

Senior Scientist
Dept. of Geology and Geophysics
Woods Hole Oceanographic Institution
Woods Hole, MA 02543
(508) 289 2956; email: peterk@whoi.edu
Soc. Sec.: 221-38-4944

Born in Wilmington Delaware, on Feb. 15, 1956. Married Rachel L. Cox on Sept. 6, 1987.
Two daughters: Sara C. Kelemen, born Jan. 21, 1994. Lucille B. Kelemen, born Dec. 2, 1997.

Education

- 1987 Ph.D., University of Washington. Thesis advisor: Dr. Bernard Evans. Assimilation of Ultramafic Rock in Fractionating Magma.
- 1985 M.Sc., University of Washington. Research Project advisor: Dr. Bernard Evans. Geology of the Big Jim Complex, Washington Cascades.
- 1980 A.B. cum laude, with high distinction in Earth Sciences, Dartmouth College.

Academic Employment

- 2001-05 Charles Francis Adams Chair, Woods Hole Oceanographic Institution
- 2000-present Senior Scientist, Woods Hole Oceanographic Institution
- 1997-00 Tenured Associate Scientist, Woods Hole Oceanographic Institution
- 1994-97 Associate Scientist, Woods Hole Oceanographic Institution
- 1993 Visiting Scientist, CNRS Centre Géologique et Géophysique, Montpellier, France
- 1990-94 Assistant Scientist, Woods Hole Oceanographic Institution
- 1990 Postdoctoral Investigator, Woods Hole Oceanographic Institution
- 1990 Visiting Assistant Professor of Earth Sciences, Dartmouth College
- 1988-90 Postdoctoral Scholar, Woods Hole Oceanographic Institution
- 1988 Postdoctoral Research Associate, University of Washington
- 1986-87 Research Assistant, University of Washington
- 1982-86 NSF Graduate Fellow, University of Washington
- 1981-82 Teaching Assistant, University of Washington. Also 82, 84, 85
- 1980-81 Reynolds Fellowship for Foreign Study, Dartmouth College, shared with Mark Sonnenfeld (Dartmouth '80): geologic mapping, NW Himalaya, India

Professional Employment

- 1980-92 Founding partner, Dihedral Exploration, mineral exploration consultants. Contracts with: Bull Moose Resources 81; Falconbridge Ltd. 83; Klukwan Iron Ore 83; Noranda (Alaska) 84; Long Lac Mineral Exploration (US) 85; Cominco (Alaska) 86, 87, 88; Geddes Resources 87; Platinova Resources Ltd. 88-91. Mapping and sampling of potential ore deposits in Alaska, British Columbia, and Greenland.
- 1978 Physical Science Aide, U.S. Army Cold Regions Research and Engineering Laboratory (CRREL), Hanover, NH. Modeling of climate, north slope of Alaska.

Education

Woods Hole doctoral advisor to: Einat Aharonov (WHOI/MIT; 1995)
 Jun Korenaga (WHOI/MIT; 1999) Mike Braun (WHOI/MIT; 2003)

Generals committee/PhD committee member for:

Mark Behn (WHOI/MIT; 2001) Robyn Kelly (WHOI/MIT; 2003)
 Ken Koga (WHOI/MIT; 1998) Mathieu Benoit (Toulouse; 1997)
 Eichi Takazawa (MIT; 1996) Dan Lizaralde (WHOI/MIT; 1996)
 Carlos Garrido (Granada; 1995) Margarite Godard (Montpellier; 1993)
 Malika Remaidi (Montpellier; 1993) Jon Snow (WHOI/MIT; 1993)

Research collaboration:

Stefan Bernstein (København; 1994) Jon Arnason (Stanford; 1995)

Postdocs supervised

Carlos Garrido (1995-98) Matthew Jull (1998-99)
 Othmar Muentener (1998-99) Karen Hanghøj (1999-2000)

