Vita

John H. Fournelle
Senior Scientist, Emeritus
Department of Geoscience, University of Wisconsin-Madison
1215 W. Dayton Street, Madison, WI 53706
Phone: 608-438-7480 FAX: 608-262-0693 email: johnf@geology.wisc.edu
Research interests: Electron probe microanalysis; volcanic petrology

Education:
Ph.D., 1989, The Johns Hopkins University
M.S., 1985, The Johns Hopkins University
B.S., 1983, University of Maryland

Postdoctoral Fellowships:
1990: The Johns Hopkins University
1989: Smithsonian Institution

Positions Held:
University of Wisconsin-Madison, Dept. of Geology & Geophysics, Assistant Scientist, 1992–1999; Associate Scientist, 1999 – 2005; Senior Scientist, 2005-2020; Emeritus, 2020-current. Director Cameron Electron Microprobe Lab 1992-2020; Director, S.W. Bailey XRD Lab, 2003-2005; Director, SEM Lab, 2006-2020
University of Maryland, University College, Part-time Lecturer, 1991 - 1992
West Chester University, Instructor (Temporary), 1991

Fellowships/Research Grants
NSF EAR-1849386 (Fournelle) 2019: $250.8K Midwest Low kV Collaboration: Continuation of low kV High Spatial Resolution EPMA Technique to Sub-micron Geological Features (in collaboration with Anette von der Handt at the University of Minnesota-Minneapolis)
NSF EAR-1632366 (Fournelle) 2016: $22.5K for student support for EPMA workshop at UW
NSF EAR-1554269 (Fournelle) 2016: $202.7K for Post-doctoral support for low voltage EPMA technique development
NSF EAR-1337156 (Fournelle, Eom, Goodwin, Singer, Valley) 2013: $960K for MRI acquisition of modern electron microprobe
NSF EAR-1015246 (Goodwin, Fournelle) 2010: $10,000 for student support for EBSD workshop at UW
NSF EAR-0813918 (Goodwin, Fournelle) 2008: $5000 for student support for EBSD workshop at UW
NSF EAR-0447332 (Goodwin, Fournelle, Tikoff, Valley, Xu) 2005: $260K for versatile SEM acquisition
UW-Madison Academic Staff Professional Development Grants, 1995, 1998, 2000
National Geographic Research Grant, 1989
Arctic Institute of North America Research Grant, 1985
Sigma Xi Research Grant, 1985
GSA Research Grants, 1984, 1985

Awards
Fellow of the Microanalysis Society, Inaugural Class, 2019
Hilldale Sponsor for undergraduate research award, 2019
Teaching Award from UW Geoscience Students, 2013
Best Paper Award, American Foundry Society 2001/2002 Melting Methods and Materials Division (Loper, Park and Fournelle, 2001)
GSA: Harold T. Stearns Award, 1984

Professional Memberships:

Microbeam Analysis Society, member; Director 2006-2008; Archivist 2007-current; Topical Conferences Committee 2007-current; Organizer MAS Topical Conferences: 2008 EBSD, 2010 EBSD, 2016 EPMA, 2019 EPMA; MAS cochair for Microscopy and Microanalysis 2020 conference.
Midwest Microscopy and Microanalysis Society, Executive Council Member, Newsletter Editor, 1998-2002
International Association of Volcanology and Chemistry of the Earth's Interior, member
American Geophysical Union, member; AGU History Committee, member 2005-current
Geological Society of America, member
Mineralogical Society of America, member; Roebling Medal Committee, 1996-7

Invited Lectures:

Australian Microbeam Analysis Society, Queensland Institute of Technology, Brisbane, Australia (February 2017): EPMA tutorial; Advances in low kV EPMA
Nanjing University, Nanjing, China (November 2016) Electron probe microanalysis: applications and developments (series of lectures over 4 days)
University of Lausanne (Switzerland) (March 2016) Developments in low voltage electron probe microanalysis
Nanjing University, Nanjing, China (November 2015) Electron probe microanalysis: applications and developments (series of lectures over 4 days)
Carnegie Mellon, Pittsburgh, PA (September 2013) Electron probe microanalysis: challenges and advances

In Review:

Publications

80. Michael Wiedenbeck, Robert B. Trumbull, Martin Rosner, Adrian Boyce, John H. Fournelle, Ian Franchi, Ralf Halama, Chris Harris, Jack H. Lacey, Horst Marschall, Anette Meixner, Andreas Pack, Philip A.E. Pogge von Strandmann, Michael J. Spicuzza, John W. Valley, and Franziska Wilke, 2020, Tourmaline reference materials for the in situ analysis of oxygen and lithium isotope ratios, *Geostandards*
79. Llovet, X., Moy, A., Pinard, P. and Fournelle, J. 2020, Electron probe microanalysis: a review of recent developments and applications in materials science and engineering, *Progress in Materials Science* (invited review) doi.org/10.1016/j.pmatsci.2020.100673
78. Li, H., Sun, C.Y., Fang, Y., Carlson, C.M., Xu, H., Jesovnik, A., Sosa-Calvo, J., Zarnowski, R., Bechtel, H.A., Fournelle, J.H. and Andes, D.R., 2020. Biomineral armor in leaf-cutter ants. *bioRxiv*.
77. Reinhard Kozdon, Donald E. Penman, D. C. Kelly, J.C. Zachos, John. H. Fournelle, J. W. Valley, 2020, Enhanced Poleward Flux of Atmospheric Moisture to the Weddell Sea Region (ODP Site 690) during the Paleocene-Eocene Thermal Maximum, *Paleoclimatology and Paleoceanography, e2019PA003811*
76. J. Wycech, D.C. Kelly, J. Fournelle, K. Kitajima, R. Kozdon, I. J. Orland, 2020, Pliocene west Pacific warm pool hydroclimate using in situ microanalyses on fossil planktic foraminifer shells, *Paleocenaography and Paleoclimatology* , e2019PA003772.
75. Ray R Zhang, Eduard Matkovic, John H Fournelle, Bruce Richard, Howard A Rowley, Shariar Salamat, 2020, Histological Features of Gadolinium Deposition in the Brain, A Case Report, *Acta Neuropathologica doi.org/10.1007/s00401-020-02159-1*
74. Xiao, S., Cui, H., Kang, J., McFadden, K.A., Kaufman, A.J., Kitajima, K., Fournelle, J.H., Schwid, M., Nolan, M., Baele, J.M. and Valley, J.W., 2020. Using SIMS to decode noisy stratigraphic δ13C variations in Ediacaran carbonates. *Precambrian Research*, p.105686.
73. Fukuda, K., Beard, B. L., Dunlap, D. R., Spicuzza, M. J., Fournelle, J. H., Wadhwa, M., & Kita, N. T., 2020, Magnesium isotope analysis of olivine and pyroxene by SIMS: Evaluation of matrix effects. *Chemical Geology*, 119482.
72. Liu, L., Shi, C., Zhang, C., Voyles, P., Fournelle, J. and Perepezko, J., 2020, Microstructure, microhardness and oxidation behavior of Mo-Si-B alloys in the Mo_{ss}+Mo_2B+Mo_5SiB_2 three phase region, *Intermetallics*, 116, doi.org/10.1016/j.intermet.2019.106618

