Curriculum Vitae

Timothy L. Grove
Department of Earth, Atmospheric, and Planetary Sciences
Massachusetts Institute of Technology
Cambridge, MA 02139
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Education:

Institution	*Dates*	*Degree*
University of Colorado Boulder, Colorado	June 1971	B.A.
Harvard University Cambridge, Massachusetts	March 1975	A.M.
Harvard University Cambridge, Massachusetts	March 1976	Ph.D.

Thesis: "Structural Characterization of Natural Calcic Plagioclases"

Professional Experience:

Field Assistant – Mapping igneous and metamorphic rocks in N.W. Colorado, United States Geological Survey, June – Sept. l969.

Exploration Geologist – Mapping and sampling of prospects for molybdenum in S.W. Colorado, Phelps Dodge Corporation, June – Sept. 1971.

Teaching Assistant – Introductory petrology-mineralogy and crystal symmetry and x-ray diffraction courses, Harvard Univ., Sept. 1973 – Jan. 1974 and Sept. 1974 – Jan. 1975.

Research Assistant – Engaged in experimental petrology of lunar samples with A. E. Bence and D. H. Lindsley, State University of New York at Stony Brook, Sept. 1975 – Sept. 1979.

Visiting Professor – Division of Geological Sciences, California Institute of Technology, Jan.– April 1979.

Assistant Professor – Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology, July 1979 – June 1984.

Associate Professor – Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology, July 1984 – June 1991.

Professor – Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology, July 1991 – present.

Visiting Scientist – Department of Geological Sciences, University of Cape Town, November 1993 – June 1994.

Research Scientist – Department of Physics, University of Zimbabwe, Harare, April 1997 – March 2001.

Gastdozent (Visiting Professor) – Department of Earth Sciences ETH, Zürich – February 2002 – August 2002.

Guest professor – University of Lausanne, Lausanne, Switzerland – February 2010 – June 2010.

Associate Head of Department – Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology, July 2010 –

Cecil and Ida Green Professor of Geology, Massachusetts Institute of Technology, July 2013 – July 2016

Robert R. Shrock Professor of Earth and Planetary Sciences, Massachusetts Institute of Technology, July 2016 –

Professional Memberships:

American Geophysical Union
Sigma Xi
Geological Society of America
Geochemical Society
Mineralogical Society of America

Awards:

Warren O. Thompson Scholarship (1970 – 1971) Univ. of Colorado
Phi Beta Kappa
Rocky Mountain Association of Geologists Pick Award (1971)
Mineralogical Society of America – Fellow (1982)
Bowen Award (1993) VGP Section of the American Geophysical Union
American Geophysical Union Fellow (2001)
Original Member, Highly Cited Researchers, ISI/Thomson Scientific (2002)
Fellow, American Academy of Arts and Sciences (2008)
Geochemical Society Fellow (2012)
V. M. Goldschmidt Award, Geochemical Society (2014)
Member, National Academy of Sciences (2014)
Asteroid (9276) Timgrove (2014)
Docteur honoris causa, Universite de Lausanne (2015)
Doctor honoris causa, University of Liege (2016)

Professional Activities:

Associate Editor, Geophysical Research Letters, 1979 – 1982

MSA representative to Joint Technical Program Committee for Geol. Soc. Amer. national meeting 1982 – 1984

Co-convener and Associate Editor: Conference on Open Magmatic Systems, Taos, New Mexico, 1984

Member, Departmental Advisory Board, University of Colorado, Boulder, Colorado, 1985 – 1990

Member, NASA, SSPEX working group, 1985 – 1986

Member, editorial board of Contributions to Mineralogy and Petrology, 1985 – 1990

Member, NASA Lunar and Planetary Geology Review Panel, 1986 – 1988

Member, NASA Planetary Materials and Geochemistry Program, Program Management Working Group, 1987 – 1988

Member, NSERC Earth Sciences Major Instrumentation Review Panel, 1987 – 1988

Secretary of the Volcanology, Geochemistry and Petrology section, American Geophysical Union, 1988 – 1990