Education at WHOI

1995-present Teaching WHOI/MIT Joint Graduate Program course on Igneous Processes at Oceanic Plate Margins, (WHOI/MIT 12.701), Fall Semester every other year
 1994-96 WHOI Dept. of Geology & Geophysics representative, Summer Student Fellowship Committee
 1992-present Co-Convenor, WHOI Geochemistry Seminar
 1992 led field trip to Josephine ophiolite for WHOI Keck Geodynamics Seminar
 1992 designed education brochure for WHOI solid earth geochemistry group
 1989-present WHOI Keck Geodynamics Seminar participant and, recently, planning committee

Invited Presentations

Special symposia

2001 Fall AGU Special Session on Processes in the Subduction Factory
 2001 GSA Pardee Keynote Symposium on Melt in the Crust and Upper Mantle
 2001 Symposium on the Iceland Plume and Crust
 2000 Fall AGU Special Session on Aleutian Arc Volcanic and Related Processes
 2000 RIDGE 2000 Integrated Studies Workshop
 2000 2nd RIDGE Workshop: Mantle Flow and Melt Production at Mid-Ocean Ridges
 2000 Symposium in Honor of Nobumichi Shimizu, Woods Hole
 1999 Workshop on Deep Subduction, Verbania, Italy
 1999 Goldschmidt Conference Session on Melt Transport
 1999 Goldschmidt Conference Session on Layered Intrusions
 1999 Spring AGU Special Session in Honor of Tony Morse
 1998 Fall AGU Special Session on Melting and Melt Extraction
 1998 Penrose Conference on Ophiolites and Oceanic Crust
 1998 Bostok Conference on Layered Intrusions, Stillwater, Montana
 1998 International Kimberlite Conference
 1998 1998 Spring AGU Special Session on Results from the MELT Experiment
 1997 1997 Fall AGU Special Session on Origin of Cratonic Mantle
 1997 1997 Fall AGU Special Session on 4D Architecture of Oceanic Lithosphere
 1997 RIDGE Workshop on Mantle Flow and Melt Production Beneath Mid-Ocean Ridges
 1997 Gordon Research Conference on Rock Deformation
 1996 Royal Society of London Discussion Meeting: Mid-Ocean Ridges
 1996 Workshop on Oceanic Lithosphere and Scientific Drilling into the 21st Century
 1995 2nd International Workshop on Orogenic Lherzolites & Mantle Processes, Spain
 1995 Symposium in Honor of Stanley R. Hart, Woods Hole
 1994 1994 VM Goldschmidt Conference, Edinburgh
 1992 GSA Penrose: Origin and Emplacement of Low K Silicic .. Rocks in Subduction Zones
 1991 Upper Mantle Processes Conference, Woods Hole

Other invited talks*Origin of the cratonic upper mantle*

Caltech, 10/98

University of Chicago, 11/98

Lamont-Doherty, 11/98

University of Copenhagen, 5/99

Origin of thick, high-velocity igneous crust along the U.S. East Coast & Greenland margins

Lamont-Doherty, 11/98

University of Copenhagen, 4/01

Major element heterogeneity in the mantle source of the North Atlantic Igneous Province