71. Druc, Isabelle, Silvana Bertolino, Andrée Valley, Kinya Inokuchi, Francisco Rumiche, and John Fournelle. "Rojo grafitado: producción de un estilo de cerámica fina temprana en los Andes." *Boletín de Arqueología PUCP* 26 (2019): 49-64.
70. Siegrist, M., Yogodzinski, G., Bizimis, M., Fournelle, J., Churikova, T., Dektor, C. and Mobley.R., 2019, Fragments of metasomatized forearc: Origin and implications of mafic and ultramafic xenoliths from Kharchinsky Volcano, Kamchatka, *Geochemistry, Geophysics, Geosystems*, DOI: 10.1029/2019GC008478
69. Moy, A., Fournelle, J. and van der Handt, A., 2019, Solving the Iron Quantification Problem in Low kV EPMA: An essential step toward improved analytical spatial resolution in electron probe microanalysis. Olivines; *American Mineralogist: Journal of Earth and Planetary Materials* 104.8: 1131-1142. DOI: https://doi.org/10.2138/am-2019-6865
68. Moy, A., Fournelle, J. and van der Handt, A., 2019, Quantitative measurement of iron-silicides by EPMA using the Fe Lα and Lβ X-ray lines: a new twist to an old approach, Microscopy and Microanalysis, 25, 664-674. doi:10.1017/S1431927619000436
67. L. Liu; Congli Sun; Chenyu Zhang; Paul Voyles; John Fournelle; Anette van der Handt; Chuan Zhang, and Perpezko, John, 2019, Examination of B in the Mo solid solution (Moss) in Moss + Mo5SiB2 + Mo2B alloys, *Scripta Materialia*, 163, 62-65. doi.org/10.1016/j.scriptamat.2019.01.003
66. Andersen, N.L., Singer, B.S., Costa, F., Fournelle, J., Herrin, J.S. and Fabbro, G.N., 2018. Petrochronologic perspective on rhyolite volcano unrest at Laguna del Maule, Chile. *Earth and Planetary Science Letters*, *493*, pp.57-70. doi.org/10.1016/j.epsl.2018.03.043
65. Schaen, A.J., Singer, B.S., Cottle, J.M., Garibaldi, N., Schoene, B., Sttkoski, A.M. and Fournelle, J., 2018, Textural and Mineralogical Record of Low Pressure Melt Extraction and Silicic Cumulate Formation in the late Miocene Risco Bayo-Huemul Plutonic Complex, Southern Andes, Journal of Petrology
64. Cui, H., Kitajima, K., Spicuzza, M.J., Fournelle, J.H., Ishida, A., Denny, A., Zhang, F., Valley, J.W., 2018. Questioning the biogenicity of Neoproterozoic superheavy pyrite by SIMS. American Mineralogist. Online. doi.org/10.2138/am-2018-6489
63. Cui, H., Kitajima, K., Spicuzza, M.J., Fournelle, J.H., Ishida, A., Brown, P.E., Valley, J.W., 2018. Searching for the Great Oxidation Event in North America: A reappraisal of the Huronian Supergroup by SIMS sulfur four-isotope analysis. Astrobiology, 5, 519–538. doi.org/10.1089/ast.2017.1722
62. Medaris Jr, L. Gordon, Steven G. Driese, Gary E. Stinchcomb, John H. Fournelle, Seungyeol Lee, Huifang Xu, Lyndsay DiPietro, Phillip Gopon, and Esther K. Stewart, 2018, Anatomy of a Sub-Cambrian Paleosol in Wisconsin: Mass Fluxes of Chemical Weathering and Climatic Conditions in North America during Formation of the Cambrian Great Unconformity. *The Journal of Geology* 126, no. 3 (2018)
61. Bonamici, C.E., Kinman, W.S., Zimmer, M.M., Pollington, A.D., Rector, K.D., Williamson, T.L., Clifton, D., Fournelle, J.H. and Hervig, R.L., 2018. *The Geochemistry of Nuclear Fallout* (No. LA-UR-18-27446). Los Alamos National Lab, Los Alamos, NM.
60. Sliwinski, Maciej; Kitajima, Kouki; Spicuzza, Michael; Orland, Ian; Ishida, Akizumi; Fournelle, John; Valley, John, 2018, SIMS bias on isotope ratios in Ca-Mg-Fe carbonates (Part III): δ18O and δ13C matrix effects along the magnesite-siderite solid-solution series. *Geostandards and Geoanalytical Research*, 42.1, 49-76. doi: 10.1111/ggr.12194
59. Gopon, P., Spicuzza, M.J., Kelly, T.F., Reinhard, D., Prosa, T. J., and Fournelle, J. , 2017, Ultra-reduced Phases in Apollo 16 Regolith: Combined Field Emission Electron Probe Microanalysis and Atom Probe Tomography of Sub-micron Fe-Si Grains in Apollo 16 Sample 61500, Meteoritics and Planetary Science, 52 (9), 1941-1962, DOI: 10.1111/maps.12899
58. Wei Kong, Adam Roberts, Wenyuan Jiao, John Fournelle, Tong-Ho Kim, Maria Losurdo, Henry Everitt, and April Brown, 2017, UVB-Emitting InAlGaN Multiple Quantum Well Synthesized Using Plasma-Assisted Molecular Beam Epitaxy, AIP Advances 7, 035109; doi: http://dx.doi.org/10.1063/1.4973637
57. Bonamici, C.E., Kinman, W.S., Fournelle, J.H., Zimmer, M.M., Pollington, A.D., Rector, K.D., 2017, A geochemical approach to constraining the formation of glassy fallout debris from nuclear tests, Contributions to Mineralogy and Petrology, 172:2 DOI 10.1007/s00410-016-1320-2

56. Law, R.W., J.H. Burton, J. Fournelle, H. Konishi and H. Xu, 2016, The composition and source of lead-based cosmetics from Harappa. In *South Asian Archaeology 2010: Proceedings of the 20th International Conference of the European Association of South Asian Archaeologists, Vienna, Austria, July 4-9, 2010*, edited by V. Widorn, U. Franke and P. Latschenberger, pp. 67-77. Brepols, Turnhout.
55. Quinn, R.J., Valley, J.W., Page, F.Z., and Fournelle, J.H., 2016, Accurate determination of ferric iron in garnets, *American Mineralogist*, 101, 1704-1707.
54. Saylor, B., Joshua Angelini, Alan Deino, Mulugeta Alene, John H Fournelle, Yohannes Haile-Selassie, 2016, Tephrostratigraphy of the Waki-Mille area of the Woranso-Mille Paleoanthropological Research project, Afar, Ethiopia; Journal of Human Evolution, pp. 25-45, DOI: 10.1016/j.jhevol.2015.12.007
53. Fournelle, J., Cathey, H., Pinard, P., and Richter, S., 2016, Low voltage EPMA: experiments on a new frontier in microanalysis – lateral spatial resolution, *IOP Conf. Ser.: Mater. Sci. Eng* doi:10.1088/1757-899X/109/1/012003
52. Kong , W., W.Y. Jiao, J.C. Li, K. Collar, J.H. Leach, J. Fournelle, T.H. Kim, A.S. Brown, 2016, Structural Characterization of the Nanocolumnar Microstructure of InAlN, *Journal of Electronic Materials*, 45, 654-660.
51. Haus, N.W., Wilhelm, K. R., Bockheim, J.G., Fournelle, J., and Miller, M., 2015, A case for chemical weathering in soils of Hurd Peninsula, Livingston Island, South Shetland Islands, Antarctica, *Geoderma*, 263, 185-194.
50. Sliwinski, Maciej; Kitajima, Kouki; Kozdon, Reinhard; Spicuzza, Michael; Fournelle, John; Denny, Adam; Valley, John, 2015, Secondary Ion Mass Spectrometry bias on isotope ratios in dolomite-ankerite, Part II: $\delta^{13}C$ matrix effects, *Geostandards and Geoanalytical Research*, 40.2, 173-184.
49. Slinwinski M.G., Katajima, K., Kozdon, R., Spicuzza, M.J., Fournelle, J.H., Denny, A. and Valley, J.W., 2015, SIMS bias on isotope ratios in dolomite-ankerite, Part I: $\delta^{18}O$ matrix effects, *Geostandards and Geoanalytical Research*, 40.2, 157-172 DOI: 10.1111/j.1751-908X.2015.00364.x
48. Gopon, P., Sobol, P., Fournelle, J. 2015, Non-sequential Spectral Acquisitions and Data Reconstruction to Remove Time Dependent Effects from X-ray Spectra, *Applied Spectroscopy*,
47. Bonamici, C.E., Fanning, C.M., Kozdon, R., Fournelle, J.H. and Valley, J.W., 2015, Combined oxygen- isotope and U-Pb age zoning studies of titanite: New criteria for age preservation, *Chemical Geology*, 398, 70-84.
46. Kong, W., Mohanta, A., Roberts, A. T., Jiao, W. Y., Fournelle, J., Kim, T. H., Losurdo, M., Everitt, H.O., and Brown, A. S., 2014, Room temperature photoluminescence from InxAl (1− x) N films deposited by plasma-assisted molecular beam epitaxy. *Applied Physics Letters*, *105*(13), 132101.
45. Singer, B. S., Jicha, B. R., Fournelle, J. H., Beard, B. L., Johnson, C. M., Smith, K. E., Greene, S.E., Kita, N.T., Valley, J.W., Spicuzza, M.J. and Rogers, N. W., 2014, Lying in wait: deep and shallow evolution of dacite beneath Volcán de Santa María, Guatemala. *Geological Society, London, Special Publications*, *385*(1), 209-234.
44. Gopon, P., Fournelle, J., Sobol, P.E., and Llovet, X., 2013, Low voltage soft x-ray EPMA of Fe-Si compounds, *Microscopy and Microanalysis*, 19(6), 1698-1708.
43. Kozdon, R., Kelly, D. C., Kitajima, K., Strickland, A., Fournelle, J. H., & Valley, J. W., 2013, In situ $\delta^{18}O$ and Mg/Ca analyses of diagenetic and planktic foraminiferal calcite preserved in a deep-sea record of the Paleocene-Eocene thermal maximum. *Paleoceanography*, *28*(3), 517-528.
42. Yelton, A., Williams, K.H., Fournelle, J., Wrighton, K.C., Handley, K.M. and Banfield, J.F., 2013, Vanadate and acetate biostimulation of contaminated sediments decreases diversity, selects for specific taxa and decreases aqueous V^{5+} concentration, *Environmental Science and Technology*, DOI: 10.1021/es4006674
41. Moreau, J.W., Fournelle, J.H. and Banfield, J.F., 2013, Quantifying heavy metals sequestration by sulfate-reducing bacteria in an acid mine drainage-contaminated wetland. *Frontiers in Microbiology* 4:43. doi: 10.3389/fmicb.2013.00043
40. Medaris, L.G. and Fournelle, J.H., 2012, Pseudorutile in the Baraboo Range, Wisconsin: First recognition of metamorphic pseudorutile, *Canadian Mineralogist*, 50(5), 1165-1172