Member, U.S. Subcommittee for the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI), 1988 – 1991

Executive editor: Contributions to Mineralogy and Petrology, 1990 – present

Member, RIDGE (Ridge Interdisciplinary Global Experiments) Steering Committee, 1990 – 1993

Mineralogical Society of America, Member of Roebling Award Committee, 1992

Mineralogical Society of America, Member of MSA Award Committee, 1993

Member, National Science Foundation, Earth Sciences Review Panel for Instrumentation and Facilities, 1991 – 1994

Mineralogical Society of America, Councilor, 1994 – 1997

President-elect of the Volcanology, Geochemistry and Petrology section, American Geophysical Union, 1996 – 1998

President of the Volcanology, Geochemistry and Petrology section, American Geophysical Union, 1998 – 2000

Chair of the Meetings Committee of the American Geophysical Union, 2000 – 2004

Member, NASA Cosmochemistry Review Panel, 2000 – 2001

Member, National Science Foundation, Geochemistry and Petrology Review Panel, 2005 – 2006

President-elect of the American Geophysical Union, 2006 – 2008

Vice Chair, American Geophysical Union Development Board, 2006 – 2008

President of the American Geophysical Union, 2008 – 2010

Member, American Institute of Physics, Governing Board, 2006-2010

Past President of the American Geophysical Union, 2010 – 2012

Chair, American Geophysical Union Governance Committee, 2012 - 2014

Chair, American Geophysical Union Ethics Committee, 2012 - 2016

Member, NASA Cosmochemistry Review Panel, 2012 – 2013

Member, American Institute of Physics, Governing Board, 2012-2014

Member, NASA Curation and Analysis Planning Team for Extraterrestrial Materials, CAPTEM, 2012 – 2015

Member, NASA, Emerging Worlds Review Panel, 2014

Member, American Geophysical Union Development Board, 2015 – 2017

Chair, AGU Task Force on Privacy 2015 - 2016

MIT Institute-level service: (note, the MIT service items are only in rough/incomplete form)

Institute Safety Committee 1994 -1997

Committee on Curriculum (CoC) 2004 - 2007

Committee on the Undergraduate Program (CUP) 2010 – 2013

CUP chair 2011 – 2013

Innovation deficit committee 2014 – 2015

Task force on the future of the Libraries 2015 - 2016

MIT departmental-level service:

Chair, EAPS Undergraduate committee, Sept. 1994 – Jan. 2002

Chair, Woods Hole – MIT Marine Geology and Geophysics Joint Program Committee, Sept. 1996 –June 2002

Woods Hole – MIT Marine Geology and Geophysics Joint Program Committee member, Sept. 1990 – June 2010

Graduate Admissions committee, Chair Sept. 2002 – June 2009

Associate Department Head, Sept. 2010 – present

Chair, Woods Hole – MIT Marine Geology and Geophysics Joint Program Committee 2013 – 2016

Graduate student thesis supervision:

David C. Gerlach	Ph.D. June 1985, co-supervised with F. Frey
Rosamond J. Kinzler	M.S. June 1985
Linda T. Elkins	M.S. June 1987
Michael B. Baker	Ph.D. Jan 1988
Daniel R. Tormey	Ph.D. Feb 1989, co-supervised with F. Frey
Tanya H. Furman	Ph.D. Sept 1989, co-supervised with F. Frey
Allen K. Kennedy	Ph.D. Sept 1989, co-supervised with S. Hart
Karen S. Bartels	Ph.D. Oct 1990
Thomas W. Sisson	Ph.D. Feb 1991
Rosamond J. Kinzler	Ph.D. May 1991
Matthew J. Cordery	Ph.D. May 1991
Deborah A. Zervas	M.S. Sept 1991
Thomas Wagner	Ph.D. May 1995
Glenn A. Gaetani	Ph.D. May 1996
Ken Koga	Ph.D. Sept 1999, co-supervised with N. Shimizu
James A. Van Orman	Ph.D. Sept 2000

