Geostand. Geoanal. Res.*, 34(2), 135-144.
201. Salters V.J.M., and A. Sachi-Kocher (2010) An ancient metasomatic source for the Walvis Ridge basalts. *Chem. Geol.*, 273, 151-167.
202. Thompson, W.G., M.B. Andersen, A. Dutton, and M. Siddall (2010) Understanding future sea level rise: The challenges of dating past interglacials. *PAGES news*, 18(1), 39-40.
203. Thorrold, S.R. and S.E. Swearer (2010) Otolith chemistry. In: B. Green, G. Begg, G. Carlos and B. Mapstone (Eds.) *Tropical fish otoliths: Information for assessment, management and ecology*. Kluwer Acad. Publ.
204. van de Flierdt, T., L.F. Robinson, and J.F. Adkins, (2010) Deep-sea coral aragonite as a recorder for the neodymium isotopic composition of seawater. *Geochim. Cosmochim. Acta.*, 74, 6014-6032.
205. Walther, B.D., and S.R. Thorrold (2010) Limited diversity in natal origins of an anadromous fish during ocean residency. *Can. J. Fish. Aquat. Sci.*, 67, 1699-1707.

2011 (17)

206. Bach W., M. Rosner, N. Jöns, S. Rausch, L.F. Robinson, H. Paulick, J. Erzinger (2011) Carbonate veins trace seawater circulation during exhumation and uplift of mantle rock: Results from ODP Leg 209. *Earth Planet. Sci. Lett.*, 311, 242-252.
207. Baioumy H.M., L.B. Eglinton, and B. Peucker-Ehrenbrink (2011) Rhenium–osmium isotope and platinum group element systematics of marine vs. non-marine organic-rich sediments and coals from Egypt. *Chem. Geol.*, 285, 70-81.

208. Elkins L.J., K.W.W. Sims, J. Prytulak, T. Elliott, N. Mattielli, J. Blichert-Toft, J. Blusztajn, N. Dunbari, C. Devey, D.F. Mertz, J.-G. Schilling, and M. Murrell (2011) Understanding melt generation beneath the slow-spreading Kolbeinsey Ridge using ^{238}U , ^{230}Th , and ^{231}Pa excesses. *Geochim. Cosmochim. Acta*, 75, 6300-6329.
209. Ferrow E., V. Vajda, C. Bender Koch, B. Peucker-Ehrenbrink, and P.S. Willumsen (2011) Multiproxy analysis of a new terrestrial and a marine Cretaceous–Paleogene (K–Pg) boundary site from New Zealand. *Geochim. Cosmochim. Acta*, 75, 657-672.
210. Gabitov R.I., A.K. Schmitt, M. Rosner, K.D. McKeegan, G.A. Gaetani, A.L. Cohen, E.B. Watson and T.M. Harrison (2011) In situ $\delta^7\text{Li}$, Li/Ca, and Mg/Ca analyses of synthetic aragonites. *Geochem., Geophys., Geosyst.*, 12, DOI: 10.1029/2010GC003322.
211. Gaetani G.A., A.L. Cohen, Z. Wang, and J. Crusius (2011) Rayleigh-based, multi-element coral thermometry: A biomineralization approach to developing climate proxies. *Geochim. Cosmochim. Acta*, 75, 1920-1932.
212. Jackson M.G., and S.B. Shirey (2011) Re–Os isotope systematics in Samoan shield lavas and the use of Os-isotopes in olivine phenocrysts to determine primary magmatic compositions. *Earth Planet. Sci. Lett.*, 312, 91-101.
213. Kelemen P.B., J.M. Matter, L. Streit, J. Rudge, W. Curry, and J. Blusztajn (2011) Rates and mechanisms of mineral carbonation in peridotite: natural processes and recipes for enhanced, in situ CO_2 capture and storage. *Annu. Rev. Earth Sci.*, 39, 545-576.
214. Owens S.A., K.O. Buesseler, and K.W.W. Sims (2011) Re-evaluating the ^{238}U -salinity relationship in seawater: Implications for the ^{238}U – ^{234}Th disequilibrium method. *Marine Chem.*, 127, 31-39.
215. Qi H.-W., O. Rouxel, R.-Z. Hu, X.-W. Bi, H.-J. Wen (2011) Germanium isotopic systematics in Ge-rich coal from the Lincang Ge deposit, Yunnan, Southwestern China Original Research Article. *Chem. Geol.*, 286, 252-265.
216. Miller C.A., B. Peucker-Ehrenbrink, B.D. Walker, and F. Marcantonio (2011) Re-assessing the surface cycling of molybdenum and rhenium. *Geochim. Cosmochim. Acta*, 75, 7146-7179.
217. Thompson, W.G., C.H. Allen, M.A. Wilson, and B. White (2011) Sea level oscillations during the last interglacial highstand recorded by Bahamas corals. *Nature Geosci.*, 4, 684-687.
218. Saenger C., R.E. Came, D.W. Oppo, L.D. Keigwin, and A.L. Cohen (2011) Regional climate variability in the western subtropical North Atlantic during the past two millennia. *Paleoceanography*, 26, DOI: 10.1029/2010PA002038.
219. Sayani H.R., K.M. Cobb, A.L. Cohen, W. Crawford Elliott, I.S. Nurhati, R.B. Dunbar, K.A. Rose, L.K. Zaunbrecher (2011) Effects of diagenesis on paleoclimate reconstructions from modern and young fossil corals. *Geochim. Cosmochim. Acta*, 75, 6361-6373.
220. Schmitz B., P.R. Heck, C. Alwmark, N.T. Kita, M.M.M. Meier, B. Peucker-Ehrenbrink, T. Ushikubo, and J.W. Valley (2011) Determining the impactor of the Ordovician Lockne crater: Oxygen and neon isotopes in chromite versus sedimentary PGE signatures. *Earth Planet. Sci. Lett.*, 306, 149-155.
221. Sohm J.A., J.A. Hilton, A.E. Noble, J.P. Zehr, M.A. Saito, and E.A. Webb (2011) Nitrogen fixation in the South Atlantic Gyre and the Benguela Upwelling System. *Geophys. Res. Lett.*, 38, doi: 10.1029/2011GL048315.
222. M. R. Stukel, M. R. Landry, C. R. Benitez-Nelson and R. Goericke (2011). Trophic cycling and carbon export relationships in the California Current Ecosystem. *Limnol. Oceanogr.*, 56(5), 1866–1878, doi:10.4319/lo.2011.56.5.1866
- 223.. Waters C.L., K.W.W. Sims, M.R. Perfit, J. Blichert-Toft, and J. Blusztajn (2011) Perspective on the genesis of E-MORB from chemical and isotopic heterogeneity at 9–10°N East Pacific Rise. *J. Petrol.*, 52(3), 565-602.

2012 (27)

