Terry Plank

Lamont Doherty Earth Observatory, 61 Rte 9W, PO Box 1000, Palisades, NY 10964
845/365-8410 tplank@ldeo.columbia.edu

PROFESSIONAL APPOINTMENTS

2013-present	Arthur D. Storke Memorial Professor, Earth & Env. Sci, Columbia University
2016-2019	Wiess Visiting Professor, Dept of Earth Sci, Rice University
2016	Benjamin Meaker Visiting Professor, University of Bristol, UK
2008-2013	Professor, Earth and Env. Sci, Columbia University
2005-2007	Professor, Earth Sciences, Boston University
1999-2005	Associate Professor, Earth Sciences, Boston University
2002 (summer)	Visiting Professor, Universite Joseph Fourier, Grenoble, France
1995-1999	Assistant Professor, University of Kansas
1998 (summer)	Visiting Professor, University of Rennes, Rennes, France
1993-1995	Post-doctoral Fellow, Cornell University (W.M. White, supervisor)

EDUCATION:

2015	Dartmouth College Honorary Doctor of Science
1985-1992	Lamont-Doherty Earth Observatory at Columbia University, Ph.D., Geosciences, *with distinction*, May 1993 Thesis title: Mantle Melting and Crustal Recycling at Subduction Zones. Advisor: Charles H. Langmuir
1981-1985	Dartmouth College A.B., Earth Sciences, *summa cum laude*, 1985 Sr Thesis: Magmatic Garnets from the Cardigan Pluton, NH Advisor: John B. Lyons

HONORS AND FELLOWSHIPS:

Wollaston Medal, Geological Society of London (2018) • Elected, American Academy of Arts and Sciences (2016) • Geological Society of America Thompson International Distinguished Lecturer (2016-2017) • Honorary Degree, Dartmouth Colloge (2015) • Elected, National Academy of Sciences (2013) • MacArthur Foundation Fellow (2013-2017) • EarthScope Lecturer (2011-2012) • Fellow of the Geochemical Society (2011) • Mineralogical Society of America Distinguished Lecturer (2010-2011) • Fellow of the Mineralogical Society of America (2009) • Fellow of the American Geophysical Union (2008) • Ingerson Lecturer, Geochemical Society (2007) • MARGINS Distinguished Lecturer (2006) • Donath Young Scientist Medal, Geological Society of America (1998) • Fellow of the Geological Society of America (1998) • Houtermans Young Scientist Medal, European Assoc'n Geochemistry (1998) • Joint Oceanographic Institutions/USSAC Distinguished Lecturer (1994-5) • National Science Foundation Postdoctoral Fellowship (1993-4) • Heezen Prize for Excellence in Research, Lamont-Doherty Earth Obs. (1991) • JOI/USSAC Ocean Drilling Program Fellowship (1998-90) • National Science Foundation Graduate Fellowship (1985-88) • John Ebers Geology Award, Dartmouth College (1985) • Upham Geology Prize, Dartmouth College (1985) •

Summer Undergraduate Research Fellow, GSO, U. Rhode Island (1984) • Phi Beta Kappa, Dartmouth College (1984)

FIELD WORK:

2016	Sample collecting, Westdahl, Cleveland, Vsevidof, Akutan volcanoes, AK
2015	Sample collecting, Makushin and Cleveland volcano, Aleutians
2010	Sample collecting, Mojave Desert, CA
2009	Sample collecting, Uinkaret Volcanic Field, W. Grand Canyon, AZ
2008	Sample collecting, Crater Flat, NV and Big Pine Volcanic Field, CA
2007	Sample collecting, Seguam island and volcano, Aleutians
2005	Sample collecting, Akutan volcano, Aleutians
1996	Sample collecting: Nicaragua volcanoes
1989	Sample collecting: Popocatepetl volcano, Mexico.
1987	Sample collecting: Zambales ophiolite and Bulusan volcano, Philippines
1984-5	Sample collecting: cardigan pluton, New Hampshire

SHIPBOARD EXPERIENCE:

1999	Co-Chief Scientist, JOIDES *Resolution*., ODP Leg 185. Mariana-Izu
1992	Shipboard Scientist, R/V *Atlantis* II. Dredging and rock coring the Mid Atlantic Ridge near the Azores (30-40°N).
1989	Shipboard Scientist, R/V *Thomas Washington*. Dredging and Seabeam mapping of the East Pacific Rise 8-12°N.
1988	Shipboard Scientist, SEDCO/BP 471, JOIDES *Resolution*. Igneous Petrologist, ODP Leg 123, Argo Abyssal Plain.
1988	Shipboard Scientist, R/V *Moana Wave*. Dredging and SEAMARC II survey of the Australian-Antarctic Discordance, Indian Ocean.

PROFESSIONAL ACTIVITIES

2020-2024	Member, Science Advisory Board, GEOMAR, Helmholz Centre for Oceans
2018-2021	Member, Steering Committee, SZ4D Research Coordination Network
2013-2019	Executive Committee, Deep Carbon Observatory, Sloan Foundation
2019	Lead Convener & Organizer, Workshop on Mantle Water, LDEO
2019	Lead Convener & Organizer, Alaska-Aleutian GeoPRISMS Synthesis Workshop, LDEO
2018	Member, External Review Committee, GFZ Potsdam, Germany
2017-2018	Goldschmidt Conference, Magmas and Volcanoes Theme co-Organizer
2017	Member, External Review Committee, Geomar Institute, Germany
2017	Member, External Review Committee, University of Cambridge, UK
2017	Lead Convener, IAVCEI Town Hall: Subduction Volcanism, Portland
2017	Lead Convener, AGU Town Hall: Subduction Hazard Science, New Orleans
2017	Co-Lead Author, SZ4D Vision Document to NSF
2016	Co-Chair, Organizing Committee, Subduction Zone Observatories Workshop
2016	Member, Committee on Improving Understanding of Volcanic Eruptions, NRC Report, National Academies
2014-2015	Co-Convener, CIDER Summer Program: Solid Earth & Hydro/Carbosphere
2014-2015	Convener, DCO Thematic Instit. Carbon from the Mantle to the Surface
2014-2015	Co-Convener, SOTA, State-of-the-Arc, Montserrat, Caribbean

