

DONALD McLAIN BURT

School of Earth and Space Exploration, Arizona State University
Box 871404, Tempe, AZ 85287-1404, USA

Tel: 480/965-6180 FAX: 480/965-8102 E-mail: dmburt@asu.edu

Education:

Princeton University, 1961-1965, A.B. 1965, Geology, *Summa Cum Laude*.
Harvard University, 1965-1970, A.M. 1968, Ph.D. 1972, Geological Sciences. Dissertation:
Mineralogy and Geochemistry of Ca-Fe-Si Skarn Deposits.

Professional Employment and Activities:

Fellow, Geophysical Laboratory, Carnegie Institution of Washington (D.C.), 1970-1972 (Experimental and theoretical petrology)
Visiting Lecturer, Vening Meinesz Laboratory, Univ. of Utrecht, The Netherlands, 1972-1973 (Fluorine equilibria in skarns and greisens)
J. Willard Gibbs Instructor in Geochemistry, Yale Univ., 1973-1975
Assistant Professor of Geology, ASU, 1975-1979
Associate Professor of Geology, ASU, 1979-1983
Professor of Geology, ASU, 1983-Present
Visiting Scientist, Lunar and Planetary Institute, Houston, TX, 1987-1988 (Lunar and space mining technologies)
Interim Department Chair, ASU, 1995 (Fall)
Geology Field Camp Director, ASU, 1995-2000 (Geologic mapping and remote sensing)
Visiting Scientist, Lunar and Planetary Institute, Houston, TX, 2001-2002 (Mars surface and subsurface mineralogy and geochemistry)

Publications: See lists below. **Grants:** Numerous; none current.

Research Experience: Geology of mineral and energy deposits; crystal chemistry and phase equilibria of complex systems; mineralogy and geochemistry of lithophile elements; natural resource economics and sustainability, digital photography.

Courses Taught (general areas): Mineral and Energy Resources, Ore Deposits, Mineralogy, Igneous and Metamorphic Petrology, Aqueous Geochemistry, Physical Geology, Historical Geology, Geology Field Camp.

Field Experience (summer, mainly): Princeton Univ.(field camp, then vertebrate paleontology, WY and MT, 1962), White Pine Copper Co. (geologic mapping, MI, 1963), U.S. Geological Survey (geologic mapping, CO, 1964), AMAX Exploration (geochemical prospecting, WY and MT, 1965 and 1966), dissertation research (skarn deposits: southwest USA, 1967 and 1968, Peru, 1969, Japan, 1970). Varied U.S. Government and company-sponsored field research in western USA (1978, 1979, 1980), USSR (1981 and 1983), China (1981), Antarctica (1982), and Mexico (1983-1990; 2008). ASU Geology Summer Field Camp (instructor, 1980-1995; director 1995-2000).

Professional Affiliations: Materials Research Soc., Am. Ceramic Soc., Am. Geophys. Union, Geochem. Soc., Mineral. Soc. Am. (Fellow), Mineral. Assoc. Canada, Soc. Econ. Geologists (Fellow), Internat. Assoc. Genesis of Ore Deposits (IAGOD), Soc. Mining, Minerals & Exploration (SME), Geol. Soc. Am. (Fellow), Am. Assoc. Advancement of Science.

Honors, Awards, and Offices: Phi Beta Kappa 1965; Sigma Xi 1965; Woodrow Wilson Fellow (hon.) 1965-1966; NSF Graduate Fellow 1965-1968, 1969-1970; Assoc. Editor, American Mineralogist 1977-1980; new mineral burtite, $\text{CaSn}(\text{OH})_6$, 1981; Nat. Acad. Sci.-sponsored research visitor to China (3 mo., 1981) and USSR (1 mo., 1981; 1.5 mo., 1983); Registered Professional Geologist, State of Arizona 1982-Present; Vice President, Working Group on Skarn, IAGOD, 1978-1986; Short Course Lecturer for Mineral. Assoc. Canada 1982, 1998; for Mineral. Soc. Am. 1984, 1988, 1989; for Geol. Assoc. Canada 1994; Editorial Adviser, Resource Geology, 1998-2005.