39. Kita, N.T., Ushikubo,T., Knight, K.B., Mendybaev, R.A., Davis, A.M., Richter, F.M. and Fournelle, J., 2012, Internal 26Al-26Mg isotope systematics of a type B CAI: remelting of refractory precursor solids, *Geochimica et Cosmochimica Acta*, 86 (1), 37-51.
38. Llovet, X., Heikinheimo, E., Nunez, A., Merlet, C., Almagro, J., Richter, S., Fournelle, J. and van Hoek, C.J.G, 2012, An inter-laboratory comparison of EPMA analysis of alloy steel at low voltage, *Institute of Physics Conference Series: Materials Science and Engineering*, 32, Conf 012014, 1-15.
37. Huberty, J.M., Konishi, H., Heck, P.R., Fournelle, J.H., Valley, J.W., and Xu, H., 2012, Silician Magnetite from the Dales Gorge Member of the Brockman Iron Formation, Hamersley Group, Western Australia, *American Mineralogist*, 97, 26-37.
36. Kozdon, R., Kelly, D.C., Kita, N.T., Fournelle, J.H., and Valley J.W., 2011, Planktonic foraminiferal oxygen isotope analysis by ion microprobe technique suggests warm tropical sea surface temperatures during the early Paleogene, *Paleoceanography*, 26, PA3206, doi:10.1029/ 2010PA002056.
35. Killian, C.E., Metzler, R.A., Gong, Y., Churchill, T.H., Olson, I.AC., Trubetskoy, V., Christensen, M.B., Fournelle, J.H., De Carlo, F., Cohen. S., Mahamid, J., Scholl, A., Young, A. Doran, A., Wilt, F.H., Coppersmith, S.N. and Gilbert, P.U.P.A., 2011, Self-sharpening mechanism of the sea urchin tooth, *Advanced Functional Materials*, 20, 1-9.
34. Kita, N. T., Hiroko Nagahara, Shogo Tachibana, Shin Tomomura, Michael J. Spicuzza, John H. Fournelle and John W. Valley, 2010, High precision SIMS oxygen three isotope study of chondrules in LL3 chondrites: role of ambient gas during chondrule formation, *Geochimica et Cosmochimica Acta*, 74, 6610-6635.
33. Zhang, N., Molenda, J.A. Fournelle, J.H., Murphy, W.L., and Sahai, N., 2010, Effects of pseudowollastonite (CaSiO3) bioceramic on in vitro activity of human mesenchymal stem cells, *Biomaterials*, 31, 7653-7665.
32. Huberty, J.M., Kita, N.T., Kozdon, R., Heck, P.R., Fournelle, J.H., Spicuzza, J.J., Huifang, X. and Valley, J.W., 2010, Crystal orientation effects in d18O for magnetite and hematite by SIMS, *Chemical Geology*, 276, 269-283.
31. Kozdon, R., Kita, N.T., Huberty, J.M., Fournelle, J.H., Johnson, C.A. and Valley, J.W., 2010, In situ sulfur isotope analysis of sulfide minerals by SIMS: Precision and accuracy, with application to thermometry of ~3.5 Ga Pilbara cherts, *Chemical Geology*, 275, 243-253.
30. Zhu, J., Zhang, C., Ballard, D., Martin, P., Fournelle, J., Cao, W., Chang. Y., 2010, Study of the Ni-rich multi-phase equilibria in the Ni-Al-Pt alloys using the cluster/site approximation for the face-centered cubic phases, *Acta Materialia*, 58(1), 180-188.
29. Smith, M.E., Singer, B.S., Carroll, A.R., and Fournelle, J.H., 2008, Precise dating of biotite in distal ash: Isolating subtle alteration using 40Ar/39Ar laser incremental heating and electron microprobe techniques: American Mineralogist, 93, 784-795.
28. Fu, B., Page, F.Z., Cavosie, A.J., Fournelle, J., Kita, N.T., Lackey, J-S., Wilde, S.A., and Valley, J.W., 2008, Ti-in-zircon thermometry: Applications and limitations: Contributions to Mineralogy and Petrology, 156 (2), 197-215.
27. Fournelle, John, 2007, Book Review of Energy Dispersive Spectrometry of Common Rock Forming Minerals by Kenneth P. Severin, American Mineralogist, 92, 2006.
26. Page FZ, Fu B, Kita NT, Fournelle F, Spicuzza MJ, Schulze DJ, Viljoen F, Basei M A S and Valley J W, 2007, Zircons from kimberlite: new insights from oxygen isotopes, trace elements, and Ti in zircon thermometry, Geochim. Cosmochim. Acta, 71, 3887-3903.
25. Smith, M.E., Singer, B.S., Carroll, A.R., and Fournelle, J.H., 2006, High-resolution calibration of Eocene strata: 40Ar/39Ar geochronology of biotite in the Green River Formation: Geology, 34, 393-396.
24. Medaris, L.G. Jr, Ghent, E.D., Wang, H.F., Fournelle, J.H. and Jelinek, E., 2006, The Spatice eclogite: constraints on the P-T-t history of the Gfohl granulite terrane, Moldanubian Zone, Bohemian Massif, Minerology and Petrology, 86, 203-220.
23. Fournelle, J.H., Kim, S. and Perepezko, J.H., 2005, Monte Carlo simulation of Nb Ka secondary fluorescence in EPMA: comparison of PENELOPE simulations with experimental results, Surface and Interface Analysis, 37, 1012-1016.

22. Jicha, B R; Singer, B S; Brophy, J G; Fournelle, J H; Johnson, C M; Beard, Brian L; Lapen, T J; Mahlen, N J., 2004, Variable impact of the subducted slab on Aleutian island arc magma sources: evidence from Sr, Nd, Pb, and Hf isotopes and trace element abundances, Journal of Petrology, 45, 1845-1875.
21. Emerson, N. R., Simo, J. A., Byers, C. W., and Fournelle, J., 2004, Correlation of (Ordovician, Mohawkian) K-bentonites in the Upper Mississippi Valley by using apatite chemistry: implication for stratigraphic interpretations of the mixed carbonate-siliciclastic Decorah Formation, Palaeogeography, Palaeoclimatology, Palaeoecology, 210, 215-233.
20. Medaris, L.G. Jr., Fournelle, J.H. and Henry, D. J., 2003,Tourmaline-bearing quartz veins in the Baraboo Quartzite, Wisconsin: Occurrence and significance of foitite and 'oxy-foitite", The Canadian Mineralogist, 41, 749-758.
19. Schoeninger, M.J., Hallin, K., Reeser, H., Valley J.W. and Fournelle, J., 2003, Isotopic alteration of mammalian tooth enamel, International Journal of Osteoarchaeology, 13, 11-19.
18. Gilbert, B., Frazer, B.H., Naab, F., Fournelle, J. and Valley, J.W., and DeStasio, G., 2003, X-ray absorption spectroscopy of silicates for in situ, sub-micrometer mineral identification, American Mineralogist, 88, 763-769.
17. Carson, E.C., Fournelle, J.H., Miller, T.P., and Mickelson, D.M., 2002: Holocene tephrochronology of the Cold Bay area, southwest Alaska Peninsula, Quaternary Science Reviews, 21, 2185-2200.
16. Jakubowski, R. T., Fournelle, J., Welch, S., Swope, R.J. and Camus, P., 2002, Evidence for magmatic vapor deposition of anhydrite prior to the 1991 climactic eruption of Mt. Pinatubo, Philippines, American Mineralogist, 87, 1029-1045.
15. Eiler, J.M., J.W. Valley, C.M. Graham, and J. Fournelle, 2002, Two populations of carbonate in ALH84001: Geochemical evidence for discrimination and genesis, Geochemica et Cosmochimica Acta, 66, 1285-2002.
14. Bindeman, I.N., J.H. Fournelle, and J.W. Valley, 2001, Low-$\delta^{18}O$ tephra from a compositionally zoned magma body: Fisher Caldera, Unimak Island, Aleutians, Journal of Volcanology and Geothermal Research, 111, 35-53.
13. Loper, C.R. Jr, J. Park and J. Fournelle, 2001, Effect of calcium on the Widmanstatten graphite formation in lead-contaminated gray cast iron, American Foundry Society Transactions 01-095, 1249-1279.
12. Medaris L. G., H.F. Wang, J. H. Fournelle, J. H. Zimmer and E. Jelinek, 1999, A cautionary tale of spinel peridotite thermobarometry: an example from xenoliths of Kazakov Volcano, Czech Republic, Geoline, 9, 92-96.
11. Medaris, L.G., J. H. Fournelle, E. D. Ghent, E. Jelinek and Z. Misar, 1998, Prograde eclogite in the Gfohl Nappe, Czech Republic: new evidence on Variscan high-pressure metamorphism, Journal of Metamorphic Geology, 16, 563-576.
10. Hagemman, S. G., Philip E. Brown, John Ridley, Peter Stern, and John Fournelle, 1998, Ore petrology, chemistry and timing of electrum in the Archean hypozonal Transvaal lode-gold deposit, Western Australia, Economic Geology, 93, 271-291.
9. Swenson, D., Nieh, T-G; Fournelle, J.H., 1998, Solid-state phase relationships in the calcia-titania-zirconia system at 1200 degrees C, Journal of the American Ceramic Society, 81, 3249-3252
8. Medaris, L.G., Jr., J.H. Fournelle, H.F. Wang and E. Jelinke, 1997, Thermobarometry and reconstructed chemical compositions of spinel-pyroxene symplectitites: evidence for pre-existing garnet in lherzolite xenoliths from Czech neogene lavas, Russian Geology and Geophysics, 38, 277-286.
7. Fournelle, J., R. Carmody, and A. Daag, 1996, Anhydrite-bearing pumices from the June 15, 1991, eruption of Mount Pinatubo: Geochemistry, mineralogy and petrology, in Punongbayan and Newhall (ed.), Fire and Mud: Eruptions and Lahars of the Mount Pinatubo, Philippines, PHIVOLCS-University of Washington, 845-863.
6. Swenson,-D.; Nieh,-T.-G.; Fournelle,-J.-H., 1996, The CaO-TiO2-ZrO2 system at 1200 degrees C and the solubilities of Hf and Gd in zirconolite, in Scientific-Basis-for-Nuclear-Waste-Management-XIX.-Symposium (Eds: Murphy,-W.-M.; Knecht,-D.-A.), 337-44
5. Fournelle, J., B.D. Marsh, and J.D. Myers, 1994, Age, character and significance of Aleutian Arc Volcanism, in Plafker and Berg (ed.), The Geology of Alaska: Boulder, Colorado, Geological Society of America, The Geology of North America, G-1, 723-757.
4. Fournelle, J. and B.D. Marsh, 1991, Shishaldin Volcano: Aleutian high-alumina basalts and the plagioclase accumulation question, Geology, 19, 234-237.
3. Fournelle, J, 1990, Anhydrite in Nevado del Ruiz November 1985 pumice: relevance to the sulfur problem, Journal of Volcanology and Geothermal Research, 42, 189-201.