224. Anderson, R., M. Fleisher, L. Robinson, R. Edwards, J. Hoff, S. Moran, S., R.R. v.d. Loeff, A. Thomas, and R. Francois (2012) Intercal: Intercalibration of ^{230}Th , ^{232}Th , ^{231}Pa and ^{10}Be GEOTRACES. Limnol. Oceanogr., Methods, 10, 179-213.
225. J. Ashford, M. Dinniman, C. Brooks, A. H. Andrews, E. Hofmann, G. Cailliet, C. Jones, and N. Ramanna (2012). Does large-scale ocean circulation structure life history connectivity in Antarctic toothfish (*Dissostichus mawsoni*)? Can. J. Fish. Aquat. Sci. **69**: 1903–1919 .
226. Auro, M., L. Robinson, A. Burke, L. Bradtmiller, M. Fleisher, and R. Anderson (2012) Improvement to ^{232}Th , ^{230}Th and ^{231}Pa analysis in seawater arising from GEOTRACES intercalibration. Limnol. Oceanogr., Methods, 10, 474-474.
227. Boyle E.A., S. John, W. Abouchami, J.F. Adkins, Y. Echegoyen-Sanz, M. Ellwood, A.R. Flegal, K. Fornace, C. Gallon, S. Galer, M. Gault-Ringold, F. Lacan, A. Radic, M. Rehkamper, O. Rouxel, Y. Sohrin, C. Stirling, C. Thompson, D. Vance, Z. Xue, and Y. Zhao (2012) GEOTRACES IC1 (BATS) contamination-prone trace element isotopes Cd, Fe, Pb, Zn, Cu, and Mo intercalibration. Limnol. Oceanogr., Methods, 653–665.
228. Burke, A., and L. Robinson (2012) The Southern Ocean's Role in Carbon Exchange During the Last Deglaciation. Science, 335, 557-461.
229. Escoube R., O. Rouxel, B. Luais, E. Ponzevera, O.F.X. Donard (2012) An Intercomparison Study of the Germanium Isotope Composition of Geological Reference Materials. Geostand. Geoanal. Res., 36, 149-159.
230. Escrig S., A. Bézos, C.H. Langmuir, P.J. Michael, and R. Arculus (2012) Characterizing the effect of mantle source, subduction input and melting in the Fonualei Spreading Center, Lau Basin: Constraints on the origin of the boninitic signature of the back-arc lavas. Geochem., Geophys., Geosyst., 13, doi: 10.1029/2012GC004130.
231. Garrison J.M., M.K. Reagan, and K.W.W. Sims (2012) Dacite formation at Ilopango Caldera, El Salvador: U-series disequilibrium and implications for petrogenetic processes and magma storage time. Geochem., Geophys., Geosyst., 13 (6), doi: 10.1029/2012GC004107.
232. Hendry, K.R. , L. Robinson, M. Meredith, S. Mulitza, C. Chiessi, and H. Arz (2012) Abrupt changes in high-latitude nutrient supply to the Atlantic during the last glacial cycle. Geology, 40, 123-126.
233. Hendry, K.R., and L. Robinson (2012) The relationship between silicon isotope fractionation in sponges and silicic acid concentration: Modern and core-top studies of biogenic opal. Geochim. Cosmochim. Acta, 81, 1-12.
234. Hu, D., P. Böning, C.M. Köhler, S. Hillier, N. Pressling, S. Wan, H.J. Brumsack, and P.D. Clift (2012) Deep sea records of the continental weathering and erosion response to East Asian monsoon intensification since 14 ka in the South China Sea. Chem. Geol., 326–327, 1-18.
235. Huang K.-F., J. Blusztajn, D.W. Oppo, W.B. Curry, and B. Peucker-Ehrenbrink (2012) High-precision and accurate determinations of neodymium isotopic compositions at nanogram levels in natural materials by MC-ICP-MS. J. Anal. Atom. Spectrom., doi: 10.1039/c2ja30123g
236. Jakuba, R., M.A. Saito, J.W. Moffett , Y. Xu (2012) Dissolved zinc in the subarctic North Pacific and Bering Sea: Its distribution, speciation, and importance to primary producers. Glob. Biogeochem. Cycl., 26, doi:10.1029/2010GB004004.
237. Krause-Nehring, J., T. Brey, and S.R. Thorrold (2012) Centennial records of lead contamination in northern Atlantic bivalves (*Arctica islandica*). Marine Poll. Bull., 64, 233-240.
238. Lam, P.J., D.C. Ohnemus, and M.A. Marcus (2012) The speciation of marine particulate iron adjacent to active and passive continental margins. Geochim. Cosmochim. Acta, 80, 108-124.
239. Larsen, M.M., J. Blusztajn, O. Andersen, and I. Dahllöf (2012) Lead isotopes in marine surface sediments reveal historical use of leaded fuel. J. Environ. Monit., 14, 2893-2901.
240. Muhsfeld, C.C., S.R. Thorrold, T.E. McMahon, and B. Marotz (2012) Estimating trout movements in a river network using strontium isoscapes. Can. J. Fish. Aquat. Sci., 69, 906-915.

- 241.Noble, A.E., C.H. Lamborg, D. Ohnemus, P.J. Lam, K.T.J. Goepfert, C.I. Measures, C.H. Frame, K.L. Casciotti, G.R. DiTullio, J. Jennings, and M.A. Saito (2012) Basin-scale plumes of cobalt, iron, and manganese emanating from the Benguela-Angola front in the South Atlantic Ocean. *Limnol. Oceanogr.*, 57, 989-1010.
- 242.Noble, T., A. Piotrowski, L. Robinson, J. McManus, C.-D. Hillenbrand, and J.-M. A (2012) Greater supply of Patagonian-sourced detritus and transport by the ACC to the Atlantic sector of the Southern Ocean during the last glacial. *Earth Planet. Sci. Lett.*, 317, 374-385.
- 243.Peucker-Ehrenbrink B., and G. Ravizza (2012) Chapter 8: Osmium isotope stratigraphy. In *The Geologic Time Scale 2012* (FM Gradstein, JG Ogg, MD Schmitz, GJ Ogg, et al., Eds.), Elsevier, Boston, p. 145-166, doi: 10.1016/B978-0-444-59425-9.00008-1.
- 244.Peucker-Ehrenbrink B., K. Hanghoj, T. Atwood, and P.B. Kelemen (2012) Rhenium-osmium isotope systematics and platinum group element concentrations in oceanic crust. *Geology*, 40, 199-202.
- 245.Planavsky N., O.J. Rouxel, A. Bekker, A. Hofmann, C.T.S. Little, and T.W. Lyons (2012) Iron isotope composition of some Archean and Proterozoic iron formations. *Geochim. Cosmochim. Acta*, 80, 158-169.
- 246.Shelley R.U., P.N. Sedwick, T.S. Bibby, P. Cabedo-Sanz, T.M. Church, R.J. Johnson, A.I. Macey, C.M. Marsay, E.R. Sholkovitz, S.J. Ussher, P.J. Worsfold, and M.C. Lohan (2012) Controls on dissolved cobalt in surface waters of the Sargasso Sea: Comparisons with iron and aluminum. *Glob. Biogeochem. Cycl.*, 26, doi: 10.1029/2011GB004155
- 247.Tanner, S.E., P. Reis-Santos, R.P. Vasconcelos, S. Franca, S.R. Thorrold, and H.N. Cabral (2012) Otolith geochemistry discriminates estuarine nursery areas of *Solea solea* and *Solea senegalensis* through time. *Mar. Ecol. Prog. Ser.*, 452, 193-203.
- 248.Tanner, S.E., R. P. Vasconcelos, H.N. Cabral, and S.R. Thorrold (2012) Testing an otolith geochemistry approach to determine population structure and movements of European hake in the northeast Atlantic Ocean and Mediterranean Sea. *Fish. Res.*, 125-126, 198-205.
- 249.Upton, S.A., B.D. Walther, S.R. Thorrold, and J.E. Olney (2012) Use of a natural isotopic signature in otoliths to evaluate scale-based age determination for American shad. *Mar. Coast. Fish. Dynam. Manag. Ecosys. Sci.* 4, 346-357.
- 250.Wolff B.A., B.M. Johnson, A.R. Breton, P.J. Martinez, and D.L. Winkelmann (2012) Origins of invasive piscivores determined from the strontium isotope ratio ($^{87}\text{Sr}/^{86}\text{Sr}$) of otoliths. *Can. J. Fish. Aquat. Sci.*, 69, 1-16.

2013 (28)

- 251.Beck, A.J., M.A. Charette, J.K. Cochran, M.E. Gonnea, and B. Peucker-Ehrenbrink (2013) Dissolved strontium in the subterranean estuary – Implications for the marine strontium isotope budget. *Geochim. Cosmochim. Acta*, 117, 33-52, doi: 10.1016/j.gca.2013.03.021.
- 252.Craddock, P.R., J.M. Warren, and N. Dauphas (2013) Abyssal peridotites reveal the near-chondritic Fe isotopic composition of the Earth. *Earth Planet. Sci. Lett.*, 365, 63-76.
- 253.Dekov, V.M., O. Rouxel, D. Asael, U. Hålenius, and F. Munnik (2013) Native Cu from the oceanic crust: Isotopic insights into native metal origin. *Chem. Geol.*, 335, 136-148.
- 254.Dulaiova, H., K.W.W. Sims, M.A. Charette, J. Prytulak, and J. Blusztajn (2013) A new method for the determination of low-level actinium-227 in geological samples. *J. Radioanal. Nuclear Chem.*, 296, 279-283.
- 255.Gabitov, R.I., A.C. Gagnon, Y. Guan, J.M. Eiler, and J.F. Adkins (2013) Accurate Mg/Ca, Sr/Ca, and Ba/Ca ratio measurements in carbonates by SIMS and NanoSIMS and an assessment of heterogeneity in common calcium carbonate standards. *Chem. Geol.*, 356, 94-108.
- 256.Gale, A., M. Laubier, S. Escrig, and C.H. Langmuir (2013) Constraints on melting processes and plume-ridge interaction from comprehensive study of the FAMOUS and North Famous segments, Mid-Atlantic Ridge. *Earth Planet. Sci. Lett.*, 365, 209-220.