University of Copenhagen, 4/01

Lamont-Doherty, 3/01

Convective instability of basaltic lower crust in arcs and continents

University of Copenhagen, 4/01

Lamont-Doherty, 3/01

Chemical and physical processes of melt extraction from the mantle

University of Washington, 12/96

University of Copenhagen, 3/96, 5/99

University of Chicago, 3/98

University of Illinois, 4/99

Harvard University, 2/00

Scripps Inst. Oceanography, 2/01

Caltech, 5/97

Lamont-Doherty, 11/98

Yale, 12/99

Boston University, 3/00

Univ. Massachusetts, 3/01

Focussed flow of magmas in porous conduits in the upper mantle

Woods Hole Oceanographic Institution, 3/88

Université de Montpellier, 7/93

Caltech, 12/94

Princeton University, 10/94

Brown University, 2/95

Igneous accretion of the lower crust beneath oceanic spreading ridges

Lamont-Doherty, 11/98

University of Chicago, 3/98

Univ of Copenhagen, 3/96, 5/99

Origin of the continental crust and primitive arc andesites

Université de Montpellier, 10/93

Union College, Schenectady NY, 5/94

Brown University, 2/95

Carnegie Institution (DTM), 6/93

Harvard University, 3/00

Lamont-Doherty, 3/01

Ecole Normale Supérieure, Lyon, 10/93

Princeton University, 10/94

University of Washington, 12/96

Boston University 3/00

Scripps Inst. Oceanography, 2/01

Univ. of Alaska, 3/01

Focussed melt flow and localized deformation in the upper mantle

Université de Montpellier, 7/93

Light rare earth element enriched Cpx in harzburgite from 15°05' N on the Mid-Atlantic Ridge

Université de Montpellier, 7/93

Assimilation of Peridotite in Fractionating Basaltic Magma:

University of Michigan, 3/88

Woods Hole Oceanographic Institution, 3/88

The Johns Hopkins University, 5/88

Lamont-Doherty Geol. Observatory, 2/89

University of Bern, Switzerland, 4/89

ETH-Zurich, Switzerland, 4/89

Univ. California, Santa Barbara, 10/91

McGill University, 5/89

University of California, Davis 2/90

University of Oregon, 3/90

Harvard University, 3/90

State University of New York, Albany, 5/90

Duke University, Durham NC, 11/90

Cornell University, 1/92

Carnegie Institution, Geophysical Lab, 3/92

Assimilation of Pelitic Xenoliths in Fractionating Basaltic Magma:

Lamont-Doherty Geophysical Observatory, 2/89

Editorial

- 2001 Editor, Current Research on the Oman Ophiolite, special volume G-cubed
 2000- present Associate Editor, G-cubed
 1999-2000 Editor, Special Lherzolite Volume of Journal of Petrology
 1996-1999 Editorial Board, Geology
 1995-96 Editor, Special Lherzolite Volume of Chemical Geology

Meeting Organizer

- 2001 Co-Convenor, GSA Special Session in Honor of Bernard W. Evans
 2000-2001 Scientific Organizing Committee, International Conference: Geology of Oman
 2000 Co-Convenor, Fall AGU Special Session on Results of MODE 98 Cruises
 1999 Co-Convenor, 3rd Workshop on Orogenic Lherzolites and Mantle Processes, Italy
 1999 Co-Convenor, Goldschmidt Conference Session on Continental Genesis
 1999 Co-Convenor, Spring AGU, Melt Migration in the Mantle and Lower Crust
 1998 Co-Convenor, RIDGE Winter School on the Oman Ophiolite
 1997 Co-Convenor, Fall AGU Special Session on Origin of Cratonic Mantle
 1995 Co-Convenor, 2nd Workshop on Orogenic Lherzolites & Mantle Processes, Spain

Short Course Participant

- 2000 MARGINS Theoretical & Experimental Institute: Subduction [Processes]
 2000 2nd RIDGE Workshop on Mantle Flow & Melt Generation Beneath Mid-Ocean Ridges
 1997 International Workshop on Continental Roots, Harvard
 1995 RIDGE Theoretical Institute on Faulting and Magmatism at Mid-Ocean Ridges
 1992 RIDGE Theoretical Institute on Hydrothermal and Magma Chamber Processes at Mid-Ocean Ridges
 1990 Mineralogical Society of America (MSA) Short Course: Modern Methods of Igneous Petrology - Understanding Magmatic Processes
 1989 MSA Short Course: Geochemistry and Mineralogy of Rare Earth Elements
 1989 Geological Society of America (GSA) Short Course on Fission Track Geochronology
 1987 MSA Short Course: Thermodynamic Modeling of Geological Materials - Minerals, Fluids and Melts
 1982 MSA Short Course: Characterization of Metamorphism through Mineral Equilibria

