

DEBORAH K. SMITH

Senior Scientist
Department of Geology and Geophysics, MS 22
Woods Hole Oceanographic Institution
Woods Hole, MA 02543-1541

TEL.: (508) 289-2472
FAX: (508) 457-2187
EMAIL: dsmith@whoi.edu

Education:

1972 BS, University of Wisconsin, Madison
1981 BA, San Francisco State University
1985 Ph.D., University of California, San Diego

Professional Affiliations/Experience:

2001-pres Senior Scientist, Dept. of Geology and Geophysics, WHOI
2010-pres Adjunct Professor, University of Maryland
2007-2010 IPA in the Ocean Drilling Program, Division of OCE at NSF
2001 Visiting Professor, Institut de Physique du Globe de Paris
1991-2001 Associate Scientist (tenured 1995), Dept. of Geology and Geophysics, WHOI
1998 Green Scholar, Green Foundation for Earth Sciences, IGPP, SIO
1987 Office of Naval Research Young Investigator
1987-1991 Assistant Scientist, Dept. of Geology and Geophysics, WHOI
1986-1987 Post-doctoral Scholar, Dept. of Geology and Geophysics, WHOI

Fellowships, Awards, National and International Committees:

2011-pres UNOLS Council
2011- 2013 IEDA Data Policy Committee
2007-2010 NSF representative on Integrated Ocean Drilling Program (IODP) Council/International Working Group Plus
2008 Ridge 2000 Distinguished Lecturer
2006 NRC study committee: Archiving Environmental and Geospatial Data at NOAA
2003-2004 InterRidge Steering Committee
2002- 2004 RIDGE 2000 Steering Committee
2002- 2004 RIDGE 2000 Executive Committee
2002-2003 NRC Committee to Review NOAA's National Geophysical Data Center
2000-2002 United States Science Advisory Committee (USSAC)
2000-2002 USSAC Executive Committee
2001 Centers of Ocean Sciences Education Excellence (COSEE) Implementation Steering Committee
2001 Visiting Professor, Institut de Physique du Globe de Paris
2001 Organizing Committee Chair, Workshop on Data Management for Marine Geology and Geophysics
1998 Green Scholar, Green Foundation for Earth Sciences, IGPP, SIO
1995/98/01 Mellon Foundation Endowment Fund for Innovative Research in Oceanography, WHOI
1987 Office of Naval Research Young Investigator Program Award
1986 Mellon Independent Study Award, Woods Hole Oceanographic Institution
1985 Earle C. Anthony Dissertation Fellowship
1981 Martin van Couvering Award, American Association of Petroleum Geologists

National/International Workshops:

2012 AGU's Science Policy Conference
2012 AGU Science Communication Training Workshop
2011 NCSE's National Conference on Science, Policy, and the Environment: Our Changing Oceans

2011 NOAA OER Atlantic Basin Workshop, URI Coastal Institute
 2010 Reaching the Mantle Frontier Workshop, Carnegie Institution, Washington, DC
 2004 Ridge 2000 Mid-Atlantic Ridge Workshop, co-convener, Providence
 2000 Ridge 2000 Integrated Studies Workshop, co-convener, Chicago
 2000 Ridge 2000 Exploratory Studies Workshop, co-convener, Albuquerque
 1999 Ridge 2000 Meeting, Newport
 2009 INVEST – IODP New Ventures in Exploring Scientific Targets, Bremen Germany
 2008 The Next Decade of the Seismogenic Zone Experiment, Mt. Hood, OR
 2004 Seismo-Acoustic Applications in Marine Geology and Geophysics, Organizing
 Committee, Woods Hole
 2004 Backarc Basins and Spreading Systems Workshop, Jeju Island, Korea
 2003 COSEE National meeting, Washington, D.C.
 2003 Cabled Regional Observatory meeting, invited, San Francisco
 2003 Opportunities and Contributions of Asian Countries to the InterRidge Next Decade
 Initiative, invited, Beijing
 2001 Data Management in Marine Geology and Geophysics Workshop, co-convener, La Jolla
 1999 RIDGE School invited lecturer, Cyprus
 1999 Iceland Rift Zones Workshop, Iceland
 1999 DEveloping Submergence SCIENCE for the Next Decade: DESCEND Workshop, NSF
 1997 SubSurface Biosphere Workshop, Washington, D.C.
 1997 GSA Workshop/Field Course: Active Lava Flows, Kilauea Volcano
 1997 GSA Workshop/Field Course: Mauna Loa Volcano
 1996 FARA, Mid-Atlantic Ridge Symposium, Iceland
 1996 Magnetization of the Ocean Crust Conference, San Juan Islands
 1995 RIDGE Theoretical Institute: Faulting and Magmatism at Mid-Ocean Ridges, Lake
 Tahoe
 1994 The Icelandic Plume and its Influence on the Evolution of the NE Atlantic, Reykjavik,
 Iceland
 1994 RIDGE Design Workshop for Experimental Approaches to Ridge Segment Structure
 and Dynamics, invited speaker, Medford
 1993 InterRidge Global Studies Meeting, Paris
 1993 InterRidge Meso-Scale Symposium, Durham, England
 1992 FARA (French-American Ridge Atlantic) Meeting, Iceland
 1992 RIDGE short course: Hydrothermal and magma chamber processes, Tucson
 1991/92 ONR Special Research Program on Acoustic Reverberation
 1994 InterRidge Meeting: 4-D Architecture of the Oceanic Lithosphere

