

MEENAKSHI WADHWA
CURRICULUM VITAE
MAY 2023

DIRECTOR AND FOUNDATION PROFESSOR
SCHOOL OF EARTH AND SPACE EXPLORATION
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BIOGRAPHICAL SUMMARY

Meenakshi Wadhwa is a planetary scientist and isotope cosmochemist interested in the time scales and processes involved in the formation and evolution of the Solar System and planets. Her research group is known for developing novel methodologies for high precision isotope analyses and for the application of high-resolution chronometers to understand: the time scales of accretion and differentiation of planetesimals and the terrestrial planets; the processes in the solar protoplanetary disk and on planetesimals; and the abundance and origin of water and other volatiles on rocky bodies in the Solar System. She received her doctorate from Washington University in St. Louis (1994) and was then appointed as a postdoctoral researcher at the Scripps Institution of Oceanography in the University of California at San Diego (1994-1995). She was subsequently Curator in the Department of Geology at the Field Museum in Chicago (1995-2006) before moving to Arizona State University as Professor in the School of Earth and Space Exploration. At ASU, she served as director of the Center for Meteorite Studies from 2006 till 2019. She was appointed director of the School of Earth and Space Exploration in 2019 and designated Foundation Professor in 2021. She is also appointed as a Distinguished Visiting Scientist and Mars Sample Return Principal Scientist at the Jet Propulsion Laboratory since 2021. She was awarded the NASA Exceptional Public Service Medal in 2022. She is recipient of the J. Lawrence Smith medal of the National Academy of Sciences (2021), the Fulbright-Nehru Academic and Professional Excellence Award (2015-2016), the Guggenheim Fellowship (2005-2006), and the Nier Prize of the Meteoritical Society (2000). She was awarded an American Council on Education Fellowship (2018-2019) and became a Fellow of the American Geophysical Union in 2019. She became a Geochemistry Fellow of the Geochemical Society and the European Association of Geochemistry in 2021, and was elected as a member of the National Academy of Sciences in 2023. Asteroid 8356 has been named 8356 Wadhwa in recognition of her contributions to meteoritics and planetary science.

EDUCATION

Ph.D., Earth and Planetary Sciences, Washington University, St. Louis, 1994
M.S. (with Honors), Geology, Panjab University, 1989
B.S. (with Honors), Geology, minors in Physics and Chemistry, Panjab University, 1988

ADMINISTRATIVE APPOINTMENTS AND EXPERIENCE

Director, School of Earth and Space Exploration, Arizona State University, 2019 – present
Director, Center for Meteorite Studies, Arizona State University, 2006 – 2019
American Council on Education Fellows Program, 2018 – 2019
Higher Education Resource Services (HERS) Leadership Institute, University of Denver, June 2017
President's Women-in-Leadership Council, ASU, 2015 – 2016
Provost's Faculty Fellow, Office of Provost, ASU, 2013 – 2014

ACADEMIC APPOINTMENTS

Foundation Professor, School of Earth and Space Exploration, Arizona State University, Mar 2021 – present
Mars Sample Return Principal Scientist, Jet Propulsion Laboratory, Apr 2021 – present
Distinguished Visiting Scientist, Jet Propulsion Laboratory, Apr 2021 – present

Professor, School of Earth and Space Exploration, Arizona State University, Oct 2006 – Mar 2021
Visiting Scientist (sabbatical), Lunar and Planetary Institute, Houston, Jan – July 2013
Visiting Faculty (sabbatical), Department of Earth, Environmental and Planetary Sciences, Rice University, Aug – Dec 2012
Curator, Department of Geology, The Field Museum, Chicago, March 2005 – Sept 2006
Visiting Scholar (sabbatical), Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, Dec 2005 – March 2006
Lecturer and Senior Research Associate, Department of Geophysical Sciences, University of Chicago, Dec 2003 – Sept 2006
Associate Curator, Department of Geology, The Field Museum, Chicago, July 1999 – March 2005
Lecturer and Research Scientist, Department of Geophysical Sciences, University of Chicago, Jan 1997 – Dec 2003
Assistant Curator, Department of Geology, The Field Museum, Chicago, June 1995 – June 1999
Visiting Scholar, Department of Geophysical Sciences, University of Chicago, June 1995 – Dec 1996
Postdoctoral Research Geochemist, Geosciences Research Division, University of California at San Diego, June 1994 – May 1995