Panel Memberships and Planning Workshops

- 2001 Bucher Medal Committee, AGU
 2001- NSF Marine Geology and Geophysics Panel
 2001 Session chair, MARGINS Subduction Theoretical Institute
 2000 Keynote speaker, RIDGE 2000 Integrated Studies Workshop
 1999 NSF OCE Decadal Planning Meetings (Working Group 6, Solid Earth)
 1999 COMPLEX Meeting, Vancouver, BC, planning Int'l Ocean Drilling Program
 1998 Subduction Factory Workshop, NSF MARGINS Initiative
 1998- 2000 Member, Architecture of the Oceanic Lithosphere Program Planning Group, ODP
 1997- Member, InterRidge Working Group on 4D Architecture of Oceanic Lithosphere
 1996 Invited participant, JOI/CORE Workshop on the Future of Marine Geosciences
 1996 Keynote speaker, ODP-INTERIDGE-IAVCEI Workshop on the Oceanic Lithosphere and Scientific Drilling into the 21st Century
 1994 RIDGE Design Workshop for Experimental Approaches to Ridge Segment Structure and Dynamics (RISES)
 1993 JOI Workshop on Magmatism and Mass Flux at Continental Margins
 1990 JOI/USSAC Workshop on Large Igneous Provinces
 1990 ONR Workshop on the Physical Properties of Volcanic Seafloor
 1989 JOI/USSAC Workshop on Drilling the Oceanic Lower Crust and Mantle

Grants and Awards

- 2002-04 OCE-0137327, "Collaborative Research: Geochemical Consequences of Melt Channeling: Exploring a New Class of Models for Geochemical Variability", M. Spiegelman (Lamont) and P. Kelemen
- 2001-05 Charles Francis Adams Chair, Woods Hole Oceanographic Institution
- 2001-03 OCE-0118572, "Detailed Study of Focused Melt Transport in the Upper Mantle Section of the Oman Ophiolite", P. Kelemen and G. Hirth
- 2001-03 EAR-0087706, Geophysics Program, "Tectonic Consequences of Lower Crustal Convective Instability", M. Jull and P. Kelemen
- 2000-04 EAR-9910899: Continental Dynamics Program, "Constraints on the Genesis of Continental Crust via Arc Magmatism: Geology, Geochemistry, Structure and Physical Properties of the Talkeetna Arc Crustal Section, South Central Alaska", Peter B. Kelemen, primary PI; Susan DeBari, Nikolas I. Christensen, Terry Pavlis, Robert G. Coleman, Stanley R. Hart, Greg Hirth, Bradley R. Hacker, and James Mattinson, co-PI's
- 1999-01 OCE-9819666: "Melt extraction and crustal accretion at mid-ocean ridges: Continued study of the mantle and lower crust in the Oman ophiolite", Kelemen PI.
- 1999-01 Mellon Independent Study Award (WHOI), "Thermodynamics of Fluid Flow in the Earth ", Peter Kelemen
- 1999-00 EAR-9814632: "The genesis of ultra-depleted mantle peridotites in continental upper mantle", Peter Kelemen, NSF Petrol. & Geochem.
- 1998-00 OCE-9731136: "ODP Site Survey via Shinkai 6500 submersible and geophysical observations: JAMSTEC/WHOI expedition to the Mid-Atlantic Ridge from 14° to 16°N, Peter Kelemen, NSF Ocean Drilling Program
- 1997-99 OCE-9711170: "Constraints on the accretion of lower oceanic crust: A quantitative textural and geochemical study of gabbros from the Oman ophiolite and mid-ocean ridges", Peter Kelemen & Greg Hirth, NSF Marine Geol. & Geophys.
- 1996-99 OCE-9530307, "Causes and consequences of flow organization during melt transport", PI: Marc Spiegelman; WHOI subcontract PI: Peter Kelemen, NSF Marine Geol. & Geophys.
- 1996-97 Mellon Independent Study Award (WHOI), "Development of low-altitude, aerial photo mosaic technique and measurement of size-frequency distribution of melt flow channels in the upper mantle", Peter Kelemen & Greg Hirth
- 1996-97 EAR-9419240, "Regional variability in primitive Aleutian magmas and implications for processes in the mantle wedge: ... an ion microprobe and isotopic study", Gene Yogodzinski & Peter B. Kelemen, NSF Petrol. & Geochem.
- 1996-98 OCE-9416631, "Hot spot influence on rifted margin and oceanic crustal structure: An OBS/MCS experiment off SE Greenland", W. Steven Holbrook, Robert Detrick, & Peter Kelemen, NSF Marine Geol. & Geophys.
- 1995-98 OCE-9416616, "Melt extraction and crustal accretion at mid-ocean ridges: Collaborative study of the mantle and lower crust in the Oman ophiolite", Peter Kelemen & Nobu Shimizu, NSF Marine Geol. & Geophys. (RIDGE Initiative)
- 1995-97 EAR-9418228, "Mapping of textural, modal and compositional variations in the shallow mantle: Implications for the dynamics of melt flow and segregation", Peter Kelemen, NSF Petrol. & Geochem.