Field Work – last 25 years:

2013 Mapping and sampling 16.5°N at the Mid-Atlantic Ridge, using AUV Sentry, TowCam,
 surface instruments, and dredges, D. Smith, Chief Scientist
 2012 Hydrophone deployment in the equatorial Atlantic, D. Smith, Chief Scientist
 2008/09 Survey of the Galapagos triple junction, H. Schouten/D. Smith, co-Chief Scientists
 2005 Geophysical survey of 13°N at the MAR, D. Smith, Chief Scientist
 2002 Survey and sample Incipient Rift, 2°40'N at the EPR, E. Klein, D. Smith co-Chief
 Scientists
 2001 Turnaround hydrophone array, multibeam mapping, camera work, D. Smith, Chief
 Scientist
 2000 Turnaround of hydrophone array, multibeam mapping, D. Smith, Chief Scientist
 1999 Deployment of autonomous hydrophones in the North Atlantic, D. Smith, Chief
 Scientist with M. Tolstoy and C. Fox

1998 DSL-120 kHz, ARGO-II survey, Puna Ridge, Hawaii, D. Smith, Chief Scientist
 1996 TOBI surveys MAR, 29° N, J.Cann and D.Blackman, co-Chief Scientists
 1995 On land, Iceland, map/sample volcanic features, with S. Humphris and W. Bryan
 1993/94 On land, Big Island of Hawaii, relate volcanic structures to those observed in sonar images of the seafloor, with W. Bryan, J. Lin.
 1992 RRS Charles Darwin - TOBI surveys/Dredging of the axial zone of the MAR 24o-30oN, J.R. Cann and D.K. Smith, co-Chief Scientists
 1991 R/V T. Washington - SeaBeam/SeaMARCII surveys of the southern EPR, P. Lonsdale, Chief Scientist
 1990 R/V M. Ewing - Hydrosweep/TOBI side-scan survey of the Reykjanes Ridge, L. Parson and R. Searle, co-Chief Scientists

Educational Public Web Sites Developed and Implemented:

- Puna Ridge Web Site, www.punaridge.org Goal: to integrate education and research by taking students and the public to sea “virtually” on a funded research cruise.
- Women Exploring the Oceans, www.womenoceanographers.org Goal: to engage the public and school children in the day-to-day lives of women in marine science.
- WHOI’s site for the New England Center for Ocean Sciences Education Excellence (NE-COSEE) partnership. Included information on NE-COSEE at WHOI activities, on-going projects and resources for scientists

Invited Talks - last 15 years:

2013 DESSC meeting, Development of detachment faults at intermediate magma supply, Fall AGU
 2012 Smith, D. K.; The Unduly Complex Galapagos Triple Junction, Lamont Doherty Earth Observatory
 2012 Smith, D. K.; The Unduly Complex Galapagos Triple Junction, University of New Hampshire (postponed until 2013 for family reasons)
 2010 Smith, D. K.; Opportunities in Ocean Drilling, Ocean Drilling Workshop, Fall AGU
 2008 Smith, D. K., An Unexpected Graveyard of Core Complexes at the Mid-Atlantic Ridge, University of Rhode Island
 2008 Smith, D. K., Blue Hill, Maine: New Wrinkles in the Fabric of the Seafloor, Marine Environmental Research Institute
 2008 Smith, D. K., An Unexpected Graveyard of Core Complexes at the Mid-Atlantic Ridge, Arizona State University, Tempe
 2008 Escartin, J.; Smith, D. K.; Cann, J.; Schouten, H., Role of detachment faulting in lithospheric accretion along slow-spreading ridges (MAR 12-35°N), EGU
 2007 D. Smith, Marie Tharp’s Crystal Ball, Marie Tharp symposium, Lamont Doherty Earth Observatory
 2007 D. Smith, H. Schouten, J. Escartin, J. Cann, Unexpected Widespread Detachment Faulting During Formation of Lithosphere at the Northern Mid-Atlantic Ridge, Fall AGU
 2007 J. Escartin, D. Smith, H. Schouten, J. Cann, Quantifying the role of active detachment faulting on lithospheric accretion along the Mid-Atlantic Ridge, Fall AGU
 2004 Smith, D. K., Mid-ocean ridges: volcanoes under the sea, Seoul National University, Seoul, Korea
 2003 Smith, D. K., Hydroacoustic studies of ocean ridge earthquakes, Beijing University, Beijing
 2002 Smith, D. K., Monitoring low-level seismicity at the Mid-Atlantic Ridge using autonomous hydrophones, University of Massachusetts, Boston

- 2001 Smith, D. K., Monitoring low-level seismicity at the Mid-Atlantic Ridge using autonomous hydrophones, University of Paris
- 2000 Smith, D. K., Diking and eruption at a slow-spreading mid-ocean ridge, University of Rhode Island
- 2000 Smith, D. K., L. A. Dolby, E. Schiele, Education and ocean exploration, Ocean Sciences Meeting
- 2000 Smith, D. K., Lava depocenters on the summit of the Puna Ridge, Kilauea Volcano, Hawaii, University of New Hampshire
- 1999 Smith, D. K., Eruption characteristics at slow-spreading ridges, Georgia Institute of Technology
- 1999 Smith, D. K., Puna Ridge revisited, Scripps Institution of Oceanography
- 1999 Smith, D. K., Diking and eruption at a slow-spreading mid-ocean ridge, Lamont-Doherty Earth Observatory
- 1999 Smith, D. K., Volcanism at mid-ocean ridges, RIDGE School, Cyprus

Publications:

- Parnell-Turner, R., J. Cann, D. K. Smith, H. Schouten, D. Yoerger, C. Palmiotto, A. Zheleznov, H. Bai, Sedimentation rates test models of oceanic detachment faulting: *Geophys. Res. Letts.*, in revision, 2014.