257. Gonnea, M.E., A.E. Mulligan, and M.A. Charette (2013) Seasonal cycles in radium and barium within a subterranean estuary: Implications for groundwater derived chemical fluxes to surface waters. *Geochim. Cosmochim. Acta*, 119, 164-177.
258. Guo W., E. Bachman, M. Li, C.N. Roy, J. Blusztajn, S. Wong, S.Y. Chan, C. Serra, R. Jasuja, T.G. Travison, M.U. Muckenthaler, E. Nemeth, and S. Bhasin (2013) Testosterone administration inhibits hepcidin transcription and is associated with increased iron incorporation into red blood cells. *Aging Cell*, 12, 280-291.
259. Hoffmann, S.S., J.F. McManus, W.B. Curry, and S. Brown-Leger (2013) Persistent export of ^{231}Pa from the deep central Arctic Ocean over the past 35,000 years. *Nature*, 497, 603-606.
260. Kolker A., M.A. Engle, B. Peucker-Ehrenbrink, N.J. Geboy, D.P. Krabbenhoft, M.H. Bothner, and M.T. Tate (2013) Atmospheric mercury and fine particulate matter in coastal New England: Implications for mercury and trace element sources in the northeastern United States. *Atmos. Environm.*, 79, 760-768.
261. Krause-Nehring, J., T. Brey, S.R. Thorrold, A. Klügel, G. Nehrke, and B. Brelochs (2013) The Significance of the long lived (>400 years) bivalve *Arctica islandica* as a high-resolution bioarchive. In: *Earth system science: bridging the gap between disciplines*, *Earth system science: bridging the gap between disciplines* (G. Lohmann, K. Grosfeld, D. Wolf-Gladrow, V. Unnithan, J. Notholt, and A. Wegner, Eds.), Heidelberg, Springer, 7 p., ISBN: 978-3-642-32234-1, doi:10.1007/978-3-642-32235-8, hdl:10013/epic.40479.
262. Lam, P.J., L.F. Robinson, J. Blusztajn, C. Li, M.S. Cook, J.F. McManus, and L.D. Keigwin (2013) Transient stratification as the cause of the North Pacific productivity spike during deglaciation. *Nature Geosci.*, 6, 622-626.
263. Lamborg, C.H., G. Swarr, K. Hughen, R. Jones, S. Birdwhistell, K. Fuby, et al. (2013) Determination of low-level mercury in coralline aragonite by calcination-isotope dilution-inductively coupled plasma-mass spectrometry and its application to *Diploria* specimens from Castle Harbour, Bermuda. *Geochim. Cosmochim. Acta*, 109, 27-37.
264. Liu, C., Z. Wang, and T.D. Raub (2013) Geochemical constraints on the origin of Marinoan cap dolostones from Nuccaleena Formation, South Australia. *Chem. Geol.*, 351, 95-104.
265. Macdonald, F.A., A.R. Prave, R. Pettersson, E.F. Smith, S.B. Pruss, K. Oates, F. Waechter, D. Trotzuk, and A.E. Fallick (2013) The Laurentian record of Neoproterozoic glaciation, tectonism, and eukaryotic evolution in Death Valley, California. *Geol. Soc. Amer. Bull.*, 125, 1203-1223.
266. Nielsen, S.G., L.E. Wasylewski, M. Rehkämper, C.L. Peacock, Z. Xue, and E.M. Moon (2013) Towards an understanding of thallium isotope fractionation during adsorption to manganese oxides. *Geochim. Cosmochim. Acta*, 117, 252-265.
267. Pike, S.M., K.O. Buesseler, C.F. Breier, H. Dulaiova, K. Stastna, and F. Sebesta (2013) Extraction of cesium in seawater off Japan using AMP-PAN resin and quantification via gamma spectroscopy and inductively coupled mass spectrometry. *J. Radioanal. Nuclear Chem.*, 296, 369-374.
268. Prouty, N.G., N.F. Goodkin, R. Jones, C.H. Lamborg, C.D. Storlazzi, and K.A. Hughen (2013) Environmental assessment of metal exposure to corals living in Castle Harbour, Bermuda. *Marine Chem.*, 154, 55-66.
269. Saito, M.A., A.E. Noble, T. J. Goepfert, C.H. Lamborg, and W.J. Jenkins (2013) Slow-spreading submarine ridges in the South Atlantic as a significant oceanic iron source. *Nature Geosci.*, 6, 775-779.
270. Schreiner, K.M., T.S. Bianchi, T.I. Eglinton, M.A. Allison, and A.J.M. Hanna (2013) Sources of terrigenous inputs to surface sediments of the Colville River Delta and Simpson's Lagoon, Beaufort Sea, Alaska. *J. Geophys. Res. - Biogeosci.*, 118, 808-824.
271. Sen, I.S., B. Peucker-Ehrenbrink, and N. Geboy (2013) Complex anthropogenic sources of platinum group elements in aerosols on Cape Cod, U.S.A. *Environm. Sci. Technol.*, 47 (18), 10,188-10,196, doi: 10.1021/es4016348.

272. Sims, K.W.W., J. Maclennan, J. Blichert-Toft, E.M. Mervine, J. Blusztajn, and K. Grönvold (2013) Short length scale mantle heterogeneity beneath Iceland probed by glacial modulation of melting. *Earth Planet. Sci. Lett.*, 379, 146-157.
273. Sims, K.W.W., S. Pichat, M.K. Reagan, P.R. Kyle, H. Dulaiova, N.W. Dunbar, J. Prytulak, G. Sawyer, G.D. Layne, J. Blichert-Toft, P.J. Gauthier, M.A. Charette, and T.R. Elliott (2013) On the Time Scales of Magma Genesis, Melt Evolution, Crystal Growth Rates and Magma Degassing in the Erebus Volcano Magmatic System Using the ^{238}U , ^{235}U and ^{232}Th Decay Series. *J. Petrol.*, 54, 235-271.
274. M.I R. Stukel, M. D. Ohman, C. R. Benitez-Nelson, M. R. Landry, (2013) Contributions of mesozooplankton to vertical carbon export in a coastal upwelling system. *Marine Ecology Progress Series*, Vol. 491: 47–65, doi: 10.3354/meps10453
275. Wang, Z., P. Hu, G. Gaetani, C. Liu, C. Saenger, A. Cohen, and S Hart (2013) Experimental calibration of Mg isotope fractionation between aragonite and seawater. *Geochim. Cosmochim. Acta*, 102, 113-123.
276. Waters, C.L., K.W.W. Sims, S.A. Soule, J. Blichert-Toft, N.W. Dunbar, T. Plank, J. Prytulak, R.A. Sohn, and M.A. Tivey (2013) Recent volcanic accretion at 9°N–10°N East Pacific Rise as resolved by combined geochemical and geological observations. *Geochem., Geophys., Geosyst.*, 14, 2547-2574.
277. Waters, C.L., K.W.W. Sims, E.M. Klein, S.M. White, M.K. Reagan, G. Girard (2013) Sill to surface: Linking young off-axis volcanism with subsurface melt at the overlapping spreading center at 9°03'N East Pacific Rise. *Earth Planet. Sci. Lett.*, 369/370, 59-70.
278. Wolff, B.A., B.M. Johnson, and C.M. Landress (2013) Classification of hatchery and wild fish using natural geochemical signatures in otoliths, fin rays, and scales of an endangered Catostomid. *Can. J. Fish. Aquat. Sci.*, 70, 1775-1784.

2014 (22)

279. Blusztajn, J., N. Shimizu, J.M. Warren, and H.J.B Dick (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.
280. Clift, P.D., S. Wan, and J. Blusztajn (2014) Reconstructing chemical weathering, physical erosion and monsoon intensity since 25 Ma in the northern South China Sea: A review of competing proxies. *Earth Sci. Rev.*, 130, 86-102.
281. Elkins, L.J.; K.W.W. Sims, J. Prytulak, J. Blichert-Toft, T. Elliott, J. Blusztajn, S. Fretzdorff, M. Reagan, K. Haase, S. Humphris, and J.-G. Schilling (2014) Melt generation beneath Arctic Ridges: Implications from U decay series disequilibria in the Mohns, Knipovich, and Gakkel Ridges. *Geochim. Cosmochim. Acta*, 127, 140-170.
282. Gonorea, M.E., M.A. Charette, Q. Liu, J.A. Herrera-Silveira, and S.M. Morales-Ojeda (2014) Trace element geochemistry of groundwater in a karst subterranean estuary (Yucatan Peninsula, Mexico). *Geochim. Cosmochim. Acta*, 132, 31-49.
283. Huang K.-F., D.W. Oppo, and W.B. Curry (2014) Decreased influence of Antarctic intermediate water in the tropical Atlantic during North Atlantic cold events. *Earth Planet. Sci. Lett.*, 389, 200-208.
284. Huang, K.-F., C.-F. You, C.-H. Chung, Y.-H. Lin, and Z. Liu (2014) Tracing the Nd Isotope Evolution of North Pacific Intermediate and Deep Waters through the Last Deglaciation from the South China Sea Sediments. *J. Asian Earth Sci.*, 79, 564-573.
285. Price, A.A., M.G. Jackson, J. Blichert-Toft, P.S. Hall, J.M. Sinton, M.D. Kurz, and J. Blusztajn (2014) Evidence for a broadly distributed Samoan Plume signature in the northern Lau and North Fiji Basins. *Geochem., Geophys., Geosyst.*, doi: 10.1002/2013GC005061.
286. Rauch, S., B. Peucker-Ehrenbrink (2014) Sources of Platinum Group Elements in the Environment. In: *Platinum Group Elements in the Environment* (Eds.: F. Zereini, Wiseman). In Press.