grants & awards, continued

- 1994 INT-9313822, "Integrated studies of oceanic spreading centers of the Oman ophiolite", Nobu Shimizu & Peter Kelemen, NSF International Programs grant for cooperative study of the Oman ophiolite, with G. Wasserburg (Caltech), and A. Nicolas & F. Boudier (CNRS/Montpellier).
- 1994-97 OCE-9314013 "Fluid flow in partially soluble porous media: Experimental and theoretical study of melt extraction from the mantle beneath mid-ocean ridges", Peter Kelemen & J.A. Whitehead, NSF Marine Geol. & Geophys.(RIDGE Initiative)
- 1993-99 OCE-9305508 and EAR-9628749 "Support of a regional ion-microprobe facility at Woods Hole Oceanographic Institution", Kelemen, Shimizu, Layne, NSF Mellon Independent Study Award (WHOI), "Evolution of volcanic rifted continental margins"; W. Steven Holbrook & Peter Kelemen
- 1992-93 OCE-9217556 "Melting and Melt Migration beneath the Mid-Atlantic Ridge at 15°05' N", Henry Dick & Peter Kelemen, NSF Marine Geology & Geophysics (RIDGE Initiative?)
- 1991-93 EAR-9018482, "Parental Magmas and Magmatic Fluids of the Lilloise Intrusion, East Greenland, and their Possible Relation to the Iceland Hotspot", Peter Kelemen & Mark Kurz, NSF Petrology & Geochemistry Program
- 1990-92 Mellon Independent Study Award (WHOI), "Experimental investigation of the effects of H₂O on phase equilibria and trace element partitioning in the upper mantle", Peter Kelemen
- 1990-93 EAR-9005306, "Field and Laboratory Study of Discordant Dunite in Alpine Peridotite: Melt-Rock Interaction During Magma Transport in the Shallow Mantle", Peter Kelemen & Henry Dick, NSF Petrology & Geochemistry Program
- 1986-88 Wrote proposal for NSF EAR-8600534, "Assimilation of ultramafic rock in fractionating magma", Mark Ghiorso & Bernard Evans, NSF Petrology & Geochemistry
- 1986-87 Achievement Rewards for College Scientists, dissertation support grant.
- 1985-86 David A. Johnston Memorial Fellowship, Dept. of Geological Sciences, University of Washington.
- 1983-84 Chevron Scholarship.
- 1983 GSA Penrose Grant for geologic field work: Outstanding Mention.
- 1983 Sigma-Xi Grant-in-Aid for geologic field work.
- 1982-85 University of Washington Department of Geological Sciences Corporation Fund Grants, '82, '83, '85.
- 1979 Academic citation for excellence in field geology, Dartmouth College.
- 1977 Explorer's Club of North America Grant: Oxygen isotope fractionation as a function of altitude, Cordillera Blanca, Peru.
- 1975-76 Rufus Choate Scholar, Dartmouth College.
- 1974 National Merit Scholar honorable mention.