HONORS AND AWARDS

Elected member of the National Academy of Sciences, 2023
NASA Exceptional Public Service Medal, 2022
J. Lawrence Smith Medal, The National Academy of Sciences, 2021
Geochemistry Fellow, Geochemical Society and European Association of Geochemistry, 2021
Foundation Professor, Arizona State University, 2021
Fellow, American Geophysical Union, 2019
American Council on Education Fellowship, 2018-2019
Shoemaker Lecturer, American Geophysical Union Fall Meeting, 2016
Fulbright-Nehru Academic and Professional Excellence Award, 2015-2016
Visiting Scientist, Lunar and Planetary Institute, 2013
Fellow, Explorers Club, 2012
Fellow, Wings WorldQuest, 2007
Fellow, Meteoritical Society, 2006
Guggenheim Fellowship, 2005-2006
Wings WorldQuest Women of Discovery Award (Air and Space), 2003
Nier Prize of the Meteoritical Society, 2000
Asteroid 8356 named (8356) *Wadhwa* by International Astronomical Union, 1999
Antarctica Service Medal, 1993
McDonnell Center Graduate Fellowship, 1990-1992
University Fellowship, Washington University, 1989-1990
University Grants Commission Fellowship, Panjab University, 1988-1989

PROFESSIONAL SOCIETIES

American Association for the Advancement of Science
American Geophysical Union (Fellow)
Geochemical Society (Fellow)
Meteoritical Society (Fellow)
The Explorers Club (Fellow)

SPONSORED RESEARCH AWARDS

PI, JPL Mars Sample Return Program Subcontract, \$815,992 (4/7/2021-9/24/2023)
PI, NASA Science Activation Integration Program, \$4,984,729 (1/1/2021-12/31/2025)
PI, NASA Solar System Workings Program, \$446,573 (1/1/21-12/31/23)
PI, NASA Solar System Workings Program, \$444,408 (1/1/17-12/31/23)

PI, NASA Emerging Worlds Program, \$1,953,008 (7/1/15-6/30/22)
 PI, NASA Earth and Space Science Fellowship (S. Ray), \$122,682 (9/1/18-2/28/22)
 PI, NASA Future Investigators in Earth and Space Science and Technology (Z. Torrano), \$40,795 (9/1/19-8/31/20)
 PI, NASA Earth and Space Science Fellowship (D. Dunlap), \$74,431 (9/1/17-8/31/20)
 PI, NASA Earth and Space Science Fellowship (E. Dunham), \$104,226 (9/1/16-8/31/20)
 Co-I, NASA Science Education CAN (PI: A. Anbar), \$10,183,479 (1/21/2016-1/20/2021)
 Co-I, NASA Nexus for Exoplanet System Science (PI: S. Desch), \$6,097,436 (12/31/2014-12/30/2019)
 PI, NASA Lunar Advanced Science & Exploration Research Program, \$122,659 (9/3/14-9/4/17)
 PI, NASA Earth and Space Science Fellowship (P. Mane), \$90,000 (9/1/13-8/31/16)
 PI, NASA Cosmochemistry Program, \$1,060,651 (6/23/11-6/22/16)
 PI, NASA Origins of Solar Systems Program, \$318,140 (6/22/11-6/21/15)
 Co-I, NASA Lunar Advanced Science & Exploration Research Program (PI: A. Bouvier), \$18,511 (5/5/12-9/2/14)
 PI, NASA Earth and Space Science Fellowship (C. Williams), \$60,000 (9/1/12-8/31/14)
 Co-I, NASA Education and Outreach in Earth & Space Science (PI: A. Anbar), \$302,377 (4/6/11-4/5/14)
 Co-I, NASA Astrobiology Institute (PI: A. Anbar), \$7,008,810 (1/15/09-1/14/14)
 PI, NASA JPL subcontract, \$16,954 (6/27/13-9/29/13)
 Co-PI, NSF Major Research Instrumentation (PI: P. Williams), \$3,267,586 (1/1/10-12/31/2012)
 PI, NASA Earth and Space Science Fellowship, \$30,000 (L. Spivak-Birndorf) (9/1/11-8/31/12)
 PI, NASA Earth and Space Science Fellowship, \$89,570 (M. Sanborn) (9/1/09-8/31/12)
 Co-I, NASA Mars Fundamental Research Program (PI: D. Bell), \$315,497 (4/24/08-4/23/12)
 PI, NASA Cosmochemistry Program, \$1,245,000 (4/1/08-3/31/12)
 PI, NASA Earth and Space Science Fellowship, \$30,000 (G. Brennecka) (9/1/10-8/31/11)
 PI, NASA Origins of Solar Systems Program, \$211,677 (1/8/07-5/7/10)
 PI, NASA Discovery Program (Genesis mission) subcontract through JSC, \$342,000 (8/1/05-9/30/09)
 PI, NASA Cosmochemistry Program, \$426,000 (5/1/05-3/31/08)
 Co-PI, NSF Major Research Instrumentation Program (PI: R. Williams), \$494,295 (9/1/03-8/31/06)
 PI, NASA Cosmochemistry Program, \$345,000 (5/1/02-4/30/05)
 PI, NSF EAR Geochemistry and Petrology Program, \$130,356 (1/1/98-6/30/03)
 PI, NASA Cosmochemistry Program, \$225,000 (4/1/99-3/31/02)
 PI, NSF Major Research Instrumentation Program, \$255,000 (9/15/98-9/14/01)
 PI, NASA Cosmochemistry Program (major equipment grant), \$255,000 (4/15/98-10/14/99)
 Co-PI, NSF Major Research Instrumentation Program (PI: M. Humayun), \$410,000 (9/1/97-8/31/99)
 PI, NASA Cosmochemistry Program, \$80,000 (4/1/97-3/31/99)

