

Curriculum Vitae

RICHARD J. WALKER

Business Address: Department of Geology, University of Maryland, College Park, Maryland 20742. (301) 405-4089. rjwalker@umd.edu

Education

1981-1984: State University of New York, Stony Brook. *Ph.D. Geochemistry*, Dissertation Title: "The Origin of the Tin Mountain Pegmatite, Black Hills, South Dakota". Advisors: J.J. Papike and G.N. Hanson.

1979-1981: State University of New York, Stony Brook. *M.S. Geology*, Thesis Title: "A Study of Apollo 15 Regolith and Agglutinate Glass". Advisor: J.J. Papike.

1975-1979: College of William and Mary, Williamsburg, Virginia. *B.S. Geology*.

Employment

2015-present: Chair, Department of Geology, University of Maryland, College Park

1998-present: Professor of Geology, Department of Geology, University of Maryland, College Park

1997: Visiting Scientist, Max Planck Institut für Chemie, Mainz, Germany

1993-1998: Associate Professor of Geology, Department of Geology, University of Maryland, College Park.

1990-1993: Assistant Professor of Geology, Department of Geology, University of Maryland, College Park.

1989-1990: Geologist, U.S. Geological Survey, Isotope Branch, Reston, Virginia.

1987-1989: Research Associate, Carnegie Institution of Washington, Department of Terrestrial Magnetism, Washington D.C.

1985-1987: National Research Council Postdoctoral Fellow, National Bureau of Standards, Gaithersburg, Maryland.

1981-1984: Research Assistant, SUNY, Stony Brook.

1979-1981: Teaching Assistant, SUNY, Stony Brook.

Awards, Honors, Named Lectures

2017 Honorary Doctorate, University of Oulu, Oulu, Finland

2016 Daly Lecture, VGP-section, AGU

2011 Kirwan Faculty Research and Scholarship Prize

2009 Fellow, *American Geophysical Union*

2009 Fellow, *Geochemical Society and European Association of Geochemistry*

2005 College of Computer, Mathematics and Physical Sciences, Board of Visitors Distinguished Faculty Award

1997 *Alexander von Humboldt* Fellowship.

1990 *Geochemical Society* Clarke Medal.

Peer Reviewed Publications (1981-2018)

1. **Walker R.J.** and Papike J.J. (1981) The relationship of the lunar regolith <10 micron fraction and agglutinates. Part 2: Chemical composition of agglutinate glass as a test of the fusion of the finest fraction model. *Proc. 12th Lunar and Planet. Sci. Conf.*, 421-432.
2. **Walker R.J.** and Papike J.J. (1981) The Apollo 15 regolith: Comparative petrology of drive tube 15010/15011 and drill core section 15003. *Proc. 12th Lunar and Planet. Sci. Conf.*, 485-508.
3. **Walker R.J.** and Papike J.J. (1981) The Apollo 15 regolith: Chemical modeling and mare/highland mixing. *Proc. 12th Lunar and Planet. Sci. Conf.*, 509-517.
4. Laul J.C., **Walker R.J.**, Shearer C.K., Papike J.J. and Simon S.B. (1984) Chemical migration by contact metamorphism between pegmatite and country rocks: Natural analogs for radionuclide migration. *Mat. Res. Soc. Symp. Proc.* **26**, 951-958.
5. Shearer C.K., Papike J.J. and **Walker R.J.** (1985) Mineral chemistry of the Harney Peak Granite and associated pegmatites. In *Geology of the Black Hills, South Dakota and Wyoming*, F.J. Rich (Ed.), American Geological Institute, Alexandria, VA 241-260.
6. **Walker R.J.**, Hanson G.N., Papike J.J., O'Neil J.R. and Laul J.C. (1986) The internal evolution of the Tin Mountain pegmatite, Black Hills, South Dakota. *Am. Min.* **71**, 440-459.
7. **Walker R.J.**, Hanson G.N., Papike J.J. and O'Neil J.R. (1986) Nd, O and Sr isotope constraints on the origin of Precambrian rocks, Black Hills, South Dakota. *Geochim. Cosmochim. Acta* **50**, 2833-2846.
8. **Walker R.J.** and Fassett J.D. (1986) Isotopic measurement of subnanogram quantities of rhenium and osmium by resonance ionization mass spectrometry. *Anal. Chem.* **58**, 2923-2927.
9. Fassett J.D. and **Walker R.J.** (1987) Ultratrace elemental and isotopic analysis of osmium and rhenium using resonance ionization mass spectrometry and thermal vaporization. *Resonance Ionization Spectroscopy 1986*, G.S. Hurst and C.G. Morgan (Eds.), Inst. of Phys. Conf. Ser **84**, 115-120.
10. Fassett J.D., **Walker R.J.**, Travis J.C. and Ruegg F.C. (1987) Quantification of pulsed ion currents produced in resonance ionization mass spectrometry. *Int. J. Mass Spectrom. Ion Proc.* **75**, 111-126.
11. Shearer C.K., Papike J.J., Redden J.A., Simon S.B., **Walker R.J.** and Laul J.C. (1987) Origin of pegmatitic granite segregations, Willow Creek, Black Hills, South Dakota. *Can. Mineral.* **25**, 159-171.