287. Reubi, O., K.W.W. Sims, and B. Bourdon (2014) ^{238}U - ^{230}Th equilibrium in arc magmas and implications for the time scales of mantle metasomatism. *Earth Planet. Sci. Lett.*, 391, 146-158.
288. Schmitz, B., G.R. Huss, M.M.M. Meier, B. Peucker-Ehrenbrink, R.P. Church, A. Cronholm, M.B. Davies, P.R. Heck, A. Johansen, K. Keil, P. Kristiansson, G. Ravizza, M. Tassinary, and F. Terfelt (2014) A fossil winonaite meteorite in Ordovician limestone: A piece of the impactor that broke up the L-chondrite parent body. *Earth Planet. Sci. Lett.*,
289. Sen, I.S., and B. Peucker-Ehrenbrink (2014) Determination of osmium concentrations and $^{187}\text{Os}/^{188}\text{Os}$ of crude oils and source rocks by coupling high-pressure, high-temperature digestion with sparging OsO_4 into a multicollector inductively coupled plasma mass spectrometer. *Anal. Chem.* 86, 2982-2988, doi: 10.1021/ac403413y.
290. Voss, B.M., B. Peucker-Ehrenbrink, T.I. Eglinton, G. Fiske, Z.A. Wang, K.A. Hoering, D.B. Montluçon, C. LeCroy, S. Pal, S. Marsh, S.L. Gillies, A. Janmaat, M. Bennett, B. Downey, J. Fanslau, H. Fraser, G. Macklam-Harron, M. Martinec, and B. Wiebe (2014) Tracing river chemistry in space and time: Dissolved inorganic constituents of the Fraser River, Canada. *Geochim. Cosmochim. Acta*, 124, 283-308, doi: 10.1016/j.gca.2013.09.006.
291. Raniere C. S. Garcez, Robert Humston, David Harbor and Carlos E. C. Freitas (2014) Otolith geochemistry in young-of-the-year peacock bass *Cichla temensis* for investigating natal dispersal in the Rio Negro (Amazon – Brazil) river system. *Ecology of Freshwater Fish*, DOI: 10.1111/eff.12142
292. Stanley R. Hart and Matthew G. Jackson (2014) Ta'u and Ofu/Olosega Volcanoes: The “Twin Sisters” of Samoa, their P, T, X Melting Regime, and Global Implications. *Geochemistry, Geophysics, Geosystem*. DOI: 10.1002/2013GC005221
293. Thomas Felis, Helen V. McGregor, Braddock K. Linsley, Alexander W. Tudhope, Michael K. Gagan, Atsushi Suzuki, Mayuri Inoue, Alexander L. Thomas, Tezer M. Esat, William G. Thompson, Manish Tiwari, Donald C. Potts, Manfred Mudelsee, Yusuke Yokoyam, Jody M. Webster (2014) Intensification of the meridional temperature gradient in the Great Barrier Reef following the Last Glacial Maximum. *Nature Communications* 5, doi:10.1038/ncomms5102
294. Katharine R. Hendry, Laura F. Robinson, Jerry F. McManus & James D. Hays. (2014) Silicon isotopes indicate enhanced carbon export efficiency in the North Atlantic during deglaciation *Nature Communications* 5, doi:10.1038/ncomms4107
295. J. V. Antibus, K. S. Panter, T. I. Wilch, N. Dunbar, W. McIntosh, A. Tripati, I. Bindeman and J. Blusztajn (2014). Alteration of volcaniclastic deposits at Minna Bluff: Geochemical insights on mineralizing environment and climate during the Late Miocene in Antarctica. *Geochemistry, Geophysics, Geosystems*. DOI: 10.1002/2014GC005422
296. M. G. Jackson, S. R. Hart, J. G. Konter, M. D. Kurz, J. Blusztajn & K. A. Farley (2014) Helium and lead isotopes reveal the geochemical geometry of the Samoan plume. *Nature* v. 514, 355-358.
297. Florian Scholz, Silke Severmann, James McManus Anna Noffke, Ulrike Lomnitz, Christian Hensen (2014). On the isotope composition of reactive iron in marine sediments: Redox shuttle versus early diagenesis. *Chemical Geology* v.389, 48-59.
298. S.M. Turner and K. E. Limburg (2014) Determination of River Herring Natal Origin using Otolith Chemical Markers: Accuracy as a Function of Spatial Scale and Choice of Markers, *Transactions of the American Fisheries Society*, 143:6, 1530-1543, DOI: 10.1080/00028487.2014.949012
299. M. E. Peterson, A. E. Saal, E. Nakamura, H. Kitagawa, M. D. Kurz and A. M. Koleszar (2014). Origin of the ‘ghost plagioclase’ signature in Galapagos melt inclusions: New evidence from Pb isotopes. *Journal of Petrology* 55, 2193-2216.
300. Hendry, K ., Robinson, L. F., McManus, J., & Hays, J. (2014). Silicon isotopes indicate enhanced carbon export efficiency in the North Atlantic during deglaciation. *Nature Communications*, 5, [3107].

2015 (23)

301. S. Mallick, J. J. Standish, M. Bizimis (2015). Constraints on the mantle mineralogy of an ultra-slow ridge: Hafnium isotopes in abyssal peridotites and basalts from the 9–25°E Southwest Indian Ridge. *Earth. Planet. Sciences.* 410, 42–53.
302. J. S. Seewald, E. P. Reeves, W. Bach, P.J. Saccoccia, P. R. Craddock, W. C. Shanks III , S. P. Sylvia , T. Pichler , M. Rosner, E. Walsh (2015) Submarine venting of magmatic volatiles in the Eastern Manus Basin, Papua New Guinea. *Geochimica et Cosmochimica Acta* 163 (2015) 178–199.
303. L. H. Kalnejais, W.R. Martin, M. H. Bothner. (2015) Porewater dynamics of silver, lead and copper in coastal sediments and implications for benthic metal fluxes. *Science of the Total Environment* 517 (2015) 178–194.
304. G. Garapí c, M.G. Jackson, E.H. Hauri, S.R. Hart, K.A. Farley, J.S. Blusztajn,J.D. Woodhead (20150. A radiogenic isotopic (He-Sr-Nd-Pb-Os) study of lavas from the Pitcairn hotspot: Implications for the origin of EM-1 (enriched mantle 1). *Lithos* 228-229, 1-11.
305. T.M. DeCarlo, G. A. Gaetani, M. Holcomb, A. L. Cohen (2015) Experimental determination of factors controlling U/Ca of aragonite precipitated from seawater: Implications for interpreting coral skeleton. *Geochimica et Cosmochimica Acta* 162, 151–165.
306. E. Steponaitis, A. Andrews, D. McGee, J. Quade , Y.-T. Hsieh, W. S. Broecker , B. N. Shuman, S. J. Burns, H. Cheng (2015). Mid-Holocene drying of the U.S. Great Basin recorded in Nevada speleothems. *Quaternary Science Reviews* pp. 1-12.
307. C. T.Hayes, R.F.Anderson, M.Q. Fleisher , K-F Huang, L. F.Robinson , Y. Lu, H. Cheng , R.L. Edwards, S.B. Moran (2015). 230Th and 231Pa on GEOTRACES GA03 ,the U.S.GEOTRACES North Atlantic transect and implications for modern and paleoceanographic chemical fluxes. *Deep-Sea Research II* 116. Pp 29–41.
308. C.Ohnemus, P. J. Lam. (2015). Cycling of lithogenic marine particles in the USGEOTRACES North Atlantic transect D. *Deep-Sea Research II* 116 pp. 283–302.
309. R. Escoube, O. J. Rouxel, K Edwards, B. Glazer , O. F.X. Donard (2015) Coupled Ge/Si and Ge isotope ratios as geochemical tracers of seafloor hydrothermal systems: Case studies at Loihi Seamount and East Pacific Rise 9 50°N. *Geochimica et Cosmochimica Acta* 167, pp 93–112.
310. S. Z. Rosengard, P. J. Lam, W. M. Balch, M. E. Auro, S. Pike, D. Drapeau and B. Bowler (2015) Carbon export and transfer to depth across the Southern Ocean Great Calcite Belt. *Biogeosciences*, 12, 3953–3971.
311. T. J.Horner, C. W.Kinsley, S. G.Nielsen (2015).Barium-isotopic fractionation in seawater mediated by barite cycling and oceanic circulation. *Earth and Planetary Science Letters* 430.
312. C. A.Miller, B. Peucker-Ehrenbrink, E. A.Schauble (2015) Theoretical modeling of rhenium isotope fractionation, natural variations across a black shale weathering profile, and potential asapaleoredox proxy. *Earth and Planetary Science Letters* 430 ,pp 339–348.
313. J. E. Vonk, L. Giosan, J. Blusztajn, D. Montlucon, E. Graf Pannatier, C. McIntyre, L. Wacker, R. W. Macdonald, M. B. Yunker, T. I. Eglinton (2015) Spatial variations in geochemical characteristics of the modern Mackenzie Delta sedimentary system. *Geochimica Cosmoch. Acta* 171, 100-120.
314. S.G. Nielsen, F Klein, T Kading, J Blusztajn, K Wickham (2015).Thallium as a tracer of fluid–rock interaction in the shallow Mariana forearc. *Earth and Planetary Science Letters* 430, 416-426.
- 315.E. M. Mervine, K. W. W. Sims, S. E. Humphris, P. B. Kelemen (2015)Applications and limitations of U–Th disequilibrium systematics for determining ages of carbonate alteration minerals in peridotite. *Chemical Geology* 412, 151-166.
316. G. M. Yogodzinski, S.T. Brown, P. B. Kelemen, J. D. Vervoort,, M.Portnyagin, K. W. W. Sims, K. Hoernle, B. R. Jicha and R.Werner (2015) The role of subducted basalt in the source of island arc magmas: Evidence from seafloor lavas of the Western Aleutians. *J. Petrology* 56 (3): 441-492.