Mountaineering

- 1990 American Lahaul Himalaya Expedition, India
- 1988 American Kulu Himalaya Expedition, India
- 1984 American Gasherbrum IV Expedition, Karakorum Range, Pakistan
- 1976-77 President, Dartmouth Mountaineering Club
- 1977 Leader, Dartmouth Mountaineering Club Expedition, Cordillera Blanca, Peru
- 1976 Dartmouth Mountaineering Club Expedition, Cordillera Blanca, Peru
- 1975-78 Senior Rock Climbing Instructor, Dartmouth College Phys. Ed. Program

Scientific Expeditions and Geological Field Work

- 2001 Oman ophiolite, Jan. (3 weeks)
Talkeetna arc section, S Central Alaska, July (4 weeks)
- 2000 Blossville Coast, East Greenland, Aug. (3 weeks)
Talkeetna arc section, S Central Alaska, July (3 weeks)
Oman ophiolite, Jan. (3 weeks)
- 1999 Oman ophiolite, Feb. (3 weeks)
- 1998 Co-Chief Scientist, SHINKAI 6500 submersible expedition to the Mid-Atlantic Ridge at 15°N, onboard R/V Yokosuka, with Co-Chief Scientist Takeshi Matsumoto of JAMSTEC
Oman ophiolite, Feb.-Mar. (5 wks)
- 1997 Oman ophiolite, Feb. (3 wks)
- 1996 Josephine ophiolite, Oregon, Oct. (1 wk)
Ingalls ophiolite, Washington, Sept. (3 wks)
East Greenland onshore/offshore seismic experiment (SIGMA), Aug.-Sept. (4 wks)
Iceland north rift zone, field trip with D. McKenzie & K. Gronvold, Aug. (1 wk)
Oman ophiolite, Dec. '95-Feb. (5 wks)
- 1995 Josephine ophiolite, Oregon, Sept. (3 wks)
Beni Boussera peridotite massif, Morocco, field trip with J. Kornprobst (1 wk)
Danish Lithosphere Centre Expedition, East Greenland Tertiary Igneous Province, July-Aug. (4 wks)
Ronda peridotite massif, Spain, field trip with J.-L. Bodinier & C. Garrido, May (1 wk)
Oman ophiolite, Jan. (3 wks)
- 1994 WHOI/JAMSTEC submersible expedition to Kane Fracture Zone, Mid-Atlantic Ridge (WMARK Leg of MODE 94), July (5 wks)
Oman ophiolite, Feb.-Mar. (4 wks)
- 1993 Lanzo, Baldissero & Ligurian peridotite massifs, Italy, field trip with A. Nicolas & F. Boudier, July (1 wk)
- 1992 Josephine ophiolite, field trip leader, Oregon, June (1 wk)
- 1991 Kap Edvard Holm intrusion, East Greenland, Au/Pt exploration & research, Aug. (5 wks)
Josephine ophiolite, Oregon, June (4 wks)
- 1990 Trinity peridotite, California, Oct.(3 wks)
Josephine ophiolite, Oregon, Sept. (4 wks)
Lahaul Himalaya, India, fission track samples for uplift study, July-Aug. (7 wks)
Oman ophiolite field trip and symposium, Jan. (2 wks)
- 1989 Plutonic rocks, East Greenland, precious metals exploration & research, July-Aug. (6 wks)
Cyprus ophiolite field trip, Mar. (1.5 wks)
- 1988 Estelle pluton, Alaska Range, gold exploration, July (4 wks)
Skaergaard intrusion, East Greenland, precious metals exploration, Aug.-Sept. (5 wks)
Kulu Himalaya, India, fission track samples for uplift study, Sept.-Nov. (10 wks)
- 1987 Windy Craggy massive sulfide deposit, St. Elias Mtns., BC & Yukon, Cu & Au exploration, July (4 wks)
Estelle pluton, Alaska Range, gold exploration, Aug. (4 wks)
- 1986 Emigrant Gap pluton, Sierra Nevada, California, Sept. (2 wks)
Chilliwack batholith, Washington, Aug. (2 wks)
Mt. Stoney pluton, Alaska Range, gold exploration, July (4 wks)