12. **Walker R.J.**, Shirey S.B. and Stecher O. (1988) Comparative Re-Os, Sm-Nd and Rb-Sr isotope and trace element systematics for Archean komatiite flows from Munro Township, Abitibi Belt, Ontario. *Earth Planet. Sci. Lett.* **87**, 1-12.
13. **Walker R.J.** (1988) Low-blank chemical separation of osmium and rhenium from gram quantities of silicate rock for measurement by resonance ionization mass spectrometry. *Anal. Chem.* **60**, 1231-1234.
14. Fassett J.D., **Walker R.J.**, Travis J.C. and Ruegg F.C. (1988) Measurement of low abundance isotopes by laser resonance ionization mass spectrometry. *Anal. Chem.* **60**, 1231-1234.
15. **Walker R.J.**, Fassett J.D. and Travis J.C. (1988) The use of resonance ionization mass spectrometry for measuring the isotopic compositions of rhenium and osmium extracted from silicate rocks. *Resonance Ionization Spectroscopy 1988*, G.S. Hurst and C.G. Morgan (Eds.), Inst. of Phys. Conf. Ser. 94, 337-342.
16. **Walker R.J.** and Morgan J.W. (1989) Rhenium-osmium isotope systematics of carbonaceous chondrites. *Science* **243**, 519-522.
17. **Walker R.J.**, Hanson G.N. and Papike J.J. (1989) Trace element constraints on pegmatite genesis: Tin Mountain pegmatite, Black Hills, South Dakota. *Contrib. Mineral. Petrol.* **101**, 290-300.
18. Lambert D.D., Morgan J.W., **Walker R.J.**, Shirey S.B., Carlson R.W., Zientek M.L. and Koski M.S. (1989) Rhenium-osmium and samarium-neodymium isotopic systematics of the Stillwater Complex. *Science* **244**, 1169-1174.
19. **Walker R.J.**, Carlson R.W., Shirey S.B. and Boyd F.R. (1989) Os, Sr, Nd, and Pb isotope systematics of southern African peridotite xenoliths: Implications for the chemical evolution of subcontinental mantle. *Geochim. Cosmochim. Acta* **53**, 1583-1595.
20. Morgan J.W. and **Walker R.J.** (1989) Isotopic determinations of rhenium and osmium using fusion, distillation and ion exchange separations, as applied to meteorites. *Anal. Chim. Acta* **222**, 91-9300.
21. **Walker R.J.**, Shirey S.B., Hanson G.N., Rajamani V. and Horan M.F. (1989) Re-Os, Rb-Sr and O isotopic systematics of the Archean Kolar schist belt, Karnataka, India. *Geochim. Cosmochim. Acta* **53**, 3005-3013.
22. Mayo S., Fassett J.D., Kingston H.M. and **Walker R.J.** (1990) Measurement of vanadium impurity in SIMOX material by isotope dilution and resonance ionization mass spectrometry. *Anal. Chem.* **62**, 240-244.