317. S. G. Nielsen, J. D. Owens and T. J. Horner. (2015) Analysis of high-precision vanadium isotope ratios by medium resolution MC-ICP-MS. *J. Anal. Atom. Spectrom.* DOI: 10.1039/c5ja00397k
- 318.D. Hu, P.D. Clift, S. Wan, P.Böning, R. Hannigan, S. Hillier and J. Blusztajn. (2015) Testing chemical weathering proxies in Miocene–Recent fluvial-derived sediments in the South China Sea. *Geological Society, London, Special Publications*, 429, doi:10.1144/SP429.5
- 319.R. Escoube, O. J. Rouxel, O. S. Pokrovsky, A. Schroth, R. M. Holmes, O. F.X. Donard (2015). Iron isotope systematics in Arctic rivers. *Comptes Rendus Geoscience* 347, pp 377–385
- 320.Stukel, M. R., E. Asher, N. Couto, O. Schofield, S. Strelbel, P. Tortell, and H. W. Ducklow (2015), The imbalance of new and export production in the western Antarctic Peninsula, a potentially “leaky” ecosystem, *Global Biogeochem.Cycles*, 29, doi:10.1002/2015GB005211.
- 321.S. M. Turner, K. E. Limburg, and E. P. Palkovacs (2015) Can different combinations of natural tags identify river herring natal origin at different levels of stock structure? *Can. J. Fish. Aquat. Sci.* 72: 845–854 .
- 322.Schroth, A.W., Giles, C.D., Isles, P.D.F., Xu, Y.,Perzan, Z., and Druschel, G.K., (2015) Dynamic coupling of iron, manganese, and phosphorus behavior in water and sediment of shallow ice-covered lakes. *Environmental Science & Technology* 49 (16), pp 9758–9767 DOI: 10.1021/acs.est.5b02057
- 323.Isles, P.D.F., Giles, C.D., Gearhart, T. Xu, Y., Druschel, G.K., Schroth, A.W. (2015) Dynamic internal drivers of a historically severe cyanobacteria bloom in Lake Champlain revealed through comprehensive monitoring *Journal of Great Lakes Research* 41(3) 818–299 DOI:10.1016/j.jglr.2015.06.006

2016 (18)

- 324.B. Peucker-Ehrenbrink, C. A. Waters, M. D.Kurz, P. F.Hoffman 2016.No evidence of extraterrestrial noble metal and helium anomalies at Marinoan glacial termination. *Earth and Planetary Science Letters* 437, 76–88.
- 325.Alpert, A. E., A. L. Cohen, D. W. Oppo,T. M. DeCarlo, J. M. Gove, and C. W. Young 2016,Comparison of equatorial Pacific sea surface temperature variability and trends with Sr/Ca records from multiple corals, *Paleoceanography*, 31, 252–265, doi:10.1002/2015PA002897.
- 326.R.G.C. Sousa, R. Humston, C. E. C. Freitas 2016 Movement patterns of adult peacock bass Cichlatemensis between tributaries of the middle Negro River basin (Amazonas – Brazil): an otolith geochemical analysis. *Fisheries Management and Ecology*, 23, 76–87.
- 327.A. A. Price, M. G. Jackson, J. Blichert-Toft, J. Blusztajn, C. S. Conatser, J. G. Konter, A.A.P. Koppers and M. D. Kurz 2016 Geochemical evidence in the northeast Lau Basin for subduction of the Cook-Austral volcanic chain in the Tonga Trench. *Geochemistry, Geophysics, Geosystems* DOI:10.1002/2015GC006237
- 328.Nielsen, S.G., Yogodzinski, G., Prytulak, J., Plank, T., Kay, S.M., Kay, R.W., Blusztajn, J., Owens, J.D. Auro, M., and Kading, T., 2016. Tracking along-arc sediment inputs to the Aleutian arc using thallium isotopes. *Geoch. Cosm. Acta* 181, 217-237.
- 329.Hart, S. R. and G. A. Gaetani, Experimental determination of Pb partitioning between sulfide melt and basalt melt as a function of P, T and X, 2016. *Geochimica et Cosmochimica Acta*, 185, 9-20
- 330.DeCarlo, T. M., G. A. Gaetani, A. L. Cohen, G. L. Foster, A. E. Alpert, and J. A. Stewart 2016, Coral Sr-U thermometry, *Paleoceanography*, 31, 626–638, doi:10.1002/2015PA002908.
- 331.K. E. Limburg and S. M. Turner 2016. How Common is “Non-textbook” Migration in Hudson River Blueback Herring? *Estuaries and Coasts*. DOI 10.1007/s12237-016-0068-2
- 332.S. M. Turner and K. E. Limburg 2016 Juvenile river herring habitat use and marine emigration trends: comparing populations. *Oecologia* (2016) 180:77–89,DOI 10.1007/s00442-015-3443-y

- 333.O. Rouxel ,B. M. Toner , S. J. Manganini and C. R. German. 2016 Geochemistry and iron isotope systematics of hydrothermal plume fall-out at East Pacific Rise 9°50'N. *Chemical Geology* 441, 212–234.
- 334.J.N. W. Howe, A. M. Piotrowski,D.W. Oppo, K-F. Huang, S. Mulitza, C. M. Chiessi, J. Blusztajn. 2016 Antarctic intermediate water circulation in the South Atlantic over the past 25,000 years. *Paleoceanography* doi: 10.1002/2016PA002975
- 335.E.H. Phillips, K. W.W. Sims, D. R. Sherrod, V. J.M. Salters,J. Blusztajn, H. Dulai. 2016 Isotopic constraints on the genesis and evolution of basanitic lavas at Haleakala, Island of Maui, Hawaii. *Geochimica et Cosmochimica Acta* 195, 201-225..
- 336.I.S. Sen, A. Mitra, B. Peucker-Ehrenbrink, S. E. Rothenberg, S. N. Tripathi, M. Bizimis 2016. Emerging airborne contaminants in India: Platinum Group Elements from catalytic converters in motor vehicles. *Applied Geochemistry* 75, 100-106
- 337.R. Humston, S. S. Doss, C. Wass, C. Hollenbeck, S. R. Thorrold, S. Smith and C. P. Bataille 2016. Isotope geochemistry reveals ontogeny of dispersal and exchange between main-river and tributary habitats in smallmouth bass *Micropterus dolomieu*. *Journal of Fish Biology* , doi:10.1111/jfb.13073.
- 338.M. Vihtakari, W. G. Ambrose Jr., P. E. Renaud, W. L. Locke V., M. L. Carroll, Jørgen Berge, Leon J. Clark, Finlo Cottier, Haakon Hop. 2016 A key to the past? Element ratios as environmental proxies in two Arctic bivalves. *Palaeogeography, Palaeoclimatology, Palaeoecology* . <http://dx.doi.org/10.1016/j.palaeo.2016.10.020>
- 339.U. Bold, E. F. Smith, A. D. Rooney, S. A. Bowring, R. Buchwaldt, F. Ő. Dudás, J. Ramezani, J. L. Crowley, D. P. Schrag and F. A. Macdonald (2016)Neoproterozoic stratigraphy of the Zavkhan terrane of Mongolia: The backbone for Cryogenian and early Ediacaran chemostratigraphic record. *Journal of Science*, Vol. 316, January, 2016, P. 1–63, DOI 10.2475/01.2016.01]
- 340.W. E. LeMasurier , S. Hi Choi , S. R. Hart , S. Mukasa and N. Rogers (2016) Reconciling the shadow of a subduction signature with rift geochemistry and tectonic environment in Eastern Marie Byrd Land, Antarctica. *Lithos* 260, 134–153
- 341.Giles, C.D., *Isles, P.D.F., *Xu, Y., Manley, T. Druschel, G.K., Schroth, A.W. (2016). The mobility of phosphorus, iron, and manganese through the sediment–water continuum of a shallow eutrophic freshwater lake under stratified and mixed water-column conditions. *Biogeochemistry* 127 (1)