scientific expeditions and geological field work, continued

- 1985 Emigrant Gap pluton, Sierra Nevada, California, Oct. (3 wks)
Chilliwack batholith, Washington, Aug. (2 wks)
Ruby Tuesday prospect, Prince of Wales Is., SE Alaska, Au & Zn exploration, July (5 wks)
- 1984 Ruby Tuesday prospect, Prince of Wales Is., SE Alaska, Au & Zn exploration, Aug (5 wks)
Karakorum Mtns., Pakistan, fission track samples for uplift study, May-July (12 wks)
- 1983 Big Jim plutonic complex, Washington, Sept. (4 wks)
Klukwan ultramafic complex, SE Alaska, precious metals exploration, Aug. (3 wks)
Windy Craggy massive sulfide deposit, St. Elias Mtns., BC & Yukon, geologic mapping for Cu & Au exploration, Aug. (4 wks)
Kigluaik Mtns., Seward Peninsula, western Alaska, July (5 wks)
- 1982 Big Jim plutonic complex, Washington, July, Aug., Sept. (total of 8 wks)
Chilliwack batholith, Washington, July (1 wk)
Baja California, Mexico, Mar. (2 wks)
- 1981 Iskut River area, Coast Range, British Columbia, mineral exploration, Aug. (3 wks)
- 1980 Ladakh and Zaskar Himalaya, India (15 wks)
- 1979 Dartmouth College Earth Sciences field course, Utah, Wyoming, Guatemala
- 1977 Cordillera Blanca, Peruvian Andes, samples for oxygen isotope study

PUBLICATIONS**Editor**

- Menzies, M.A., R. Vannucci, J.L. Bodinier, F.A. Frey, N. Shimizu, P.B. Kelemen, E. Rampone, G. Rivalenti and A. Hofmann, Orogenic Lherzolites and Mantle Processes, 3rd Orogenic Lherzolites Conference, Pavia, Italy, *J. Petrol.* 42, 250 pp., 2001.
- Menzies, M.A., J.-L. Bodinier, F. Frey, F. Gervilla and P.B. Kelemen, Editors, Melt Processes and Exhumation of Garnet, Spinel and Plagioclase Facies Mantle, 2nd Orogenic Lherzolites Conference, Granada, 25 August - 5 September 1995, Special Issue of *Chemical Geology*, 134, Nos. 1-3, 214 pp., 1996

Research Papers**submitted**

- Braun, M.G. and P.B. Kelemen, Dunite distribution in the Oman ophiolite: Implications for melt flux through porous dunite conduits, *Geochemistry, Geophysics, Geosystems* (G-cubed), submitted
- Jull, M., P.B. Kelemen and K. Sims, Consequences of diffuse and channelled porous melt migration on U-series disequilibria, *Geochim. Cosmochim. Acta*, in revision.
- Kelemen, P.B., G.M. Yogodzinski and D.W. Scholl, Along-strike variation in lavas of the Aleutian island arc: Implications for the genesis of high Mg# andesite and the continental crust, *AGU Monograph Series* (J. Eiler, editor), accepted pending revision.
- Sims, K.W., S.J. Goldstein, J. Blichert-Toft, M.R. Perfit, P. Kelemen, D.J. Fornari, P. Michael, M.T. Murrell, S.R. Hart, D.J. DePaolo, G. Layne, L. Ball, M. Jull and J. Bender, Chemical and isotopic constraints on the generation and transport of magma beneath the East Pacific Rise, *Geochim. Cosmochim. Acta*, accepted pending revision.

in press

- Korenaga, J., P.B. Kelemen and W.S. Holbrook, Mantle melting and crustal accretion processes during the formation of the Southeast Greenland margin, *J. Geophys. Res.*, in press.
- Schouten, H. and P.B. Kelemen, Evidence for a process of lava segregation by viscosity on the upper flanks of the Paleo-Troodos Rise, Cyprus, *Earth Planet. Sci. Lett.*, in press.