Stephen W. Parman	Ph.D. Jan 2001
Rebecca Saltzer	Ph.D. Feb 2002, co-supervised with R. van der Hilst
Linda Elkins Tanton	Ph.D. July 2002
Marc Hesse	M.S. Aug 2002
Steven Singletary	Ph.D. Jan 2004
Astri Kvassnes	Ph.D. June 2004, co-supervised with H. Dick
Anna Monders	M.S. June 2006
Jay Barr	Ph.D. Aug 2010
Michael Krawczynski	Ph.D. Aug 2011
Christy Till	Ph.D. Aug 2011
Benjamin Mandler	Ph.D. June 2016
Alexandra Andrews	Ph.D. June 2016
Stephanie Brown	4th year
Max Collinet	2nd year

Predoctoral visiting scholars

Jonathon D. Blundy	Sept. 1985 – Sept. 1987
Kennedy Memorial Trust visiting scholar	
Eva Ebert	March 2003 – Nov. 2003
Max Collinet	Sept. 2013 – Aug. 2014

Post-doctoral associates

Karin Ehlers	Sept. 1989 – Aug. 1990
Jesse Dann	Sept. 1996 – Aug. 2000
Astrid Holzheid	Feb. 1997 – Aug. 1999
Othmar Muentener	Mar. 1998 – Mar.1999
Steve Parman	Jan. 2001 – Aug. 2005
Etienne Médard	Sept. 2004 – Sept. 2007
Alex Miskovic	Oct. 2008 – Oct. 2009
Muriel Laubier	Jan. 2009 – June 2013
Anne Pommier	Jan. 2010 – Sept. 2011
Bernard Charlier	Oct. 2010 – Sept. 2012
Christy Till	Aug. 2011 – Dec. 2011

Publications:

1. Grove, T.L., Walker, D., Longhi, J., Stolper, E., Hays, J.F. (1973) Petrology of rock 12002 and origin of picritic basalts at Oceanus Procellarum. *Proc. Lunar Sci. Conf., 4th*, 995-1011.
2. Walker, D. J., Longhi, Grove, T.L., Stolper, E., Hays, J.F. (1973) Experimental petrology and origin of rocks from the Descartes Highlands. *Proc. Lunar Sci. Conf., 4th,* 1013-1032.
3. Walker, D., Grove, T.L., Longhi, J., Stolper, E., Hays, J.F. (1973) Origin of Lunar Feldspathic Rocks. *Earth Planet. Sci. Lett., 20,* 325-336.
4. Grove, T.L., and Hazen, R.M. (1974) Alkali feldspar unit-cell parameters at liquid nitrogen temperatures: Low-temperature limits of the displacive transformation *Amer. Mineral., 59,* 1327-1329.
5. Longhi, J., Walker, D., Grove, T.L., Stolper, E., Hays, J.F. (1974) The petrology of the Apollo 17 mare basalts. *Proc. Lunar Sci. Conf., 5th,* 447-469.