2017 (23)

- 342.S. G. Nielsen, J. Prytulak, J. Blusztajn, S. Yunchao, M. Auro M. Regelous and J. Walker (2017) Thallium isotopes as tracers of recycled materials in subduction zones: Review and new data for lavas from Tonga-Kermadec and Central America. *Journal of Volcanology and Geothermal Research* 339, 23–40.
- 343.S. G. Nielsen and H. R. Marschall,(2017) Geochemical evidence for mélange melting in global arcs. *Sci. Adv.* 3, e1602402.
- 344.Price, A. A., M. G. Jackson,J. Blichert-Toft, M. D. Kurz, J. Gill,J. Blusztajn, F. Jenner, R. Brens, and R. Arculus (2017), Geodynamic implications for zonal and meridional isotopic patterns across the northern Lau and North Fiji Basins, *Geochem. Geophys. Geosyst.*,18doi:10.1002/2016GC006651.
- 345.M. Hatta , C. I. Measures, P. J. Lam, D. C. Ohnemus, M.E. Auro, M. M. Grand, K. E. Selph, (2107) The relative roles of modified circumpolar deep water and benthic sources in supplying iron to the recurrent phytoplankton blooms above Pennell and Mawson Banks, Ross Sea, Antarctica. *Journal of Marine Systems* 166, 61–72.
- 346.S. L. Bates , K. R. Hendry , H. V. Pryer ,C. W. Kinsley , K. M. Pyle, E. M. S. Woodward , T. J. Horner (2017) Barium isotopes reveal role of ocean circulation on barium

- cycling in the Atlantic. *Geochimica et Cosmochimica Acta* 204, 286–299.
- 347.M. E. Gonnea , A. L. Cohen , T. M. DeCarlo, M. A. Charette (2017) Relationship between water and aragonite barium concentrations in aquaria reared juvenile corals *Geochimica et Cosmochimica Acta* 209, 123–134.
- 348.Liu, C., Clift, P.D., Murray, R.W., Blusztajn, J., Ireland, T., Wan, S., Ding, W., (2017). Geochemical Evidence for Initiation of the Modern Mekong Delta in the southwestern South China Sea after 8 Ma. *Chemical Geology*. doi:10.1016/j.chemgeo.2017.01.008.
- 349.Emerson CE, Reinardy HC, Bates NR, Bodnar AG. (2017). Ocean acidification impacts spine integrity but not regenerative capacity of spines and tube feet in adult sea urchins. *R. Soc. open sci.* 4: 170140. <http://dx.doi.org/10.1098/rsos.170140>.
- 350.Ostrander C.M., Owens J.D., Nielsen S.G., (2017) Constraining the rate of oceanic deoxygenation leading up to a Cretaceous Oceanic Anoxic Event (OAE-2: ~94 Ma). *Sci. Adv.* 3, e1701020.
- 351.J. D. Owens, S. G. Nielsen, T. J. Horner, C.M. Ostrander and L. C. Peterson (2017) Thallium-isotopic compositions of euxinic sediments as a proxy for global manganese-oxide burial. *Geochimica et Cosmochimica Acta* 213, 291–307.
- 352.H.R. Marschall, V.D. Wanless, N. Shimizu, P.A.E. Pogge von Strandmann, T Elliott and B. D. Monteleone (2017). The boron and lithium isotopic composition of mid-ocean ridge basalts and the mantle. *Geochimica et Cosmochimica Acta* 207, 102-138.
- 353.G.M.Yogodzinski, P.B.Kelemen, K. Hoernle, S. T.Brown, I. Bindeman, J. D.Vervoort, K.W.W.Sims, M. Portnyagin, R. Werner (2017) Sr and O isotopes in western Aleutian seafloor lavas: Implications for the source of fluids and trace element character of arc volcanic rocks. *Earth and Planetary Science Letters* 475, 169–180.
- 354.Giosan, L., Ponton, C., Usman, M., Blusztajn, J., Fuller, D., Galy, V., Haghipour, N., Johnson, J. E., McIntyre, C., Wacker, L., and Eglinton, T. (2017) Massive erosion in monsoonal Central India linked to late Holocene landcover degradation, *Earth Surf. Dynam.* 5, 781-789.
- 355.Y. Shu, S. G. Nielsen, Z. Zeng, R. Shinjo, J. Blusztajn, X. Wang and S. Chen. (2017) Tracing subducted sediment inputs to the Ryukyu arc-Okinawa Trough system: Evidence from thallium isotopes. *Geochimica et Cosmochimica Acta* 217, 462–491.
- 356.Rouxel, O., Toner, B., Germain, Y., Glazer, B., (2017) Geochemical and iron isotopic insights into hydrothermal iron oxyhydroxide deposit formation at loihī seamount, *Geochimica et Cosmochimica Acta*, doi: <https://doi.org/10.1016/j.gca.2017.09.050>
- 357.Girard G.,Reagan M.K., Sims, K.W.W., Thorner, C., Waters C.L.,and Phillips E.H., (2017).²³⁸U–²³⁰Th–²²⁶Ra–²¹⁰Pb–²¹⁰Po Disequilibria constraints on magma generation, ascent, and degassing during the ongoing eruption of Kilauea. *Journal of Petrology*. 58, 1199–1226.
- 358.Horner, T.J., Pryer, H.V., Nielsen, S.G., Crockford, P.W., Gauglitz, J.M., Wing, B.A. and Ricketts R.D. (2017) Pelagic barite precipitation at micromolar ambient sulfate. *Nature communications* 8,doi:10.1038/s41467-017-01229-5
- 359.Peterson, M.E., Saal, A.E., Kurz, M.D., Hauri, E.H., Blusztajn, J.S., Harpp, K.S., Werner, R., Geist, D.J., (2017). Submarine basaltic glasses from the Galapagos Archipelago: Determining the volatile budget of the mantle plume. *Journal of Petrology*, 58, 1419–1450.
- 360.Clift, P.D., Heinrich, P., Dunn, D., Jacobus, A., Blusztajn, J., 2017. The Sabine block, Gulf of Mexico: Promontory on the North American margin?. *Geology*,46, pp 15-18. doi:<https://doi.org/10.1130/G39592.1>
- 361.Conrad, T. A., Nielsen, S. G., Peucker-Ehrenbrink, B., Blusztajn, J., Winslow, D., Hein, J. R., and Paytan, A. (2017). Reconstructing the evolution of the submarine Monterey Canyon System from Os, Nd, and Pb isotopes in hydrogenetic Fe-Mn crusts. *Geochemistry, Geophysics, Geosystems*, 18. <https://doi.org/10.1002/2017GC007071>

362. D. Joung, M. Leduc, B. Ramcharitar, Y. Xu, P. D. F. Isles, J. D. Stockwell, G. K. Druschel, T. Manley, A. W. Schroth (2017). Winter weather and lake-watershed physical configuration drive phosphorus, iron, and manganese dynamics in water and sediment of ice-covered lakes. *Limnol. Oceanogr.* 62, 1620–1635
363. T. Ozersky, M. V. Pastukhov, A. E. Poste, X. Y. Deng, and M. V. Moore (2017) Long-Term and Ontogenetic Patterns of Heavy Metal Contamination in Lake Baikal Seals (*Pusa sibirica*). *Environmental Science & Technology*, 51 (18), 10316-10325. DOI: 10.1021/acs.est.7b00995
364. Rosenberg, B. and Schroth A.W (2017) Coupling of reactive riverine iron and phosphorus species during hot transport moments: impacts of landcover and seasonality. *Biogeochemistry* DOI: 10.1007/s10533-016-0290-9

