

CURRICULUM VITAE

ALEXANDER M. RUZICKA

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Education

Ph.D.	1996	Planetary Sciences, University of Arizona. Tucson, AZ
M.S.	1988	Earth and Space Sciences, SUNY Stony Brook, NY
B.S.	1982	Geology, University of Minnesota, Minneapolis, MN
B.S.	1982	Geophysics, University of Minnesota, Minneapolis, MN

Employment

- Assistant Professor, Portland State University, Department of Geology, 2006-current
- Research Assistant Professor, Portland State University, Department of Geology, 2001-2006
- Assistant Professor, Portland State University, Department of Geology, 2000
- Instructor, Portland Community College, Portland, 1999-2002
- Postdoctoral Research Fellow, University of Tennessee, Knoxville, 1996-1999
- Graduate Research Associate, University of Arizona, Tucson, 1991-1996
- Graduate Research Assistant, University of Arizona, Tucson, 1986-1991
- Graduate Teaching Assistant, University of Arizona, Tucson, 1987
- Graduate Research Assistant, SUNY Stony Brook, 1982-1985

Dissertation

Petrologic-kinetic studies of meteorites, 1996, Advisor William V. Boynton.

Refereed publications

- Ruzicka A., M. Hutson, C. Floss and A. Hildebrand (2012) Large silica-rich igneous-textured inclusions in the Buzzard Coulee chondrite: Condensates, differentiates, or impact melts? Submitted to *Meteoritics & Planetary Science*.
- Ruzicka A., C. Floss and M. Hutson (2012) Amoeboid olivine aggregates (AOAs) in the Efremovka, Leoville and Vigarano (CV3) chondrites: A record of condensate evolution in the solar nebula. *Geochim. Cosmochim. Acta* **79**, 79-105.
- Ruzicka A., C. Floss and M. Hutson (2012) Agglomeratic olivine (AO) objects in ordinary chondrites: Accretion and melting of dust to form ferroan chondrules. *Geochim. Cosmochim. Acta* **76**, 103-124.
- Jamsja N. and A. Ruzicka (2010) Shock and thermal history of NWA 4859, an annealed impact-melt breccia of LL-chondrite parentage containing unusual igneous features and pentlandite. *Meteorit. Planet. Sci.* **45**, 828-849.
- Ruzicka A. and M. Hutson (2010) Comparative petrology of silicates in the Udei Station (IAB) and Miles (IIE) iron meteorites: Implications for the origin of silicate-bearing irons. *Geochim. Cosmochim. Acta* **74**, 394-433.
- Ruzicka A., C. Floss and M. Hutson (2008) Relict olivine grains, chondrule recycling, and implications for the chemical, thermal, and mechanical processing of nebular materials. *Geochim. Cosmochim. Acta* **72**, 5530-5557.

- Hutson M., A. Ruzicka, R. Pugh, L. Sloan and E. Thompson (2007) Complex brecciation and shock effects in the Buck Mountain Wash (H3-5) chondrite. *Meteorit. Planet. Sci.* **42**, 963-978.
- Ruzicka A., H. Hiyagon, M. Hutson and C. Floss (2007) Relict olivine, chondrule recycling, and the evolution of nebular oxygen reservoirs. *Earth Planet. Sci. Lett.* **257**, 274-289.
- Ruzicka A. and M. Hutson (2006) Differentiation and evolution of the IVA meteorite parent body: Clues from pyroxene geochemistry in the Steinbach stony-iron. *Meteorit. Planet. Sci.* **41**, 1959-1987. (October 2006)
- Ruzicka A., M. Hutson and C. Floss (2006) Petrology of silicate inclusions in the Sombroete ungrouped iron meteorite: Implications for the origins of IIE-type silicate-bearing irons. *Meteorit. Planet. Sci.* **41**, 1797-1831. (July 2006)
- Ruzicka A., M. Killgore, D.W. Mittlefehldt and M.D. Fries (2005) Portales Valley: Petrology of a metallic-melt meteorite breccia. *Meteorit. Planet. Sci.* **40**, 261-296.
- Ruzicka A., G.A. Snyder and L.A. Taylor (2002) Response to the comment by G. Dreibus and H. Wänke on "Comparative geochemistry of basalts from the Moon, Earth, HED asteroid, and Mars: Implications for the origin of the Moon" (2001). *Geochim. Cosmochim. Acta* **66**, 2633-2635
- Ruzicka A., G.A. Snyder and L.A. Taylor (2001) Comparative geochemistry of basalts from the Moon, Earth, HED asteroid, and Mars: Implications for the origin of the Moon. *Geochim. Cosmochim. Acta* **65**, 979-997.
- Snyder G.A., D.-C. Lee, A. Ruzicka, M. Prinz, L.A. Taylor and A.N. Halliday (2001) Hf-W, Sm-Nd, and Rb-Sr isotopic evidence of late impact fractionation and mixing of silicates on iron meteorite parent bodies. *Earth Planet. Sci. Lett.* **186**, 311-324.
- Hutson M. and A. Ruzicka (2000) A multi-step model for the origin of E3 (enstatite) chondrites. *Meteorit. Planet. Sci.* **35**, 601-608.
- Ruzicka A., G.A. Snyder and L.A. Taylor (2000) Crystal-bearing lunar spherules: Impact melting of the Moon's crust and implications for the origin of meteoritic chondrules. *Meteorit. Planet. Sci.* **35**, 173-192.
- Ruzicka A., G.A. Snyder and L.A. Taylor (2000) Geochemical and isotopic evidence bearing on the origin of large, igneous-textured inclusions in ordinary chondrites. *Antarct. Meteorite Res.* **13**, 19-38.
- Ruzicka A., G.W. Fowler, G.A. Snyder, M. Prinz, J.J. Papike and L.A. Taylor (1999) Petrogenesis of silicate inclusions in the Weekeroo Station IIE iron meteorite: Differentiation, remelting, and dynamic mixing. *Geochim. Cosmochim. Acta* **63**, 2123-2143.
- Ruzicka A., L.R. Riciputi, L.A. Taylor, G.A. Snyder, J. Greenwood, R.A. Keller, G.P. Bulanova, and H.J. Millidge (1999) Petrogenesis of mantle-derived sulfide inclusions in Yakutian diamonds: Chemical and isotopic disequilibrium during quenching from high temperatures, In *7th International Kimberlite Conference*, Cape Town, South Africa, 741-749.
- Ruzicka A. (1998) Growth of mineral zones by diffusion-controlled reactions: Theory and application to mesosiderites. *Am. J. Sci.* **298**, 1-35.
- Ruzicka A., G.A. Snyder and L.A. Taylor (1998) Mega-chondrules and large, igneous-textured clasts in Julesberg (L3) and other ordinary chondrites: Vapor-fractionation, shock-melting, and chondrule formation. *Geochim. Cosmochim. Acta* **62**, 1419-1442.
- Ruzicka A., G.A. Snyder and L.A. Taylor (1998) Giant Impact and Fission Hypotheses for the Origin of the Moon: A Critical Review of Some Geochemical Evidence. *Intl. Geol. Rev.* **40**, 851-864.
- Ruzicka A. (1997) Mineral layers around coarse-grained, Ca-Al-rich inclusions in CV3 carbonaceous chondrites: Formation by high-temperature metasomatism. *J. Geophys. Res. Planets* **102**, 13387-13402.