SPACECRAFT MISSION ENGAGEMENT

Principal Scientist, Mars Sample Return Program, 2021 – present
 Science team member, Mars 2020 mission (Returned Sample Science Working Group), 2021 – present
 Collaborator, NASA Mars Science Laboratory mission (SAM instrument suite), 2011 – present
 Initial Analysis Chemistry Team member, JAXA Hayabusa2 mission, 2018 – 2023
 Science team member (Co-I), NASA Genesis Discovery mission, 2005 – 2009

PROFESSIONAL LEADERSHIP AND SERVICE

Member, Universities Space Research Association (USRA) Lunar and Planetary Institute Science Council, 2022 – present
 Mentor, Brooke Owens Fellowship Program, 2016 – present
 Member, The National Academies of Sciences, Engineering, and Medicine, Intelligence Science and Technology Experts Group (ISTEG), 2015 – present
 Member, Academic Program Review Committee, Department of Earth, Environmental and Planetary Sciences, Rice University, 2022

Member, Initial Analysis Chemistry Team for Chemistry, JAXA's Hayabusa2 sample return mission to asteroid Ryugu, 2018 – 2023

Member, Editorial Board for *Scientific Reports*, a Nature Research journal, 2018 – 2023

Member, NASA Advisory Council, 2018 – 2022

Chair, NASA Advisory Council Science Committee, 2018 – 2022 (member, 2017 – 2018)

Member, Academic Program Review Committee, Morton K. Blaustein Department of Earth and Planetary Sciences, Johns Hopkins University, 2021

Member, Academic Program Review Committee, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, 2021

Member, Academic Program Review Committee, Department of Earth and Planetary Sciences, University of New Mexico, 2021

Member, NASA-ESA Mars Sample Return Caching Strategy Steering Committee, 2020

Member, NASA-ESA Mars Sample Planning Group 2 (MSPG-2), 2020

Member, NASA Mars Sample Return Independent Review Board, 2020

President, The Meteoritical Society, 2019-2020 (President Elect, 2017-2018; Past President, 2021-2022)

Member, Review panel for NASA Science Mission Directorate Research and Analysis program, 2019

Member, NASA-ESA Mars Sample Planning Group 1 (MSPG1), 2018 – 2019

Member, AGU Robert Cowen Award for Sustained Achievement in Science Journalism selection committee, 2017 – 2019

Member, Astronaut Scholarship Foundation's Neil Armstrong Award of Excellence selection committee, 2017 – 2019

Member, International Mars Sample Return Objectives and Samples Team (iMOST), 2018