2014	Organizer, Workshop on the Geology of the Manhattan Prong, Lamont
2014	Organizer, Symposium in honor of Dave Walker, Lamont
2012-2015	Member, WHOI Ionprobe Nation Facility Advisory Committee
2012-2013	Goldschmidt Medal Committee, Geochemical Society
2012-2013	Goldschmidt Conference, Subduction Theme Organizer
2012-2015	Advisory Committee for CIDER-II (Cooperative Inst. for Dynamic Earth Research)
2112-2013	Steering Committee for Reservoirs and Fluxes, Deep Carbon Observatory
2112-2015	NAS: U.S. National Committee for Geodesy and Geophysics
2011-2012	EarthScope Distinguished Lecturer
2011	Convener, Lithosphere-Asthenosphere Boundary (EarthScope Institute)
2010	Lecturer, CIDER (Cooperative Institute for Dynamic Earth Research)
2008-2011	Member, EarthScope Science Steering Committee
2008-2011	Member, Advisory Board for ELEMENT Magazine (Geochemical Soc.)
2008-2011	Member, AGU Fellows Nominating Committee, Volc-Geoch-Petrol
2006-2008	Secretary and Fall Meeting Planning, AGU, Volcanology-Petrology Section
2007	Member, Organizing Committe, Workshop to Integrate Subduction Studies in Central America; Heredia, Costa Rica, June, 2007
2006	MARGINS Distinguished Lecturer
2005	Member, Evaluation Committee, IFM-GEOMAR, Kiel, Germany
2005-2007	Member, SOTA (State of the Arc) 2007 program committee
2004-2006	Member, USArray Advisory Committee to IRIS/EarthScope
2005	Member, EarthChem Science Advisory Committee
2005	Convener, Goldschmidt Conference Subduction Magmatism Session
2004	Member, Review Panel, NSF GEO-MARGINs
2003	Participant & invited speaker, CIDER (Coop. Instit. for Deep Earth Res.) Pt. Reyes
2003	Session Chair, Gordon Conference on the Deep Earth, Mt. Holyoke
2003	Member *SAMPLES* (Sample Archive and Management PLanning for the Earth Sciences)
2002-2003	Bowen Award Committee, VGP Section, AGU
2001-2003	Assoc. Editor, Oceanic Inputs to the Subduction Factory, Special Volume,*G3*
2001	Participant & contributor to Science Plan: EARTHSCOPE Workshop, Utah
2001	Co-convener, Processes within the Subduction Factory, AGU Fall Mtg.
1999-2000	Co-convener, MARGINs T&E Institute: Inside the Subduction Factory, Oregon
1997-2007	Advisory Editorial Board, *Earth and Planetary Science Letters*
1997 -2000	Steering Committee Member, NSF MARGINS Initiative
1997-1999	Editorial Board, *Geology*
1997-1998	Member, Review Panel, NSF OCE-MG&G (Marine Geology & Geophysics)
1995-1998	Member, USSAC (US Science Advisory Committee), Ocean Drilling Program
1997	Judge, Outstanding Student Presentations, VGP, Fall AGU Meeting
1997	Co-convener: "Fluxes at Subduction Zones," Goldschmidt Conference
1997	Member, Review Panel, NSF-GEO POWRE (Prof. Opp. Women in Research & Educ.)
1996	Participant, FUMAGES (Future of Marine Geosciences at NSF), Oregon
1994-1995	JOI/USSAC Distinguished Lecturer
1994-1995	Member, Committee for the Study of the Earth's Deep Interior, AGU
1994	Presider, Tectonics & Mafic Magmatism Through Time, St. Malo, France
1994	Co-presider, JOI-USSAC Workshop: Scientific Drilling & Crustal Recycling
1993	Participant, JOI-USSAC Workshop: Western Pacific Drilling

1993 Participant, JOI/MARGINS Workshop: Magmatism & Mass Fluxes at Margins
1993 Presenter, Symposium: Cooperative Studies of the Earth's Deep Interior
1992 Participant, RIDGE Workshop: Hydrothermal & Magma Chamber Processes
1990 Presenter, RIDGE Workshop on Mantle Flow and Melt Generation
1989 Participant, JOI-USSAC Workshop: Drilling Oceanic Lower Crust & Mantle

Department & University Service, Earth and Environmental Science, Columbia University

2011-2020 member, then chair of Curriculum Committee
2009-2020 co-organizer of Geodynamics Seminar (internal and external speakers)
2017-2018 Search Committee, Experimental Earth Science Search
2017-2018 Lamont Postdoctoral Fellows Selection Committee
2016-2017 Search Committee, AMNH Curator in Earth & Planetary Science
2015-2016 Search Committee, Broad Search Faculty Position
2016 Search Committee, Lamont Research Professor
2014 Search Committee, Experimental Earth Science Faculty Position
2013 Search Committe for Executive Vice President for Arts and Sciences
2011-2013 co-Director of Undergraduate Studies
2013 Lamont Postdoctoral Fellows Selection Committee
2009-2013 Adjunct Faculty Committee, Endowment Committee, Vision Committee

KEYNOTE TALKS:

2019 Miller Institute, UC Berkeley, "At the Speed of Volcanic Eruptions"
2018 Gordon Conference: Deep Carbon
2016 Plenary Speaker, Goldschmidt Conference, Yokohama, Japan
"The Volatile Input to Volcanoes and Eruptions"
2015 Shell Distinguished Woman in Science Lecture, Ohio State University
2015 Gordon Conference: Deep Earth
2015 Convocation Address, The Tatnall School, Delaware
2014 Jaeger-Hales Lecture, Australian National University
"At the Speed of Volcanic Eruptions"
2014 Research Briefings: A Sampling of the Work of Members Elected in 2013, National Academy of Science: "Clocking the Run-up to Volcanic Eruptions"
2013 Convocation Address for M.A. Candidates, Columbia University
2013 Wetterhahn Science Research Symposium, Dartmouth College
2011 Symposium on "Frontiers in Earth Surface System Interactions" Yale University:
"From the Slab to the Eruption, the Water Cycle at Subduction Zones"
2010 MARGINS Successor Program Workshop (San Antonio, Texas):
"The Production and Fate of Fluids and Magmas at Active Margins"
2009 MARGINS Volatiles Theoretical and Experimental Institute (Mt. Hood, OR):
"Volatile Recycling at Subduction Zones"
2009 INVEST (IODP New Ventures in Exploring Scientific Targets; Bremen, Germany:
"Down and Back Again: Cycles and Growth at Convergent Margins"
2009 CIDER (Coop. Instit. for Deep Earth Res.): "Melting Regions in the Mantle"
2007 Ingerson Lecture, Geochemical Society: "Squeezing Water from a Stone"
2006 MARGINS Distinguished Lecture: "Water in Arc Magmas"
2005 Developments in Isotope Geochemistry, Max Planck Inst-Geochimie, Mainz, Germany

"Water Recycling from the Surface to the Solid Earth: The Fate of the Oceans"

2005 Gordon Conference on Chemical Oceanography, Tilton, NH
"Crustal Recycling at Subduction Zones"

2004 Australian Geological Convention, Hobart Tasmania
"Using Melt Inclusions to Probe the Mantle Melting Process at Subduction Zones"

2002 NSF-IREE MARGINS Izu-Bonin-Mariana Subduction Factory Workshop, Hawaii
"Subduction Inputs to the IBM System"

2001 Intra-Oceanic Arcs Conference, Geological Society of London
"Element Recycling at Subduction Zones: Constraints from Th/La"

1999 Lamont-Doherty Earth Observ.: "Women in Earth Science: The Next Fifty Years,"
"Continents Formed from Arcs, or Arcs Inherit the Earth? Operation of the Subduction Factory"

1998 National Academy of Science, German-American Frontiers of Science
"The ins and outs of arc volcanoes"

1997 State of the Arc Conference, Adelaide, Australia
"The role of sediment input in arc lava compositions"

1996 Izu-Bonin-Mariana System Workshop, Hayama, Japan
"Sediment subduction and the Mariana arc."

1996 Geochemical Earth Reference Model Workshop, Lyon, France
"Mass, water and chemical fluxes during subduction"

1990 RIDGE Summer Institute, Boulder, Colorado, July, 1990
"Petrological constraints on melt generation beneath ocean ridges"

INVITED DEPARTMENTAL LECTURES

2019 "At the Speed of Volcanic Eruptions"
Lamont Doherty Earth Observatory • Miller Institute, UC Berkeley

2018 "Volatiles and Volcanic Vigor"
Harvard University • University of Manchester • Oxford University • University of Delaware

2017 "Joint Inversion of Petrology and Seismology: Solving for the Geotherm"
Imperial College London • University of Bremen • University of Wisconsin • University of Wellington • University of Auckland
"The Vigor of Volcanic Eruptions"
Geomar, Kiel, Germany • Imperial College London • University of Bremen • University of Wisconsin • University of New Mexico • Penn State University • University of Wellington • GNS Taupo NZ • University of Auckland • Johns Hopkins University • West Chester University • Stanford University •
"The Flux of Organic Carbon into the Mantle"
Marum, Bremen, Germany • GNS Wellington NZ

