

## **Vita**

### John H. Fournelle

Senior Scientist

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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-current; Director Cameron Electron  
Microprobe Lab 1992-current; Director, S.W. Bailey XRD Lab, 2003-2005; Director, SEM Lab,  
2006-current

University of Maryland, University College, Part-time Lecturer, 1991 - 1992

West Chester University, Instructor (Temporary), 1991

### Fellowships/Research Grants

GSA Research Grants, 1984, 1985 (1984: Harold T. Stearns Award)

Sigma Xi Research Grant, 1985

Arctic Institute of North America Research Grant, 1985

National Geographic Research Grant, 1989

UW-Madison Academic Staff Professional Development Grants, 1995, 1998, 2000

NSF EAR-0447332 (Goodwin Fournelle Tikoff Valley Xu) 2005: \$260K for versatile SEM acquisition

NSF EAR-0813918 (Goodwin, Fournelle) 2008: \$5000 for student support for EBSD workshop

NSF EAR-1015246 (Goodwin, Fournelle) 2010: \$10,000 for student support for EBSD workshop

NSF EAR-1337156 (Fournelle, Eom, Goodwin, Singer, Valley) 2013: \$960K for MRI acquisition of  
modern electron microprobe

### Awards

Best Paper Award, American Foundry Society 2001/2002 Melting Methods and Materials Division (Loper,  
Park and Fournelle, 2001)

Teaching Award from UW Geoscience Students, 2013

### Professional Memberships:

Microbeam Analysis Society, member; Director 2006-2008; Archivist 2007-

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-

Geological Society of America, member

Mineralogical Society of America, member; Roebling Medal Committee, 1996-7

### In Review

Chloe E. Bonamici, William S. Kinman, John H. Fournelle, Mindy M. Zimmer<sup>1</sup>, Anthony D. Pollington, Kirk D. Rector, 2015, Formation of glassy nuclear fallout: An updated model  
Beverly Saylor, Joshua Angelini, Alan Deino, Mulugeta Alene, John H Fournelle, Yohannes Haile-Selassie, 2015, Tephrostratigraphy of the Waki-Mille area of the Woranso-Mille Paleoanthropological Research project, Afar, Ethiopia; *Journal of Human Evolution*

In Press

Fournelle, J., Cathey, H., Pinard, P., and Richter, S., 2015, Low voltage EPMA: experiments on a new frontier in microanalysis – lateral spatial resolution, *IOP Conf. Ser.: Mater. Sci. Eng*

### **Publications**

- Kong, W., W.Y. Jiao, J.C. Li, K. Collar, J.H. Leach, J. Fournelle, T.H. Kim, A.S. Brown, 2015, Structural Characterization of the Nanocolumnar Microstructure of InAlN, *Journal of Electronic Materials*, \_\_, 1-7.
- 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.
- 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:  $\delta^{13}\text{C}$  matrix effects, *Geostandards and Geoanalytical Research*.
- 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:  $\delta^{18}\text{O}$  matrix effects, *Geostandards and Geoanalytical Research*, DOI: 10.1111/j.1751-908X.2015.00364.x
- 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*,
- 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.
- 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  $\text{In}_x\text{Al}(1-x)\text{N}$  films deposited by plasma-assisted molecular beam epitaxy. *Applied Physics Letters*, 105(13), 132101.
- 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.
- 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), 1798-1708,
- Kozdon, R., Kelly, D. C., Kitajima, K., Strickland, A., Fournelle, J. H., & Valley, J. W., 2013, In situ  $\delta^{18}\text{O}$  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.
- 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  $\text{V}^{5+}$  concentration, *Environmental Science and Technology*, DOI: 10.1021/es4006674
- 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
- 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

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- 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.
- 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.
- 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.
- 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.
- Killian, C.E., Metzler, R.A., Gong, Y., Churchill, T.H., Olson, I.A.C., 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.
- 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.
- Zhang, N., Molenda, J.A. Fournelle, J.H., Murphy, W.L., and Sahai, N., 2010, Effects of pseudowollastonite (CaSiO<sub>3</sub>) bioceramic on in vitro activity of human mesenchymal stem cells, *Biomaterials*, 31, 7653-7665.
- 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.
- 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.
- 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.
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- 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.
- Fournelle, John, 2007, Book Review of Energy Dispersive Spectrometry of Common Rock Forming Minerals by Kenneth P. Severin, *American Mineralogist*, 92, 2006.
- 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.
- 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.
- 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.
- 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.
- 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.