Convener, Workshop on Role of Sample Return in Addressing Major Scientific Questions in Planetary Sciences, International Space Science Institute, Bern, Switzerland, 2018

Vice-President, Meteoritical Society, 2017 – 2018

Member, The National Academies of Sciences, Engineering, and Medicine, Space Studies Board Executive Committee, 2016 – 2017

Member, The National Academies of Sciences, Engineering, and Medicine, Space Studies Board, 2012 – 2017

Member, NASA Advisory Council's Planetary Protection Subcommittee, 2015 – 2016

Member, Review panels for NASA Science Mission Directorate Research and Analysis programs, 2015 – 2016

Member, AGU David Perlman Award for Excellence in Science Journalism selection committee, 2015 – 2016

Member, Elements Magazine Advisory Board, 2009 – 2016

Member, Ad hoc panel of experts (Planetary Protection) convened by The National Academies NRC, 2014 – 2015

Member, The National Academies NRC Committee on the Assessment of NASA Science Mission Directorate 2014 Science Plan, 2013

Chair, Audit Committee of the Meteoritical Society, 2013; member, 2011 – 2013

Co-Convener, Lunar Highlands Workshop, 2012

Chair, NASA Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM), 2009 – 2012

Member, Planetary Science Subcommittee of the NASA Advisory Council, 2009 – 2012

Theme Chair (Cosmochemistry, Planet Formation), Goldschmidt Conference, 2011

Member, Organizing Committee, Workshop on Formation of the First Solids in the Solar System, 2011

Invited Nominator, MacArthur Foundation Fellows Program, 2011, 2005

Invited External Member, Faculty Search Committee, ETH Zurich, 2010 – 2011

Invited External Member, Faculty Search Committee, Center for Star and Planet Formation, University of Copenhagen, 2010

Chair, Planetary Conditions for Life sub-panel, NASA Exobiology Review Panel, 2009

Chair, McKay Award Committee of the Meteoritical Society, 2009

Member, National Academies NRC Committee on Planetary Protection Requirements for Mars Sample Return Missions, 2008 – 2009

Member, NASA Cosmochemistry Review Panel, 2008

Member, NASA Discovery and Scout Mission Capabilities Expansion Review Panel, 2008
 Chair, Meteoritical Society Pellas-Ryder Committee, 2008; member, 2006 – 2008
 Member, Science Steering Committee, 5th Astrobiology Science Conference, 2007 – 2008
 Member, National Academies NRC Committee on Astrobiology Strategy for the Exploration of Mars, 2006 – 2008
 Member, National Academies NRC Committee on Origins and Evolution of Life, 2005 – 2008
 Member, NASA Cosmochemistry Program Management Operations Working Group, 2005 – 2008
 Member, Universities Space Research Association (USRA) Lunar and Planetary Institute Science Council, 2002 – 2008
 Member, NASA Origins of Solar Systems Review Panel, 2007
 Co-Chair, Planetary Conditions for Life sub-panel, NASA Exobiology Review Panel, 2007
 Member, Program Committee, 70th Annual Meteoritical Society Meeting, 2007
 Member, Nominations Committee of the Meteoritical Society, 2007
 Member, Organizing Committee, Early Planetary Differentiation Workshop, 2006
 Member, NASA Solar System Exploration Strategic Roadmap Committee, 2005
 Member, Program Committee, 68th Annual Meteoritical Society Meeting, 2005
 Member, Solar System Exploration Subcommittee of NASA's Space Sciences Advisory Committee, 2004 – 2005
 Member, Editorial Committee, *Meteorites & the Early Solar System II* (U. Arizona Press), 2004 – 2005
 Member, NASA Curation and Planning Team for Extraterrestrial Materials (CAPTEM), 2002 – 2005
 Member, NASA Mars-Moon Science Linkages (MMSL) Science Steering Group, 2004
 Member, Organizing Committee, Oxygen in the Terrestrial Planets Workshop, 2004
 Member, Meteoritical Society Council, 2001 – 2004
 Panel Chief, NASA Cosmochemistry Review Panel, 2002 – 2003
 Member, Organizing Committee, Workshop on Mercury: Space Environment, Surface, and Interior, 2001
 Member, NASA Cosmochemistry Management Operations Working Group/Ad Hoc Advisory Group, 1998 – 2001
 Co-Chair, Organizing Committee, 63rd Annual Meteoritical Society Meeting, 2000
 Chair, Meteorite Nomenclature Committee, 1998; member, 1996–2000
 Panel Chief, NASA Planetary Instrument Definition and Development Program (PIDDP) Surface Instrumentation Review Panel, 1999
 Member, Program Committee, Lunar and Planetary Science Conference, 1998 – 1999
 Group Chief, Experimental and Analytical Geochemistry Group, 1999; member, NASA Cosmochemistry Review Panel, 1997 – 1999
 Member, NASA-NSF-Smithsonian Meteorite Working Group, 1996 – 1999
 Member, NASA Laboratory Instrumentation for the Analysis of Returned Samples (LIFARS) Program Definition Group, 1997 – 1998
 Member, NASA Planetary Instrument Definition and Development Program (PIDDP) Surface Instrumentation Review Panel, 1996