23. **Walker R.J.**, Echeverría L.M., Shirey S.B. and Horan M.F. (1991) Re-Os isotopic constraints on the origin of volcanic rocks, Gorgona Island, Colombia: Os isotopic evidence for ancient heterogeneities in the mantle. *Contrib. Mineral. Petrol.* **107**, 150-162.
24. **Walker R.J.**, Morgan J.W., Naldrett A.J., Li C. and Fassett J.D. (1991) Re-Os isotope systematics of Ni-Cu Sulfide Ores, Sudbury Igneous Complex, Ontario: Evidence for a major crustal component. *Earth Planet. Sci. Lett.* **105**, 416-429.
25. Horan M.F., Morgan J.W., **Walker R.J.** and Grossman J.N. (1992) Re-Os isotope constraints on the age of iron meteorites. *Science* **255**, 1118-1121.
26. Morgan J.W., **Walker R.J.** and Grossman J.N. (1992) Rhenium-osmium isotope systematics in meteorites I: Magmatic iron meteorite groups IIAB and IIIAB. *Earth Planet. Sci. Lett.* **108**, 191-202.
27. Krogstad E.J., **Walker R.J.**, Nabelek P.I. and Russ-Nabelek C. (1993) Pb isotopic constraints on the origin of Archean and Proterozoic granites, Black Hills, South Dakota. *Geochim. Cosmochim. Acta* **57**, 4677-4685.
28. **Walker, R.J.**, Morgan, J.W., Hanski, E.J. and Smolkin, V.F. (1994) The role of the Re-Os system in the study of magmatic sulfide ores: A tale of three ores. *Proceedings of Sudbury-Noril'sk Symposium, Ontario Geological Survey Spec. Pub.* **5**, 343-355.
29. Krogstad E.J. and **Walker R. J.** (1994) High closure temperatures of the U-Pb system in large apatites from the Tin Mountain pegmatite, Black Hills, South Dakota. *Geochim. Cosmochim. Acta* **58**, 3845-3853.
30. **Walker, R.J.**, Morgan J.W., Horan M.F., Czamanske G.F., Krogstad E.J., Fedorenko V. and Kunilov V.E. (1994) Re-Os isotopic evidence for an enriched-mantle source for the Noril'sk-type ore-bearing intrusions, Siberia. *Geochim. Cosmochim. Acta* **58**, 4179-4197.
31. Lambert D.D., **Walker R.J.**, Morgan J.W., Shirey S.B., Carlson R.W., Zientek M.L., Lipin B.R., Koski M.S. and Cooper R.L. (1994) Re-Os and Sm-Nd isotope geochemistry of the Stillwater Complex, Montana: Implications for the petrogenesis of the J-M Reef. *Journ. Petrol.* **35**, 1717-1753.
32. Morgan J.W., Horan M.F., **Walker R.J.** and Grossman J.N. (1995) Rhenium-osmium concentration and isotope systematics in group IIAB iron meteorites. *Geochim. Cosmochim. Acta* **59**, 2331-2344.
33. Shirey S.B. and **Walker R.J.** (1995) Carius tube digestion for low-blank rhenium-osmium analysis. *Anal. Chem.* **34**, 21362141.
34. **Walker R.J.**, Morgan J.W. and Horan M.F. (1995) ^{187}Os enrichment in some mantle plume sources: Evidence for core-mantle interaction? *Science* **269**, 819-822.