published

- Garrido, C.-J., P.B. Kelemen and G. Hirth, Variation of cooling rate with depth in lower crust formed at an oceanic spreading ridge: Plagioclase crystal size distributions in gabbros from the Oman ophiolite, *Geochemistry, Geophysics, Geosystems (G-cubed)*, 2001.
- Hanghøj, K., P. Kelemen, S. Bernstein, J. Blusztajn, and R. Frei, Osmium isotopes in the Wiedemann Fjord mantle xenoliths, a unique record of cratonic mantle formation by melt depletion in the Archaean, *Geochemistry, Geophysics, Geosystems (G-cubed)*, 2001
- Holbrook, W.S., H.C. Larsen, J. Korenaga, T. Dahl-Jensen, I.D. Reid, P.B. Kelemen, J.R. Hopper, G.M. Kent, D. Lizarralde, S. Bernstein, and R.S. Detrick, Mantle thermal structure and melting processes during continental breakup in the North Atlantic, *Earth Planet. Sci. Lett.* 190, 251-266, 2001.
- Jull, M. and P.B. Kelemen, On the conditions for lower crustal convective instability, *J. Geophys. Res.* 106, 6423-6446, 2001.
- Koga, K., P.B. Kelemen and N. Shimizu, Petrogenesis of the crust-mantle transition zone (MTZ) and the origin of lower crustal wehrlite in the Oman Ophiolite, *Geochemistry, Geophysics, Geosystems (G-cubed)*, 2001.
- Korenaga, J., W. S. Holbrook, R. Detrick and P.B. Kelemen, Gravity anomalies and crustal architecture at the southeast Greenland margin, *J. Geophys. Res.* 106, 8853-8870, 2001.
- Müntener, O., P.B. Kelemen and T.L. Grove, The role of H₂O and composition on the genesis of igneous pyroxenites: An experimental study, *Contrib. Mineral. Petrol.* 141, 643-658, 2001.
- Spiegelman, M., P.B. Kelemen and E. Aharonov, Causes and consequences of flow organization during melt transport: The Reaction infiltration instability, *J. Geophys. Res.* 106, 2061-2078, 2001.
- Korenaga, J. and P.B. Kelemen, Major element heterogeneity in the mantle source of the North Atlantic igneous province, *Earth Planet. Sci. Lett.* 184, 251-268, 2000.
- Korenaga, J., W.S. Holbrook, G.M. Kent, P.B. Kelemen, R.S. Detrick, H.-C. Larsen, J.R. Hopper and T. Dahl-Jensen, Crustal structure of the southeast Greenland margin from joint refraction and reflection seismic tomography, *J. Geophys. Res.* 105, 21,591-21,614, 2000.
- Kelemen, P.B., M. Braun and G. Hirth, Spatial distribution of melt conduits in the mantle beneath oceanic spreading ridges: Observations from the Ingalls and Oman ophiolites, *Geochemistry, Geophysics, Geosystems (G-cubed)*, 2000.
- Kelemen, P.B., S.R. Hart and S. Bernstein, Silica enrichment in the continental upper mantle via melt/rock reaction, *Earth Planet. Sci. Lett.* 164, 387-406, 1998.
- Kelemen, P.B. and E. Aharonov, Periodic formation of magma fractures and generation of layered gabbros in the lower crust beneath oceanic spreading ridges, *in* *Faulting and Magmatism at Mid-Ocean Ridges*, Geophysical Monograph 106, W.R. Buck, P.T. Delaney, J.A. Karson and Y. Lagabriele, editors, American Geophysical Union, Washington DC, 267-289, 1998.
- Bernstein, S., P.B. Kelemen and C.K. Brooks, Highly depleted spinel harzburgite xenoliths in Tertiary dikes from East Greenland, *Earth Planet Sci. Lett.* 154, 221-235, 1998.
- Bernstein, S., P.B. Kelemen, C. Tegner, M.D. Kurz and C.K. Brooks, Post-rift basaltic magmatism along the East Greenland Tertiary rifted margin, *Earth Planet Sci. Lett.* 160, 845-862, 1998.

published research papers, continued

- Korenaga, J. and P.B. Kelemen, Melt migration through the oceanic lower crust: A constraint from melt percolation modeling with finite solid diffusion, *Earth Planet. Sci. Lett.* 156, 1-11, 1998.
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