2018 (15)

- 365.J. N.W. Howe, K-F, Huang, D. W. Oppo, C. M. Chiessi, S. Blusztajn and A. Piotrowski (2018) Similar mid-depth Atlantic water mass provenance during the Last Glacial Maximum and Heinrich Stadial 1. *Earth and Planetary Science Letters*, 490, pp 51-61.
- 366.J. M. McDermott, S. P. Sylva, S. Ono, C. R. German and J. S. Seewald (2018) Geochemistry of fluids from Earth's deepest ridge-crest hot-springs: Piccard hydrothermal field, MidCayman Rise. *Geochimica et Cosmochimica Acta*, v.228, pp 95-118.
- 367.J. Blusztajn, S. G. Nielsen, H. R. Marschall, Y. Shu, C. M. Ostrander and T. Hanyu (2018) Thallium isotope systematics in volcanic rocks from St. Helena – Constraints on the origin of the HIMU reservoir. *Chem. Geol.* 476, pp 292-301.
- 368.Clift, P.D., Heinrich, P., Dunn, D., Jacobus, A., Blusztajn, J., (2018). The Sabine block, Gulf of Mexico: Promontory on the North American margin? *Geology*, 46, 15-18.
doi:<https://doi.org/10.1130/G39592.1>
- 369.T. N. Jonell, Y. Li, J. Blusztajn, L. Giosan, P. D. Clift Signal or noise? Isolating grain size effects on Nd and Sr isotope variability in Indus delta sediment provenance (2018). *Chemical Geology* 485, 56–7
- 370.W. Hutchison , T. A. Mather, D. M.Pyle, A. J.Boyce, M.L.M.Gleeson, G. Yirgu, J. D.Blundy, D. J.Ferguson, C. Vye-Brownh, I. L.Millari, K. W.W.Sims and A. A.Finch. (2018). The evolution of magma during continental rifting: New constraints from the isotopic and trace element signatures of silicic magmas from Ethiopian volcanoes. *Earth and Planetary Science Letters* 489, 203–218.
- 371.Giosan, L., Naing, T., Min Tun, M., Clift, P. D., Filip, F., Constantinescu, S., Khonde, N., Blusztajn, J., Buylaert, J.-P., Stevens, T., and Thwin, S.(2018) On the Holocene evolution of the Ayeyawady megadelta, *Earth Surf. Dynam.*, 6, 451-466.
- 372.K.S. Panter, P. Castillo, S. Krans, C. Deering, W. McIntosh, J. W. Valley, K. Kitajima, P. Kyle, S. Hart and J. Blusztajn (2018) Melt Origin across a Rifted Continental Margin: a Case for Subduction-related Metasomatic Agents in the Lithospheric Source of Alkaline Basalt, NW Ross Sea, Antarctica, *Journal of Petrology*, 59, 517–558.
- 373.S. G. Nielsen, T. J. Horner, H. V. Pryer, J. Blusztajn, Y. Shu, M. D. Kurz and V. Le Roux (2018) Barium isotope evidence for pervasive sediment recycling in the upper mantle. *Science Advances*: eaas8675
- 374.A.A., Reinhard, M.G., Jackson, J.M., Koornneef, E.F., Rose-Koga, J. Blusztajn, J.G. Konter, K.T. Koga, P.J. Wallace, J. Harvey (2018). Sr and Nd isotopic compositions of individual olivine-hosted melt inclusions from Hawai'i and Samoa: Implications for the origin of isotopic heterogeneity in melt inclusions. *Chemical Geology* 495, 36-49.
- 375.Y. Li , P. D. Clift, P. Böning, J. Blusztajn, R. W. Murray, T. Ireland, K. Pahnke, N. C. Helm, L. Giosan (2018) Continuous Holocene input of river sediment to the Indus Submarine Canyon. *Marine*

- Geology 406, 159-176.
- 376.S. L. Bourret and N. G. Clancy (2018) Using forensic geochemistry via fish otoliths to investigate an illegal fish introduction. *Can. J. Fish. Aquat. Sci.*, dx.doi.org/10.1139/cjfas-2018-0082.
- 377.Farfán, G.A., E. Cordes, R.G. Waller, T.M. DeCarlo, and C.M. Hansel. (2018). Mineralogy of deep-sea coral aragonites as a function of aragonite saturation state. *Front. Mar. Sci.* 5:473. doi: 10.3389/fmars.2018.00473
- 378.Oppo, D. W., Gebbie, G., Huang, K.-F., Curry, W. B., Marchitto, T. M., and Pietro, K. R. (2018). Data constraints on glacial Atlantic water mass geometry and properties. *Paleoceanography and Paleoclimatology*, 33, 1013–1034. doi.org/10.1029/2018PA003408
- 379.Y Shu, Z Zeng, X Yin, X Wang and S Chen (2018). Geochemical and Sr-Nd isotopic constraints on the origin of volcanic rocks from the northern Okinawa Trough. *Geological Journal*, doi: 10.1002/gj.3332

2019 (23)

- 380.S. E. Munoz, L. Giosan, J. Blusztajn , C. Rankin and G.E. Stinchcomb (2019) Radiogenic fingerprinting reveals anthropogenic and buffering controls on sediment dynamics of the Mississippi River system. *Geology*, doi: 10.1130/G45194.1.
- 381.S. R. Scott, K. W.W.Sims,M.K.Reagan,L. Ball, J.B.Schwieters, C. Bouman, N. S.Lloyd, C.L.Waters, J.J.Standish and D. L.Tollstrup (2019) The application of abundance sensitivity filters to the precise and accurate measurement of uranium series nuclides by plasma mass spectrometry. *International Journal of Mass Spectrometry*. doi.org/10.1016/j.ijms.2018.11.011
- 382.S. G. Nielsen, M. Auro, K. Righter, D. Davis, J.Prytulak, F. Wug and J. D.Owens (2019) Nucleosynthetic vanadium isotope heterogeneity of the early solar system recorded in chondritic meteorites. *Earth and Planetary Science Letters* 505, 131–140.
- 383.F. Wu, J. D.Owens, T. Huang,A. Sarafian, K-F. Huang, I.S.Sen, T.J.Horner, J.Blusztajn, P. Morton and S. G.Nielsen (2019)Vanadium isotope composition of seawater. *Geochimica et Cosmochimica Acta*, 244, 403-415.
- 384.A. A. Reinhard , M. G. Jackson, J. Blusztajn, A. A. P. Koppers, A. R. Simms and J. G. Konter (2019) ‘Petit Spot’ rejuvenated volcanism superimposed on plume-derived Samoan shield volcanoes: Evidence from a 645 meter drill core from Tutuila Island, American Samoa. *Geochemistry, Geophysics, Geosystems*. doi.org/10.1029/2018GC007985
- 385.Y. Shu, S. G. Nielsen, H. R. Marschall, T. John, J. Blusztajn and M. Auro (2019) Closing the loop: Subducted eclogites match thallium isotope compositions of ocean island basalts. *Geochimica et Cosmochimica Acta*, 250, 130-148.
- 386.C. M. Ostrander, S. G. Nielsen, J. D. Owens, B. Kendall, G. W. Gordon, S. J. Romaniello, A. D. Anbar (2019) Fully oxygenated water columns over continental shelves before the Great Oxidation Event. *Nature Geosciences* 12, 186-191.
- 387.Clift, P. D., Zhou, P., Stockli, D. F., and Blusztajn, J. (2019) Regional Pliocene exhumation of the Lesser Himalaya in the Indus drainage, *Solid Earth*, 10, 647-661, https://doi.org/10.5194/se-10-647-2019.
- 388.S. K. Dailey, P. D. Clift, D. K. Kulhanek, J. Blusztajn and 35 coauthors (2019). Large-scale mass wasting on the Miocene continental margin of western India. *Geological Society America*
- 389.S. Péron, M. A. Moreira, M. D. Kurz, J. Curtice, J.S. Blusztajn, B. Putlitz, V. D. Wanless, M.R. Jones, S.A. Soule, E. Mittelstaedt (2019) Noble gas systematics in new popping rocks from the Mid-Atlantic Ridge (14°N): Evidence for small-scale upper mantle heterogeneities. *Earth and Planetary Science Letters* 519, 70–82.