6. Walker, D., Longhi, J., Stolper, E., Grove, T.L., Hays, J.F. (1975) Origin of titaniferous lunar basalts. *Geochim. Cosmochim. Acta, 39,* 1219-1235.
7. Grove, T.L. (1976) Exsolution in metamorphic bytownite. In **Electron Microscopy in Mineralogy,** Wenk, H.R., ed., 266-270. Springer, New York.
8. T.L Grove (1977) A periodic antiphase structure model for the intermediate plagioclases (An_{33} to An_{75}). *Amer. Mineral., 62,* 932-941.
9. Grove, T.L. (1977) Structural characterization of labradorite-bytownite plagioclase from volcanic, plutonic and metamorphic environments. *Contrib. Mineral. Petrol., 64,* 273-302.
10. Grove, T.L., Bence, A.E. (1977) Experimental study of pyroxene-liquid interaction in quartz-normative basalt 15597. *Proc. Lunar Sci. Conf., 8th,* 1549-1579.
11. Grove, T.L., Walker, D. (1977) Cooling histories of Apollo 15 quartz-normative basalts. *Proc. Lunar Sci. Conf., 8th*, 1501-1520.
12. Schaeffer, O.A., Muller, H.W., Grove, T.L. (1977) Laser ^{39}Ar-^{40}Ar study of Apollo 17 basalts. *Proc. Lunar Sci. Conf., 8th,* 1489-1499.
13. Walker, D., Longhi, J., Lasaga, A.C., Stolper, E.M., Grove, T.L., Hays, J.F. (1977) Slowly cooled microgabbros 15555 and 15065. *Proc. Lunar Sci. Conf., 8th,* 1521-1547.
14. Bence, A.E., Grove, T.L., Scambos, T. (1977) Gabbros from Mare Crisium: An analysis of the LUNA 24 soil. *Geophys. Res. Lett., 4,* 493-496.
15. Grove, T.L., Vaniman, D.T. (1978) Experimental petrology of very low Ti (VLT) basalts. *Mare Crisium: The View from LUNA 24,* 445-471.
16. Bence, A.E., Grove, T.L. (1978) The Luna 24 highland component. *Mare Crisium: The View from LUNA 24,* 429-444.
17. Grove, T.L. (1978) Cooling histories of Lunar 24 very low Ti (VLT) ferrobasalts: An experimental study. *Proc. Lunar Planet. Sci. Conf., 9th,* 565-584.
18. Grove, T.L., Raudsepp, M. (1978) Effects of kinetics on the crystallization of quartz-normative basalt 15597: An experimental study. *Proc. Lunar Planet. Sci. Conf., 9th,* 585-599.
19. Bence, A.E., Baylis, D.M., Bender, J.F., Grove, T.L. (1979) Controls on the major and minor element chemistry of mid-ocean ridge basalts and glasses. Ewing Symposium, "Implications of Deep Drilling Results in the North Atlantic," 331-341.
20. Grove, T.L., Bence, A.E. (1979) Crystallization kinetics in a multiply saturated basalt magma: An experimental study of Luna 24 ferrobasalt. *Proc. Lunar Planet. Sci. Conf., 10th,* 439-478.
21. Lofgren, G.E., Grove, T.L., Brown, R.W., Smith, D.P. (1979) Comparison of dynamic crystallization techniques on Apollo 15 quartz normative basalts. *Proc. Lunar Planet. Sci. Conf., 10th,* 423-438.
22. Allen, F.M., Bence, A.E., Grove, T.L. (1979) Olivine vitrophyres in Apollo 14 breccia 14321: Samples of the high-Mg component of the lunar highlands. *Proc. Lunar Planet. Sci. Conf., 10th,* 695-712.
23. Bence, A.E., Grove, T.L., Papike, J.J. (1980) Basalts as probes of planetary interiors: constraints on the chemistry and mineralogy of their source regions, *Precambrian Research, 10,* 249-279.
24. Grove, T.L., Beaty, D.W. (1980) Classification, experimental petrology and possible volcanic histories of the Apollo 11 high-K basalts. *Proc. Lunar Planet. Sci. Conf., 11th,* 149-177.
25. Grove, T.L. (1981) Compositional variations among Apollo 15 green glass spheres. *Proc. Lunar Planet. Sci. Conf., 12th,* 935-948.
26. Grove, T.L. (1981) Use of FePt alloys to eliminate the iron loss problem in 1-atmosphere gas mixing experiments: Theoretical and practical considerations. *Contrib. Mineral. Petrol., 78,* 298-304.
27. Grove, T.L. (1982) Use of exsolution lamellae in lunar pyroxenes as cooling rate speedometers. *Amer. Mineral., 67,* 251-268.
28. Grove, T.L., Gerlach, D.C., Sando, T.W. (1982) Origin of calc-alkaline series lavas at Medicine Lake volcano by fractionation, assimilation and mixing. *Contrib. Mineral. Petrol., 80,* 160-182.