35. Horan M.F., **Walker R.J.**, Fedorenko V.A. and Czamanske G.K. (1995) Os and Nd isotopic constraints on the temporal and spatial evolution of Siberian flood basalt sources. *Geochim. Cosmochim. Acta* **59**, 5159-5168.
36. *Smoliar M.I., **Walker R.J.** and Morgan J.W. (1996) Re-Os ages of group IIA, IIIA, IVA and IVB iron meteorites. *Science* **271**, 1099-1102.
37. *Tomascak P.B., Krogstad E.J. and **Walker R.J.** (1996) U-Pb monazite geochronology of granitic rocks from Maine: implications for late Paleozoic tectonics in the northern Appalachians. *J. of Geol.* **104**, 185-195.
38. Koide M., Goldberg E.D. and **Walker R.** (1996) The analysis of seawater osmium. *Deep-Sea Res.* **43**, 53-55.
39. **Walker R.J.**, Hanski E.J., Vuollo J. and Liipo J. (1996) The Os isotopic composition of Proterozoic upper mantle: evidence for chondritic upper mantle from the Outokumpu ophiolite, Finland. *Earth Planet. Sci. Lett.* **141**, 161-173.
40. Krogstad E.J. and **Walker R.J.** (1996) Evidence of heterogeneous crustal sources: the Harney Peak Granite, South Dakota, U.S.A. *Trans. Roy. Soc. Edinburgh; Earth Sciences* **87**, 331-337.
41. Meisel T., **Walker R.J.** and Morgan J.W. (1996) The osmium isotopic composition of the Earth's primitive upper mantle. *Nature* **383**, 517-520.
42. *Tomascak P.B., Krogstad E.J. and **Walker R.J.** (1996) Mixed crustal sources for the late Paleozoic Sebago batholith, Maine, U.S.A. *Contrib. Mineral. Pet.* **125**, 45-59.
43. **Walker R. J.**, Morgan J.W., Hanski E.J. and Smolkin V. (1997) Re-Os systematics of Early Proterozoic ferropicrites, Pechenga Complex, NW Russia: evidence for ancient ¹⁸⁷Os-enriched plumes. *Geochim. Cosmochim. Acta* **61**, 3145-3160.
44. Terakado Y., Fujitani T. and **Walker R.J.** (1997) Nd and Sr isotopic constraints on the origin of igneous rocks resulting from the opening of the Japan Sea, southwestern Japan. *Contrib. Mineral. Pet.* **129**, 75-86.
45. **Walker R.J.**, Morgan J.W., Beary E., Smoliar M.I., Czamanske G.K. and Horan M.F. (1997) Applications of the ¹⁹⁰Pt-¹⁸⁶Os isotope system to geochemistry and cosmochemistry. *Geochim. Cosmochim. Acta* **61**, 4799-4808.
46. Shirey S.B. and **Walker R.J.** (1998) Re-Os isotopes in cosmochemistry and high-temperature geochemistry. *Annual Reviews of the Earth and Planetary Sciences* **26**, 423-500.

47. Horan M.F., *Smoliar M.I. and **Walker R.J.** (1998) ^{182}W and ^{187}Re - ^{187}Os systematics of iron meteorites: chronology for melting, differentiation and crystallization in asteroids. *Geochim. Cosmochim. Acta* **62**, 545-554.
48. Asmerom Y. and **Walker R.J.** (1998) Pb and Os isotopic constraints on the composition and rheology of the lower crust. *Geology* **26**, 359-362.
49. Brandon A., **Walker R.J.**, Morgan J.W., Norman M.D. and Prichard H.M. (1998) Coupled ^{186}Os and ^{187}Os evidence for core-mantle interaction. *Science* **280**, 1570-1573.
50. *Tomascak P.B., Krogstad E.J. and **Walker R.J.** (1998) Nd isotope systematics and the derivation of granitic pegmatites in southwestern Maine, USA. *Canadian Mineralogist* **36**, 327-337.
51. *Tomascak P.B., Krogstad E.J. and **Walker R.J.** (1999) Clues to the significance of the Norumbega Fault Zone in southwestern Maine from the geochemistry of granitic rocks. In, *The Norumbega Fault Zone*, eds. A. Ludman and D.P. West, G.S.A. Special Paper **331**, 105-119.
52. **Walker R.J.**, Storey M., Kerr A., Tarney J. and Arndt N.T. (1999) Implications of ^{187}Os heterogeneities in mantle plumes: evidence from Gorgona Island and Curaçao. *Geochim. Cosmochim. Acta* **63**, 713-728.
53. Tomascak P., Tera F., Helz R. and **Walker R.** (1999) The absence of lithium isotope fractionation during basalt differentiation: New measurements by multi-collector sector ICP-MS. *Geochim. Cosmochim. Acta* **63**, 907-910.
54. Brandon A.D., Norman M.D., **Walker R.J.** and Morgan J.W. (1999) ^{186}Os - ^{187}Os systematics of Hawaiian picrites. *Earth Planet. Sci. Lett.* **172**, 25-42.
55. *Tsuru A., **Walker R.J.**, Kontinen A., Peltonen P. and Hanski E. (2000) Re-Os isotopic systematics of the Jormua Ophiolite Complex, NW Finland. *Chemical Geology* **164**, 123-141.
56. Borg L.E., Brandon A.D., Clyne M.A. and **Walker R.J.** (2000) Re-Os isotopic systematics of primitive basalts from the Lassen region of the Cascade arc, California. *Earth Planet. Sci. Lett.* **177**, 301-317.
57. Brandon A.D., Snow J.E., **Walker R.J.**, Morgan J.W. and Mock T.D. (2000) ^{190}Pt - ^{186}Os and ^{187}Re - ^{187}Os systematics of abyssal peridotites. *Earth Planet. Sci. Lett.* **177**, 319-335.
58. Helz G.R., Adelson J.M., Miller C.V., Cornwell J.C., Hill J.M., Horan M. and **Walker R.J.** (2000) Osmium isotopes demonstrate distal transport of contaminated sediments in Chesapeake Bay. *Environmental Science and Technology* **34**, 2528-2534.