2. Marsh, B.D., J. Fournelle, J.D. Myers and I-M. Chou, 1990, On plagioclase thermometry in island-arc rocks: experiments and theory, in Fluid-Mineral Interactions: A Tribute to H.P. Eugster (eds. R.J. Spencer and I-M. Chou), Geochemical Society Special Publication, 2, 65-83.
1. Melson, W.G., J.F. Allan, D.R. Jerez, J. Nelen, M.L. Calvache, S.N. Williams, J. Fournelle and M. Perfit, 1990, Water contents, temperatures and diversity of the magmas of the catastrophic eruption of Nevado del Ruiz, Colombia, November 13, 1985, Journal of Volcanology and Geothermal Research, 41, 97-126.

Contributor

Fournelle, J., 1990: Shishaldin, Isanotski, and Roundtop Volcanoes, in: Volcanoes of North America, C.A. Wood and J. Kienle, Eds., p.48-50.

Books – On Line Manual

Donovan, John with co-editors Dan Kremser, John Fournelle and Karsten Goemann, 2019, Probe for EPMA – User's Guide and Reference Manual, Probe Software, 429 pages.

Abstracts

164. Moy, A., von der Handt, A., and Fournelle, J., 2020, Using calibration curves to quantify Fe with the soft Lα and Lβ X-ray lines, Microscopy & Microanalysis 2020 (submitted)
163. von der Handt, A., Moy, A. and Fournelle, J., 2020, Quantitative microanalysis of chromites and garnets at low kV using Fe and Cr Lα and Lβ X-ray lines, Microscopy & Microanalysis 2020 (submitted)
162. Fournelle, J., Moy, A. and von der Handt, A., 2020, The EPMA Matrix Correction: ALL Elements Must Be Present For Accuracy: Four Examples With B, C, O and F, Microscopy & Microanalysis 2020 (submitted)
161. Fournelle, J., 2020, A New Kakanui Hornblende for Use by EPMA Labs, Microscopy & Microanalysis 2020 (submitted)
160. Moy, A. and Fournelle, J., 2020, BadgerFilm: an open source thin film analysis program, Microscopy & Microanalysis 2020 (submitted)
159. Sam Duncanson, Latisha Brengman, John Fournelle, and Aurélien Moy, 2020, Identifying primary and diagenetic mineral phases within the Biwabik Iron Formation from NE Minnesota, North-Central GSA 2020 abstract
158. Trevor Dwyer, Wentao Cao, and John Fournelle, 2020, Pressure-Temperature Path of Migmatite from Lac Dumoine terrane, western Greenville Province, NE GSA 2020 abstract
157. Moy, A., Fournelle, J. and von der Handt, A., 2019, An EPMA Study of the Soft Fe La-L X-ray lines in Fe-silicide, Olivine and Fe-sulfide Minerals by SXES and WDS, Microscopy & Microanalysis 2019 Portland Oregon
156. XIAO, Shuhai, CUI, Huan, KANG, Junyao, MCFADDEN, Kathleen A., KAUFMAN, Alan J., KITAJIMA, Kouki, FOURNELLE, John H. and VALLEY, John W., 2019, USING SIMS DATA TO UNDERSTAND THE ROLE OF AUTHIGENIC CARBONATE IN THE ORIGIN OF CHAOTIC STRATIGRAPHIC VARIATIONS OF CARBON ISOTOPES IN THE EARLY EDIACARAN DOUSHANTUO FORMATION, GSA 2019
155. CUI, Huan, ORLAND, Ian J., DENNY, Adam, KITAJIMA, Kouki, FOURNELLE, John H., BAELE, Jean-Marc, DE WINTER, Niels J., GODERIS, Steven, CLAEYS, Philippe and VALLEY, John W., 2019, ICE OR FIRE? CONSTRAINING THE ORIGIN OF ISOTOPICALLY ANOMALOUS CAP CARBONATE CEMENTS BY SIMS, GSA 2019
154. Gu, T., Pamato, M.G., Novella, D., Nestola, F., Nestola, F., Alvaro, M., Fournelle, J.H. and Wang, W., 2019, Fragments sampled at Earth's transition zone and lower mantle boundary by type IAB diamond, GSA Abstract 335372
153. DUNCANSON, S.P., BRENGMAN, L.A., FOURNELLE, J.H., and MOY, A., 2019, Deciphering primary and diagenetic controls on mineralogy in the ~1.9 Ga Biwabik Iron Formation, MN using paired textural and geochemical analyses, GSA abstract
152. Cui, H., Orland, K.J, Kitajima, K. Xiao, S. Kaufman, A.J., Fournelle, J.H., Baele, J-M, Goderis, S., Claeys, P. and Valley, J.W., 2019, Probing an atypical Shuram excursion by SIMS, GSA abstract