29. Gerlach, D.C., Grove, T.L. (1982) Petrology of Medicine Lake Highland Volcanics: Characterization of endmembers of magma mixing. *Contrib. Mineral. Petrol., 80,* 147-159.
30. Grove, T.L., Ferry, J.M., Spear, F.S. (1983) Phase transitions and decomposition relations in calcic plagioclase. *Amer. Mineral., 68,* 41-59.
31. Grove, T.L., Gerlach, D.C., Sando, T.W., Baker, M.B. (1983) Origin of calc-alkaline series lavas at Medicine Lake volcano by fractionation assimilation and mixing: corrections and clarifications. *Contrib. Mineral. Petrol., 82,* 407-408.
32. Grove, T.L., Baker, M.B. (1983) Effects of melt density on magma mixing in calc-alkaline series lavas. *Nature, 305,* 416-418.
33. Grove, T.L., Bryan, W.B. (1983) Fractionation of pyroxene-phyric MORB at low pressure: an experimental study. *Contrib. Mineral. Petrol., 84,* 293-309.
34. Grove, T.L., Baker, M.B. (1984) Phase equilibrium controls on the calc-alkaline vs. tholeiitic differentiation trends. *J. Geophys. Res., 89,* 3253-3274.
35. Grove, T.L., Baker, M.B., Kinzler, R.J. (1984) Coupled CaAl-NaSi diffusion in plagioclase feldspar: experiments and applications to cooling rate speedometry. *Geochim. Cosmochim. Acta, 48*, 2113-2121.
36. Baker, M.B., Grove, T.L. (1985) Kinetic controls on pyroxene nucleation and liquid lines of descent in a basaltic andesite. *Amer. Mineral., 70,* 279-287.
37. Kinzler, R.J., Grove, T.L. (1985) Crystallization differentiation of Archean komatiite lavas from Northeast Ontario: Phase equilibrium and kinetic studies. *Amer. Mineral., 70,* 40-51.
38. Grove, T.L., Ferry, J.M., Spear, F.S. (1986) Phase transition in calcic plagioclase: A correction and further discussion. *Amer. Mineral., 71,* 1049-1050.
39. Grove, T.L., Donnelly-Nolan, J. (1986) The evolution of young silicic lavas at Medicine Lake Volcano, California: Implications for the origin of compositional gaps in calc-alkaline lava series. *Contrib. Mineral. Petrol., 92,* 281-302.
40. Grove, T.L., Kinzler, R.J. (1986) Petrogenesis of Andesites. *Ann. Rev. Earth Planet. Sci., 14,* 417-454.
41. Hildreth, W., Grove, T.L., Dungan, M.A. (1986) Introduction to special issues on open magmatic systems. *J. Geophys. Res., 91,* 5887-5889.
42. Tormey, D.R., Grove, T.L., Bryan, W.B. (1987) Experimental petrology of normal MORB near the Kane Fracture Zone: 22°-25°N, mid-Atlantic ridge, *Contrib. Mineral. Petrol., 96,* 121-139.
43. Recca, S.I., Lange, D.E., Grove, T.L. (1987) Minquant I: A quantitative analysis schedule for Tracor Northern Task5. San Francisco Press, Inc., San Francisco, CA 94101-6800.
44. Grove, T.L., Kinzler, R.J., Baker, M.B., Donnelly-Nolan, J., Lesher, C.E. (1988) Assimilation of granite by basaltic magma at Burnt Lava flow, Medicine Lake volcano, northern California: Decoupling of heat and mass transfer. *Contrib. Mineral. Petrol., 99,* 320-343.
45. Nielsen, R.L., Davidson, P.M., Grove, T.L. (1988) Pyroxene-melt equilibria: An updated model. *Contrib. Min. Petrol., 100,* 361-373.
46. Juster, T.C., Grove, T.L., Perfit, M.R. (1989) Experimental constraints on the generation of FeTi basalts, andesites and rhyodacites at the Galapagos Spreading Center, 85°W and 95°W. *J. Geophys. Res., 94,* 9521-9274.
47. Grove, T.L., Juster, T.C. (1989) Experimental investigations of low-Ca pyroxene stability and olivine-pyroxene-liquid equilibria at 1-atm in natural basaltic and andesitic liquids. *Contrib. Mineral. Petrol., 103,* 287-305.
48. Komor, S.C., Grove, T.L. (1990) Abyssal peridotites from ODP site 670A (21°10'N, 45°02'W): Residues of mantle melting exposed in a zero offset transform. In *Proceeding of the Ocean Drilling Program Legs 106/109, Part B,* Bryan, W.B., Juteau, T., et al., 85-102.
49. Grove, T.L. (1990) Cooling histories of lavas from Serocki Volcano. In *Proceeding of the Ocean Drilling Program Legs 106/109, Part B,* Bryan, W.B., Juteau, T., et al., 3-8.