- Smith, D.K., Schouten, H., Dick, H.J.B., and Cann, J.R. and the scientific party of R/V Knorr 210-05, 2014, Unexpected low-angle corrugated fault surface from near-bottom data, 16.5oN at the Mid-Atlantic Ridge: *Geochem. Geophys. Geosyst.*, submitted, 2014.
- Carbotte, S.M., Smith, D.K., Cannat, M., and Klein, E.M., 2014, Tectonic and Magmatic Segmentation of the Global Ocean Ridge System: Synthesis of Observations and Definition of a Spreading Cell: *Geol. Soc. London, Special Volume, Magmatic Rifting and Active Volcanism*, in press, 2014.
- Smith, D. K., Schouten, H., Zhu, W., and Montesi, L., 2013, The recent history of the Galapagos Triple Junction preserved on the Pacific plate, *Geochem. Geophys. Geosys., Earth Planet Sci. Letts.*, 371-372, p6-15, <http://dx.doi.org/10.1016/j.epsl.2013.04.018>.
- Smith, D. K., 2013, Mantle spread across the sea floor, *Nature Geoscience*, 6, p. 247-248, doi:10.1038/ngeo1786.
- Smith, D.K., Escartín, J., Schouten, H., and Cann, J.R., 2012, Active long-lived faults emerging along slow-spreading mid-ocean ridges: *Oceanography*, v. 25, p. 94-99.
- Collins, J.A., Smith, D.K., and McGuire, J.J., 2012, Seismicity of the Atlantis Massif detachment fault, 30°N at the Mid-Atlantic Ridge: *Geochem. Geophys. Geosys.*, p. in press.
- Dziak, R.P., Bohnenstiehl, D.R., and Smith, D.K., 2012, Hydroacoustic monitoring of oceanic spreading centers – past, present, and future.: *Oceanography*, v. 25, p. 116-127.
- Smith, D.K., 2011, Grid(s) of multibeam bathymetry at Galapagos Triple Junction: *Integr. Earth Data Appl.*, v. Palisades, New York, , p. doi:10.1594/IEDA/100005.
- Smith, D.K., Schouten, H., Zhu, W., Montési, L., and Cann, J.R., 2011, Distributed deformation ahead of the Cocos-Nazca Rift at the Galapagos Triple Junction: *Geochem. Geophys. Geosyst.*, v. 12, p. doi:10.1029/2011GC003689.
- Mitchell, G.A., Montési, L.G.J., Zhu, W., Smith, D.K., and Schouten, H., 2011, Transient rifting north of the Galápagos Triple Junction: *Earth Planet. Sci. Letts.*, v. 307, p. 461-469.
- Schouten, H., Smith, D.K., Cann, J.R., and Escartin, J., 2010, Tectonic versus magmatic extension in the presence of core complexes at slow-spreading ridges from a visualization of faulted seafloor topography: *Geology*, v. 38, p. 615-618; doi: 10.1130/G30803.1.
- Smith, D.K., Exon, N., Barriga, F., and Tatsumi, Y., 2010, Forty years of successful international collaboration in scientific ocean drilling: *EOS*, v. 91, p. 383-394.
- Llanes, P., Herrera, R., Gomez, M., Munoz, A., Acosta, J., Uchupi, E., and Smith, D.K., 2009, Geological evolution of the volcanic island La Gomera, Canary Islands, from analysis of its geomorphology: *Mar. Geology*, v. 264, p. 123-139, doi:10.1016/j.margeo.2009.05.001.