2016 "Joint Inversion of Petrology and Seismology: Solving for the Geotherm"
Rice University • Scripps Institution of Oceanography • University of Bristol
"At the Speed of Magma Ascent and Volcanic Eruption"
University of Bristol • University of Washington

2015 "At the Speed of Magma Ascent and Volcanic Eruption"
Ohio State University • Rice University • Carnegie Institution of Washington

2014 "At the Speed of Magma Ascent and Volcanic Eruption"
UCLA • ETH, Zurich, Switzerland • University of Bristol, UK • Cambridge University, UK • Univ of Oregon • Univ of Tasmania • Univ of Melbourne
"Extending a Continent: Magmatism and Lithosphere Dynamics across the Basin and Range Province of the western United States" UCLA • Queens College • Oxford Univ, UK • Oregon State Univ. • ANU
"How Much Water Erupts from Arc Volcanoes?" Virginia Tech

2013 "How Much Water Erupts from Arc Volcanoes?"
CRPG-Nancy, France • LDEO Geodynamics Seminar • Dartmouth College
"Extending a Continent: Magmatism and Lithosphere Dynamics across the Basin and Range Province of the western United States"
SUNY Stony Brook, NY

2012 "How Much Water Erupts from Arc Volcanoes?"
University of Michigan
"Extending a Continent: Magmatism and Lithosphere Dynamics across the Basin and Range Province of the western United States"
UC Santa Cruz • University of Alabama • Youngstown State University • Michigan State University • RPI • New Mexico Tech • New Mexico State

2011 "Are the Oceans Shrinking? "Hot and Cold Slabs: New Constraints from Mineral-Fluid Thermometers"
Lehigh University • Middlebury College • University of Bristol (UK) • University of St. Andrews (UK) • Technische Universität Bergakademie Freiberg (Germany) • The College of William and Mary • Vanderbilt University • University of Florida • University of Wisconsin • UC Berkeley
"Extending a Continent: Magmatism and Lithosphere Dynamics across the Basin and Range Province of the western United States"
University of Wyoming

2010 "Are the Oceans Shrinking? The Subduction Zone Water Cycle" "Hot and Cold Slabs: New Constraints from Mineral-Fluid Thermometers"
Memorial University, Newfoundland • Institut National de la Recherche Scientifique, Quebec • Tufts University

2009 "Water in Arc Magmas" "Emerging Geothermometers for Estimating Slab Surface Temperatures"
Institut de Physique du Globe (Paris) • Carnegie Institution of Washington • Harvard University

2008 "Water in Arc Magmas" "The Role of Accessory Minerals in the Subduction Zone"
Bristol, UK • Dartmouth College • Penn State University • American Museum of Natural History (NY) • Princeton University

2007 "Water in Arc Magmas"
Woods Hole Oceanographic Institution

2006 "Recycling of Water through the Subduction Factory" "Water in Arc Magmas"

University of Alaska • Humboldt State Univ • Boise State Univ. • GEOMAR • Brown Univ • Michigan Tech • UC Davis • Lamont-Doherty Earth Observatory, Columbia University

2005 "The Effect of Water on Mantle Melting at Subduction Zones"
UC Los Angeles, Rutgers University, Syracuse University, IFM-GEOMAR (Kiel, Germany)
"Sediment Subduction at the Lesser Antilles Margin"
Grenoble, France

2004 "The Effect of Water on Mantle Melting at Subduction Zones"
Rice University, UC Berkeley (Class of 1951 Lecture) Cornell University, Boston University, Montclair State University (NJ)

2002 "Sediment Subduction at the Subduction Factory and Consequences for the Continents", " A mantle melting profile across the Basin and Range"
University of Arizona, University of Massachusetts, Yale University, University of Michigan, University Joseph Fourier Grenoble, Lamont-Doherty Earth Obs., Columbia Univ.

2001 "Sediment Subduction at the Subduction Factory and Consequences for the Continents", " A mantle melting profile across the Basin and Range"
University of California Berkeley, University of Rhode Island, University of Bristol (UK)

2000 "Sediment Subduction at the Subduction Factory and Consequences for the Continents"
Brown University • Woods Hole Oceanographic Institutions • Dartmouth College • Rutgers University

1999 "Sediment Subduction and Consequences for the Continents"
Harvard University • Arizona State University • Massachusetts Institute of Technology • Rensselaer Polytechnic Institute

1998 "Sediment Subduction and Consequences for the Continents"
University of Minnesota • Boston University • California Institute of Technology • CRPG-CNRS, Nancy, France • University of Rennes, France

1997 "Mass, water and chemical fluxes during subduction"
Northern Illinois University • Australian National University, Canberra • Washington University, St. Louis

1996 "Ins and outs of arc volcanoes: Sediment recycling"
University of Texas, Inst. Geophysics • Northwestern University • Duke University • University of Iowa

1995 "Ins and outs of arc volcanoes: Sediment recycling"
Arizona State University • Woods Hole Oceanographic Institute • Kansas State University • University of Puerto Rico, Mayaguez, PR • Smith College • University of Massachusetts • Indiana University

1994 "Ins and outs of arc volcanoes: Sediment recycling"

Humboldt State University, Calif. • Pennsylvania State University • Brown University • University of Pennsylvania • University of Kansas • Vrije University Amsterdam • Harvard University • University of South Florida, Tampa

Pre-1993 "Mantle melting and crustal recycling at subduction zones"
California Institute of Technology • University of Chicago • GEOMAR, Kiel, Germany • Carnegie Institute of Washington • Wesleyan University • Harvard University • University of Delaware • Duke University • Rutgers University • UC Santa Cruz

PROFESSIONAL SOCIETIES:
American Geophysical Union • Geological Society of America • Geochemical Society • Mineralogical Society of America

STUDENTS:

Primary Advisor or Co-Advisor
Anna Barth (Ph.D.; Columbia Univ/LDEO., in progress)
Henry Towbin (Ph.D.; Columbia Univ/LDEO., in progress)
Dan Rasmussen (Ph.D.; Columbia Univ/LDEO., 2019) "The Aleutian arc through and through: Subduction dynamics and the generation, storage, and eruption of hydrous magmas" Now at: The Smithsonian Instititution
Channing Prend (B.A. Columbia Univ**.** senior thesis, 2018**) "**Quantifying the total marine carbonate budget using regional models of the calcite compensation depth" Now at: Scripps Institution of Oceangraphy
Zach Wiles (B.A., Columbia Univ., senior thesis, 2016) "Using Volcanic Products to Determine Magma Characteristics of the 1964 and 1991 Eruptions of Westdahl Volcano, Alaska" Now at: US Air Force
Claire Bendersky (M.Phil.; Columbia/LDEO, 2014) "Magmatism in the Basin and Range"
Megan Crowley (M.Phil, Columbia/LDEO, 2014) "Ultrahigh pressure sediments and Kilauea eruptions"
Alexander Lloyd (Ph.D.; Columbia Univ/LDEO., 2014) "Timescles of magma ascent during explosive eruptions: Insights from the re-equilibration of magmatic volatiles." Now at: The Hun School, Princeton, NJ
Siobhan Campbell (B.A., Columbia Univ., senior thesis, 2013) Distinguishing the Effects of Temperature and Melt on Seismic Velocities in the Upper Mantle. Now at: Syracuse University
Timothy Greene (B.A., Columbia Univ., senior thesis, 2011) "The Origin of Volcanism in Papua New Guinea"
Lauren Cooper (Ph.D.; Boston Univ., 2009) "Volatiles in Tonga arc magmas and their role in unraveling subduction zone processes. " ETH, Zurich, Switzerland (2009-2017)
Mindy Zimmer (Ph.D.; Boston Univ., 2008) "Water in Aleutian Magmas: Its Origins in the Subduction Zone and its Effects on Magma Evolution" Now at: Pacific Northwest National Lab, Staff Scientist
Jennifer Wade (Ph.D., Boston Univ., 2008) "Constraints on the Central American Slab Fluid Composition from Arc Melt Inclusions and Phenocrysts" Now at: National Science Foundation, Program Office, EAR, Petrology and Geochemistrty

Kevin Schrecengost (B.A., Boston Univ., senior thesis, 2007) "Using thermobarometry to determine the pressure of crystallization of Aleutian magmas" University of North Carolina, MA program.