- 390.P.W. Crockford, B. A. Wing, A. Paytan, M. S.W. Hodgskiss, K.K. Mayfield, J. A.Hayles, J.E. Middleton, A-S. C. Ahm, D.T. Johnston, F. Caxito, G. Uhlein, G. P.Halverson, B. Eickmann, M. Torres, T. J.Horner. (2019) Barium-isotopic constraints on the origin of post-Marinoan barites. *Earth and Planetary Science Letters.*519, 234-244.
- 391.F. Martinez-Ruiz, A. Paytan, M.T. Gonzalez-Munoz, F. Jroundi, M.M. Abad, P.J. Lam, J.K.B. Bishop, T.J. Horner, P.L. Morton, M. Kastner. (2019) Barite formation in the ocean: Origin of amorphous and crystalline precipitates. *Chemical Geology,*511, 441-451.
- 392.Bryan, S. P., Hughen, K. A.,Karnauskas, K. B., & Farrar, J. T.(2019). Two hundred fifty years of reconstructed South Asian summer monsoon intensity and decadal-scale variability. *Geophysical Research Letters,* 46, 3927–3935. <https://doi.org/10.1029/2018GL081593>
- 393.Umling, N. E., Oppo, D. W., Chen, P. , Yu, J. , Liu, Z. , Yan, M. , Gebbie, G. , Lund, D. C., Pietro, K. R., Jin, Z. D., Huang, K. , Costa, K. B. and Toledo, F. A. (2019), Atlantic Circulation and Ice Sheet Influences on Upper South Atlantic Temperatures During the Last Deglaciation. *Paleoceanography and Paleoclimatology.* doi:10.1029/2019PA003558
- 394.B.M. Geyman, J.L Ptacek, M. LaVigne, T.J. Horner (2019) Barium in deep-sea bamboo corals: Phase associations, barium stable isotopes, & prospects for paleoceanography. *Earth and Planetary Science Letters* 525, 115751.
- 395.M.S.W. Hodgskiss, P.W. Crockford, Y. Peng, B.A. Wing, T.J. Horner. (2019).A productivity collapse to end Earth's Great Oxidation. *Proceedings of the National Academy of Sciences,* 201900325
- 396.B. Schmitz, K. A. Farley, S. Goderis, P. R. Heck, S. M. Bergström, S. Boschi, P. Claeys, V. Debaille, A. Dronov, M. van Ginneken, D. A.T. Harper, F. Iqbal, J. Friberg, S. Liao, E. Martin, M. M. M. Meier, B. Peucker-Ehrenbrink, B. Soens, R. Wieler and F. Terfelt (2019).An extraterrestrial trigger for the mid-Ordovician ice age: Dust from the breakup of the L-chondrite parent body. *Science Advances,* DOI: 10.1126/sciadv.aax4184
- 397.Rodriguez, L.G., Cohen, A.L., Ramirez, W. , Oppo, D.W., Pourmand, A. , Edwards, R.L., Alpert, A.E. and Mollica, N. (2019). Mid-Holocene, Coral-Based Sea Surface Temperatures in the Western Tropical Atlantic. *Paleoceanography and Paleoclimatology,* 34, 1234-1245. doi: 10.1029/2019PA0035
- 398.Zhao, N., Oppo, D.W., Huang, K., Howe J.N.W.,Blusztajn, J., and Kegwin, L.D. (2019). Glacial–interglacial Nd isotope variability of North Atlantic Deep Water modulated by North American ice sheet. *Nature Commun* **10**, 5773, doi:10.1038/s41467-019-13707-z
- 399.Wilckens, F. K., Reeves, E. P., Bach, W.,Seewald, J. S., & Kasemann, S. A.(2019). Application of B, Mg, Li, and Sr isotopes in acid-sulfate vent fluids and volcanic rocks as tracers for fluid-rock interaction in back-arc hydrothermal systems.*Geochemistry, Geophysics,Geosystems*,20,<https://doi.org/10.1029/2019GC008694>
- 400.M.R. Stukel, T. B. Kelly (2109) The carbon: ^{234}Th orium ratios of sinking particles in the California current ecosystem 2: Examination of a thorium sorption, desorption, and particle transport model. *Marine Chemistry* 211, 37–51.
- 401.M. R. Stukel, T. B. Kelly, L. I. Aluwihare,K. A. Barbeau, R. Goericke, J. W. Krause, M.R. Landry, M. D. Ohman (2019) The Carbon: ^{234}Th orium ratios of sinking particles in the California current ecosystem 1: relationships with plankton ecosystem dynamics. *Marine Chemistry* 212, 1-15.
- 402.L. R. Ciepiela and A. W. Walters (2109) Life-history variation of two inland salmonids revealed through otolith microchemistry analysis. *Can. J. Fish. Aquat. Sci.* **76:** 1971–1981, dx.doi.org/10.1139/cjfas-2018-0087

2020 (11)

- 403.D. S. Hardisty, T.J.Horner, S.D.Wankel, J. Blusztajn, S.G. Nielsen., (2020) Experimental observations of marine iodide oxidation using a novel sparge-interface MC-ICP-MS technique. *Chemical Geology*, <https://doi.org/10.1016/j.chemgeo.2019.119360>
- 404.G. N. Evans, M. K Tivey, B. Monteleone, N. Shimizu, J. S. Seewald and O. J. Rouxel (2020). Trace element proxies of seafloor hydrothermal fluids based on secondary ion mass spectrometry (SIMS) of black smoker chimney linings. *Geochimica et Cosmochimica Acta*, 269, 346-375.
- 405.H.Fan, S.G. Nielsen, J.D. Owens, M. Auro, Y. Shu, D. S. Hardisty, T. J. Horner, C. N. Bowman, S. A. Young and H. Wen (2020) Constraining oceanic oxygenation during the Shuram excursion in South China using thallium isotopes. *Geobiology*, <https://doi.org/10.1111/gbi.12379>
- 406.S.G. Nielsen, Y. Shu, M. Auro, G. Yogodzinski, R. Shinjo, T. Plank, S.M. Kay and T.J. Horner (2020) Barium isotope systematics of subduction zones. *Geochimica et Cosmochimica Acta*, <https://doi.org/10.1016/j.gca.2020.02.006>
- 407.Brown, K. A., Williams, W. J., Carmack, E. C., Fiske, G., François, R., McLennan, D., and Peucker-Ehrenbrink, B. (2020). Geochemistry of small Canadian Arctic Rivers with diverse geological and hydrological settings. *Journal of Geophysical Research: Biogeosciences*, 125, e2019JG005414.<https://doi.org/10.1029/2019JG005414>
- 408.F.Pöppelmeier, M.Gutjahr, P.Blaser, D.W.Oppo, S.L.Jaccard, M.Regelous, K.F.Huang, F.Süfke, and J.Lippold (2020) Water mass gradients of the mid-depth Southwest Atlantic during the past 25,000 years. *Earth and Planetary Science Letters*, v. 531
- 409.L.E. Kipp, P.B. Henderson, Z.A. Wang and M.A. Charette (2020) Deltaic and estuarine controls on Mackenzie River solute fluxes to the Arctic Ocean. *Estuaries and Coasts*, <https://doi.org/10.1007/s12237-020-00739-8>
- 410.Linhoff, B., Charette, M., and Wadham, J., (2020), Rapid mineral surface weathering beneath the Greenland Ice Sheet shown by radium and uranium isotopes: *Chemical Geology*, 547, doi.org/10.1016/j.chemgeo.2020.119663
- 411.C. M. Ostrander, J.D.Owens, S.G.Nielsen, T.W.Lyons, Y.Shu, X.Chen, E. A. Sperling, G. Jiang, D. T. Johnston, S. K. Sahoo, A. D. Anbar.(2020) Thallium isotope ratios in shales from South China and northwestern Canada suggest widespread O₂ accumulation in marine bottom waters was an uncommon occurrence during the Ediacaran Period. *Chemical Geology* <https://doi.org/10.1016/j.chemgeo.2020.119856>
- 412.Nielsen, S.G., Bekaert, D.V., Magna, T., Mezger, K., Auro, M. (2020) The vanadium isotope composition of Mars: implications for planetary differentiation in the early solar system. *Geochem. Persp. Let.* 15, 35–39.
- 413.Bagur, M., Widory, D. (2020). Characterizing the levels and sources of the historical metal contamination in the atmosphere of Montreal (Canada) from 1973 to 2013 by coupling chemistry and lead and osmium isotope ratios, *Atmospheric Research*, <https://doi.org/10.1016/j.atmosres.2019.104794>