DEPARTMENT AND UNIVERSITY SERVICE

Director, School of Earth and Space Exploration (SESE), Arizona State University (ASU), 2019-present
 Member, Space Strategy Committee, ASU, 2020-present (chair, 2020-2021)
 Member, Faculty Women's Association Board, ASU, 2012 – present
 Mentor, Alumni Mentoring Program of ASU Launching Leaders Program, Spring 2022
 Member, Search Committee for Provost, ASU, 2020
 Chair, Promotion and Tenure Committee, SESE, ASU, 2018 – 2019; member, 2016 – 2019
 Member, Exploration Postdoctoral Fellowship evaluation committee, SESE, ASU, 2019
 Member, Origins Project Internal Advisory Committee, ASU, 2013 – 2018
 Member, Senators Council, College of Liberal Arts and Sciences, ASU, 2014 – 2018
 Member, Search Committee for Small Satellites faculty member, SESE, ASU, 2016 – 2017
 Member, President's Women-in-Leadership Council, ASU, 2015 – 2016
 Member, Regent's Professors selection committee, ASU, 2015 – 2016

Member, Exploration Postdoctoral Fellowship evaluation committee, SESE, ASU, 2015
Member, Search Committee for Electron Microprobe Lab Manager, Center for Solid State Science, ASU, 2015
Member, Search Committee for Planetary Science faculty member, SESE, ASU, 2014 – 2015
Member, Search Committee for Provost, ASU, 2013
Co-Chair, International Student Experience Strategic Plan Committee, ASU, 2013
Member, Promotion and Tenure Committee, SESE, ASU, 2007 – 2011
Member, Undergraduate and Graduate Curriculum Committee, SESE, ASU, 2008 – 2009
Member, Graduate Qualification Requirements (Ad Hoc) Committee, SESE, ASU, 2007 – 2008
Member, Interdisciplinary Science and Technology Building-4 Planning (Ad Hoc) Committee, SESE, ASU, 2007 – 2008
Member, Search Committee for the Dean of the Sandra Day O'Connor School of Law, ASU, 2007 – 2008
Member, Graduate Recruitment Committee, SESE, ASU, 2007
Director, Center for Meteorite Studies, SESE, ASU, 2006-2019

TEACHING EXPERIENCE

SES591/494 Advances in Solar System Exploration with Sample Return Missions, Spring 2023
GLG598/485 & CHM598/485 Cosmochemistry and Meteorites, ASU, Spring 2021, Fall 2018, Fall 2016, Spring 2014, 2012, 2010, Fall 2007
SES591/494 Sample Return Missions, Spring 2018
GLG598/490 Analytical Instruments, ASU, Spring 2017, 2011, Fall 2008
GLG581/494 & CHM598/494 Isotope Geochemistry (co-taught with A. Anbar), ASU, Spring 2015
GLG598/494 Trace Element Geochemistry (co-taught with R. Hervig), ASU, Fall 2014
GeoSci220 Magmatism in the Early Solar System, University of Chicago, Spring Quarter, scheduled alternate years, 1998-2006
PhySci110 Environmental History of Earth, University of Chicago, Winter Quarter, 2001