Kathryn Grover (B.A., Boston Univ., senior thesis, 2006) "Magmatic water content in Aleutian Volcanoes"

Ezra Benjamin (M.A., Boston Univ., 2004) "Water content of a hypothetically dry magma: The 1723 and 1963 eruptions of Irazu Volcano, Costa Rica" Now at: Enviornmental Resource Management, Boston, Senior Director, Business Operations and Chief of Staff

Katherine Kelley (Ph.D.; Boston Univ., 2004) "Trench inputs and arc outputs in the Mariana-Izu-Bonin Subduction Factory" Now at: Graduate School of Oceanography, Univ. of Rhode Island, NSF-ADVANCE Faculty Fellow, Professor of Oceanography.

Michael Hamilton (B.A., Boston Univ., senior thesis, 2003) "Using phenocryst composition as a water proxy in Alamagan lavas, Marianas Islands" Now at: Univ. of Northern Arizona MA program

Linda Farr (M.S., Boston Univ., 2002) "Mineral hosts of uranium in the altered oceanic crust and mechanisms controlling its distribution: a laser ablation-ICPMS study. Now at: Miami Dade College, Faculty.

Vaughn Balzer (M.S.; Kansas; 1999)"Late Miocene history of sediment subduction & recycling as recorded in the Nicaraguan volcanic arc" Now at: Oregon State Geological Survey

Kefa Wang (Ph.D., Kansas; 1999) "Crust-mantle interactions and mantle chemical systematics during Basin and Range extension, SW USA: Evidence from late Cenozoic volcanic rocks" Now at: Sprint Communications, Kansas City.

Chris Spies (B.S., Kansas, senior thesis, 1999) "Geochemical variations in recent Nicaragua and Costa Rica volcanics"

Other Thesis Committees

Samantha Tramontano (PhD, CUNY-Queens, 2020); Hannah Rabinowitz (Ph.D., Columbia., 2017); Jason Jweda (Ph.D., Columbia, 2013); Ellen Crapster-Pregont (Ph.D., Columbia, 2017); Wei Du (Ph.D., Columbia, 2011); Merry Cai (Ph.D., Columbia, 2008); Ashley Tibbetts (M.A., UNLV, 2009); Ronnie Phillips (M.Sci.Jour., Columbia, 2009); Merry Cai (Ph.D., Columbia, 2008), Ellen Syracuse (Ph.D., Boston, 2008), Patricia Clay (M.A., Boston, 2006), Leah Mehl (M.A.., Boston, 2007), Arancha Pinan (Ph.D., Boston, 2006); Christa Ziegler (Ph.D., Boston, 2006), Brittina Argow (Ph.D., Boston, 2006), Louise Bolge (Ph.D., Rutgers, 2005); Giovannibattista Rossi (M.A., Boston, 2004), Steve Whitmeyer (Ph.D., Boston, 2003), Lacie Quintin (M.A., Boston, 2003), Aaron Ferris (M.A., Boston, 2002), David Schlesinger (Ph.D., Boston, 2001), Steve Parman (Ph.D., MIT, 2001), Jesse Kidwell (M.S., Kansas, 1999), Sharon Stern (Ph.D., Kansas, 1998), Golam Sarkar (Ph.D., Kansas, 1998), Lina Patino (Ph.D., Rutgers University, 1997), Janet Baker (M.S., Kansas, 1995)

POST-DOCTORAL RESEARCH SCIENTISTS MENTORED:

Michael Jollands	(Ph.D., Australian National University, 2016)	LDEO 2020-2022
Megan Newcombe	(Ph.D., Caltech, 2015) post-doc at Carnegie Institution of Washington and Now: Assistant Professor, University of Maryland	LDEO 2016-2018
Alexander Lloyd	(Ph.D., Columbia University, 2014) Columbia Science Fellow 2014-2017 Now at: The Hun School, Princeton, NJ	

David Ferguson	(Ph.D., Oxford University, 2011)	LDEO 2011-2013
	Postdoctoral Fellow, Harvard University, 2014-2016	
	Now: Univerisity Academic Fellow (tenure-track), Univeristy of Leeds	
Elizabeth Ferriss	(Ph.D., University of Michigan, 2009)	LDEO 2011-2014
	Lamont Associate Research Scientist, 2014-2017	
	Now: Adaptive Mangement with DataMonster	
Philipp Ruprecht	(Ph.D., University of Washington, 2009)	LDEO 2009-2012
	now, Assistant Professor, University Nevada, Reno	
Esteban Gazel	(Ph.D., Rutgers University, 2009)	LDEO 2009-2011
	Now, Associate Professor, Cornell University	

COURSES TAUGHT (n = students enrolled; **X** = average score for overall performance; 5.0 is highest score)

Columbia University:

EESC UN3101: Geochemistry/Habitable Planet	Fall 2019	n= 27	**X**= 4.2
EESC G6700: Magmatism and Volcanism	Spring 2019	n= 7	X = 4.7
EESC UN3101: Geochemistry/Habitable Planet	Fall 2018	n= 25	**X**= 4.9
EESC 4701: Igneous & Metamorphic Petrology	Spring 2016	n= 8	**X**= 4.8
EESC UN3101: Geochemistry/Habitable Planet	Fall 2017	n= 26	**X**= 4.7
EESC UN3101: Geochemistry/Habitable Planet	Fall 2016	n= 25	**X**= 4.9
EESC G6700: Magmatism and Volcanism	Fall 2016	n= 8	X = 4.8
EESC 4701: Igneous & Metamorphic Petrology	Spring 2016	n= 5	**X**= 4.0
EESC 3101: Geochemistry/Habitable Planet	Fall 2015	n= 10	**X**= 5.0
SCNC C1000 Frontiers of Science (w/ 3 others)	Spring 2015	n > 500	**X**= 3.6
SCNC C1000 Frontiers of Science (w/ 3 others)	Fall 2014	n > 500	**X**= 3.4
EESC 3101: Geochemistry/Habitable Planet	Fall 2013	n= 26	**X**= 4.1
SCNC C1000 Frontiers of Science (w/ 3 others)	Spring 2013	n > 500	**X**= 4.0
EESC 9701: Seminar on Diffusion	Spring 2013	n= 6	**X**= na
EESC 3101: Geochemistry/Habitable Planet	Fall 2012	n= 22	**X**= 4.7
SCNC C1000 Frontiers of Science (w/ 3 others)	Spring 2012	n > 500	**X**= 4.0
EESC 3101: Geochemistry/Habitable Planet	Fall 2011	n= 17	**X**= 4.2
EESC 9701: Seminar on Volcanic Eruptions	Fall 2011	n=	**X**= na
EESC 9701: Seminar in Volcanism & Extension	Spring 2011	n= 5	**X**= 5.0
SCNC C1000 Frontiers of Science (w/ 3 others)	Spring 2011	n > 500	**X**= 4.2
EESC 3101: Geochemistry/Habitable Planet	Fall 2010	n= 7	**X**= 4.5
SCNC C1000 Frontiers of Science (w/ 3 others)	Spring 2010	n= 546	**X**= 3.8
EESC 3101: Geochemistry/Habitable Planet	Fall 2009	n= 15	**X**= 4.5
SCNC C1000 Frontiers of Science (w/ 3 others)	Spring 2009	n= 500	**X**= 3.8
EESC 2200: Earth System: Solid Earth (w/ Menke)	Fall 2008	n= 29	**X**= 4.0
EESC 9701: Seminar in Volcano Petrology	Fall 2008	n= 9	**X**= 4.3
EESC 9701: Seminar in Volatiles (w/Hofmann)	Fall 2008	n= 4	**X**= na