151. Schneider, B. and Fournelle, J., 2019, Using quanttative and qualitative analysis to confirm phase identies for arge area EBSD mapping of geological thin sections, MAS Quantitative Microanalysis Topical Conference, University of Minnesota
150. Moy, A. and Fournelle, J., 2019, Monte Carlo simulations to evaluate analytical spatial resolutiuon in EPMA, MAS Quantitative Microanalysis Topical Conference, University of Minnesota
149. Fournelle, J., 2019, And now for something completely different: A probe potpourri, MAS Quantitative Microanalysis Topical Conference, University of Minnesota
148. Moy, A., von der Handt, A. and Fournelle, J., 2019, Absolute calibration curves for the quantification of Fe by EPMA using the soft La-Lb X-ray lines, Invited talk, MAS Quantitative Microanalysis Topical Conference, University of Minnesota
147. Moy, A. and Fournelle, J., 2019, Modern thin film analysis by electron probe microanalysis, Invited talk, MAS Quantitative Microanalysis Topical Conference, University of Minnesota
146. Barshi, N., Bruck, B., Mixon, E., Valenca Villa, A., Kotsakis, G., Kumar, A. and Fournelle, J., 2019, Seeking compositional truth: EDS vs WDS to evaluate new standard materials, Student talk, MAS Quantitative Microanalysis Topical Conference, University of Minnesota
145. Fournelle, J., 2019, CASINO: A free software program to enhance your EDS and WDS ezperience, Invited talk, MAS Quantitative Microanalysis Topical Conference, University of Minnesota
144. Fournelle, J., 2019, Standard reference materials—Critical elements for microanalysis (WDS and EDS): A cautionary tale, and a hopeful future, Invited talk, MAS Quantitative Microanalysis Topical Conference, University of Minnesota
143. von der Handt, A., Fournelle, J., Kirilova, M., Plümpe, O., Toy, V.G., Wirth, R., 2019, How can we characterise graphite via electron microscopy, EGU abstract
142. Gu, T., Valley, J., Kitajima, K., Spicuzza, M.J., Fournelle, J.H., Stern, R., Ohfuji, H. and Wang, W., 2018, Evidence of subducted altered oceanic crust into deep mantle from inclusions of IAB diamonds, GSA abstract 282-8.
141. Brengman, L.A., Stewart, E.K., Stewart, E.D., Moy, A., Fournelle, J., Segee-Wright, G., 2018, Reviving histoidal data > 100 years leater: A fresh look at the depositional setting and petrogenesis of the <1.7 GA Freedom Formation, Baraboo, WI, GSA abstract 192-2
140. CAVOSIE, A.J., SPENCER, C., EVANS, N.J., MCDONALD, B., REDDY, S.M., WILDE, S.A., TALAVERA, C., CAMERON, E.M., VALLEY, J.W., FOURNELLE, J., USHIKUBO, T., 2018, Zircon evidence for eclogite facies metamorphism at 3.9 Ga , Goldschmidt 2018
139. Cui, H., Kitajima, K., Spicuzza, M.J., Fournelle, J.H., Denny, A., Ishida, A., Zhang, F. and Valley, J.W. 2018, Questioning the biogenicity of neoproterozoic superheavy pyritre by SIMS, Goldschmidt 2018
138. Moy, A. and Fournelle, J., 2018, A Study on the Change of the Fe Lα Mass Absorption Coefficients and Fluorescence Yields in Iron Silicide Samples by EPMA, Microscopy and Microanalysis 2018
137. Moy, A, Fournelle, J. and Vinson, J., 2018, Iron La and Lb X-ray lines: A comparison of EPMA experimental measurements and theoretical calculations, Microscopy and Microanalysis 2018.
136. Tenner, T.J., Chaumard, N., Hertwig, A., Fournelle, J.H., Kita, N.T., Ushikubo, T. and Kimura, M., 2017, July. Evaluating Silica Excess in Dominion Range 08006 Chondrule Plagioclase: Comparisons to Yamato 81020 and Acfer 094 Chondrule Plagioclase. In *80th Annual Meeting of the Meteoritical Society* (Vol. 1987).
135. Medaris, G. Jr., Lee, S., Xu, H., Fournelle, J. and Stewart, E., 2017, Precipitation of pedogenic quartz and concurrent bulk removal of silica during sub-Cambrian weathering—a paradox resolved, Institute on Lake Superior Geology
134. Schneider, W., MacRae, C.M. and Fournelle, J., 2017, Effective SEM analytical techniques for the cathodoluminescence visualization of intergranular cements in Saint Peter Sandstone: a round robin exercise, Microscopy and Microanalysis 2017
133. Moy, A. and Fournelle, J., 2017, Quantitative electron probe microanalysis of Fe at low accelerating voltage using the La and Lb X-ray lines, Microscopy and Microanalysis 2017
132. Moy, A. and Fournelle, J., 2017, Analytical spatial resolution in EPMA: what is it and how can it be estimated?, Microscopy and Microanalysis 2017
131. Fournelle, J. and Scott, J., 2017, Minerals from the Kakanui volcanic breccia: a 2017 look at geological reference materials for EPMA, *Microscopy and Microanalysis* 23.S1 (2017): 502-503.
130. Fournelle, J., 2017, Seven decades of trans-Atlantic cooperation in the development of EPMA, Microscopy and Microanalysis 2017
129. Gopon, P., Spicuzza, M., Kelly, T., Reinhard, D., Prosa, T. and Fournelle, J., 2017, Atom Probe Tomography of Reduced Phases in Apollo 16 Regolith Sample 61501,22, abstract for IUMAS/EMAS conference
128. Matsumura, R., Shigematsu, N., Toy, V., Harigane, Y. and Fournelle, J., 2017, Improving spatial resolution for quantitative microanalysis by SEM-EDS using lower accelerating voltage, Abstract for Joint JpGu-AGU meeting

127. Moy, A., Fournelle, J., Cavosie, A., and Farthing, D., 2017, Electron probe microanalysis of Sn-rich silicate glass at low accelerating voltage, IUMAS/EMAS 2017 Konstanz Germany
126. Fournelle, J., 2017, Seven decades of trans-Atlantic cooperation in the development of EPMA, IUMAS/EMAS Konstanz Germany
125. Fournelle, J.H., Moy, A. and Gopon, P., 2017, Experiments with low voltage FE-EPMA: toward achieving improved analytical spatial resolution, Australian Microbeam Analysis Society conference abstract.
124. Andersen, N.L., Singer, B.S., Costa, F., Herrin, J., Fabbro, G. and Fournelle, J., 2016, Tracking the extraction of compositionally and thermally distinct rhyolite magma batches at Laguna del Maule, central Chile, abstract at Cities on Volcano Conference, Santiago, Chile
123. Seddio, S.M. and Fournelle, J.H., 2015, Comparing the Intensities and Spectral Resolution Achieved by Wavelength-Dispersive Spectrometers on Microprobes and SEMs, Microscopy & Microanalysis 2015 meeting
122. Gopon, P., Fournelle, J., Spicuzza, M., and Valley, J.W., 2015, Survey for Fe-Si in Apollo 16 Regolith Sample 61501,22, Microscopy & Microanalysis 2015 meeting
121. Fournelle, J., and Cathey, H., 2014, Experiments with Low Voltage Field Emission EPMA, abstract V33D-06, AGU Fall Meeting.
120. Bonamici, C.E., Fournelle, J.H., Zimmer, M.M., Kinman, W.S. and Pollington, A.D., 2014, Physiochemical processes in the nuclear cloud: a record from aerodynamic Trinity fallout, abstract V21B-4764, AGU Fall Meeting.
119. Gopon, P., Fournelle, J., Sobol, P., Spicuzza, M., Pinard, P., Richter, S., Llovet, X. and Valley, J.W., 2014, Soft X-Ray EPMA Analyses of Extremely Reduced phases from Apollo 16 regolith: problems and solutions for sub-micron analysis, Microscopy and Microanalysis 20.S3 (2014): 698-699.
118. Gopon, P., Fournelle, J., Valley, J., Horn, W., Pinard, P., Sobol, P., Spicuzza, M. & LLovet, X. (2014, August). Soft X-Ray EPMA analyses of nanophase lunar Fe-Si compounds. In *Proceedings of the Wisconsin Space Conference*.
117. Fournelle, J. and Hanchar, J., 2013, Electron Microprobe Analysis of Hf in Zircon: Suggestions for Improved Accuracy of a Difficult Measurement, abstract V44B-05, AGU Fall Meeting
116. Gopon, P., Fournelle, J., Valley, J.W., Pinard, P.T., Sobol, P., Horn, W., Spicuzza, M.J., Llovet, X. and Richter, S., 2013, Quantitative EPMA of Nano-Phase Iron-Silicides in Apollo 16 Lunar Regolith, abstract V53B-2791, AGU Fall Meeting.
115. Cathey, H., Gopon, P., and Fournelle, J., 2013, NBS K409: A potential reference material for sub-micron X-ray resolution by EPMA, abstract V53B-2793, AGU Fall Meeting
114. Wycech, J., Kelly, D C., Kozdon, R., Fournelle, J., Valley, J W., 2013, Warm Tropical Sea Surface Temperatures During the Pliocene: a New Record from Mg/Ca and δ18O In Situ Techniques, abstract PP53C-2016, AGU Fall Meeting.
113. Gopon, P., Sobol, P., & Fournelle, J., 2013, Random spectrometer motion for removal of time dependent artifacts in spectroscopy. *Microscopy and Microanalysis*, *19*(S2), 814-815.
112. Cavosie, A.J., Roig, C.I., McDougal, D.J., Ushikubo, T., Spicuzza, M.J., Fournelle, J., Valley, J.W., Cordua, W.S. and Mattson, C., 2013, The sedimentary record of a small, deeply eroded impact structure: A search for detrital shocked minerals and extraterrestrial chromites in sediments eroded from the Ordovician Rock Elm impact structure (USA), 44th Lunar and Planetary Science Conference, 2028-29.
111. Gopon, P., Fournelle, J, Llovet, X. and Sobol, P., 2013, Low keV electron probe analysis of iron silicides, EMAS 2013 13th European Workshop on Modern Developments and Applications in Microbeam Analysis, 323-324.
110. Fournelle, J., 2012, Complications with Using Natural Minerals as Microbeam Standards: Pyroxenes, V23C-2827, EOS Trans AGU
109. Gopon, P., Fournelle, J., Llovet, X. and Sobol, P., 2012,. Low Voltage EPMA of Lunar, Terrestrial, and Synthetic Fe-Si Compounds, V12A-06, EOS Trans AGU
108. Kozden, R., Kelly, D., Fournelle, J., Valley, J.W., 2012,. Hydrologic Cycle Response to the Paleocene-Eocene Thermal Maximum at Austral, High-Latitude Site 690 as Revealed by In Situ Measurements of Foraminiferal Oxygen Isotope and Mg/Ca Ratios, B21C-0362, EOS Trans AGU
107. Buchanan, A., Hanchar, J.M., Steele-MacInnis, M.J., Crowley, J.L., Valley, P.M, Fisher, C.M., Fedo, C., Piccoli, P.M. and Fournelle, J., 2012, Tracking hydrothermal alteration and mineralization in rock-forming and accessory minerals from the Lyon Mountain Granite and related iron oxide apatite (IOA) ores from the Adirondack Mountains, New York State, V43C-2843, EOS Trans AGU
106. Fournelle, J., 2012, Complexities of using natural minerals as standard reference materials: personal experiences from a geological microprobe lab, abstract, Microanalytical Reference Materials Conference, Colorado School of Mines
105. Fournelle, J., 2012, Toward a quartz sandstone SEM-CL intensity imaging reference material, abstract, Microanalytical Reference Materials Conference, Colorado School of Mines