50. Grove, T.L., Kinzler, R.J., Bryan, W.B. (1990) Natural and experimental phase relations of lavas from Serocki Volcano. In *Proceeding of the Ocean Drilling Program Legs 106/109 Part B,* Bryan W.B., Juteau, T., et al., 9-17.
51. Kinzler, R.J., Grove, T.L., Recca, S.I. (1990) An experimental study on the effect of melt composition on the partitioning of nickel between olivine and silicate melt. *Geochim. Cosmochim. Acta, 54,* 1255-1265.
52. Elkins, L.T., Grove, T.L. (1990) Ternary feldspar experiments and thermodynamic models. *Amer. Mineral., 75,* 544-559.
53. Kennedy, A.K., Grove, T.L., Johnson, R.W. (1990) Experimental and major element constraints on the evolution of lavas from Lihir Island, Papua New Guinea. *Contrib. Mineral. Petrol., 104,* 722-734.
54. Donnelly-Nolan, J.M., Champion, D.E., Miller, C.D., Grove, T.L., Trimble, D.A. (1990). Post-11,000-year volcanism at Medicine Lake Volcano, Northern California cascade range. *J. Geophys. Res., 95,* 19693-19704.
55. Bartels, K.S., Grove, T.L. (1991) High-pressure experiments on magnesian eucrite magmas: Constraints on magmatic processes in the eucrite parent body. *Proc. Lunar Planet. Sci. Conf., 21st,* 351-365.
56. Bartels, K.S., Kinzler, R.J., Grove, T.L. (1991) High pressure phase relations of a near primary high alumina basalt from Medicine Lake Highland, N. California. *Contrib. Mineral. Petrol., 108,* 253-270.
57. Baker, M.B., Grove, T.L., Kinzler, R.J., Donnelly-Nolan, J.M., Wandless, G.A. (1991). Origin of compositional zonation (high alumina basalt-basaltic andesite) in the Giant Crater lava field, Medicine Lake volcano, northern California. *J. Geophys. Res., 96,* 21819-21842.
58. Donnelly-Nolan, J.M., Champion, D.E., Grove, T.L., Baker, M.B., Taggart, J.E., Jr., Bruggman, P.E. (1991) The Giant Crater lava field: Geology and geochemistry of a compositionally zoned, high-alumina basalt to basaltic andesite eruption at Medicine Lake volcano, California. *J. Geophys. Res., 96,* 21843-21863.
59. Grove, T.L., Bartels, K.S. (1992) The relation between diogenite cumulates and eucrite magmas. *Proc. Lunar Planet. Sci. Conf., 22nd,* 437-435.
60. Kinzler, R.J., Grove, T.L. (1992) Primary magmas of mid-ocean ridge basalts, I: Experiments and methods. *J. Geophys. Res., 97,* 6885-6906.
61. Kinzler, R.J., Grove, T.L. (1992) Primary magmas of mid-ocean ridge basalts, 2: Applications. *J. Geophys. Res., 97,* 6907-6926.
62. Ehlers, K.E., Sisson, T.W., Recca, S.I., Grove, T.L. (1992) The effect of oxygen fugacity on the partitioning of nickel and cobalt between olivine, silicate melt and metal. *Geochim. Cosmochim. Acta, 56,* 3733-3743.
63. Sisson, T.W., Grove, T.L. (1993) Experimental investigations of the role of H_2O in calc-alkaline differentiation and subduction zone magmatism. *Contrib. Mineral. Petrol., 113,* 143-166.
64. Sisson, T.W., Grove, T.L. (1993) Temperatures and H_2O contents of low MgO high-alumina basalts. *Contrib. Mineral. Petrol., 113,* 167-184.
65. Grove, T.L., Kinzler, R.J., Bryan, W.B. (1993) Fractionation of mid-ocean ridge basalt (MORB). In **Mantle Flow and Melt Migration at Mid-Ocean Ridges,** Phipps-Morgan, J., et al., eds., American Geophysical Monograph 71, 281-311.
66. Grove, T.L. (1993) Corrections to expressions for calculating mineral components in "Origin of Calc-Alkaline Series Lavas at Medicine Lake Volcano by Fractionation, Assimilation and Mixing" and "Experimental Petrology of normal MORB near the Kane Fracture Zone: 22^{o}-25^{o}N, mid-Atlantic ridge". *Contrib. Mineral. Petrol., 114,* 422-424.
67. Gaetani, G.A., Grove, T.L., Bryan, W.B. (1993) The influence of water in the petrogenesis of subduction-related igneous rocks. *Nature, 365,* 332-334.