Languages: English; Spanish, French, German, Russian; some Dutch, Italian, Japanese.

Personal Data: U.S. citizen, married, 2 grown children.

D.M. Burt - Refereed Publications (excluding abstracts and reviews)

1. Hargraves, R.B. and Burt, D.M., 1967, Paleomagnetism of the Allard Lake anorthosite suite: *Canad. Jour. Earth Sci.*, v. 4, p. 357-369.
2. Rosenberg, P.E., Burt, D.M., and Holland, H.D., 1967, Calcite-dolomite-magnesite stability relations in solution—the effect of ionic strength: *Geochim. et Cosmochim. Acta*, v. 31, p. 391-396.
3. Burt, D.M., 1971, On the paragenesis of babingtonite: *Soc. Mining Geologists of Japan, Special Issue, No. 3, Proc. IMA-IAGOD Meetings '70, IAGOD Vol.*, p. 375-380.
4. Burt, D.M., 1971, Some phase equilibria in the system Ca-Fe-Si-C-O: *Carnegie Inst. Washington Year Book 70*, p. 178-184.
5. Burt, D.M. 1971, The facies of some Ca-Fe-Si skarns in Japan: *Carnegie Inst. Washington Year Book 70*, p. 185-188; also, 24th Internat. Geol. Congress, Montreal, Sect. 2, Petrology, p. 284-288 (1972).
6. Burt, D.M., 1971, Multisystems analysis of the relative stabilities of babingtonite and ilvaite: *Carnegie Inst. Washington Year Book 70*, p. 189-197.
7. Burt, D.M., 1972, Decarbonation sequence in the system CaO-MnO-SiO₂-CO₂: *Carnegie Inst. Washington Year Book 71*, p. 427-435.
8. Burt, D.M., 1972, The system Fe-Si-C-O-H, a model for metamorphosed iron formations: *Carnegie Inst. Washington Year Book 71*, p. 434-443.
9. Burt, D.M., 1972, The influence of fluorine on the facies of Ca-Fe-Si skarns: *Carnegie Inst. Washington Year Book 71*, p. 443-450.
10. Burt, D.M., Vliyanie flora na fatsii Ca-Fe-Si skarnov: *Mezhdunarodn. Geokhim. Kongr. [Internat. Geochem. Congress], Moskva, Dokl.*, v. 3, part 1, p. 15-27.
11. Burt, D.M., 1972, Silicate-sulfide equilibria in Ca-Fe-Si skarn deposits: *Carnegie Inst. Washington Year Book 71*, p. 450-457.
12. Finger, L.W. and Burt, D.M., 1972, REACTION, a Fortran IV computer program to balance chemical reactions: *Carnegie Inst. Washington Year Book 71*, p. 616-620.
13. Burt, D.M. and Petersen, U., 1974, Caracteristicas generales de yacimientos en skarn: *Bol. Soc. Geol. del Peru*, v. 44 (Junio), p. 42-79.
14. Burt, D.M., 1974, Metasomatic zoning in Ca-Fe-Si exoskarns, in Hofmann, A.W. et al., eds., *Geochemical Transport and Kinetics: Proc. Carnegie Conf., 1973, Carnegie Inst. Washington Publ. 634, Washington, D.C.*, p. 287-293.
15. Burt, D.M., 1974, Stabilities of hurlbutite, herderite, and related minerals in the model system CaO-BeO-SiO₂-P₂O₅-F₂O₋₁, in Stempok, M., ed., *Metallization Associated with Acid Magmatism: Geological Survey, Prague [Czechoslovakia]*, v. 1, p. 262-266.
16. Burt, D.M., 1975, Beryllium mineral stabilities in the model system CaO-BeO-SiO₂-P₂O₅- F₂O₋₁, and the breakdown of beryl: *Econ. Geol.*, v. 70, p. 1279-1292.
17. Burt, D.M., 1976, Hydrolysis equilibria in the system K₂O-Al₂O₃-SiO₂-H₂O-Cl₂O₋₁: comments on topology: *Econ. Geol.*, v. 71, p. 665-671.
18. Burt, D.M., 1977, Mineralogy and petrology of skarn deposits: *Rendiconti della Soc. Ital. di Mineral. e Petrol.*, v. 33, p. 859-873.
19. Burt, D.M., 1978, Discussion: A working model of some equilibria in the system alumina-silica-water: *Am. Jour. Sci.*, v. 278, p. 244-250.
20. Burt, D.M. and Pewe, T.L., eds., 1978, *Guidebook to the Geology of Central Arizona: Ariz. Bur. Geol. Mineral Technol., Special Paper No. 2*, p. 1-176.
21. London, D. and Burt, D.M., 1978, Lithium pegmatites of the White Picacho district, Maricopa and Yavapai Counties, Arizona: *Ariz. Bur. Geol. Mineral Technol., Special Paper No. 2*, p. 61-72.
22. Thorpe, D.G and Burt, D.M., 1978, Precambrian metavolcanic rocks of the Squaw Peak area, Maricopa County, Arizona: *Ariz. Bur. Geol. Mineral Technol., Special Paper No. 2*, p. 101-106.
23. Burt, D.M., 1978, Tin silicate-borate-oxide equilibria in skarns and greisens - The system CaO-SnO₂-SiO₂-H₂O-B₂O₃-CO₂-F₂O₋₁: *Econ. Geol.*, v. 73, p. 269-282.
24. Burt, D.M., 1978, Sulfide-silicate reactions in skarn base-metal deposits, in *Problems of Ore Deposition: Fourth IAGOD Symposium, Varna, Bulgaria, 1974*, v. 3, p. 160-161.
25. Burt, D.M., 1978, Multisystems analysis of beryllium mineral stabilities: the system BeO-Al₂O₃-SiO₂-H₂O: *Am. Mineralogist*, v. 63, p. 664-676.
26. Rose, A.W. and Burt, D.M., 1979, Hydrothermal alteration, in Barnes, H.L., ed., *Geochemistry of Hydrothermal Ore Deposits, 2nd ed.: New York, Wiley-Interscience*, p. 173-235.