Boston University:

ES 371/671: Geochemistry	Fall 2007	n= 24	**X**= nr
ES 836: Adv petrology: Volcanology	Spr 2007	n= 4	**X**= 5.0
ES 101: The Dynamic Earth	Fall 2006	n= 117	**X**= 4.3
ES 371/671: Geochemistry	Fall 2006	n= 18	**X**= 4.3
ES 574: Geochemical Modeling (w/ Kurtz&Baxter)	Spr 2006	n= 9	**X**= 4.2

ES 424: Igneous & Metamorphic Petrology	Spr 2006	n= 13	**X**= 4.3
ES 371/671: Geochemistry	Fall 2005	n= 21	**X**= 4.3
ES 836: Advanced Topics in Ign Petrology	Spr 2005	n = 8	**X**= 5.0
ES 101: The Dynamic Earth	Fall 2004	n= 110	**X**= 4.5
ES 371/671: Geochemistry	Fall 2004	n= 11	**X**= 4.8
ES 424: Igneous & Metamorphic Petrology	Spr 2004	n= 5	**X**= 5.0
ES 574: Geochemical Modeling (w/ Kurtz&Baxter)	Fall 2003	n= 12	**X**= 4.7
ES 371/671: Geochemistry	Fall 2003	n= 13	**X**= 4.5
ES 573: Analytical Methods (w/ Murray)	Fall 2003	n= 2	**X** = na
ES 371/671: Geochemistry	Spr 2003	n= 23	**X**= 4.8
ES 836: Volatiles in Magmas	Fall 2002	n= 4	**X** = 5.0
ES 101: The Dynamic Earth	Fall 2002	n= 41	**X** = 4.7
ES 424: Igneous and Metamorphic Petrology	Spr 2002	n= 7	**X** = 4.6
ES 371: Introduction to Geochemistry	Spr 2002	n= 17	**X** = 4.3
ES 587: Subduction Seminar (w/Abers)	Fall 2001	n= 6	**X** = 4.7
ES 573: Analytical Methods (w/ Kurtz)	Fall 2001	n= 7	**X** = 4.7
ES 101: The Dynamic Earth (w/ Raymo)	Fall 2000	n= 59	**X** = 4.6
ES 571: Adv. Geochem.: Solid Earth CO_2 Cycle	Fall 2000	n= 7	**X** = 4.2
ES 424: Igneous and Metamorphic Petrology	Spr 2000	n= 5	**X** = na
ES 371: Introduction to Geochemistry	Spr 2000	n= 18	**X** = 3.8
ES 573: Analytical Methods (w/ Murray)	Fall 1999	n= 14	**X** = 4.3

University of Kansas:

GEOL 512: Igneous and Metamorphic Petrology	Spr 1999	n= 12	**X** = na
GEOL 101: Introduction to Geology	Fall 1998	n= 115	**X** = 4.8
GEOL 101: Introduction to Geology	Fall 1998	n= 105	**X** = 4.9
GEOL 512: Igneous and Metamorphic Petrology	Spr 1998	n= 7	**X** = 4.7
GEOL 791: Geochemical Modeling	Fall 1997	n= 3	**X** = 5.0
GEOL 791: Analytical Geochemistry, ICP-AES	Fall 1997	n= 5	**X** = 5.0
GEOL 512: Igneous and Metamorphic Petrology	Spr 1997	n = 14	**X** = 4.7
GEOL 101: Introduction to Geology	Fall 1996	n= 99	**X** = 4.9
GEOL 791: Analytical Geochemistry, ICP-MS	Fall 1996	n= 7	**X** = 5.0
GEOL 512: Igneous and Metamorphic Petrology	Spr 1996	n = 13	**X** = 4.7
GEOL 512: Igneous and Metamorphic Petrology	Fall 1995	n = 9	**X** = 4.9
GEOL 791: Extensional Magmatism	Spr 1995	n= 4	**X** = 4.8

(performance based on student evaluations)

GRANTS/PROJECTS FUNDED:

Amount: $ 2,470,814 (LDEO)
Title: " AVERT: Anticipating Volcanic Eruptions in Real Time"
Agency: Moore Foundation #8995
Period: 11/04/19 – 1/31/25
PI: T.Plank (LDEO) and E. Lev with 6 other PI's

Amount: $ 455,659 (LDEO) and GBP300,000 (Oxford)

Title: " NSFGEO-NERC: Sulfur Cycling at Subduction Zones"
Agency: National Science Foundation (Marine Geology & Geophys) OCE- 1933773
Period: 09/01/19 – 08/31/22
PI: T.Plank (LDEO) with T. Mather (Oxford) and A. Aiuppa (Univ.Palermo)

Amount: $ 14,064 (LDEO)
Title: " Aleutian - Alaska Workshop at Lamont for GeoPrisms Synthesis"
Agency: National Science Foundation (GeoPrisms) OCE-
Period: 08/01/19 – 08/31/22
PI: T.Plank (LDEO) with T. Mather (Oxford) and A. Aiuppa (Univ.Palermo)

Amount: $ 499,400 (U Washington Award)
Title: " RCN: A Research Coordination Network for the SZ4D Initiative"
Agency: National Science Foundation (5 Programs) EAR- 1828096
Period: 09/15/18 – 10/31/21
PI: H. Tobin (PI) w/ steering committee of 14, including T.Plank

Amount: $ 980,000 Total Award
Title: " MRI: Acquisition of an electron microprobe at the American Museum of Natural History"
Agency: National Science Foundation (Instrumentation & Facilities) EAR- 1828110
Period: 10/01-2018 – 09/30/21
PI: J. Webster, D. Ebel, A. Fiege (AMNH), T.Plank (LDEO), Flores (CUNY)

Amount: $ 208,362 LDEO Award
Title: " Acquisition of a Fourier Transform Infrared Imaging Microscope at LDEO"
Agency: National Science Foundation (Instrumentation & Facilities) EAR- 1748684
Period: 03/15/18 – 02/28/18
PI: T.Plank (LDEO)

Amount: $ 232,497 LDEO Award
Title: "Water in the Lithosphere: The Fidelity of Mantle Xenoliths"
Agency: National Science Foundation (Petrology & Geochemistry) EAR- 1731784
Period: 09/01/2017 - 08/31/2019
PI: T.Plank (LDEO)

Amount: $ 117,006 (LDEO Award)
Title: "The Carbon Budget in Marine Sediments"
Agency: Alfred P. Sloan Foundation (Deep Carbon Observatory: Reservoirs and Fluxes)
Grant Number G-2018-11344, LDEO- 15026
Period: 06/01/2015 - 12/31/2019
PI: A. Malinverno (PI-LDEO) and T.Plank (N/C-co-PI-LDEO)

Amount: $ 307,628 (LDEO Award) $ 374,500 (total project budget)
Title: "Collaborative Research: Rapid Magma Ascent Recorded in Volatile Diffusion Profiles"
Agency: National Science Foundation (Petrology & Geochemistry) EAR- 1524542

Period: 09/01/2015 - 08/31/2018
PI: T. Plank (LDEO) and E. Hauri (Carnegie)

Amount: $ 359,699 (LDEO Award) $ 580,190 (total project budget)
Title: "Collaborative Research: From the Slab to the Surface: Origin, Storage, Ascent, and Eruption of Volatile-Bearing Magmas"
Agency: National Science Foundation (GeoPrisms) EAR-1456814
Period: 06/01/2015 - 05/31/2018
PI: D. Roman and E. Hauri (Carnegie) and Plank (LDEO)