68. Kinzler, R.J., Grove, T.L. (1993) Corrections, and further discussion of the Primary Magmas of Mid-Ocean Ridge Basalts, 1 and 2. *J. Geophys. Res., 98,* 22339-22347.
69. Walker, D., Grove, T.L. (1993) Ureilite Smelting. *Meteoritics, 28,* 629-636.
70. Gaetani, G.A., Grove, T.L., Bryan, W.B. (1994) Experimental phase relations of basaltic andesite from Hole 839B under hydrous and anhydrous conditions. *Proceedings of the Ocean Drilling Program, Scientific Results, 135,* 557-563.
71. Bryan, W.B., Ewart, A., Grove, T.L., Pearce, T.H. (1994) Natural phase equilibria and petrologic models: Lau basin sites 834, 836, and 839. *Proceedings of the Ocean Drilling Program, Scientific Results, 135,* 487-503.
72. Baker, M.B., Grove, T.L., Price, R. (1994) Primitive basalts and andesites from the Mt. Shasta region, N. California: Products of varying melt fraction and water content. *Contrib. Mineral. Petrol., 118,* 111-129.
73. Hauri, E.H., Wagner, T.P., Grove, T.L. (1994) Experimental and natural partitioning of Th, U, Pb and other trace elements between garnet, clinopyroxene and basaltic melts. *Chem. Geol., 117*, 149-166.
74. Gaetani, G.A., Grove, T.L. (1995) Partitioning of rare-earth elements between clinopyroxene and silicate melt: Crystal-chemical controls. *Geochim Cosmochim Acta*, *59,* 1951-1962.
75. Wagner, T.P., Donnelly-Nolan, J.M., Grove, T.L. (1995) Evidence of hydrous differentiation and crystal accumulation in the low-MgO, high Al_2O_3 Lake Basalt from Medicine Lake Volcano, California. *Contrib. Mineral. Petrol., 121,* 201-216.
76. Yang, H.-J., Kinzler, R.J., Grove, T.L. (1996) Experimental and models of anhydrous basaltic olivine-plagioclase-augite saturated melts from 0.001 to 10 kbar. *Contrib. Mineral. Petrol.*, *124,* 1-18.
77. Sisson, T.W., Grove, T.L., Coleman, D.S. (1996) Hornblende gabbro sill complex at Onion Valley, California, and a mixing origin for the Sierra Nevada batholith. *Contrib. Mineral. Petrol., 126,* 81-108, doi:10.1007/s004100050237.
78. Carlson, R.W., Grove, T.L., de Wit, M.J., Gurney, J.J. (1996) Program to study crust and mantle of the Archean craton in southern Africa. *EOS, Trans. AGU*, *77*, 273-277.
79. Grove, T.L., de Wit, M., Dann, J.C. (1996) Komatiites from the Komati type section, Barberton South Africa. In **Tectonic Evolution of Greenstone Belts,** de Wit, MJ., Ashwal, L.D., eds., Oxford Univ. Press, 438-453.
80. Wagner, T.P., Grove, T.L. (1997) Experimental constraints on the origin of lunar high-Ti ultramafic glasses. *Geochim Cosmochim Acta, 61,* 1315-1327.
81. Grove, T.L., Donnelly-Nolan, J., Housh, T. (1997) Magmatic processes that generated the rhyolite of Glass Mountain, Medicine Lake Volcano, N. California. *Contrib. Mineral. Petrol., 127,* 205-223.
82. Gaetani, G.A., Grove, T.L. (1997) Partitioning of moderately siderophile elements among olivine, silicate melt and sulfide melt: Constraints on core formation in Earth and Mars. *Geochim. Cosmochim. Acta, 61,* 1829-1846.
83. Parman, S.W., Dann, J.C., Grove, T.L., de Wit, M.J. (1997) Emplacement conditions of komatiite magmas from the 3.49 Ga Komati formation, Barberton Greenstone Belt, South Africa. *Earth Planet. Sci. Lett., 150,* 303-323.
84. Wagner, T.P., Grove, T.L. (1998) Melt/harzburgite reaction in the petrogenesis of tholeiitic magma from Kilauea volcano, Hawaii. *Contrib. Mineral. Petrol.*, *131*, 1-12, doi:10.1007/s004100050374.
85. Wagner, T.P., Clague, D.A., Hauri, E.H., Grove, T.L. (1998) Trace element abundances of high-MgO glasses from Kilauea, Mauna Loa and Haleakala volcanoes, Hawaii. *Contrib. Mineral. Petrol., 131,* 13-22, doi:10.1007/s004100050375.
86. Gaetani, G.A., Grove, T.L. (1998) The influence of water on melting of mantle peridotite. *Contrib. Mineral. Petrol., 131*, 323-346, doi:10.1007/s004100050396.
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"Vote Now on Governance Changes"