27. Burt, D.M., 1979, Obmennye operatory, kisloty i osonovaniya (Exchange operators, acids, and bases), in Zharikov, V.A., Fonarev, V.I., and Korikovskii, S.P., eds., Problemy Fiziko-Chimicheskoi Petrologii (Problems of Physico-Chemical Petrology), v. 2: Moscow, Nauka Press, p. 3-15.
28. Thorpe, D.G. and Burt, D.M., 1980, A unique chloritoid-staurolite schist from near Squaw Peak, Phoenix, Arizona: *Ariz. Geol. Soc. Digest*, v. 12, p. 193-200.
29. Burt, D.M., 1980, The stability of danalite, $\text{Fe}_4\text{Be}_3(\text{SiO}_4)_3\text{S}$: *Am. Mineralogist*, v. 65, p. 355-360.
30. Burt, D.M. and Sheridan, M.F., Principal Investigators, 1980, Uranium mineralization in fluorine-enriched volcanic rocks: U.S. Dept. of Energy Open-File Report GJBX-225(80), 494 p.
31. Burt, D.M., Moyer, T.C, and Christiansen, E.H., 1981, Garnet and topaz-bearing rhyolite from near Burro Creek, Mohave County, western Arizona - Possible exploration significance: *Ariz. Geol. Soc. Digest*, v. 13, p. 1-4.
32. Burt, D.M. and Sheridan, M.F., 1981, A model for the formation of uranium/lithophile element deposits in fluorine-rich volcanic rocks: *Am. Assoc. Petroleum Geologists, Studies in Geology*, no. 13, p. 99-109.
33. Burt, D.M., 1981, Acidity-salinity diagrams - application to greisen and porphyry deposits: *Econ. Geol.*, v. 76, p. 832-843.
34. London, D. and Burt, D.M., 1982, Alteration of spodumene, montebrasite, and lithiophilite in pegmatites of the White Picacho district, Arizona: *Am. Mineralogist*, v. 67, p. 97-113.
35. London, D. and Burt, D.M., 1982, Lithium minerals in pegmatites: *Mineral. Assoc. Canada, Short Course Handbook*, v. 8, p. 99-133.
36. Burt, D.M., 1982, Minerals of beryllium: *Mineral. Assoc. Canada, Short Course Handbook*, v. 8, p. 135-148.
37. Burt, D.M. and London, D., 1982, Subsolidus equilibria: *Mineral. Assoc. Canada, Short Course Handbook*, v. 8, p. 329-346.
38. London, D. and Burt, D.M., 1982, Lithium aluminosilicate occurrences in pegmatites and the lithium aluminosilicate phase diagram: *Am. Mineralogist*, v. 67, p. 483-493.
39. London, D. and Burt, D.M., 1982, Chemical models for lithium aluminosilicate stabilities in pegmatites and granites: *Am. Mineralogist*, v. 67, p. 494-509.
40. Einaudi, M.T. and Burt, D.M., eds., 1982, A Special Issue on Skarn Deposits: *Econ. Geol.*, v. 77, no. 4, p. 745-1052.
41. Einaudi, M.T. and Burt, D.M., 1982, Introduction - terminology, classification, and composition of skarn deposits: *Econ. Geol.*, v. 77, p. 745-754.