104. Hanchar, J.M., J. Fournelle, C. Hayward, B. Dhuime, C. Münker, E. Mundy and C.M. Fisher, 2012, Synthesis and characterization of Ti-Y-Zr-Nb-Hf-Ta-La-Nd-Sm-Gd-Dy-Er-Yb-Lu doped haploandesite glass reference materials, MAS Conference on Reference Materials, Colorado School of Mines, May
103. Gopon, P. , Fournelle, J. and Llovet, X. , 2012, Soft X-ray EPMA of nanophase lunar Fe-Si compounds, Microscopy and Microanalysis Conference, July, Phoenix
102. Jonnard, P. and Fournelle, J., 2012, High-resolution Al and Mg Ka emissions of some minerals, European X-ray Spectroscopy conference, Vienna, June.
101. Buchanan, A., Hanchar, J.M., Mcinnis-Steele, M., Crowley, J., Valley, P.M., Fisher, C.M., Piccoli, P.M. and Fournelle, J., 2012, Tracking hydrothermal alteration and mineralization in rock-forming and accessory minerals from the Lyon Mountain Granite and related iron oxide-copper gold (IOGG) ores from the Adirondack Mountains, New York State, GAC-MAC abstract
100. Fournelle, J. and Jonnard, P., 2011, Peak shift in Mg Ka in EPMA: high resolution x-ray spectrometer results for silicate minerals, Trans. AGU, V31C-2542.
99. Fournelle, J.H., 2011, An investigation of "San Carlos Olivine": comparing USNM-distributed material with commercially available material, Microscopy and Microanalysis, 17 (Suppl 2), 842-843.
98. Carpenter, P.K., Vicenzi, E.P., Gauvin, R. and Fournelle, J., 2011, The legacy of Raimond Castaing: a perspective at 60 years, Microscopy and Microanalysis, 17 (Suppl 2), 546-547.
97. Spicuzza, M.J., Valley, J.W., Fournelle, J., Huberty, J. and Tremain, A., 2011, Native silicon and FeSi3 from the Apollo 16 lunar regolith: extreme reduction, metal-silicate immiscibility, and shock melting. LPSI Contribution No. 1608, 2231-2.
96. Fournelle, J. and Geiger, C. A., 2010, An Electron Microprobe Study of Synthetic Aluminosilicate Garnets, EOS abstract #V51C-2208
95. Hanchar, J. M.; Shimizu, N.; Fournelle, J.; Fisher, C. M.; Buchanan, A.; Piccoli, P. M.; Hayward, C.; Bowring, S. A., 2010, Development and characterization of a Ti-doped haploandesite glass standard for Ti-in-zircon geothermometry, EOS abstract #V43F-02
94. Del Marmol, M., Budianto, A., Fournelle, J., Jacobs, P., Elburg,M.A., 2010, Marapi, an active West-Central Sumatra Volcano: a geological and petrological study, EOS Abstract V23B-2434
93. Firouzdor, V., Fournelle, J.H. and Kou, S., 2010, PENEPMA, a useful tool in intermetallic phase ID along the joint interface of al-Mg dissimilar metal friction-stir welds, Microscopy and Microanalysis, 16: 1500-1501
92. Kozdon, R.; Williford, K. H.; Kita, N. T.; Huberty, J. M.; Fournelle, J. H.; Valley, J. W., 2010, In Situ Sulfur Isotope Analysis of Sphalerite and Other Sulfides by SIMS: Precision vs. Accuracy, Astrobiology Science Conference 2010: LPI Contribution No. 1538, p.5050
91. Ludois, J. M.; Sinha, M. P.; Johnson, C. M.; Fournelle, J.; Beard, B. L., 2010, Rb-Sr Geochronology by Laser Ablation of Neutral Atoms by Miniature Mass Spectrometry on Sulfate Minerals: Possible Applications for In-Situ Analysis on Mars, Astrobiology Science Conference, LPI Cont. No. 1538, p. 5325.
90. Zhang, N., Molenda, J.A. Fournelle, J.H., Murphy, W.L., and Sahai, N., 2010, Calcium Silicate (CaSiO3) crystal structure effects on in vitro activity of human mesenchymal stem cells, Gordon Conference
89. Kita, N.T., Ushikubo, T., Davis, A. M., Knight, K. B., Mendybaev, R. A., Richter, F. M. and Fournelle, J. H., 2010, Initial ^{26}Al abundance in a Type B CAI: remelting of pre-existing refractory solid, LPI Abstract
88. Fournelle, J., 2009, Notes on some crystals of San Carlos Olivine and EPMA standards, Eos Trans, AGU V31E-2009
87. Gregory, R.T., Marsh, B.D., Teplow, W. and Fournelle, J., 2009, On the interaction of a vigorous hydrothermal system with an active magma chamber: the Puna Magma Chamber, Kilauea East Rift, Hawaii, Eos Trans, AGU V11F-08.
86. Kozdon, R., Kita, N., Huberty, J., Fournelle, J., and Valley, J.W., 2009, In situ sulfur isotope analysis of sphalerite by SIMS: precision vs accuracy. Eos Trans, V31E-2019.
85. Kita, N., Fournelle, J., Mendybaev, R., Knight, K., Davis, A.M., Richter, F.M., and Ushikubo, T., 2009, Evaluation of anorthite glass standards for high precision SIMS Al-Mg dating of early solar system materials. Eos Trans, V31E-2020.
84. Singer, B.S., Greene, S.E., Smith, K.E., Jicha, B., Fournelle, J., Johnson, C., Beard, B., and Rogers, N.W., 2009, Petrologic, Sr and Th isotope insight to evolution of 1902 dacite, Volcan Santa Maria, Guatemala., Eos Trans, AGU V43H-03.
83. Huberty, J.M., Kita, N.T., Heck, P.R., Kozdon, R., Fournelle, J.H., Xu, H.F., and Valley, J.W., 2009, Crystal orientation effects on bias of d18O in magnetite by SIMS, GCA Suppl, 73, A562.
82. Fournelle, J., 2009, Evaluating atmospheric particles – using EDS, WDS and EBSD. Invited talk, MAS Topical Conference April 22, College of Microscopy (McCrone)
81. Medaris, L.G. Jr., Fournelle, J.H., 2009, Metamorphic pseudorutile in the Seeley Slate, Baraboo Range, Wisconsin. Proceedings and Abstracts-Institute on Lake Superior Geology, Vol 55 (1), 57-58.
80. Fournelle, J., 2008, SEM microanalysis of particles: concerns and suggestions, Eos Trans. AGU 89(53), Fall Meet. Suppl., Abstract A43D-0333,.