- Ruzicka A., G.A. Snyder and L.A. Taylor (1997) Vesta as the howardite, eucrite, and diogenite parent body: Implications for the size of a core and for large-scale differentiation. *Meteorit. Planet. Sci.* **32**, 825-840.
- Ruzicka A., D.A. Kring, D.H. Hill, W.V. Boynton, R.N. Clayton and T.K. Mayeda (1995) Silica-rich orthopyroxenite in the Bovedy chondrite. *Meteoritics* **30**, 57-70.
- Ruzicka A. (1995) Nullarbor 018: A new L6 chondrite from Australia. *Meteoritics* **30**, 102-105.
- Ruzicka A., W.V. Boynton and J. Ganguly (1994) Olivine coronas, metamorphism and the thermal history of the Morristown and Emery mesosiderites. *Geochim. Cosmochim. Acta* **58**, 2725-2741.
- Ruzicka A. (1990) Deformation and thermal histories of chondrules in the Chainpur (LL3.4) chondrite. *Meteoritics* **25**, 101-113.

Non-refereed publications

- Ruzicka, M. Hutson, C. Floss and A. Hildebrand (2012) Large, silica-rich igneous-textured inclusions in the Buzzard Coulee (H4) chondrite. *43rd Lunar Planet. Sci. Conf.*, Abstract #1630.
- Friedrich J.M., A. Ruzicka, D. S. Ebel, J. Thostenson, R. A. Rudolph, M. L. Rivers, R. J. Macke and D. T. Britt (2012) Three Dimensional Petrography of Kernouvé: A Story of Vein Formation, Compaction, and Metamorphism. *43rd Lunar Planet. Sci. Conf.*, Abstract #1197.
- Ruzicka A. and Hutson M. (2011) Agglomeratic olivine (AO) objects: Melting of dust to create Type II chondrules. *Workshop on Formation of the First Solids of the Solar System*, Abstract #9020.
- Ruzicka A. and R. Hugo (2011) A shocking tale: TEM observations of deformed olivine in ordinary chondrites. *Meteorit. Planet. Sci.* **46**, Abstract #5368.
- Jamsja N., A.M. Ruzicka and M. Fries (2011) New insights on hydrous phases in R chondrites NWA 6491 and 6492. *Meteorit. Planet. Sci.* **46**, Abstract #5377.
- Ruzicka A. (2011) 2011 Service Award for Richard Norman Pugh. *Meteorit. Planet. Sci.* **46**, 932-934.
- Hauver K. and A. Ruzicka (2011) Cohenite in NWA 5964 (L3-6 melt breccia): A possible product of shock-induced contact metamorphism. *42nd Lunar Planet. Sci. Conf.*, Abstract #2627.
- Jamsja N. and A. Ruzicka (2011) Presence of hydrous phases in two R chondrites, Northwest Africa 6491 and 6492. *42nd Lunar Planet. Sci. Conf.*, Abstract #2324.
- Ruzicka A., M.L. Hutson and C. Floss (2011) Amoeboid olivine aggregate condensates and the origin of the refractory element fractionation. *42nd Lunar Planet. Sci. Conf.*, Abstract #1336.
- Hutson M.L., R.N. Pugh and A. Ruzicka (2011) Meteorites on the road: Taking meteorite science to rural communities. *42nd Lunar Planet. Sci. Conf.*, Abstract #1269.
- Pugh R.N., M. Hutson and A. Ruzicka (2010) Oregon's two new meteorites: Morrow County and Fitzwater Pass. Submitted to *Oregon Academy of Sciences* (Dec. 23, 2010).
- Ruzicka A., M. Hutson and S.A. Kissin (2010) Classification of four new irons, including common (IIAB) and uncommon (IIIF, unusual IAB) types. *73rd Annual Meeting of the Meteoritical Society*, Abstract #5330.
- Ruzicka A., C. Floss and M. Hutson (2010) Accretion and melting of dust to form ferroan chondrules in ordinary chondrites. *Lunar Planet. Sci. XXXXI*, Abstract #1956. Lunar and Planetary Institute.
- Hutson M.L. and A.M. Ruzicka (2010) Jungo 001, Jungo 002, Jungo 003, and Big Horn Mountains: Four new chondrites from Nevada and Arizona which contain a variety of unusual petrographic features. *Lunar Planet. Sci. XXXXI*, Abstract #1878. Lunar and Planetary Institute.