42. Burt, D.M., 1982, Skarn deposits - historical bibliography through 1970: *Econ. Geol.*, v. 77, p. 755-763.
43. Ferry, J.M. and Burt, D.M., 1982, Characterization of metamorphic fluid composition through mineral equilibria: *Mineral. Soc. Am., Reviews in Mineralogy*, v. 10, p. 207-262.
44. Burt, D.M., Sheridan, M.F., Bikun, J.V., and Christiansen, E.H., 1982, Topaz rhyolites - distribution, origin, and significance for exploration: *Econ. Geol.*, v. 77, p. 1818-1836.
45. Christiansen, E.H., Burt, D.M., Sheridan, M.F., and Wilson, R.T., 1983, The petrogenesis of topaz rhyolites from the western United States: *Contrib. Mineral. Petrol.*, v. 83, p. 16-30.
46. Burt, D.M. and Stump, E., 1984, Mineralogical investigation of andalusite-rich pegmatites from Szabo Bluff, Scott Glacier area [Antarctica]: *Antarctic. Jour. of the United States*, 1983 Review, v. 18, no. 5, p. 49-52.
47. Burt, D.M., 1984, On-site in Chinese tungsten mines: *China Exchange News*, v. 12, 10-11.
48. Lin, C., Burt, D.M., and Zhang, Z., 1984, Phase equilibria of several tungsten deposits in southern China (in Chinese): *Diqiu Huaxua [Geochimica]*, no. 1, p. 22-30.
49. Christiansen, E.H., Bikun, J.V., Sheridan, M.F., and Burt, D.M., 1984, Geochemical evolution of topaz rhyolites from the Thomas Range and Spor Mountain, Utah: *Am. Mineralogist*, v. 69, p. 223-236.
50. Burt, D.M., 1984, Relation of lithophile element mineralization to acid magmatism, western USA: 27th *Internat. Geol. Congr., Moscow, Proc.*, VNU Science Press, Utrecht, v. 9, p. 27-39.
51. Cerny, P. and Burt, D.M., 1984, Paragenesis, crystallochemical characteristics, and geochemical evolution of micas in granitic pegmatites, in Bailey, S.W., ed., *Micas: Mineral. Soc. Am., Reviews in Mineralogy*, v. 13, p. 257-297.
52. Burt, D.M. and Sheridan, M.F., 1985, The relation of topaz rhyolite volcanism to uranium mineralization in the western United States of America, in *Uranium Deposits in Volcanic Rocks: Internat. Atomic Energy Agency, Vienna, Panel Proceedings Series*, p. 337-345.
53. Burt, D.M. and Sheridan, M.F., 1986, Mineral deposits related to topaz rhyolites in the Southwest, in Beatty, B. and Wilkinson, P.A.K., eds., *Frontiers in Geology and Ore Deposits of Arizona and the Southwest: Arizona Geol. Soc. Digest*, v. 16, p. 170-178.
54. Christiansen, E.H., Burt, D.M., and Sheridan, M.F., 1986, Geology and geochemistry of topaz rhyolites from the western United States: *Geol. Soc. Am. Special Paper 205*, 82 p.