Amount: $ 222,017 (LDEO Award)
Title: "Water diffusion in olivine: Experiments and application to phenocrysts"
Agency: National Science Foundation (CH) EAR-1449699
Period: 03/01/2015 - 2/28/2017
PI: E.Ferriss and Plank (LDEO)

Amount: $ 78,172 (Berkeley Award)
Title: "Workshop Support Proposal for a DCO Thematic Institute on Carbon from the Mantle to the Surface"
Agency: Alfred P. Sloan Foundation
Period: 01/01/2015 - 12/31/2015
PI: B. Romanowicz (Berkeley), Plank (LDEO) wrote proposal

Amount: $ 124,448 (LDEO Award) $ 500,738 (total project budget)
Title: "Collaborative Research: Hawaiian and Subplinian Basaltic Volcanism: Constraints on Eruption Dynamics from Kilauea"
Agency: National Science Foundation (CH) EAR-1145177
Period: 01/01/2012 - 12/31/2013
PI: B. Houghton (Hawaii), Plank (LDEO), Gonnermann (Rice), Hauri (Carnegie)

Amount: $ 217,124 (LDEO award) $ 262, 662 (total project budget)
Title: "Integrating Seismological, Rheological and Petrological Studies of Melt Production and Transport in Subduction Zones"
Agency: National Science Foundation (CSEDI) EAR-1067974
Period: 09/15/2011 - 08/31/2013
PI: Abers (LDEO-PI), Plank (co-PI), B. Holzman (co-PI), with K. Fischer (Brown), D. Wiens (WUSTL), G. Hirth (Brown)

Amount: $93,893 (Oregon State University award - EarthScope National Office)
Title: "EarthScope Institute: The Lithosphere-Asthenosphere Boundary"
Agency: National Science Foundation (EarthScope Science) EAR-1059661
Period: 05/01/11-04/30/12
PI: Plank (co-PI and lead science writer) with A. Trehu (PI), C. Conrad (Hawaii), C. Dalton (Boston), G. Hirth (Brown)

Amount: $286,729 (LDEO award) $345,142 (total project budget)

Title: "Collaborative Research: Volatile Loss During Magma Ascent and Cooling"
Agency: National Science Foundation (Petrology & Geochemistry) EAR-0948533
Period: 08/01/10-07/31/13
PI: Plank (LDEO PI) with E. Hauri (CIW)

Amount: $70,000 (Columbia award)
Title: "RAMAN Microprobe for probing nano-bio interfaces and complex systems"
Agency: National Science Foundation CBET-09-33621
Period: 09/01/09-08/31/10
PI: P. Somasundaran, M.A. Borden, N. J. Turro, T. A. Plank, T. F. Heinz

Amount: $290,701 (LDEO award) $682,532 (total project budget)
Title: "Collaborative Research: Mantle dynamics and magmatism across the Basin and Range"
Agency: National Science Foundation (Earthscope Science). EAR-0745797
Period: 01/01/08-12/31/10 (extended to 12/31/11)
PI: Plank (LDEO PI), with D. Forsyth (Brown) and C-T. Lee (Rice)

Amount: $1,063,824
Title: "Collaborative Research: How is rifting exhuming the youngest HP/UHP rocks on Earth?"
Agency: National Science Foundation (CD: Continental Dynamics). EAR-0814236
Period: 07/15/07-06/30/12
PI: Abers (BU PI), Plank (co-PI BU); with S. Baldwin (lead PI, Syracuse), P. Mann (Texas), B. Hacker (UCSB), J. Gaherty & R.Buck (Lamont/Columbia)

Amount: $136,953
Title: Workshop to Integrate Subduction Factory and Seismogenic Zone Studies in Central America; Costa Rica - July 2007 OCE-0646768
Agency: National Science Foundation (MARGINS).
Period: 03/15/07-02/29/08
PI: Abers (BU PI), Plank (co-PI BU); with E. Silver (co-PI UCSC)

Amount: $165,370 (BU award)
Title: "Collaborative Research: Volatiles In Aleutian Arc Magmas" EAR-0609953/EAR-0852462
Agency: National Science Foundation (EAR: Petrology & Geochemistry).
Period: 08/01/06-07/31/09
PI: Plank, with E. Hauri (Carnegie Instit. Washington)

Amount: $160,000 (BU award)
Title: "Technical Support: Laser ablation and inductively coupled plasma laboratories - Renewal"
Agency: National Science Foundation (Instrumentation and Facilities). EAR-0549641
Period: 09/15/06-8/31/07
PI: Plank, with R. Murray, A. Kurtz and E. Baxter

Amount: $157,299 (BU award)
Title: "Magmatic water along the Central America arc" OCE-0549051, OCE-0839076

Agency: National Science Foundation (MARGINS).
Period: 02/15/06-03/31//2010
PI: Plank

Amount: $256,956 (BU award)
Title: "Volatiles in Tonga Arc Magmas"
Agency: National Science Foundation (OCE-MG&G) OCE-0526450/OCE-0839061
Period: 9/1/05 – 8/31/09
PI: Plank

Amount: $683,770 (BU award)
Title: "Acquisition & Development of a Thermal Ionization Mass Spectrometer Facility at Boston University"
Agency: National Science Foundation (MRI – Major Research Instrumentation) EAR- 0521266
Period: 09/15/05 - 8/31/06
Lead PI: Ethan Baxter Co-PI's: Kurtz, Murray, Plank

Amount: $87,892 (BU award) $183,910 (total project budget)
Title: "Collaborative Research: Volatiles in Aleutian-Alaska Arc Magmas"
Agency: National Science Foundation (EAR – Petrology & Geochemistry) EAR- 0409495
Period: 07/01/04 – 06/30/06
PI: T. Plank Co-PI's: P. Kelemen (WHOI); E. Hauri (Carnegie)

Amount: $210,000 (BU award)
Title: "Technical Support: laser ablation and inductively coupled plasma laboratories – Phase I.
Agency: National Science Foundation (EAR – Instrumentation & Facilities) EAR-0233712
Period: 05/15/03 – 04/30/06
PI: T. Plank Co-PI's: R. Murray, A. Kurtz

Amount: $ 478,134 (BU award); $ 758,175 (total project budget)
Title: "Collaborative Research: Imaging the mantle in the Central American Subduction Factory"
Agency: National Science Foundation (OCE-MARGINS) OCE-0203650
Period: 04/01/02 - 03/31/07
PI: G. Abers Co-PI's: T. Plank (BU) and Karen Fischer (Brown)

Amount: $ 67,301 (BU award); $ 197,250 (total project budget)
Title: "Collaborative Research: Hf-Nd isotopic and trace element geochemistry of globally subducting sediments"
Agency: National Science Foundation (OCE-MG&G) OCE-0137110
Period: 02/15/02 - 02/28/05
PI: T. Plank Co-PI's: J. Vervoort (Washington State) and J. Patchett (Arizona)

Amount: $ 109,017 (BU award); $ 138,572 (total project budget)
Title: "Collaborative Research: Tracing Paleoceanographic Sources of Fe to the Central Pacific Ocean"

Agency: National Science Foundation (OCE-MG&G) OCE-0136855
Period: 06/01/02 - 05/31/05
PI: R. Murray Co-PI's: T. Plank (BU) and S. Hemming (Lamont)

Amount: $ 173, 544 (BU award) + $14,419 (supplement); $ 504,369 (total project budget)
Title: "Collaborative Research: Volatiles (H_2O and CO_2) in Mariana and Izu Arc Magmas"
Agency: National Science Foundation (OCE, MARGINs Initiative) OCE-0001897
Period: 09/01/00 - 08/31/05
PI: Plank Co-PI's: T. Grove (MIT) and E. Stolper/S. Newman (Caltech)