- Schepker T.J. and A. Ruzicka (2010) X-ray diffraction as a tool for the classification of equilibrated ordinary chondrites. *Lunar Planet. Sci. XXXXI*, Abstract #2644. Lunar and Planetary Institute.
- Hildebrand A.R., E.P. Milley, P.G. Brown, P.J. McCausland, W.M. Edwards, M. Beech, A. Ling, G. Sarty, M. Paulson, L.A. Maillet, S.F. Jones, M.R. Stauffer, M.L. Hutson and A.M. Ruzicka (2009) A bright multiple fragmentation fireball and meteorite fall at Buzzard Coulee, Saskatchewan, Canada, November 20, 2008. *EOS Trans. AGU*, **90 (22)**, Jt. Assem. Suppl., Abstract MA12A-01.
- Hutson M. L., R. Hugo, A.M. Ruzicka and A.E. Rubin (2009) Olivine microstructures in the Miller Range 99301 (LL6) ordinary chondrite. *Lunar Planet Sci. XXXX*, Abstract #1081, Lunar and Planetary Institute.
- Hutson M.L., A.M. Ruzicka, E.P. Milley and A.R. Hildebrand (2009) A first look at the Buzzard Coulee (H4) chondrite, a recently observed fall from Saskatchewan. *Lunar Planet Sci. XXXX*, Abstract #1893, Lunar and Planetary Institute.
- Ruzicka A. and T.J. Schepker (2008) Trace-element analyses of pyroxene and plagioclase in three HED meteorites. *Meteorit. Planet. Sci.* **43**, Abstract #5310.
- Ruzicka A., C. Floss and M. Hutson (2008) Amoeboid olivine aggregates (AOAs) in the Efremovka (CV_R) chondrite: First SIMS trace-element results. *Lunar Planet Sci. XXXIX*, Abstract #1764, Lunar and Planetary Institute.
- Schepker T.J. and A. Ruzicka (2007) XRD as a tool to constrain olivine composition: Applications to H- and L-chondrites. *Meteorit. Planet. Sci.* **42**, Abstract #5316.
- Hutson M. L. and A. Ruzicka (2007) The case against Mercury as the angrite parent body. *Meteorit. Planet. Sci.* **42**, Abstract #5238.
- Hutson M., R. Hugo, A. Ruzicka and M. Killgore (2007) Annealing after shock: Evidence from olivine microstructures in Portales Valley. *Meteorit. Planet. Sci.* **42**, Abstract #5072.
- Ruzicka A. and M. Hutson (2006) NWA 2999 and other angrites: No compelling evidence for a mercurian origin. *Meteorit. Planet. Sci.* **41**, Abstract #5080.
- Ruzicka A., C. Floss and M. Hutson (2006) Trace-element compositions of normal, dusty, and clear olivine in Chainpur chondrules. *Meteorit. Planet. Sci.* **41**, Abstract #5266.
- Hutson M.L., R.N. Pugh and A.M. Ruzicka (2006) Public outreach and education with meteorites involving a museum exhibit, website, and teacher workshops. *Lunar Planet. Sci. XXXVII*, Abstract #1095, Lunar and Planetary Institute.
- Ruzicka A. and M. Hutson (2005) Geochemical constraints for the origin of the Steinbach (IVA) stony iron meteorite. *Meteorit. Planet. Sci.*, **40**, A133 (Abstract #5279).
- Fries M., A. Steele and A. Ruzicka (2005) Carbon and mineral phase distribution on a CV3 dark inclusion boundary – A confocal raman imaging study. *Meteorit. Planet. Sci.*, **40**, A52 (Abstract #5236).
- Ruzicka A., H. Hiyagon and C. Floss (2005) Relict olivine, chondrule recycling, and evolution of oxygen reservoirs. *Workshop on Oxygen in Asteroids and Meteorites*, Abstract #1422, Lunar and Planetary Institute.
- Ruzicka A. and M. Hutson (2005) Filter-press differentiation: A newly-recognized fractionation mechanism for silicate inclusions in Sombrosete and possibly in other iron meteorites. *Lunar Planet. Sci. XXXVI*, Abstract #1169, Lunar and Planetary Institute (CD-ROM).
- Ruzicka A. and M. Hutson (2005) Portales Valley: Not just another ordinary chondrite. Manuscript published electronically, Planetary Science Research Discoveries (PSRD), University of Hawai'i, <http://www.psrds.hawaii.edu/Sept05/PortalesValley.html>
- Ruzicka A. and C. Floss (2004) Forsterite and olivine in Sahara-97210 (LL3.2) and Chainpur (LL3.4) chondrules: Compositional evolution and the influence of melting. *Lunar Planet. Sci. XXXV*, Abstract #1422, Lunar and Planetary Institute (CD-ROM).
- Greeney S. and A. Ruzicka (2004) Relict forsterite in chondrules: Implications for cooling rates. *Lunar Planet. Sci. XXXV*, Abstract #1426, Lunar and Planetary Institute (CD-ROM).