55. Burt, D.M., 1986, Tungsten deposits of North America, in Beus, A.A, ed., *Geology of Tungsten* (International Geological Correlation Project 26, "MAWAM"): Paris, UNESCO, p. 187-190.
56. Burt, D.M. and Sheridan, M.F., 1987, Types of mineralization related to fluorine-rich silicic lava flows and domes, in Fink, J.H., ed., *The emplacement of silicic domes and lava flows: Geol. Soc. Am. Special Paper 212*, p. 103-109.
57. Hervig, R.L, Kortemeier, W.T., and Burt, D.M., 1987, Ion-microprobe analyses of Li and B in topaz from different environments: *Am. Mineralogist*, v. 72, p. 392-397.
58. Leavens, P.B., Dunn, P.J., and Burt, D.M., 1987, Glaucocroite olivine from Franklin, New Jersey: Its composition, occurrence, and formation: *Am. Mineralogist*, v. 72, p. 423-428.
59. Schmitz, C. and Burt, D.M., 1987, Field guide to the Black Pearl Tungsten mine area, Yavapai County, Arizona: Dewitt, E.H., ed., *Soc. Econ. Geologists Field Trip Guide No. 1*, p. 97-105.
60. Kortemeier, W.T. and Burt, D.M., 1988, Ongonite and topazite dikes in the Flying W Ranch area, Tonto Basin, Arizona: *Am. Mineralogist*, v. 73, p. 507-523.
61. Ahn, J.H., Burt, D.M., and Buseck, P.R., 1988, Alteration of andalusite to sheet silicates in a pegmatite: *Am. Mineralogist*, v. 73, p. 559-567.
62. Burt, D.M. and Sheridan, M.F., 1988, Mineralization associated with topaz rhyolites and related rocks in Mexico, in Taylor, R.P., ed., *Recent Advances in the Geology of Granite-related Mineral Deposits: Canad. Inst. Mining and Metall. Special Volume 39*, p. 303-306.
63. Burt, D.M., 1988, Planet Alsioff - A problem set: *Am. Mineralogist*, v. 73, p. 936-938.
64. Burt, D.M., 1988, Planet Alsioff - Solutions to problems: *Am. Mineralogist*, v. 73, p. 1201-1204.
65. Burt, D.M., 1988, Stability of genthelvite, $Zn_4(BeSiO_4)_3S$ - an exercise in chalcophilicity using exchange operators: *Am. Mineralogist*, v. 73, p. 1384-1394.
66. Burt, D.M., 1988, Vector representation of phyllosilicate compositions: *Mineral. Soc. Am., Reviews in Mineralogy*, v. 19 (Hydrous Phyllosilicates Exclusive of Micas, ed. by S.W. Bailey), Chap 14, p. 561-599.
67. Zheng, N.J., Wilson, I.H., Knipping, U., Burt, D.M., Krinsley, D.H., and Tsong, I.S.T., 1988, Atomically resolved scanning tunneling microscopy images of dislocations: *Physical Review B*, v. 38, no. 17, p. 12780-12782.
68. Burt, D.M., 1989, Iron-rich clay minerals on Mars: potential sources or sinks for hydrogen and indicators of hydrogen loss over time: *Proceedings of the 19th Lunar and Planetary Science Conference, Houston, TX*, p. 423-432.
69. Burt, D.M., 1989, Vector representation of tourmaline compositions: *Am. Mineralogist*, v. 74, p. 826-839.
70. Burt, D.M., 1989, Mining the Moon: *Am. Scientist*, v. 77, p. 574-579.
71. Burt, D.M., 1989, Compositional and phase relations among rare-earth-element minerals: *Mineral. Soc. Am., Reviews in Mineralogy*, v. 21 (Geology and Geochemistry of Rare Earth Elements, ed. by B. Lipin and G. McKay), Chap. 10, p. 259-307.
72. Schmitz, C. and Burt, D.M., 1990, The Black Pearl Mine, Arizona: Wolframite veins and stockscheider pegmatite related to an albitic stock: *Geol. Soc. Am. Special Paper 246 (Ore-Bearing Granite Systems: Petrogenesis and Mineralizing Processes, ed. by H.J. Stein and J.L. Hannah)*, p. 221-232.
73. Burt, D.M., 1991, Vector representation of lithium and other mica compositions: *Progress in Metamorphic and Magmatic Petrology (D.S. Korzhinskii Memorial Vol., ed. by L.L. Perchuk)*, Cambridge Univ. Press, Cambridge, p. 113-129.
74. Burt, D.M., 1991, Vectors, components, and minerals: *Am. Mineralogist*, v. 76 (J.B. Thompson issue), p. 1033-1037.
75. Burt, D.M., 1991, Lime production from lunar anorthite: *Lunar Concrete* (ed. by R.A. Kaden), *Am. Concrete Inst. Publ. SP-125*, p. 237-244.
76. Burt, D.M., 1991, Metallogenesis [1987-1990 U.S. Natl. Report to IUGG], *Rev. Geophys. Space Phys. Supplement*, p. 542-553.
77. Burt, D.M., 1992, Lunar mining of oxygen using fluorine: *Second Conference on Lunar Bases and Space Activities of the 21st Century* (ed. by W.W. Mendell), Houston, TX, *NASA Conf. Publ. 3166*, v. 2, p. 423-428.
78. Seboldt, W., Lingner, S., Hoernes, S., Grimmeisen, W., Lekies, R., Herkelmann, R., and Burt, D.M., 1993, Lunar resource extraction using fluorine: *Resources of Near-Earth Space* (ed. by J.S. Lewis, M.S. Matthews, and M.L. Guerrieri), Univ. of Arizona Press, Tucson, p. 129-147.
79. Stoker, C.R., Gooding, J.L., Roush, T., Banin, A., Burt, D., Clark, B.C., Flynn, G., and Gwynne, O., 1993, The physical and chemical properties and resource potential of Martian surface soils: *Resources of Near-Earth Space* (ed. by J.S. Lewis, M.S. Matthews, and M.L. Guerrieri), Univ. of Arizona Press, Tucson, p. 659-707.