Amount: $ 50,000 (BU award)
Title: Purchase of an FTIR Microscope for Analysis of Art, Archeological and Geological Materials
Agency: National Science Foundation (Social, Behavioral and Economic Science) BCS-0083555
Period: 08/21/00 - 08/31/01
PI: P. Goldberg (BU-Arch)
Co-PI's: T. Plank & D.Coleman (BU-Earth), R. Laursen (BU-Chem)

Amount: $ 39,128 (BU award)
Title: Geochemical Fluxes at the Mariana-Izu Trenches: Constraints from ICP-AES, ICP-MS and LAM analyses of Leg 185 sediments and oceanic crust.
Agency: Joint Oceanographic Institutions, US Science Support Program
Period: 08/20/99 - 04/30/01
PI: Plank and Kelley

Amount: $ 78,827 (BU award)
Title: Co-chief scientist participation on ODP Leg 185
Agency: Joint Oceanographic Institutions, US Science Support Program
Period: 9/99-8/02
PI: Plank

Title: "Fluid Flow, Seismic Cycling, and Pressure-Temperature Characteristics of the Costa Rica Subduction Zone "
Agency: Ocean Drilling Program
Period: Leg 203 scheduled for 9/02 – 11/02
Lead PI: E. Silver
Co-PI's: M. Kastner, J. Morris, K. McIntosh, T. Plank, D. Saffer

Title: "Crustal Fluxes and Mass Balances at the Mariana-Izu Convergent Margin"
Agency: Ocean Drilling Program
Period: Leg 185 took place 4/16/99 - 6/11/99
Lead PI: Plank
Co-PI's: R.L. Larson, J.B. Gill, R. Stern, J. Morris, T. Elliott, P. A. Floyd, J. Alt, L. Abrams

Amount: $ 78,094 (KU award); $161,000 (total project budget)
REU Supplement: $3,008 (KU Award) "Laser Ablation Microprobe Study of Plagioclase"

Title: "A structural analysis of sediment subduction off Nicaragua: Why the 10Be anomaly"
Agency: National Science Foundation (Ocean Sciences Division, Ocean Drilling Program)
Period: 9/95-12/98 OCE-9521717
Lead PI: Plank Co-PI's: J. Morris (Washington Univ.) and M. Carr (Rutgers Univ.)

Amount: $300,000 (KU award)
Title: "Acquisition of an Inductively Coupled Plasma Regional Facility for Geochemical Research"
Agency: W.M. Keck Foundation
Period: 7/95 - 7/99
Co-PI's: Plank and G.L. Macpherson

Amount: $97,000 (KU award); $227,000 (total project budget)
Title: "Collaborative Research: An Experimental Study of Sediment Dehydration and Melting in Subduction Zones"
Agency: National Science Foundation (EAR, Geochemistry and Petrology Program)
Period: 2/95 - 2/00 EAR-9506730
Co-PI's: Plank and M. Johnson (U.S. Military Academy, West Point, NY)

Amount: $175,000 (KU award)
Title: "Acquisition of an Inductively Coupled Plasma Mass Spectrometer for Geochemical Research at the University of Kansas"
Agency: National Science Foundation (Academic Research Infrastructure Program).
Period: 9/94 - 9/98 **EAR-9413547**
Lead PI: Plank
Co-PI's: G.L. Macpherson, R.H. Goldstein, W.R. Van Schmus, J.D. Walker, L.W. McKenna

Amount: $70,000 (Cornell award)
Title: "EAR Postdoctoral Fellowship: Behavior of high field strength elements during plate recycling "
Agency: National Science Foundation (EAR).
Period: 1/93 - 12/94 **EAR-9203151**
PI: Plank

PUBLICATIONS:

Total number citations (1987 - 2019): **14,515** (*Google Scholar*)
h index: **48** (*Google Scholar*) • most cited publications: *** (n > 400) ** (n > 100), * (n > 50)
† Student Advisee, †† Postdoc Mentored

2020

Werner, C., † D.J. Rasmussen, **T. Plank**, P.J. Kelly, C. Kern, T. Lopez, J. Gliss, J. Power, D. C. Roman, P. Izbekov, and J. Lyons. Linking Subsurface to Surface using Gas Emission and Melt Inclusion data at Mount Cleveland volcano, Alaska. *Geochem. Geophys. Geosyst*. Submitted Dec 2019.

††Newcombe, M., **T. Plank**, †A. Barth, P. Asimow, E. Hauri. Water-in-olivine magma ascent chronometry: Every crystal is a clock. *Journal of Volcanology and Geothermal Research*, in revision Jan 2020.

† Rasmussen, D.J., Plank, T., Wallace, P.J., Newcombe. M. and Lowenstern, J.B. Vapor-bubble growth in olivine-hosted melt inclusions. American Mineralogist, submitted Nov. 2019.

2019

91. Ducklow, H and **Plank, T**. (2019) Perspectives: Volcano-stimulated marine photosynthesis. *Science*, **365**, 978-979.

90. **Plank, T**., & Manning, C. E. (2019). Subducting carbon. *Nature*, 574 (7778), 343-352.

89. † Barth, Anna, ††Megan Newcombe, **Terry Plank**, Helge Gonnermann, Sahand Hajimirza, Gerardo Soto, Armando Saballos, and Erik Hauri. "Magma decompression rate correlates with explosivity at basaltic volcanoes—Constraints from water diffusion in olivine." *Journal of Volcanology and Geothermal Research* (2019): 106664.

88. Aiuppa, A., T. P. Fischer, **T. Plank**, P. Bani (2019) CO_2 flux emissions from the Earth's most actively degassing volcanoes, 2005-2015. *Scientific Reports* 9:5442 | https://doi.org/10.1038/s41598-019-41901-y.

2018

87. Bellot, N., Boyet, M., Doucelance, R., Bonnand, P., Savov, I. P., **Plank, T.,** & Elliott, T. (2018). Origin of negative cerium anomalies in subduction-related volcanic samples: Constraints from Ce and Nd isotopes. *Chemical Geology*, 500: 46-63.

86. †† Ferriss, E., **T. Plank**, †† M.Newcombe, D. Walker, E. Hauri. (2018) Site-specifc dehydration of olivines from San Carlos and Kilauea Iki. *Geochimica et Cosmochimica* Acta 242: 165–190.

85. Huang, Kangjun, Fang-Zhen Teng, **Terry Plank**, Hubert Staudigel, Yan Hu, and Zheng-Yu Bao (2018) Magnesium isotopic composition of the altered oceanic crust and implications for the magnesium geochemical cycle, *Geochim. Cosmochim. Acta*., 238: 357-373.

84. Williams, HM, J. Prytulak, JD Woodhead, KA Kelley, M Brounce, **T Plank** (2018) Interplay of crystal fractionation, sulfide saturation and oxygen fugacity on the iron isotope composition of arc lavas. An example from the Marianas. *Geochimica Cosmochimia Acta.* 226: 224 – 243.

83. † Rasmussen, D.J., **Plank, T**., Roman, D.C., Power, J.A., Bodnar, R.J. and Hauri, E.H. (2018) When does eruption run-up begin? Multidisciplinary insight from the 1999 eruption of Shishaldin volcano. *Earth and Planetary Science Letters*, 486: 1–14.

2017

82. Hu, Yan, Feng-zhen Teng, **T. Plank** and Kang-Jun Huang (2017) Magnesium isotopic composition of subducting marine sediments. *Chemical Geology*, 466, 15-31.