- Pugh R., A. Ruzicka, M. Hutson and B. Schmeer (2004) Eyewitness reports for the June 3, 2004 Pacific Northwest Fireball. Electronic publication by the "June 3, 2004 Fireball project" at <http://astrowww.phys.uvic.ca/%7Eatum/fireball/ruzicka.pdf>
- Ruzicka A. and M. Hutson (2003) Evidence for silicate liquid immiscibility within silicate inclusions during rapid cooling of the Sombrerete (Ungrouped) iron meteorite. *Meteorit. Planet. Sci.*, **38**, A129.
- Lindsay T., A. Ruzicka and M. Killgore (2003) Origin of silicate inclusions in the Miles (IIE) iron: Minimal partial melting, maximal fractional crystallization. *Meteorit. Planet. Sci.*, **38**, A102.
- Ruzicka A. and C. Floss (2003) Relict forsterite and igneous olivine grains in Chainpur (LL3.5) chondrules: Major- and trace-element evidence for vapor-fractionation and igneous partitioning. *Lunar Planet Sci. XXXIV*, Abstract #1243, Lunar and Planetary Institute (CD-ROM).
- Ruzicka A. and M. Killgore (2002) Trace-element abundances in the Portales Valley meteorite: Evidence for geochemical fractionations. *Lunar Planet. Sci. XXXIII*, Abstract #1918, Lunar and Planetary Institute (CD-ROM).
- Ruzicka A. (2001) Book Review: "The Moon: Resources, Future Development and Colonization", by D. Shunk, B. Sharpe, B. Cooper, and M. Thangavelu. *Meteorit. Planet. Sci.* **36**, 474.
- Ruzicka A., M. Killgore, J. Boesenberg and M. Prinz (2000) Portales Valley: Not just another "ordinary" chondrite. *Meteorit. Planet. Sci.* **35**, A139-A140.
- Ruzicka A., J.F. McHone and M. Killgore (2000) Portales Valley: Discovery of a large graphite nodule. *Meteorit. Planet. Sci.* **35**, A140.
- Ruzicka A., H. Hiyagon, M. Prinz and L.A. Taylor (2000) Forsteritic olivine grains in unequilibrated ordinary chondrites: Additional evidence for a link between ordinary and carbonaceous chondrites. *Lunar Planet. Sci. XXXI*, Abstract #1312, Lunar & Planetary Institute (CD-ROM).
- Ruzicka A. (2000) Magnetic lineations on Mars: Evidence for plate tectonics, or for magnetic eolian deposits? *Lunar Planet. Sci. XXXI*, Abstract #1575, Lunar & Planetary Institute (CD-ROM).
- Ruzicka A., G.A. Snyder and L.A. Taylor (1999) Origins of large, igneous-textured inclusions in ordinary chondrites. *Antarctic Meteorites XXIV*, pp. 160-162.
- Hutson M. and A. Ruzicka (1999) A simple three-step model for the origin of the enstatite chondrites. *Antarctic Meteorites XXIV*, pp. 40-42.
- Ruzicka A., E.A. Jerde, G.A. Snyder and L.A. Taylor (1999) A large, igneous-textured inclusion containing co-existing enstatite and ferroan olivine in the LEW 86018 (L3.1) chondrite. *Lunar Planet Sci. Conf. XXX*, Abstract #1502, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A., J.S. Boesenberg, G.A. Snyder, M. Prinz and L.A. Taylor (1999) Rare-earth-element abundances of clasts and matrix in the Lamont mesosiderite: Complex spatial variations. *Lunar Planet Sci. Conf. XXX*, Abstract #1516, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A., J.S. Boesenberg, G.A. Snyder, M. Prinz and L.A. Taylor (1999) Petrogenesis of the Lamont mesosiderite: Evidence from petrography and pyroxene clast zoning systematics. *Lunar Planet Sci. Conf. XXX*, Abstract #1513, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A., G.A. Snyder, M. Prinz and L.A. Taylor (1999) Portales Valley: A new metal-phosphate-rich meteorite with affinities to Netschaëvo and H-group chondrites. *Lunar Planet Sci. Conf. XXX*, Abstract #1645, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A., M.E. Bennett III, A.D. Patchen, G.A. Snyder and L.A. Taylor (1999) Widmannstätten