79. Kita, N.T., Ushikubo, T., Fournelle, J., Knight, K.B., Mendybaev, R.A., Davis, A.M., and Richter, F.M., 2008, Internal isochron of CAI using high precision SIMS Mg isotope analyses, Geochimica et Cosmochimica Acta, 72, A477.
78. Fournelle, J., Zhang, C. and Chang,Y.A., 2008, Al-Ir compounds and the problem of light element-heavy element matrix corrections in EPMA: application of PENEPMA Monte Carlo Modeling, Microscopy and Microanalysis, Albuquerque
77. Marinenko, R.B.and Fournelle, J., 2008, Wavelength dispersive electron microprobe quantification of a TiAl(NbW) alloy, NIST SRMs 2061 and 2062, Microscopy and Microanalysis, Albuquerque
76. Fournelle, J., 2007, Peak shifts in Al, Mg, Si and Na in geologically important materials, Eos Trans. AGU, 88(52) Fall Mtg Supple, Abstract V51A-0328
75. Fournelle, J., 2007, Problems in trace element EPMA: modeling secondary fluorescence with PENEPMA, Eos Trans. AGU, 88(52) Fall Mtg Supple, Abstract V51A-0329
74. Kracher, A, Bindi, L., Bonazzi, P., Fournelle, J., Spring, P.G., 2007, Large errors in electron microprobe analysis of Laphamite due to uncertainties in ZAF correction parameters, EOS, Abstracts of AGU Annual Meeting
73. Gustafson, R., White, B., Gustafson, M. and Fournelle, J., 2007, Development of a lunar agglutinate simulant, Space Resources Roundtable VIII, Program and Abstracts Vol 1332, 25-26.
72. Gustafson, R., White, B., Gustafson, M. and Fournelle, J., 2007, Development of high-fidelity lunar regolith simulants with agglutinates, Lunar and Dust Regolith Simulant Workshop, Huntsville AL
71. Fournelle, J., 2007, The problem of secondary fluorescence in EPMA in the application of the Ti-in-zircon geothermometer and the utility of PENEPMA Monte Carlo Program, Microscopy and Microanalysis, Ft. Lauderdale, FL
70. Medaris, L.G., Jr., Fournelle, J. H. and Guggenheim, S., 2007, An occurrence of agrellite in the Wausau alkaline igneous complex, Marathon County, Wisconsin. Proc & Abs – Inst on Lake Superior Geology, 53, 50-51.
69. Kita N. T., Nagahara H., Tachibana S., Fournelle J. H., and Valley J. W. , 2007, Oxygen Isotopic Compositions of Chondrule Glasses in Semarkona (LL3.0): Search for 16O-depleted Components in Chondrules. Lunar Planet. Sci. Conf., 38th, abstract #1791.
68. Fournelle, J, Severin, K., Wallace, K., Beget, J. and Larsen, J. ,2006, Electron microprobe techniques for use in tephrochronological analyses, Eos Trans. AGU, 87(52), F2299-2300.
67. Fournelle, J.H., 2006, Software useful for training students in electron probe microanalysis, Geological Society of America Abstracts with Programs, 38, 284.
66. Fournelle, J.H., 2006, Al and Mg Ka peak shifts in common silicate and oxide minerals: relevance to achieving the goal of 1% accuracy in EPMA, invited contribution, Microscopy and Microanalysis, Microscopy and Microanalysis, 12, Supplement 2, 822CD
65. Fournelle, J.H. and P. Carpenter, 2006, Core community specifications for electron microprobe operating systems: software, quantity control, and data management issues, Microscopy and Microanalysis, Microscopy and Microanalysis, 12, Supplement 2, 880CD.
64. Fournelle, J. and class of Geology 777, 2006, The significance of refractive index "K" values of 45 to 200 Å 2d LSMs, or, Why your long wavelength peak markers may not line up correctly, Microscopy and Microanalysis, 12, Supplement 2, 836CD.
63. Fournelle, J.H., 2006 Silicate Peak Shifts, Spectrometer Peaking Issues and Standard/Specimen Size Discrepancies in EPMA: 3 Bumps in the Road to the Goal of 1% Accuracy, Eos Trans. AGU, 87(36)) May Mtg Supple, Abstract MB51A-04.
62. Medaris, L.G., Singer, B.S., Zhang, X., Fournelle, J.H., Ghent, E.D., Brueckner, H.K., and Mehta, K., 2005, Eclogites in peridotites, Western Gneiss Region, Norway: characteristics and enigmatic Sm-Nd results, Mitt. Osterr. Miner. Ges. 150.
61. Schoeninger, M.J., Reeser, H., Valley, J.W. and Fournelle, J., 2005, Variable diagenetic alteration in fossil enamel apatite indicated by cathodoluminescence, Abstract, Fifth International Bone Diagenesis Meeting
60. Fournelle, J.H., Gosses, J., Kelly, J., Staffier, K., Waters, J. and Webber, C., 2005, Secondary fluorescence corrections for EPMA: PENELOPE MC simulations, Microscopy and Microanalysis, 11 (2), 1282CD.
59. Fournelle, J.H., 2005, Al and Si quantitation in routine silicate epma: Maybe not so routine, Geochimica et Cosmochimica Acta, 69, Suppl, 589.
58. Kelly, J., Gosses, J., Webber, C., Staffier, K and Fournelle, J. , 2005, PENELOPE computer simulations of secondary fluorescence in EPMA, Geochimica et Cosmochimica Acta, 69, Suppl, 590.
57. Page F, Fu B, Kita NT, Fournelle J, Spicuzza MJ, Schulze DJ, Basei MA and Valley JW, 2005, Ti in Zircon Megacrysts From Kimberlite: Evidence for low Temperatures of Formation. *AGU 2005 Fall Meeting*, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract V41E-1509.
56. Fu B, Cavosie AJ, Fournelle J. Kita NT, Lackey J, Page F, Wilde SA and Valley JW, 2005, Ti-in-Zircon Thermometer: Preliminary Results. *AGU 2005 Fall Meeting*, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract V41F-1538.
55. Fournelle, J.H., Kim, S. and Perepezko, J. H.,2004, Evaluating Nb Ka secondary fluorescence by experiment, thin

film software and Monte Carlo, Program and Abstracts of NIST Workshop on Modeling Electron Transport for Applications in Electron and X-ray Analysis and Metrology, November 8-10, 2004, p. 36

54. Fournelle, J., 2004, Al and Si Ka: peaks, peaking and the elusive 1% accuracy in "common" minerals, Microscopy and Microanalysis, 10, Suppl. 2, 908CD.
53. Medaris, L.G. Jr, Ghent, E.D., Jelinek, E., Fournelle, J.H. and Wang, H.F., 2004, The Spacice Eclogite Revisited, in Abstracts of the International Workshop on Petrogenesis of Granulites and Related Rocks, Brno, Czech Republic, p. 49-50
52. Fournelle, J. H., Ryan T. Jakubowski, Sue Welch, and R.J. Swope, 2003, 3D Petrography— Serendipitous discovery of magmatic vapor deposition of anhydrite at Mount Pinatubo by SEM imaging of outer crystal surfaces, EOS, V12A-0553.
51. Kearns, J. P.; Cervini-Silva, J.; Fournelle, J.; Schloss, P.; Williamson, L.; Reuss, R.; Handlesman, J.; Banfield, J. F., 2003, Mechanisms of Biogeochemical Influence on Phosphorus Bioavailablity in Cold Terrestrial Ecosystems, EOS abstract #B21C-0720
50. Medaris, L.G.Jr., Lapen, T.J., Fournelle, J.H., Johnson, C.M. and Beard, B.L., 2003, Archean to Paleozoic evolution of the Sandvik peridotite, Western Gneiss Region, Norway. GSA Abstracts with Programs, 35: 556.
49. Fournelle, J. 2002, Trials and Tribulations in an EPMA lab: the Good, the Bad and the Ugly (Standards), NIST/MAS Technical Workshop on Understanding the Accuracy Barrier of Quantitative Electron Beam X-ray Microanalysis and the Role of Standards, April 8-11, Germantown, Maryland.
48. Park, J.S., Sakidja, R., Perepezko, J.H. and Fournelle, J. 2002, High temperature coating layer design for Mo-Si-B alloy, MRS Fall Meeting Session HH4.7
47. Cavosie, A.J., Valley, J.W., Fournelle, J. and Wilde, S.A., 2002, Implications for sources of Jack Hills metasediments based on detrital chromite and zircon, Geochim. Cosmochim. Acta, 66, A125.
46. Ponomareva, V.V., Bindeman I.N, Fournelle J.H., and Valley J.W., 2002, The impact of last glaciation on volcanism in N. Pacific Arcs, Geochim. Cosmochim. Acta, 66, A611.
45. Bindeman I.N, Ponomareva, V.V., Fournelle J.H., and Valley J.W., 2002, The impact of glaciation on volcanism in N. Pacific arcs, 3rd Biennial Workshop on Subduction Processes emphasizing the Kurile-Kamchatkan-Aleutian Arcs, Fairbanks.
44. Jicha, B.R, Singer, B.S., Brophy, J.G., Fournelle, J.H, 2002, Resolving Late Pleistocene Volcanic History in the Aleutian Arc by Means of High Precision 40 Ar/39 Ar Geochronology, 3rd Biennial Workshop on Subduction Processes emphasizing the Kurile-Kamchatkan-Aleutian Arcs, Fairbanks.
43. Loper Jr, C R; Park, J; Fournelle, J; Seong, H-G; Cho, J-I , 2001, Interaction of phosphorus and bismuth in A356 Alloy, Transactions of the American Foundry Society and the One Hundred Fifth Annual Castings Congress; Dallas, TX, pp. 1-31.
42. Fournelle, J. 2001, Effect of calcium on Widmanstatten graphite foundation in lead-contaminated gray cast iron, Transactions of the American Foundry Society and the One Hundred Fifth Annual Castings Congress; Dallas, TX
41. Ryan T. Jakubowski, John Fournelle, Sue Welch, R.J. Swope and Patrick Camus, 2001, Evidence for High Temperature Magmatic Vapor Deposition of Anhydrite onto Phenocrysts Deposited in a 15 June 1991 Mount Pinatubo Pumice Deposit. EOS, 82, p. F-15.
40. Fournelle, J.H., 2001, A history of the mapping and geological and geophysical exploration of the Aleutians: combining oral history, archival history and detective work, GSA Abstracts with Programs, 33, p. A59.
39. Emerson, Norlene R., Fournelle, John, Simo, J. A., and Byers, Charles W., 2001, Correlation of (Mohawkian) K-bentonites by using apatite chemistry: implication for Decorah Formation carbonate and shale depositional sequences, GSA Abstracts with Programs, 33, p. A213.
38. Fournelle, J.H., Bindeman I.N., and Valley J.W., 2000, Fisher Caldera, Unimak Island, Aleutians: Oxygen Isotope Geochemistry and Regional Tephrochronology, EOS, 81, F1376.
37. Park, J.S., Sakidja, R., Fournelle, J. and Perepezko, J, 2000, The Effect of Coating on the Oxide Scale Formation on Mo-B-Si Alloy. ASM Fall Meeting abstracts, p 122-123
36. Fournelle, J. H., J. J. Donovan, S. Kim and J. H. Perepezko, 2000, Analysis of boron by epma: correction for dual Mo and Si interferences for phases in the Mo-B-Si system, Inst. Phys. Conf. Ser. No 165: Symposium 14, 2nd Conf. Int. Union Microbeam Analysis Societies, Kailua-Kona, Hawaii, 9-13 July 2000, 425-426.
35. Fournelle, J.H., Bindeman, I. N. and Valley, J.W., 2000, Quantitative EPMA Mapping of Minor and Trace Elements in Zircons from Yellowstone Tuffs and Lavas, EOS, 81, S26-27.
34. Medaris, L.G., Jr. and Fournelle, J.H., 2000, Tourmaline-bearing quartz veins in the Baraboo Quartzite: A new occurrence of the alkali-deficient tourmaline, foitite (abstract): Institute on Lake Superior Geology Proceedings, 46th Annual Meeting, Thunder Bay, ON, v. 46, Part 1, p. 39-40.
33. Fournelle, J. and G.D. Robinson, 1999, 1999-1949: 50th anniversary of M.S. Eider's first season studying Aleutian volcanoes and geology, EOS, 80, F1088.
32. Jakubowski, R., J. Fournelle and S. Welch, 1999, SEM study of Mt. Pinatubo anhydrite from 1991 eruption pumice: evidence for phenocryst-fluid reactions?, GSA Abstracts with Program, 31, A179-180.