ACADEMIC MENTORING

Graduate Student Advisees

Nicole Phelan (masters student, ASU, 2021 – present)
Andrea Distel (doctoral student, ASU, 2021 – present)
Linnea McCann (ASU, MNS 2022)
Soumya Ray (doctoral student, ASU, 2016 – 2021, currently postdoctoral fellow at University of Maryland at College Park/Goddard Space Flight Center)
Zachary Torrano (ASU, PhD 2020, currently Carnegie Postdoctoral Fellow at Carnegie's Earth and Planets Laboratory in Washington, DC)
Emilie Dunham (ASU, PhD 2020, currently Heising Simons Foundation 51Pegasi b Fellow at the University of California at Los Angeles, Los Angeles, CA)
Daniel Dunlap (ASU, PhD 2020, currently Analytical Chemist at Oak Ridge National Laboratory, Oak Ridge, TN)
Gabriel Franco (ASU, MNS 2019)
Prajakta Mane (ASU, PhD 2016, currently Staff Scientist at Lunar and Planetary Institute, Houston, TX)
Kera Tucker (ASU, MS 2015; currently Senior Systems Engineer at Lockheed Martin, Denver, CO)
Curtis Williams (ASU, PhD 2014; currently Program Director (Petrology and Geochemistry), National Science Foundation, Washington DC)
Matthew Sanborn (ASU, PhD 2012; currently Staff Scientist, Los Alamos National Laboratory, Los Alamos, NM)
Lev Spivak-Birndorf (ASU, PhD 2012; currently Founder and Research Scientist at PSI Labs, Ann Arbor, MI)
Greg Brennecke (ASU, PhD 2011; currently Staff Scientist, Lawrence Livermore National Laboratory, Livermore, CA)

Postdoctoral and Other Advisees

Jemma Davidson (Associate Research Scientist, Center for Meteorite Studies, ASU, 2023 – present)

Vinai Rai (Research Scientist and Laboratory Manager, Center for Meteorite Studies, ASU, 2023 – present)
Jeffrey Osterhaut (Postdoctoral Researcher, Jet Propulsion Laboratory, Pasadena, CA, 2021 – present)
Rebekah Hines (Research Professional, Center for Meteorite Studies, ASU, 2011 – present)
Jemma Davidson (Assistant Research Scientist, Center for Meteorite Studies, ASU, 2018 – 2023)
Vinai Rai (Associate Research Scientist and Laboratory Manager, Center for Meteorite Studies, ASU, 2016 – 2023)
Stephen Romaniello (Assistant Research Scientist, 25% appointment in Center for Meteorite Studies, ASU, 2014 – 2019; Assistant Research Scientist and Laboratory Manager, Center for Meteorite Studies, ASU, 2012 – 2014; currently Director of Research, Project Vesta, Knoxville, TN)
Alice Stephant (Postdoctoral Researcher, Center for Meteorite Studies, ASU, 2015 – 2017; currently Marie Curie Research Fellow, Istituto Nazionale di Astrofisica, Rome, Italy)
Julia Cartwright (Postdoctoral Researcher, Center for Meteorite Studies, ASU, 2014 – 2017; currently Assistant Professor, University of Alabama, Huntsville, AL)
Kate Sounders (Assistant Research Professor and Laboratory Manager, Center for Meteorite Studies, ASU, 2014 – 2015; currently Research Geologist, United States Geological Survey, Denver, CO)
Gregory Brennecka (Postdoctoral Researcher, Center for Meteorite Studies, ASU, 2011 – 2013; currently Staff Scientist, Lawrence Livermore National Laboratory, Livermore, CA)
Philip Janney (Associate Research Scientist and Laboratory Manager, Center for Meteorite Studies, ASU, 2006 – 2012; Laboratory Manager, The Field Museum, 2000 – 2006; currently Professor, University of Cape Town, South Africa)
Melissa Morris (SESE Exploration Postdoctoral Fellow co-advised with S. Desch, ASU, 2010 – 2011; currently Discipline Scientist/Program Officer, NASA Headquarters, Washington, DC)
Audrey Bouvier (Postdoctoral Researcher, Center for Meteorite Studies, ASU, 2007 – 2010; currently Research Scientist at Bayerisches Geoinstitut, University of Bayreuth, Bayreuth, Germany)
Fang Zhen Teng (Postdoctoral Researcher, The Field Museum, 2006 – 2007; currently Professor, University of Washington, Seattle, WA)
Nicolas Dauphas (Postdoctoral Researcher, The Field Museum and University of Chicago, co-advised with A. M. Davis, 2002 – 2004; currently Louis Block Professor, University of Chicago, Chicago, IL)
Nicole Foley (Postdoctoral Researcher, The Field Museum, 2002 – 2004)