- texture in the Portales Valley meteorite: Slow (but not unusually slow) cooling at low temperatures. *Lunar Planet Sci. Conf. XXX*, Abstract #1616, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A. (1998) Book Review: "Dana's New Mineralogy – The system of mineralogy of James Dwight Dana and Edward Salisbury Dana, Eighth Edition", edited by R. V. Gaines, H. Catherine, W. Skinner, E.E. Foord, B. Mason and A. Rosenzweig. *Meteorit. Planet. Sci.* **33**, 949.
- Ruzicka A., G.A. Snyder and L.A. Taylor (1998) Equilibration temperatures of large, sodium-poor melt inclusions in ordinary chondrules. *Meteorit. Planet. Sci.* **33**, A132-A133.
- Ruzicka A., G.W. Fowler, G.A. Snyder, J.J. Papike and L.A. Taylor (1998) Trace-element constraints on melting and mixing processes affecting IIE silicate inclusions: A reconnaissance SIMS study. *Lunar Planet. Sci. Conf. XXIX*, Abstract #1151, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A., M. Prinz, G.A. Snyder and L.A. Taylor (1998) Major-element compositions and mineralogies of silicate inclusions in IIE iron meteorites: Impact-induced or "planetary" differentiation? *Lunar Planet. Sci. Conf. XXIX*, Abstract #1155, Lunar and Planetary Institute, Houston (CD-ROM).
- Snyder G.A., D.-C. Lee, A.M. Ruzicka, L.A. Taylor, A.N. Halliday and M. Prinz (1998) Evidence of late impact fractionation and mixing of silicates on iron meteorite parent bodies: Hf-W, Sm-Nd, and Rb-Sr isotopic studies of silicate inclusions in IIE irons. *Lunar Planet. Sci. Conf. XXIX*, Abstract # 1142, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A., L.R. Riciputi, G.A. Snyder, A.D. Patchen and L.A. Taylor (1998) Oxygen isotopic composition of olivine in ureilites: Possible evidence for millimeter-scale variations. *Lunar Planet. Sci. Conf. XXIX*, Abstract #1176, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A., A.D. Patchen, G.A. Snyder and L.A. Taylor (1998) Lunar chondrule petrography and mineral chemistry: Rims, relict grains, and metasomatism. *Lunar Planet. Sci. Conf.*, *XXIX*, Abstract # 1436, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A., G.A. Snyder, A.D. Patchen and L.A. Taylor (1998) Lunar chondrules: Impact-melting of highland lithologies. *Lunar Planet. Sci. Conf.*, *XXIX*, Abstract #1434, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A., G.A. Snyder and L.A. Taylor (1998) The shergottite-Nakhla connection: Forming nakhlites as cumulates of shergottitic melts. *Lunar Planet. Sci. Conf.*, *XXIX*, Abstract #1129, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A., G.A. Snyder and L.A. Taylor (1998) Rare-earth-element modelling of nakhlites: Constraints on the proportion of trapped melt. *Lunar Planet. Sci. Conf.*, *XXIX*, Abstract #1154, Lunar and Planetary Institute, Houston (CD-ROM).
- Snyder G.A., A. Ruzicka and L.A. Taylor (1998) Trapped liquid and planetary differentiation processes: The Moon. *Lunar Planet. Sci. Conf.*, *XXIX*, Abstract #1143, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruzicka A., G.A. Snyder and L.A. Taylor (1997) Could eucrites have formed as residual liquids in a magma ocean? *Lunar Planet. Sci. XXVIII*, 1213-1214.
- Ruzicka A., G.A. Snyder and L.A. Taylor (1997) Formation of eucrites and diogenites in a magma ocean on the HED parent body. *Lunar Planet. Sci. XXVIII*, 1215-1216.
- Ruzicka A., G.A. Snyder and L.A. Taylor (1997) Large chondrules and lithic clasts in Julesberg (L3) and other ordinary chondrites: Bulk-chemical characterization. *Lunar Planet. Sci. XXVIII*, 1217-1218.
- Ruzicka A., G.A. Snyder and L.A. Taylor (1997) Large chondrules and lithic clasts in Julesberg (L3) and other ordinary chondrites: Petrographic and mineral-chemical characterization. *Lunar Planet. Sci. XXVIII*, 1219-1220.

- Ruzicka A., G.A. Snyder and L.A. Taylor (1997) Na-Al-rich chondrules: Droplets produced by incipient shock-melting? *Lunar Planet. Sci. XXVIII*, 1221-1222.
- Ruzicka A., G.A. Snyder and L.A. Taylor (1996) Asteroid 4-Vesta as the HED parent body: Implications for the size of a metallic core and for magma ocean crystallization. In *Workshop on Evolution of Igneous Asteroids: Focus on Vesta and the HED meteorites*, LPI Tech. Report No. 96-02, pp. 23-24, Houston, TX.
- Ruzicka A., G.A. Snyder and L.A. Taylor (1996) The composition of the Eucrite Parent Body: Implications for the origin of the Moon and for planetary accretion. In *Workshop on Evolution of Igneous Asteroids: Focus on Vesta and the HED meteorites*, LPI Tech. Report No. 96-02, pp. 24-25, Houston, TX.
- Ruzicka A. and W.V. Boynton (1995) Quantitative models of CAI rim layer growth. *Meteoritics* **30**, 570.
- Ruzicka A. and W.V. Boynton (1995) Fine-grained CAIs in Efremovka and Leoville: In-situ layer growth and confirmation of a link to rims on coarse-grained CAIs. *Lunar Planet. Sci. XXVI*, 1207-1208.
- Ruzicka A. and W.V. Boynton (1994) Origin of CAI rims by vaporization and metasomatism. *Meteoritics* **29**, 526.
- Ruzicka A. and W.V. Boynton (1993) The anatomy and bulk composition of CAI rims in the Vigarano (CV3) chondrite. *Meteoritics* **28**, 426.
- Ruzicka A. and W.V. Boynton (1993) The trace element composition of a silica-rich clast in the Bovedy (L3/4) chondrite. *Meteoritics* **28**, 426-427.
- Ruzicka A. and W.V. Boynton (1992) Microfaulting of CAI rim layers and relationship to the fabric of the Leoville (CV3) chondrite. *Lunar Planet. Sci. XXIII*, 1191-1192.
- Ruzicka A. and W.V. Boynton (1992) A distinctive silica-rich, sodium-poor igneous clast in the Bovedy (L3) chondrite. *Meteoritics* **27**, 283.
- Ruzicka A. and W.V. Boynton (1992) The origin of silica-rich chondrules and clasts in ordinary and carbonaceous chondrites. *Meteoritics* **27**, 284.
- Ruzicka A. and W.V. Boynton (1991) A survey of CAIs in Leoville and Vigarano: Rim layers, brecciation, metamorphism, and alteration. *Meteoritics* **26**, 390-391.
- Ruzicka A. and W.V. Boynton (1991) Zone sequences, widths and compositions of olivine coronas in mesosiderites. *Meteoritics* **26**, 391.
- Ruzicka A. and W.V. Boynton (1990) The formation of olivine coronas in mesosiderites. *Meteoritics* **25**, 403.
- Ruzicka A. (1988) The geology of Ariel. *Lunar Planet. Sci. XIX*, 1009-1010.
- Ruzicka A. (1986) Pre-agglomeration metamorphism of chondrules in the Chainpur chondrite. *Meteoritics* **21**, 498-499.
- Ruzicka A. (1986) Deformation histories of chondrules in the Chainpur chondrite. *Meteoritics* **21**, 499.
- Dodd R.T., E. Jarosewich and A. Ruzicka (1984) Fe-Ni-S variation in L-chondrites. *Lunar Planet. Sci. XV*, 228-229.
- Ruzicka A. (1982) Callisto: A lunar-like bombardment? In *Advances in Planetary Geology*, May 1984, 160-166.
- Ruzicka A. and R.G. Strom (1982). Spatial distribution of craters on the moon and Callisto. In *Reports of the Planetary Geology Program-- 1982*, NASA Tech. Memo. 85127, 105-107.