- 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.
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- 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.
- 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.
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- 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.
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- 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.
- 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.
- 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.
- 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
- Medaris, L.G., Jr., J.H. Fournelle, H.F. Wang and E. Jelinke, 1997, Thermobarometry and reconstructed chemical compositions of spinel-pyroxene symplectites: evidence for pre-existing garnet in lherzolite xenoliths from Czech neogene lavas, *Russian Geology and Geophysics*, 38, 277-286.
- 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.
- Swenson,-D.; Nieh,-T.-G.; Fournelle,-J.-H., 1996, The CaO-TiO<sub>2</sub>-ZrO<sub>2</sub> 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
- 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.
- Fournelle, J. and B.D. Marsh, 1991, Shishaldin Volcano: Aleutian high-alumina basalts and the plagioclase accumulation question, *Geology*, 19, 234-237.
- 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.
- 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.
- 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, 2015, *Probe for EPMA – User’s Guide and Reference Manual*, Probe Software, 429 pages.

#### Abstracts

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*

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*

Fournelle, J., and Cathey, H., 2014, Experiments with Low Voltage Field Emission EPMA, abstract \_\_\_\_, *AGU Fall Meeting*.

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 \_\_\_\_, *AGU Fall Meeting*.

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.

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*.

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*

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*.

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*

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  $\delta^{18}\text{O}$  In Situ Techniques, abstract PP53C-2016, *AGU Fall Meeting*.

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.

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), 44<sup>th</sup> Lunar and Planetary Science Conference, 2028-29.

Gopon, P., Fournelle, J., Llovet, X. and Sobol, P., 2013, Low keV electron probe analysis of iron silicides, EMAS 2013 13<sup>th</sup> European Workshop on Modern Developments and Applications in Microbeam Analysis, 323-324.

Fournelle, J., 2012, Complications with Using Natural Minerals as Microbeam Standards: Pyroxenes, V23C-2827, *EOS Trans AGU*

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*

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*

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
- 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
- Fournelle, J., 2012, Toward a quartz sandstone SEM-CL intensity imaging reference material, abstract, Microanalytical Reference Materials Conference, Colorado School of Mines
- Hanchar, J.M., J. Fournelle, C. Hayward, B. Dhuime, C. Munker, 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
- Gopon, P., Fournelle, J. and Llovet, X., 2012, Soft X-ray EPMA of nanophase lunar Fe-Si compounds, Microscopy and Microanalysis Conference, July, Phoenix
- Jonnard, P. and Fournelle, J., 2012, High-resolution Al and Mg Ka emissions of some minerals, European X-ray Spectroscopy conference, Vienna, June.
- 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
- 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.
- 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.
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- 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
- 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
- Firouzdar, 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
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- 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.
- Zhang, N., Molenda, J.A. Fournelle, J.H., Murphy, W.L., and Sahai, N., 2010, Calcium Silicate (CaSiO<sub>3</sub>) crystal structure effects on in vitro activity of human mesenchymal stem cells, Gordon Conference
- Kita, N.T., Ushikubo, T., Davis, A. M., Knight, K. B., Mendybaev, R. A., Richter, F. M. and Fournelle, J. H., 2010, Initial <sup>26</sup>Al abundance in a Type B CAI: remelting of pre-existing refractory solid, LPI Abstract
- Fournelle, J., 2009, Notes on some crystals of San Carlos Olivine and EPMA standards, Eos Trans, AGU V31E-2009
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