Eos, Vol. 90, No. 48, 1 December 2009
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"Member-Approved Governance Changes: An Important Watershed in AGU's History"

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"Upcoming Leadership Elections"

Field trips and Short Courses

University of Milano, Milano, Italy Short course

June 7 – 12, 2009, "Magmatic processes: An integrated approach to decoding the igneous rock record"

5th Intl. Lherzolite Conference, Mt. Shasta City, CA

A field trip to Mt. Shasta and vicinity, northern California, USA prepared for the 5th International Orogenic Lherzolite Conference, Spt. 24, 2008, T.L. Grove, M.J. Krawczynski, C.B. Till, J.A. Barr. 104 participants.

University of Lausanne, Lausanne, Switzerland

Short course on igneous petrogenesis: 7 – 10 April 2010, University of Lausanne, Lausanne, Switzerland

Swiss Pro-Doc Field Trip, California, Sierra Nevada and south Cascades

August 31, 2010 – September 11, 2010, C.B. Till, T.L. Grove, T.W. Sisson, Field Trip to the Sierra Nevada and northern California Cascades for the Swiss National Science Foundation Pro-doc program. 25 participants.

MIT EAPS semi-annual Geology field trip

August 22 – 30, 2015, T.L. Grove, Field trip to the southern Sierra Nevada and northern California Cascades, MIT EAPS semi-annual Geology field trip. 15 participants.