Presentations at Professional Meetings (2000-2011)

- 2011 Poster presentation at the *Workshop on Formation of the First Solids of the Solar System*, Kauai, Hawaii, for "Agglomeratic olivine (AO) objects: Melting of dust to create Type II chondrules" (with M. Hutson).
- 2011 Oral presentation at the 74th Annual Meeting of the Meteoritical Society,

- Greenwich, England, for “2011 Service Award for Richard Norman Pugh” (award citation for Cascadia Meteorite Laboratory member).
- 2011 Oral presentation at the 74th Annual Meeting of the Meteoritical Society, Greenwich, England, for “A shocking tale: TEM observations of deformed olivine in ordinary chondrites” (with R. Hugo).
- 2011 Poster presentation at the 74th Annual Meeting of the Meteoritical Society, Greenwich, England, for “New insights on hydrous phases in R chondrites NWA 6491 and 6492” (with N. Jamsja).
- 2011 Oral presentation at the 42nd Lunar and Planetary Science Conference, The Woodlands, TX, “Amoeboid Olivine Aggregate Condensates and the Origin of the Refractory Element Fractionation” (with M. Hutson and C. Floss).
- 2011 Poster presentation at the 42nd Lunar and Planetary Science Conference, The Woodlands, TX, “Cohenite in NWA 5964 (L3–6 Melt Breccia): A Possible Product of Shock-Induced Contact Metamorphism” (with K.L. Hauer).
- 2011 Poster presentation at the 42nd Lunar and Planetary Science Conference, The Woodlands, TX, “Presence of Hydrous Phases in Two R Chondrites, Northwest Africa 6491 and 6492” (with N. Jamsja).
- 2011 Poster presentation at the 42nd Lunar and Planetary Science Conference, The Woodlands, TX, “Meteorites on the Road: Taking Meteorite Science to Rural Communities” (with M. L. Hutson and R. N. Pugh).
- 2010 Poster presentation at the 73rd Annual Meeting of The Meteoritical Society, New York City, NY, for “Classification of four new irons, including common (IIAB) and uncommon (IIIF, unusual IAB) types” (with M. Hutson and S.A. Kissin).
- 2010 Oral presentation at Lunar and Planetary Science Conference, The Woodlands, TX, for “Accretion and melting of dust to form ferroan chondrules in ordinary chondrites” (with C. Floss, M. Hutson).
- 2010 Poster presentation at Lunar and Planetary Science Conference, The Woodlands, TX, for “Jungo 001, Jungo 002, Jungo 003, and Big Horn Mountains: Four new chondrites from Nevada and Arizona which contain a variety of unusual petrographic features” (with M. Hutson).
- 2010 Poster presentation at Lunar and Planetary Science Conference, The Woodlands, TX, for “X-ray diffraction as a tool for the classification of equilibrated ordinary chondrites” (with T.J. Schepker).
- 2009 Poster presentation at Lunar and Planetary Science Conference, The Woodlands, TX, for “Olivine microstructures in the Miller Range 99301 (LL6) ordinary chondrite” (with M. Hutson, R. Hugo, A.E. Rubin).
- 2009 Poster presentation at Lunar and Planetary Science Conference, The Woodlands, TX, for “A first look at the Buzzard Coulee (H4) chondrite, a recently observed fall from Saskatchewan” (with M. Hutson, E.P. Milley, A.R. Hildebrand).
- 2008 Poster presentation at the Annual Meeting of the Meteoritical Society, Matsue, Japan, for “Trace-element analyses of pyroxene and plagioclase in three HED meteorites” (with T.J. Schepker).
- 2008 Oral presentation at Lunar and Planetary Conference, Houston, TX, for “Amoeboid olivine aggregates (AOAs) in the Efremovka (CV_R) chondrite: First SIMS trace-element results” (with C. Floss, M. Hutson).
- 2007 Poster presentation at the Annual Meeting of the Meteoritical Society, Tucson, AZ, for “XRD as a tool to constrain olivine composition: Applications to H- and L-chondrites” (with T.J. Schepker).
- 2007 Poster presentation at the Annual Meeting of the Meteoritical Society, Tucson, AZ, for “The case against Mercury as the angrite parent body” (with M. Hutson).
- 2007 Poster presentation at the Annual Meeting of the Meteoritical Society, Tucson,