59. Borisov A. and **Walker R.J.** (2000) Os solubility in silicate melts: new efforts and results. *American Mineralogist* **85**, 912-918.
60. Righter K., **Walker R.J.** and Warren P.H. (2000) Significance of highly siderophile elements and Os isotopes in the lunar and terrestrial mantles. in *Origin of the Earth and Moon*, R. Canup and K. Righter eds., Univ. of Arizona Press, Tucson, 291-322.
61. Brandon A.D., **Walker R.J.**, Morgan J.W. and Goles G.G. (2000) Re-Os isotopic evidence for early differentiation of the Martian mantle. *Geochim. Cosmochim Acta.* **64**, 4083-4095.
62. Czamanske G.K., Wooden J.L., **Walker R.J.**, Fedorenko V.A., Simonov O.N., Budahn J.R. and Siems D.F. (2000) Geochemical, isotopic and SHRIMP age data for Precambrian basement rocks, Permian volcanic rocks, and sedimentary host rocks to the ore-bearing intrusions, Noril'sk-Talnakh District, Siberian Russia. *International Geology Review*, **42**, 895-927.
63. Begemann F., Ludwig K.R., Lugmair G.W., Min K.W., Nyquist L.E., Patchett P.J., Renne P.R., Shih C.-Y., Villa I.M. and **Walker R.J.** (2001) Towards and improved set of decay constants for geochronological use. *Geochim. Cosmochim Acta* **65**, 111-121.
64. Meisel T., **Walker R.J.**, Irving A.J., and Lorand J.-P. (2001) Osmium isotopic compositions of mantle xenoliths: a global perspective. *Geochim. Cosmochim Acta.* **65**, 1311-1323.
65. **Walker R.J.** and Stone W.R. (2001) Os isotope constraints on the origin of the 2.7 Ga Boston Creek flow, Ontario, Canada. *Chem. Geol.* **175**, 567-579.
66. Hanski E., **Walker R.J.**, Huhma H. and Suominen I. (2001) The Os and Nd isotopic systematics of the 2.44 Ga Akanvaara and Koitelainen mafic layered intrusions in northern Finland. *Precambrian Research* **109**, 73-102.
67. Horan M.F., Morgan J.W., **Walker R.J.** and Cooper R. (2001) Re-Os isotopic constraints on magma mixing in the peridotite zone of the Stillwater Complex, Montana. *Contrib. Mineral. Petrol.* **141**, 446-457.
68. Becker H., **Walker R.J.**, MacPherson G.J., Morgan J.W. and Grossman J.N. (2001) Rhenium-osmium systematics of calcium-aluminum-rich inclusions in carbonaceous chondrites. *Geochim. Cosmochim. Acta* **65**, 3379-3390.
69. Morgan J.W., **Walker R.J.**, Brandon A.D. and Horan M.F. (2001) Siderophile elements in Earth's upper mantle and lunar breccias: Data synthesis suggests manifestations of the same late influx. *Meteoritics and Planetary Science* **36**, 1257-1275.
70. Waight T.E., Wiebe R.A., Krogstad E.J. and **Walker R.J.** (2001) Isotopic responses to basaltic injections into silicic magma chambers: a whole rock and microsampling study of

macrorhythmic units in the Pleasant Bay layered gabbro-diorite complex, Maine, USA. *Contrib. Mineral. Petrol.* **142**, 323-335.