81. Aiuppa, Allesandro, Tobias P. Fischer, **Terry Plank**, Philippe Robidoux, and Rossella Di Napoli. (2017) Along-arc and inter-arc variations in volcanic gas CO_2/S_T ratios reveal dual source of carbon in arc volcanism. *Earth Science Review*, 168: 24–47.

80. Prytulak, J., A. Brett, M. Webb, **T. Plank**, M. Rehkamper, P. S Savage, J. D. Woodhead (2017) Thallium elemental behavior and stable isotope fractionation during magmatic processes. *Chemical Geology*, Volume 448, Pages 71–83.

2016

79. Prytulak, J., Paolo A Sossi, Alex N Halliday, **Terry Plank**, Paul S Savage, Jon D Woodhead (2017) Stable vanadium isotopes as a redox proxy in magmatic systems? *Geochemical Perspectives Letters*, v3, n1, doi: 10.7185/geochemlet.1708, 2016.

78. † Lloyd, A.S., **Terry Plank**, Philipp Ruprecht, Elizabeth Ferris, Erik Hauri (2016) An assessment of clinopyroxene as a recorder of magmatic water and ascent. *Journal of Petrology*, Vol.57, No.10, 1865–1886.

77. **Plank, Terry** (2016) The Geochemistry of Subduction Zones. *The Encyclopedia of Geochemistry*, editor, William M. White, Springer International Publishing Switzerland. DOI 10.1007/978-3-319-39193-9_268-1.

76. †† Ferguson, D.J., ., Gonnermann, H.M., Ruprecht, P., **Plank, T.,** Hauri, E.H., Houghton, B.F. and Swanson, D.A. (2016) Magma decompression rates during explosive eruptions of Kilauea volcano, Hawaii, *Bulletin of Volcanology*, 78 (10), 712016.

75. ††Ferriss, E., **Plank, T.,** Walker, D. (2016) Site-specific hydrogen diffusion rates during clinopyroxene dehydration. *Contrib. Mineral. Petrol*., 171:55. DOI 10.1007/s00410-016-1262-8

74. **Plank, T**. and Forsyth, D.W. (2016) Thermal Structure and Melting Conditions in the Mantle beneath the Basin and Range Province from Seismology and Petrology, *Geochem. Geophys. Geosyst*, 17: 1312-1338, doi:10.1002/2015GC006205.

73. Nielsen, S.G.; Gene Yogodzinski; Julie Prytulak; **Terry Plank**; Suzanne Kay; Robert Kay; Jerzy Blusztajn; Jeremy Owens; Maureen Auro; Tristan Kading (2016) Tracking along-arc sediment inputs to the Aleutian arc using thallium isotopes. *Geochem. Cosmochem. Acta*., 181: 217-237.

2015

72. Rabinowitz, H.S., Savage, H.M., Plank, T. Polissar, P.J., Kirkpatrick, J.D. and Rowe, C.D. (2015) Multiple major faults at the Japan Trench: Chemostratigraphy of the plate boundary at IODP Exp. 343: JFAST, *Earth and Planetary Science Letters* 423, 57-66.

71. ** Wallace P, **Plank T**, Edmonds M, Hauri EH (2015) Volatiles in Magmas. In: H. Sigurdsson et al. (Editors) *Encyclopedia of Volcanoes*, Elsevier. http://dx.doi.org/10.1016/B978-0-12-385938-9.00007-9, 163-183.

70. Moore, J.C., **T. Plank**, F.M. Chester, P.J. Polissar, H.M Savage. The plate boundary thrust of the 2011 great Tohoku earthquake: Oceanographic provenance and controls on slip propagation. *Geosphere,* v.11. 533-541, doi:10.1130/GES01099.1, 2015.

69. * Moore, L., E, Gazel, R Tuohy, †A Lloyd, R Esposito, EH Hauri, PJ Wallace, **T Plank**, RJ Bodnar (2015) Bubbles matter: An assessment of the contribution of vapor bubbles to melt inclusion volatile budgets. *American Mineralogist*, 100 (4), 806-823.

68. ††Ferriss, E., **Plank, T**., Walker, D., Nettles, M. (2015) The whole block approach: Measuring hydrogen diffusivity by geochemical tomography. *American Mineralogist*, DOI: http: //dx.doi.org/10.2138/am-2015-4947.

67. Wei, S.S, D A. Wiens, Y. Zha, T. Plank, S. C. Webb, D. K. Blackman, R.A. Dunn, and J. A. Conder. Seismological Evidence of Effects of Water on Mantle Melt Transport beneath the Lau Back-arc Basin. *Nature*, 518: 395-398.

2014

66. Abers, GA, KM Fischer, G Hirth, DA Wiens, **T Plank**, BK Holtzman, C McCarthy, E Gazel (2014) Reconciling mantle attenuation-temperature relationships from seismology, petrology and laboratory measurements. *Geochem. Geophys. Geosyst*. 10.1002/2014GC005444.

65. * †Lloyd, A.S., **Plank, T**., Ruprecht, P., Hauri, E.H., Rose, W., and Gonnermann, H.M. (2014) NanoSIMS results from olivine-hosted melt embayments: Magma ascent rate during explosive basaltic eruptions. *Journal of Volcanology and Geothermal Research*, 283, 1-18, http://dx.doi.org/10.1016/j.jvolgeores.2014.06.002.

64. Wanless, V.D., M.D.Behn, A.M.Shaw, **T. Plank** (2014) Variations in melting dynamics and mantle compositions along the Eastern Volcanic Zone of the Gakkel Ridge: insights from olivine-hosted melt inclusions. *Contrib Mineral Petrol*, 167:1005. DOI 10.1007/s00410-014-1005-7

63. ** **Plank, T**. (2014) The Chemical Composition of Subducting Sediments. In: Holland H.D. and Turekian K.K. (eds.) *Treatise on Geochemistry*, Second Edition, vol. 4, pp. 607-629.

Oxford: Elsevier. http://dx.doi.org/10.1016/B978-0-08-095975-7.00319-3. Data tables archived at EarthChem Library: DOI: 10.1594/IEDA/100416

2013

62. Waters, C.L., Sims, K.W.W, Soule, S.A, Blichert-Toft, J., Dunbar, N.W., **Plank, T.,** Sohn, R.A., Tivey, M.A. (2013) Recent Volcanic Accretion at 9-10°N East Pacific Rise as Resolved by Combined Geochemical and Geological Observations. *Geochem. Geophys. Geosyst*., v. 14, 14, 2547–2574, doi:10.1002/ggge.20134.

61. * †† Ruprecht, P. and **Plank, T.** (2013) Feeding andesitic eruptions with a high-speed connection from the mantle. *Nature*, v: 50, 68-72 doi:10.1038/nature12342.

60. Prytulak, J., Nielsen, S.G., **Plank, T.** Barker, M. and Elliott, T. (2013) Assessing the utility of thallium and thallium isotopes for tracing subduction zone inputs to the Mariana arc. *Chemical Geology*, 345: 139–149.

59. * †† Ferguson, D.J., J. Maclennan, I.D. Bastow, D.M. Pyle, S.M. Jones, D. Keir, J.D. Blundy, **T. Plank,** G. Yirgu (2013) Melting during late-stage rifting in Afar is hot and deep. *Nature*, 499: 70-74. doi:10.1038/nature12292.

58. ** **Plank, T.**, Kelley, K.A., †Zimmer, M.M., Hauri, E.H. and Wallace, P.J. (2013) Why do mafic arc magmas contain ~4 wt% water on average? *Earth and Planetary Science Letters*, Frontiers Article, v. 364: 168-179.

57. ** Davidson, J., Turner, S. and **Plank, T**. (2013) Dy/Dy*: variations arising from mantle sources and petrogenetic processes. *Journal of Petrology*, 54(3): 525-537, doi:10.1093/petrology/egs076.

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