- AZ, for “Annealing after shock: Evidence from olivine microstructures in Portales Valley” (with M. Hutson, R. Hugo).
- 2006 Oral presentation at the Annual Meeting of the Meteoritical Society, Zürich, Switzerland, for “Trace-element compositions of normal, dusty, and clear olivine in Chainpur chondrules” (with C. Floss, M. Hutson).
- 2006 Poster presentation at the Annual Meeting of the Meteoritical Society, Zürich, Switzerland, for “NWA 2999 and other Angrites: No compelling evidence for a mercurian origin” (with M. Hutson).
- 2006 Poster presentation at the Lunar and Planetary Science Conference, Houston, TX, for “Public outreach and education with meteorites involving a museum exhibit, website, and teacher workshops” (with M. Hutson, R.N. Pugh).
- 2005 Oral presentation at the Annual Meeting of the Meteoritical Society, Gatlinburg, TN, for “Geochemical constraints for the origin of the Steinbach (IVA) stony-iron meteorite” (with M. Hutson).
- 2005 Poster presentation at the Annual Meeting of the Meteoritical Society, Gatlinburg, TN, for “Carbon and mineral phase distribution on a CV3 dark inclusion boundary – A confocal Raman imaging study” (with M. Fries, A. Steele).
- 2005 Oral presentation at the Workshop on Oxygen in Asteroids and Meteorites, Flagstaff, AZ, for “Relict olivine, chondrule recycling, and evolution of oxygen reservoirs” (with H. Hiyagon, C. Floss).
- 2005 Poster presentation at the Lunar and Planetary Science Conference, Houston, TX, for “Filter-press differentiation: A newly-recognized fractionation mechanism for silicate inclusions in Sombrosete and possibly in other iron meteorites” (with C. Floss, M. Hutson).
- 2004 Oral presentation at the Lunar and Planetary Science Conference, Houston, TX, for “Forsterite and olivine in Sahara-97210 (LL3.2) and Chainpur (LL3.4) chondrules: Compositional evolution and the influence of melting” (with C. Floss).
- 2004 Poster presentation at the Lunar and Planetary Science Conference, Houston, TX, for “Relict forsterite in chondrules: Implications for cooling rates” (with S. Greeney).
- 2003 Oral presentation at the Annual Meeting of the Meteoritical Society, Münster, Germany, for “Origin of silicate inclusions in the Miles (IIE) iron: Minimal partial melting, maximal fractional crystallization” (with T. Lindsay, M. Killgore).
- 2003 Oral presentation at the Annual Meeting of the Meteoritical Society, Münster, Germany, for “Evidence for silicate liquid immiscibility within silicate inclusions during rapid cooling of the Sombrosete (Ungrouped) iron meteorite” (with M. Hutson).
- 2003 Oral presentation at the Lunar and Planetary Science Conference, Houston, TX, for “Relict forsterite and igneous olivine grains in Chainpur (LL3.5) chondrules: Major- and trace-element evidence for vapor-fractionation and igneous partitioning” (with C. Floss).
- 2002 Oral presentation at the Lunar and Planetary Science Conference, Houston, TX, for “Trace-element abundances in the Portales Valley meteorite: Evidence for geochemical fractionations” (with M. Killgore).
- 2000 Oral presentation at the Annual Meeting of the Meteoritical Society, Chicago, IL, for “Portales Valley: Not just another ‘ordinary’ chondrite” (with M. Killgore, J. Boesenberg, M. Prinz).
- 2000 Poster presentation at the Annual Meeting of the Meteoritical Society, Chicago, IL, for Portales Valley: Discovery of a large graphite nodule” (with J. McHone, M. Killgore).

Professional Service

2012-current	Chair of Membership Committee , Meteoritical Society (3 year term starting Jan. 2012).
2011	Reviewer for three NASA Cosmochemistry proposals (August 2011).
2011	Panel Reviewer , NASA Lunar Advanced Science Exploration Research program (June 2011).
2010-2011	Search Committee , Editor of the Meteoritical Bulletin (Meteoritical Society).
2010	Panel Reviewer , NASA Origins of Solar Systems Program (August 2010).
2010	Reviewer for NASA Cosmochemistry proposal (August 2010).
2010	Nomenclature Committee , Meteoritical Society (3-year term starting Jan. 2010).
2009	Bid made to Council of the Meteoritical Society for Portland to host the 2013 Annual Meeting of the Meteoritical Society.
2008-current	Associate Editor , <i>Meteoritics and Planetary Science</i> (named November 2008 for indefinite term). Papers handled to date: (1) MAPS-1085, "Mineralogy, petrology, and trace-element geochemistry of Cumulus Ridge (CMS) 04071 pallasite", by Danielson, Righter, and Humayan (assigned late 2008); (2) MAPS-1113, "Thermal processing in ordinary chondrites: Development of the fast electron microprobe (FEM) technique for measuring heterogeneity of ferromagnesian silicates", by Marsh and Lauretta (assigned late 2008); (3) MAPS-1136, "Matrix and whole-rock fractionations in the Acfer 094 type 3.0 ungrouped carbonaceous chondrite" by Wasson & Rubin (assigned early 2009); (4) MAPS-1151, "Shock, brecciation, impact-melting and post-shock annealing in aubrites", by Rubin (assigned early 2009); (5) MAPS-1197, "Compositions and taxonomy of 15 unusual carbonaceous chondrites", by Rubin, Wasson, Choe, Huber & Kallemeyn (assigned late 2009); (6) MAPS-1258, "The Ar-Ar age and petrology of Miller Range 05029: An impact melt from the very early solar system", by Weirich, Wittmann, Isachsen, Rumble, Swindle & Kring (assigned November 2009); (7) MAPS-1264, "Diogenites as polymict breccias: Mixtures of orthopyroxenite and harzburgite", by Beck & McSween (assigned November 2009); (8) MAPS-1276, "Examining the effect of silicon in iron-bearing metallic melts on trace element partitioning behavior", by Chabot (assigned early 2010); (9) MAPS-1315, "Jesenice—a new meteorite fall from Slovenia", by Bischoff, Jersek, Grau, Mirtic, Ott, Kucera, Horstmann, Laubenstein, Hermann, Randa, Weber & Heussen (assigned March 2010); (10) MAPS-1316, "Mineralogy, chemistry and irradiation record of Neuschwanstein (EL6) chondrite", by Zipfel, Bischoff, Shultz, Spettel, Dreibus, Schönbeck & Palme (assigned March 2010); (11) MAPS-1344, "Pigeonite thermometry and the style of the ureilite