- Schouten, H., Smith, D.K., Montési, L., Zhu, W., and Klein, E.M., 2008, Unstable Northern Rifts of the Galapagos Triple Junction, Eastern Equatorial Pacific: *Geology*, p. 330-342, doi:10.1130/G24431A.1.
- Smith, D.K., Escartin, J., Schouten, H., and Cann, J.R., 2008, Fault rotation and core complex formation: Significant processes in seafloor formation at slow-spreading mid-ocean ridges (Mid-Atlantic Ridge, 13-25°N): *Geochem. Geophys. Geosyst.*, v. 9, p. Q03003, doi:10.1029/2007GC001699.
- Escartín, J., Smith, D.K., Cann, J., Schouten, H., Langmuir, C.H., and Escrig, S., 2008, Central role of detachment faults in accretion of slow-spread oceanic lithosphere: *Nature*, v. 455, p. 790-794, doi:10.1038/nature07333.
- Smith, D.K., Cann, J.R., and Escartin, J., 2006, Widespread active detachment faulting and core complex formation near 13°N on the Mid-Atlantic Ridge: *Nature*, v. 442, p. doi:10.1038/nature04950.
- Williams, C.M., Stephen, R.A., and Smith, D.K., 2006, Hydroacoustically-recorded seismicity at the intersection of the Atlantis (30°N) and Kane (23°40'N) Transform Faults with the Mid-Atlantic Ridge: *Geochem. Geophys. Geosyst.*, v. 7, Q06015, p. DOI 10.1029/2005GC001127.
- Gregg, P.T., Lin, J., and Smith, D.K., 2006, Segmentation of transform systems on the East Pacific Rise: Implications for earthquakes processes at fast-slipping oceanic transform faults: *Geology*, v. 34, p. doi: 10.1130/G22212.1, 289-292.
- Acosta, J., Uchupi, E., Smith, D.K., Munoz, A., Herranz, P., Palomo, C., LLanes, P., and Ballesteros, M., 2005, Comparison of volcanic rifts on La Palma and El Hierro, Canary Islands and the Island of Hawaii: *Mar. Geophys. Res.*, v. 24, p. 59-90.
- Smith, D.K., and Lemmond, P., 2005, Oceanographic Telecommuting: Going to Sea Virtually: *EOS*, v. 86, p. 333-334.
- Klein, E.M., Smith, D.K., Williams, C.M., and Schouten, H., 2005, Counter-rotating microplates at the Galapagos triple junction, eastern equatorial Pacific Ocean: *Nature*, v. 433, p. 855-858.
- Cann, J.R., and Smith, D.K., 2005, Evolution of volcanism and faulting in a segment of the Mid-Atlantic Ridge at 25°N: *Geochem. Geophys. Geosyst.*, v. 6, p. DOI 10.1029/2005GC000954.
- Dziak, R.P., Bohnenstiehl, D.R., Matsumoto, H., Fox, C.G., Smith, D.K., Tolstoy, M., T.-K., L., Haxel, J.H., and Fowler, M.J., 2004, P- and T-Wave Detection Thresholds, Pn Velocity Estimate, and Detection of Lower Mantle and Core P-Waves on Ocean Sound-Channel Hydrophones at the Mid-Atlantic Ridge: *Bull. Seism. Soc. Am.*, v. 94, p. 665-677, DOI: 10.1785/0120030156.
- Dziak, R.P., Smith, D.K., Bohnenstiehl, D.R., Fox, C.G., Desbruyeres, D., Matsumoto, H., Tolstoy, M., and Fornari, D.J., 2004, Evidence of a recent magma dike intrusion at the slow-spreading Lucky Strike segment, Mid-Atlantic Ridge: *J. Geophys. Res.*, v. 109, p. doi:10.1029/2004JB003141.
- Smith, D.K., Escartin, J., Cannat, M., Tolstoy, M., Fox, C.G., Bohnenstiehl, D., and Bazin, S., 2003, Spatial and temporal distribution of seismicity along the northern Mid-Atlantic Ridge (15°-35°N): *J. Geophys. Res.*, v. 108, p. doi: 10.1029/2002JB001964.
- Gregg, T.K.P., and Smith, D.K., 2003, Volcanic investigations of the Puna Ridge, Hawaii: relations of lava flow morphologies and underlying slopes: *J. Vol. Geotherm. Res.*, v. 126, p. 63-77.
- Bohnenstiehl, D.R., Tolstoy, M., Smith, D.K., Dziak, R.P., and Fox, C.G., 2003, Time-clustering behavior of spreading-center seismicity between 15-35N on the Mid-Atlantic Ridge: Observations from hydroacoustic monitoring: *Phys. Earth Planet. Int.*, v. 138, p. 147-161.
- Escartín, J., Smith, D.K., and Cannat, M., 2003, Parallel bands of seismicity at the Mid-Atlantic Ridge, 12-14N: *Geophys. Res. Letts.*, v. 30, p. doi:10.1029/2003GL017226.
- Perfit, M.R., Cann, J.R., Fornari, D.J., Engels, J., Smith, D.K., Ridley, W.I., and Edwards, M., 2003, Consequences of steam formation by seawater-lava interaction during submarine eruptions at mid-ocean ridges: *Nature*, v. 426, p. 62-65.
- Smith, D.K., Tolstoy, M., Fox, C.G., Bohnenstiehl, D.R., Matsumotu, H., and Fowler, M.J., 2002, Hydroacoustic monitoring of seismicity at the slow-spreading Mid-Atlantic Ridge: *Geophys. Res. Letts.*, v. 29, p. doi: 10.1029/2001GL013912.