31. Fournelle, J., Davidson, C., Spear, F, Kohn, M., and Guo, H., 1999, Trace element mapping of minerals and materials by electron microprobe, Microscopy and Microanalysis 1999, 630-631.
30. Medaris, L.G. Jr, Fournelle, J.H., Boszhardt, R.F. and Broihahn, J.H., 1999, Chemical and mineralogical comparision of Baraboo, Barron, and Souix argillite, metapelite and pipestone, 45, 35-36.
29. Reeser, H.A., M.J. Schoeninger, J. Valley and J. Fournelle, 1999, Fossil tooth enamel composition. American Assoc. Physical Anthropologists. Suppl. 28, 229-230.
28. Reeser, H.A., J. W. Valley, J. Fournelle, and M.J. Schoeninger, 1999, Cathodoluminescence of Pliocene mammal tooth enamel from Allia Bay in Kenya's Lake Turkana Basin. Journal of Vertebrate Paleontology. 19; 3, Suppl., 69
27. Carson, E. C., J. Fournelle, and D. Mickelson, 1998, Correlation of Holocene tephra deposits in the Cold Bay area, southwest Alaska Peninsula, EOS, 79, F937-938.
26. Eiler JM, Valley JW, Graham CM, Fournelle J, 1998, Geochemistry of carbonates and glass in Allan Hills 84001, Meteoritics and Planetary Science, 33, A44-A45
25. Taunton, A.E., Welch, S.A., Santelli, C.M., Fournelle, John, and Banfield, J.F., 1998, Apatite Weathering and Cerium Fractionation: Possible Microbial Influences: Geological Society of America, Abstracts with Programs, v. 30, A304-305.
24. Welch, S.A., Taunton, A.E., Santelli, C.M., Fournelle, John, and Banfield, J. F., 1998, The Role of Microorganisms in Biotite Weathering: Geological Society of America, Abstracts with Programs, v. 30, no. 7, A305.
23. Carson, E. C. and J. Fournelle, 1998, Holocene tephrochronology of the Cold Bay Area, Southwest Alaska Peninsula, GSA Abstracts with Program, North-Central Section, 30, 9.
22. Medaris, L.G. Jr and J. H. Fournelle, 1998, Svanbergite in the Baraboo Quartzite: significance for diagenetic processes and Phosphorus flux in Precambrian oceans; 44th Institute Lake Superior Geology,.44, 91-92.
21. Medaris, L.G. Jr., H.F. Wang, J.H. Fournelle, J.H. Zimmer, and E. Jelinek, 1998, A cautionary tale of spinel peridotite thermobarometry: an example from xenoliths of Kozakov Volcano, Czech Republic; IGCP #369 Magmatism and Rift Basin Evolution, Workshop Excursion Guide and Abstracts, Czech Republic, Liblice, Sept 7-11, 1998, 80-81.
20. Fournelle, J.H., T. Simkin and B.D. Marsh, 1997, Shishaldin Volcano, Aleutians: 1975 Eruption and FeTi Basalts, EOS, 78, F794.
19. Fournelle, J.H., C.A. Nunes and J.H. Perepezko, 1996, Anomalous backscattered electron behavior of MoB and Mo5SiB2 (T2) phases in an as-cast Mo-B-Si alloy, Proceedings of Microscopy and Microanalysis,1026-1027.
18. Nunes, C.A., J.H. Fournelle, and J.H. Perepezko, 1996, Characterization of phases in an as-cast Mo-B-Si alloy by WDS EPMA, Proceedings of Microscopy and Microanalysis, 518-519.
17. Zimmer, J. H., L. G. Medaris, Jr., J.H. Fournelle, H.F. Wang, and E. Jelinek, 1996, TP conditions and thermal histories of spinel lherzolite xenoliths: an example from the Neogene Korzakov Volcano, Czech Republic, EOS, 77, F817
16. Medaris, L.G., Jr., B.L. Beard, J.H. Fournelle, E.D. Ghent and E. Jelinek, 1996, Convergent Variscan metamorphism of garnet peridotite eclogite and high-pressure granulite in the Gfohl Nappe, Bohemian Massif, EOS, 77, F763
15. Medaris, L.G., Jr., J.H. Fournelle, and E. Jelinke, 1995, Thermobarometry and reconstructed chemical compositions of spinel-pyroxene symplectitites: evidence for pre-existing garnet in lherzolite xenoliths from Czech neogene lavas. Extended Abstracts of Sixth Kimberlite Conference, Novosibirsk, 371-373.
14. Swenson, D., T.G. Nieh, and J. H. Fournelle, 1995, The CaO-TiO_2-ZrO_2 system at 1200°C and the solubilities of Hf and Gd in zirconolite. MRS Fall Meeting Abstracts, Session V25.8, 412, 596.
13. Jewett, T.J., M. Dahms, and J. Fournelle, 1995, Phase stability of the C14 laves phase in the Ti-Al-Cr ternary system, Abstracts of TMS
12. Jewett, T.J., M. Dahms, and J. Fournelle, 1994, A contribution to the Ti-Al-Cr ternary phase diagram, Abstacts of TMS
11. Fournelle, J., 1992, On the "extra" sulfur in eruptions of some arc volcanoes: possible contributions from the assimilation of underlying sulfides/sulfates, in Abstacts of Chapman Conference on Volcanism, Climate and Global Change (Hilo, HI)
10. Fournelle, J., 1991, Anhydrite and sulfide in pumices from the 15 June 1991 eruption of Mt. Pinatubo: Initial examination, EOS, 72, 68.
9. Fournelle, J., 1990, Geology and geochemistry of Fisher Caldera, Unimak Island, Aleutians: initial results, EOS, 71, 1698.
8. Fournelle, J. and B.D. Marsh, 1990, Shishaldin high-alumina basalts: plagioclase, europium anomalies and CSDs from an Aleutian volcano, EOS, 71, 664.
7. Fournelle, J. and B.D. Marsh, 1989, The geology and petrology of Shishaldin Volcano, Aleutian Arc, Abstracts of 28th International Geological Congress, 1-504 - 1-505.

6. Fournelle, J. and B.D. Marsh, 1988, Low Mg# basalts at Shishaldin (Aleutian Arc): evidence of low (not high) Mg# parental magmas for Aleutian high alumina basalts, GSA Abstracts with Programs, 20, A195.
5. Fournelle, J. and B.D. Marsh, 1988, Plagioclase equilibria and geothermometry in arc basalts and andesites: review and suggestions, EOS, 69, 732.
4. Fournelle, J. and B.D. Marsh, 1987, Diopsidic cpx produced by assimilation of Fo-rich olivine by magmas at Shishaldin Volcano: implications for Alaskan layered complexes, EOS, 68, 1525.
3. Marsh, B.D. and J. Fournelle, 1987, "Low temperature" Fo94 olivine in high magnesian basalt from Shishaldin Volcano, Unimak Island, Aleutians, EOS, 68, 1525.
2. Fournelle, J. and B.D. Marsh, 1986, Shishaldin Volcano, Unimak Island, Aleutians: unordinary arc lavas. II. Significant REE patterns, EOS, 68, 461.
1. Fournelle, J. and B.D. Marsh, 1986, Shishaldin Volcano, Unimak Island, Aleutians: unordinary arc lavas. I. Chemistry, mineralogy and petrology, EOS, 67, 1277.