anatexis”, by Warren (assigned May 2010);
 (12) MAPS-1346, “An amoeboid olivine aggregate and Fe-poor chondrules from the equilibrated ordinary Sahara 02500 chondrite”, by Owacki (assigned May 2010);
 (13) MAPS-1394, “Ion microprobe analyses of oxygen three isotope ratios of chondrules from the Sayh al Uhaymir 290 CH chondrite using a multiple-hole disk”, by Nakashima, Ushikubo, Rudraswami, Kita, Valley, Nagao (assigned September 2010);
 (14) MAPS-1409, “Jesenice—a new meteorite fall from Slovenia”, by Bischoff, Jersek, Grau, Mirtic, Ott, Kucera, Horstmann, Laubenstein, Hermann, Randa, Weber & Heussen (assigned November 2010);
 (15) MAPS-1428, “QUE 94202: A primitive enstatite achondrite produced by the partial melting of an E-chondrite-like protolith”, by Izawa, Flemming, and Banerjee (assigned January 2011);
 (16) MAPS-1450, “Description of the densest meteorite collection area in hot deserts: the San Juan meteorite field (Atacama Desert, Chile)”, by Gattacceca and 12 others (assigned February, 2011);
 (17) MAPS-1467, “Thermal history of Northwest Africa (NWA) 5073—a coarse-grained Stannern-trend eucrite containing cm-sized pyroxenes and large zircon grains”, by Roszjar and 7 others (assigned April 2011);
 (18) MAPS-1489, “Melt inclusions in augite from the nakhlite meteorites: reassessment of nakhlite parental melt and implications for petrogenesis”, by Sautter, Topliss, and Lorand (assigned June 2011).
 (19) MAPS-1548, “Petrology and oxygen isotopes of NWA 5492, a new metal-rich chondrite”, by Weisberg, Bunch, Wittke, Rumble, Ebel (assigned August, 2011).
 (20) MAPS-1557, “Petrologic and textural diversity in the largest sample of Vestan regolith”, by Beck, Welten, McSween, Viviano, Caffee (assigned September, 2011).

2009-2011 Member of **Membership Committee**, Meteoritical Society (3-year term starting Jan. 2009).

2008 **Reviewer** of NASA grant proposal for Origins of Solar Systems (August 2008).

2007 **Reviewer** of two NASA grant proposals for Planetary Geology & Geophysics, and Cosmochemistry Programs (August 2007).

2007 **Panel Reviewer** for NASA EPOESS (Education/Outreach) Program (July 2007).

2006 **Reviewer** of three NASA grant proposals for Cosmochemistry program.

2006 **Reviewer** for two book chapters (Meteorites in the Early Solar System II).

2006 **Reviewer for NASA Postdoctoral Program** (December 2006).

2005 **Reviewer** for four NASA grant proposals for Cosmochemistry, and Origins of Solar Systems programs (August 2005).

2002-2004 **Program Committee**, Lunar and Planetary Science Conference.

2001-current **Board of Editors**, Astrobiology.

2001-2008 **Board Member**, Columbia-Willamette Chapter of Sigma Xi, the scientific research society.

1997-current **Session Co-Chair** in science conferences (Lunar and Planetary Science Conference, Annual Meeting of the Meteoritical Society). Recent examples: (a) 41st Lunar and Planetary Science Conference, 2010, session: “Formation of the building blocks of planetary bodies”; (b) 74th Annual Meeting of the Meteoritical Society, 2011, session: “Shock

1996-current

processes" (2011).

Peer Reviewer of journal articles submitted to *Meteoritics and Planetary Science* (MAPS), *Geochimica et Cosmochimica* (GCA), *Earth and Planetary Science Letters*, *Icarus*, *Science*, *Astrobiology* (average ~4-5 articles per year between 2001-2011, increasing with time). Example for 2008:

(1) MAPS-1014, "Quantifying the error of 2D bulk chondrules analyses", by Hezel and Kießwetter;

(2) MAPS-1018, "Analysis of ordinary chondrites using powder x-ray diffraction", by Dunn et al.;

(3) GCA-W5911, "Siderophile and other geochemical constraints on mixing relationships among HED meteorites", by Warren et al.;

(4) GCA-W5915, "Petrogenesis of augite-bearing ureilites Hughes 009 and FRO 99054/93008 inferred from melt igneous inclusions", by Goodrich et al.;

(5) MAPS-1021, "Evidence for K-rich terranes and granites on Vesta from impact spherules", by Barrat et al.;

(6) MAPS-1044, "Nebular history of amoeboid olivine aggregates", by Suguira et al.

Membership in Professional Societies

Member of the Meteoritical Society, American Geophysical Union, Sigma Xi.

Contact Information for Alex Ruzicka

Portland State University
Department of Geology
1721 SW Broadway, P.O. Box 751
Portland, OR 97207-0751
Tel (503) 725-3372
Fax (503) 725-3025
email ruzickaa@pdx.edu

Website (Alex) <http://web.pdx.edu/~ruzickaa/>

Website (CML) <http://meteorites.pdx.edu>

[Both websites designed and maintained by Ruzicka]