- Smith, D.K., Kong, L.S.L., Johnson, K.T.M., Reynolds, J., and al., e., 2002, Volcanic structure of the Puna Ridge, Kilauea Volcano, in Takahashi, E., and al., e., eds., *Evolution of Hawaiian Volcanoes: Recent Progress in Deep Underwater Research*, Volume 128: Washington, D. C., AGU Monograph, p. 125-142.
- Zhu, W., Smith, D.K., and Montesi, L., 2002, Effects of regional slope on viscous flows: A preliminary study of submarine terrace emplacement at submarine volcanic rift zones: *J. Vol. Geotherm. Res.*, v. 119, p. 145-159.
- Johnson, K.T.M., Reynolds, J., Smith, D.K., Kong, L.S.L., and Vonderhaar, D., 2002, Petrological systematics of submarine lavas from the Puna Ridge, Hawai'i: Implications for rift zone plumbing and magmatic processes, in al., E.T.e., ed., *AGU Monograph: Evolution of Hawaiian Volcanoes: Recent Progress in Deep Underwater Research*, Volume 128: Washington, D. C., AGU Monograph, p. 143-160.
- Dziak, R.P., Fox, C.G., Smith, D.K., Matsumoto, H., Bohnenstiehl, D., Haxel, J., and Fowler, M., 2002, Evidence of probable magmatic episode at the Lucky Strike Setment, Mid-Atlantic Ridge, March 2001: *InterRidge News*, v. 11, p. 29-31.
- MacLeod, C.J., Escartín, J., Banerji, D., Banks, G.J., Gleeson, M., Irving, D.H.B., Lilly, R.M., McCaig, A., Niu, Y.-L., Allerton, S., and Smith, D.K., 2002, Direct geological evidence for oceanic detachment faulting: The Mid-Atlantic Ridge, 15°45'N: *Geology*, v. 30, p. 279-282.
- Bohnenstiehl, D.R., Tolstoy, M., Dziak, R.P., Fox, C.G., and Smith, D.K., 2002, Aftershock sequences in the mid-ocean ridge environment: An analysis using hydroacoustic data: *Tectonophysics*, v. 354, p. 49-70.
- Smith, D.K., Tivey, M.A., Gregg, P., and Kong, L.S., 2001, Magnetic anomalies along the submarine Puna Ridge, Kilauea Volcano, Hawaii,: *J. Geophys. Res.*, v. 105, p. 2721-2736.
- Parfitt, E., Gregg, T., and Smith, D.K., 2001, A comparison between subaerial and submarine fissure eruptions at Kilauea Volcano, Hawaii: *J. Vol. Geotherm. Res.*, v. 113, p. 213-242.
- Jaroslow, G.E., Smith, D.K., and Tucholke, B.E., 2000, Record of seamount production and off-axis evolution in the North Atlantic Ocean, 25°25'-27°10'N: *J. Geophys. Res.*, v. 105, p. 2721-2736.
- Smith, D.K., Tivey, M.A., and Schouten, H., 1999, Locating the spreading axis along 80 km of the Mid-Atlantic Ridge south of the Atlantis Transform: *J. Geophys. Res.*, v. 104, p. 7599-7612.
- Smith, D.K., and Cann, J.R., 1999, Constructing the upper crust of the Mid-Atlantic Ridge; a reinterpretation based on the Puna Ridge, Kilauea Volcano: *J. Geophys. Res.*, v. 104, p. 25379-25399.
- Blackman, D.K., Cann, J.R., Janssen, B., and Smith, D.K., 1998, Origin of extensional core complexes: Evidence from the Mid-Atlantic Ridge at Atlantis Fracture Zone: *J. Geophys. Res.*, v. 103, p. 21,315-21,333.
- Cann, J.R., Blackman, D.K., Smith, D.K., McAllister, E., Janssen, B., Mello, S., Avgerinos, E., Pascoe, A.R., and Escartín, J., 1997, Corrugated slip surfaces formed at North Atlantic ridge-transform intersections: *Nature*, v. 385, p. 329-332.
- Spencer, S., Smith, D.K., Cann, J.R., Lin, J., and McAllister, E., 1997, Structure and stability of non-transform discontinuities on the Mid-Atlantic Ridge between 24°N and 30°N: *Mar. Geophys. Res.*, v. 19, p. 339-362.
- Smith, D.K., Humphris, S.E., Tivey, M.A., and Cann, J.R., 1997, Viewing the morphology of the Mid-Atlantic Ridge from a new perspective: *EOS*, v. 26, p. 265, 269.
- Smith, D. K., 1996, Comparison of the shapes and sizes of seafloor volcanoes on Earth and "Pancake" domes on Venus: *J. Vol. Geotherm. Res.*, v. 73, p. 47-64.
- Head, J.W., Wilson, L., and Smith, D.K., 1996, Mid-ocean ridge vent morphology and structure: Evidence for dike widths, eruption rates, and evolution of eruptions and axial volcanic ridges: *J. Geophys. Res.*, v. 101, p. 28,265-28280.
- Little, S.A., and Smith, D.K., 1996, Fault scarp identification in side-scan sonar and bathymetry images from the Mid-Atlantic Ridge using wavelet-based digital filters: *Mar. Geophys. Res.*, v. 18, p. 741-755.