71. Morgan J.W., **Walker R.J.**, Horan M.F. and Beary E.S. (2002) ^{190}Pt - ^{186}Os and ^{187}Re - ^{187}Os systematics of the Sudbury Igneous Complex, Ontario. *Geochim. Cosmochim. Acta* **66**, 273-290.
72. **Walker R.J.**, Prichard H.M., Ishiwatari A. and Pimentel M. (2002) The osmium isotopic composition of convecting upper mantle deduced from ophiolite chromitites. *Geochim. Cosmochim. Acta* **66**, 329-345.
73. Becker H., Dalpe C. and **Walker R.J.** (2002) High precision Ru isotopic measurements by multi-collector ICP-MS. *The Analyst* **127**, 775-780.
74. **Walker R.J.** and Nisbet E. (2002) ^{187}Os isotopic constraints on Archean mantle dynamics. *Geochim. Cosmochim. Acta* **66**, 3317-3325.
75. **Walker R.J.**, Horan M.F., Morgan J.W., Becker H., Grossman J.N. and Rubin A. (2002) Comparative ^{187}Re - ^{187}Os systematics of chondrites: Implications regarding early solar system processes. *Geochim. Cosmochim. Acta* **66**, 4187-4201.
76. Brandon A.D., **Walker R.J.**, Puchtel I.S., Becker H., Humayun M. and Revillon S. (2003) ^{186}Os - ^{187}Os systematics of Gorgona Island komatiites: implications for early growth of the inner core. *Earth Planet. Sci. Lett.* **206**, 411-426.
77. Horan M.F., **Walker R.J.**, Morgan J.W., Grossman J.N. and Rubin A. (2003) Highly siderophile elements in chondrites. *Chem. Geol.* **196**, 5-20.
78. Becker H. and **Walker R.J.** (2003) The ^{98}Tc - ^{98}Ru and ^{99}Tc - ^{99}Ru chronometers: new results on iron meteorites and chondrites. *Chem. Geol.* **196**, 43-56.
79. Wu F., **Walker R.J.**, Ren X-w, Sun D-y and Zhou X-h. (2003) Osmium isotopic constraints on the age of lithospheric mantle beneath northeastern China. *Chem. Geol.* **196**, 107-129.
80. *Gangopadhyay A. and **Walker R.J.** (2003) Re-Os systematics of the ca. 2.7 Ga Alexo komatiites, Ontario, Canada. *Chem. Geol.* **196**, 147-162.
81. Arndt N.T., Czamanske G.K., **Walker R.J.**, Chauvel C. and Fedorenko V.A. (2003) Geochemistry and origin of the intrusive hosts of Noril'sk-Talnakh Cu-Ni-PGE deposits. *Econ. Geol.* **98**, 495-515.
82. Becker H. and **Walker R.J.** (2003) Efficient mixing of the solar nebula from uniform Mo isotopic composition of meteorites. *Nature* **425**, 152-155.