80. Burt, D.M., 1994, Exchange vector diagrams for the compositions of alteration minerals: Alteration and Alteration Processes Associated with Ore-Forming Systems (ed. D.R. Lentz), Geol. Assoc. Canada, Short Course Notes, v. 11, p. 31-42.
81. Grauch, T.I., Lindahl, I., Evans, H.T., Burt, D.M., Fitzpatrick, J.J., Foord, E.E., Graff, P.-R., and Hysingjord, J., 1994, Høgtuvaite, a new beryllian member of the aenigmatite group from Norway, with new x-ray data on aenigmatite: *Canad. Mineralogist*, v. 32, p. 439-448.
82. Burt, D.M., 1994, Vector representation of some mineral compositions in the aenigmatite group, with special reference to høgtuvaite: *Canad. Mineralogist*, v. 32, p. 449-457.
83. Haggerty, S.E., Fung, A.T., and Burt, D.M., 1994, Apatite, phosphorus and titanium in eclogitic garnet from the upper mantle: *Geophys. Res. Letters*, v. 21, p. 1699-1702.
84. Webster, J.D., Burt, D.M., and Aguillon, R.A., 1996, Volatile and lithophile trace-element geochemistry of Mexican tin-rhyolite magmas deduced from melt inclusions: *Geochim. Cosmochim. Acta*, v. 60, p. 3267-3283.
85. Burt, D.M., 1998, Vector treatment of the compositions of some skarn minerals: Mineralized Intrusion-Related Skarn Systems (ed. D.R. Lentz), Mineral. Assoc. Canada Short Course Handbook, v. 26, p. 51-70.
86. Knauth, L.P., Klonowski, S., and Burt, D.M., 2000, Ideas about the surface runoff features on Mars (letter). *Science*, v. 290, p. 711-712.
87. Knauth, L.P. and Burt, D.M., 2002, Eutectic brines on Mars: Origin and possible relation to young seepage features: *Icarus*, v. 158, p. 267-271.
88. Burt, D.M. and Knauth, L.P., 2003, Electrically conducting, Ca-rich brines, rather than water, expected in the Martian subsurface: *J. Geophys. Res.* v. 108, doi: 10.1029/2002JE001862 (Issue E4, 25 April, GDS 7-1 to 7-6).
89. James, L.P., Park, M-E, and Burt, D.M., 2005, World skarn deposits: skarns of Asia outside of China and Japan: p. 1-6 and 2 Tables, in electronic folder "1 Asia_Korea" in electronic folder "Meinert" in CD-ROM suppl. appendix to: Meinert, L.D., Dipple, G. M., and Nicolescu, S., 2005, World skarn deposits: in Hedenquist, J.W., Thompson, J.F.H., Goldfarb, R.J., and Richards, J.P., eds., *Economic Geology 100th Anniv. Vol.*, Soc. Econ. Geol., Littleton, Colorado, USA, p. 299-336.
90. Knauth, L.P., Burt, D.M., and Wohletz, K.H., 2005, Impact origin of sediments at the Opportunity landing site on Mars: *Nature*, v. 438, p. 1123-1128.
91. Burt, D.M., Wohletz, K.H., and Knauth, L.P., 2006, Mars and mine dumps: *Eos*, v. 87, no. 49, p. 549, 552.
92. Garvie, L.A.J., Burt, D.M., and Buseck, P.R., 2008, Nanometer-scale complexity, growth, and diagenesis in desert varnish: *Geology*, v. 36, p. 215-218.
93. Burt, D.M., Knauth, L.P., Wohletz, K.H., and Sheridan, M.P., 2008, Surge deposit misidentification at Spor Mountain, Utah and elsewhere: A cautionary message for Mars: *J. Volcanology and Geothermal Research*, v. 177, p. 755-759.
94. Burt, D.M., M. Dumas, N. Springer, and D.A. Vaccari, 2013, Global phosphorus: Geological sources and demand-driven production, in Wyant, K.A., J.R. Corman, and J.J. Elser, eds., *Phosphorus, Food, and Our Future*, Oxford University Press, New York, NY, p. 40-63.
95. Burt, D.M. and Knauth, L.P., 2016, Terraforming ancient Mars: comment published as eLetter to Science, <http://science.sciencemag.org/content/350/6257/aac7575.e-letters/>.