- Smith, D.K., Humphris, S.E., and Bryan, W.B., 1995, A comparison of eruptive units at the Reykjanes Ridge and the Mid-Atlantic Ridge, 24-30N: *J. Geophys. Res.*, v. 100, p. 22485- 22498.
- Magde, L., and Smith, D.K., 1995, Seamount volcanism at the Reykjanes Ridge: Relationship to the Iceland hotspot: *J. Geophys. Res.*, v. 100, p. 8449-8468.
- Smith, D.K., Cann, J.R., Dougherty, M.E., Lin, J., Spencer, S., MacLeod, C., Keeton, J., McAllister, E., Brooks, B., Pascoe, R., and Robertson, W., 1995, Mid-Atlantic ridge volcanism from deep-towed side-scan sonar images, 25°-29°N: *J. Vol. Geotherm. Res.*, v. 67, p. 233-262.
- Cann, J.R., and Smith, D.K., 1994, Volcanoes of the mid-ocean ridges and the building of new ocean crust: *Endeavour, New Series*, v. 18, p. 61-66.
- Smith, D.K., and Cann, J.R., 1993, Building the crust at the Mid-Atlantic Ridge: *Nature*, v. 365, p. 707-715.
- Bemis, K.G., and Smith, D.K., 1993, Production of small volcanoes in the Superswell region of the South Pacific: *Earth Planet. Sci. Letts.*, v. 118.
- Little, S.A., Carter, P.H., and Smith, D.K., 1993, Wavelet analysis of a bathymetric profile reveals anomalous crust: *Geophys. Res. Letts.*, v. 20, p. 1915-1918.
- Parson, L.M., Murton, B.J., Searle, R.C., Booth, D., Evans, J., Field, P., Keeton, J., Laughton, A., McAllister, E., Millard, N., Redbourne, L., Rouse, I., Shor, A., Smith, D.K., Spencer, S., Summerhayes, C., and Walker, C., 1993, En echelon axial volcanic ridges at the Reykjanes Ridge: A life cycle of volcanism and tectonics: *Earth Planet. Sci. Letts.*, v. 117, p. 73-97.
- Smith, D.K., and Cann, J.R., 1992, The role of seamount volcanism in crustal construction at the Mid-Atlantic Ridge (24°N-30°N): *J. Geophys. Res.*, v. 97, p. 1645-1658.
- Smith, D.K., 1991, Seamount abundances and size distributions, and their geographic variations: *Rev. Aq. Sci.*, v. 5, p. 197-210.
- Smith, D.K., and Cann, J.R., 1990, Hundreds of small volcanoes on the median valley floor of the Mid-Atlantic Ridge: *Nature*, v. 344, p. 427-431.
- Smith, D.K., and Shaw, P.R., 1990, Seafloor topography: a record of a chaotic dynamical system?: *Geophys. Res. Lett.*, v. 17, p. 1541-1544.
- Shaw, P.R., and Smith, D.K., 1990, Robust description of statistically heterogeneous seafloor topography through its slope distribution: *J. Geophys. Res.*, v. 95, p. 8705-8722.
- Smith, D.K., and Shaw, P.R.S., 1989, Using topographic slope distribution to infer seafloor patterns: *IEEE J. Oc. Eng.*, v. 14, p. 338-347.
- Smith, D.K., 1988, Shape analysis of Pacific seamounts: *Earth Planet. Sci. Letts.*, v. 90, p. 457-466.
- Smith, D.K., and Jordan, T.H., 1988, Seamount statistics in the Pacific Ocean: *J. Geophys. Res.*, v. 93, p. 2899-2918.
- Shaw, P.R., and Smith, D.K., 1987, Statistical methods for seafloor topography: *Geophys. Res. Lett.*, v. 14, p. 1061-1064.
- Smith, D.K., and Jordan, T.H., 1987, The size distribution of Pacific seamounts: *Geophys. Res. Letts.*, v. 14, p. 1119-1121.
- Kim, I.I., Smith, D.K., Menard, H.W., Orcutt, J.A., and Jordan, T.H., 1987, Seismic reflection site survey: correlation with physical properties, in Menard, H.W., Natland, J.H., Jordan, T.H., and Orcutt, J.A., eds., *Init. Repts. DSDP, 91*: Washington, U.S. Government Printing Office.
- Jordan, T.H., Menard, H.W., and Smith, D.K., 1983, Density and size distribution of seamounts in the eastern Pacific inferred from wide-beam sounding data: *J. Geophys. Res.*, v. 88, p. 10508-10518.