83. Lazar G.C., Walker D. and **Walker R.J.** (2004) Experimental partitioning of Tc, Mo, Ru and Re between solid and liquid during crystallization in Fe-Ni-S. *Geochim. Cosmochim. Acta* **68**, 643-652.
84. McDaniel D.K., **Walker R.J.**, Hemming S.R., Horan M.F., Becker H. and R. I Grauch (2004) Sources of osmium to the modern oceans: New evidence from the ^{190}Pt - ^{186}Os system. *Geochim. Cosmochim. Acta* **68**, 1243-1252.
85. *Cook D.L. **Walker R.J.**, Horan M.F., Wasson J.T. and Morgan J.W. (2004) Pt-Re-Os systematics of group IIAB and IIIAB iron meteorites. *Geochim. Cosmochim. Acta* **68**, 1413-1431.
86. Balykin, P.A., Polyakov, G.V., Hanski, E., **Walker, R.J.**, Huhma, H., Glotov, A.I., Trang Trong Hoa, Ngo Thi Phuong, Hoang Huu Thanh, Tran Quoc Hung, Petrova, T.E. (2004) Late-Permian komatiite-basalt complex in the Song Da rift, northwestern Vietnam. *Journal of Geology (Vietnam)*, Series B, No. **23**, 52-64.
87. Hanski E.J., **Walker R.J.**, Huhma H., Polyakov, G.V., Glotov, A.I., Tran Trong Hoa, Ngo Thi Phuong (2004) Origin of Permo-Triassic komatiites, northwestern Vietnam. *Contrib. Mineral. Petrol.* **147**, 453-469.
88. Gornostayev S.S., **Walker R.J.**, Hanski E.J. and Popovchenko S.E. (2004) Evidence for the emplacement of ca. 3.0 Ga lithospheric mantle in the Ukrainian Shield. *Precamb. Res.* **132**, 349-362.
89. **Gelin A., Kring D.A., Zurcher L., Urrutia-Fucugauchi J., O. Morton and **Walker R.J.** (2004) Osmium isotope constraints on the proportion of bolide component in Chicxulub impact melt rocks. *Meteoritics Planet. Sci.* **39**, 1003-1008.
90. **Walker R. J.**, Horan M.F., Shearer C.K. and Papike J.J. (2004) Depletion of highly siderophile elements in the lunar mantle: evidence for prolonged late accretion. *Earth Planet. Sci. Lett.* **224**, 399-413.
91. **Walker R. J.**, Brandon A.D., Bird J.M., Piccoli P.M., McDonough W.F. and Ash R.D. (2005) ^{186}Os - ^{187}Os systematics of Os-Ir-Ru alloy grains, southwestern Oregon. *Earth Planet. Sci. Lett* **230**, 211-226.
92. Brandon A. D. and **Walker R.J.** (2005) The debate over core-mantle interaction. *Earth Planet. Sci. Lett. Frontiers* **232**, 211-225 (invited).
93. Terakado Y. and **Walker R.J.** (2005) Nd, Sr and Pb isotopic and REE geochemical study of Miocene submarine hydrothermal deposits (Kuroko deposits), Japan, *Contrib. Mineral. Petrol.* **149**, 388-399.
94. **Walker R.J.** and Walker D. (2005) Does the core leak? *EOS* **86**, 237-242.

95. *Lynton S.J., **Walker R.J.** and Candela P.A. (2005) Lithium isotopes in the system Qz-Ms-fluid. *Geochim. Cosmochim. Acta* **69**, 3337-3347.
96. Puchtel I.S., Brandon A.D., Humayun M., and **Walker, R.J.** (2005) Evidence for the early differentiation of the core from Pt-Re-Os isotope systematics of 2.8-Ga komatiites. *Earth Planet. Sci. Lett.* **237**, 118-134.
97. *Gangopadhyay A., Sproule R.A., **Walker R.J.** and Leshner M. (2005) Re-Os systematics of komatiites and komatiitic basalts at Dundonald Beach, Ontario, Canada: Evidence for a complex alteration history and implications of a late-Archean chondritic mantle source. *Geochim. Cosmochim. Acta* **69**, 5087-5098.
98. Pietruszka A.J., **Walker R.J.** and Candela P.A. (2006) Determination of mass dependent molybdenum isotopic variations by MC-ICP-MS: an evaluation of matrix effects. *Chem. Geol.* **225**, 121-136.
99. *Gangopadhyay A., **Walker R.J.**, E. Hanski, and P. Solheid (2006) Origin of Paleoproterozoic Ti-enriched komatiitic rocks from Jeesiörova, Kittilä Greenstone Complex, Finnish Lapland. *Journal of Petrology* **47**, 773-789.
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101. Brandon A.D., **Walker R.J.** and Puchtel I.S. (2006) Platinum-Os isotope evolution of the Earth's mantle: constraints from chondrites and Os-rich alloys. *Geochim. Cosmochim. Acta* **70**, 2093-2103.
102. Lee S. R., Horton J.W. and Walker R.J. (2006) Osmium-isotope and platinum-group element systematics of impact melt rocks, Chesapeake Bay Impact Structure, Virginia, USA. *Meteoritics Planet. Sci.* **41**, 819-833.
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