D.M. Burt – Publications (abstracts and reviews – last 12 years only)

86. Burt, D.M., Knauth, L.P., and Wohletz, K.H., 2005, Origin of layered rocks, salts, and spherules at the Opportunity landing site on Mars: No flowing or standing water evident or required: *Lunar and Planetary Science*, v. 36, Abstr. #1527.
87. Burt, D.M., 2005, Using an inexpensive digital camera to photograph Mars-analog materials at the scale of the MER Microscopic Imager, and at other scales: *Lunar and Planetary Science*, v. 36, Abstr. #1705.
88. Burt, D.M., Knauth, L.P., and Wohletz, K.H., 2005, Impact-derived sedimentary rocks: How common on Mars? *Geol. Soc. Am., Abstracts with Programs*, v. 37, no. 7, p. 513, Paper 233-10.
89. Knauth, L.P., Burt, D.M., and Wohletz, K.H., 2006, Impact surge as the simplest of the proposed hypotheses for the origin of sediments at the Opportunity landing site on Mars: *Lunar and Planetary Science*, v. 37, Abstr. #1869.
90. Burt, D.M., Wohletz, K.H., and Sheridan, M.F., 2006, "Water-laid tuff" of the Utah desert and similar surge deposit misinterpretations: A possible lesson for Mars?: *Lunar and Planetary Science*, v. 37, Abstr. #2295.

91. Burt, D.M., 2006, Using an inexpensive digital camera to take Mars-analog photographs at near-infrared wavelengths: *Lunar and Planetary Science*, v. 37, Abstr. #2326.
92. Burt, D.M., Knauth, L.P., Wohletz, K.H., and Sheridan, M.F., 2006, History of surge deposit misidentification at Spor Mountain, Utah and elsewhere: A cautionary message for Mars: *Volcanic Flows and Falls: A Conference to Honor Professor Michael F. Sheridan*, Buffalo, NY, May 11-12 (Abstr. published on CD by SUNY-Buffalo).
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