Undergraduate Student Advisees

Christian Kroemer (ASU, Honors Thesis 2022)
Max Kulak (ASU, Honors Thesis 2022)
Ivy Ettenborough (ASU, 2019)
Karen Leung (ASU, 2016)
Elizabeth Dybal (ASU, 2014 – 2016)
Ya-Jui Ku (National Taiwan University, 2014)
Jasmine Parker (ASU, 2012 – 2013)
Tyler Farina (ASU, 2012)
Brian De Hoog (ASU, 2009 – 2012)
Melissa Anderson (ASU, 2009)
Michael Stuart (ASU, 2009)
Ashley Dancer (ASU, 2008 – 2009)
Jesse Hannah (ASU, 2008 – 2009)
Ashley Stanfil (ASU, 2008)
Susheel Koushik (ASU, 2007 – 2008)
Melanie Channon (ASU, 2007)
Elizabeth Meith (ASU 2007)
Matthew Sanborn (ASU, 2007)
Lev Spivak-Birndorf (U. Chicago, 2003 – 2005)
Nicolas Beecher (U. Chicago, 2002)
Josef Dufek (U. Chicago, 2001)
Noel Heim (U. Chicago, 1999 – 2000)
Shelley Erickson (Field Museum Intern, 1998 – 1999)

Emily Lakdawalla (Field Museum Intern, 1998)

Brooke Owens Fellowship Mentees

Kylie Schmidt (University of Kentucky, 2023)
Sarah Fry (Princeton University, 2022)
Isabel Hunt (Temple University, 2021)
Sanjana Tewathia (Georgia Institute of Technology, 2020)
Kira Altman (University of Colorado at Boulder, 2019)
Carson Brumley (University of Colorado at Boulder, 2018)
Justine Walker (College of Wooster, 2017)

Honors and Awards (As Mentor)

NASA Future Investigators in Earth and Space Science and Technology, Zachary Torrano (as graduate student at ASU), 2019
NASA Earth and Space Science Fellowship, Emilie Dunham (as graduate student at ASU), 2016, 2017, 2018, 2019
NASA Earth and Space Science Fellowship, Soumya Ray (as graduate student at ASU), 2018, 2019, 2020
Stephen E. Dworkin Award (Geological Society of America) for best poster presentation, Daniel Dunlap (as graduate student at ASU), 2018
NASA Earth and Space Science Fellowship, Daniel Dunlap (as graduate student at ASU), 2017, 2018, 2019
Wiley Award (The Meteoritical Society) for oral presentation, Daniel Dunlap (as graduate student at ASU), 2017
Nier Prize (The Meteoritical Society), Greg Brenneka (for work conducted as a graduate student and postdoctoral researcher at ASU), 2016
Nier Prize (The Meteoritical Society), Audrey Bouvier (for work conducted as a postdoctoral researcher at ASU), 2016
NASA Earth and Space Science Fellowship, Prajkta Mane (as graduate student at ASU), 2013, 2014
NASA Earth and Space Science Fellowship, Curtis Williams (as graduate student at ASU), 2012, 2013
NASA Earth and Space Science Fellowship, Lev Spivak-Birndorf (as graduate student at ASU), 2011
NASA Earth and Space Science Fellowship, Greg Brenneka (as graduate student at ASU), 2010
Nininger Meteorite Award, Greg Brenneka (as graduate student at ASU), 2010
NASA Earth and Space Science Fellowship, Matthew Sanborn (as graduate student at ASU), 2009, 2010, 2011
Brian Mason Award of the Meteoritical Society, Greg Brenneka (as graduate student at ASU), 2009
Nier Prize (The Meteoritical Society), Nicolas Dauphas (for work conducted as a postdoctoral researcher at The Field Museum/University of Chicago), 2005

INVITED LECTURES AND COLLOQUIA

Yervant Terzian Lecture, Department of Astronomy, Cornell University, October 2023 (scheduled)
Plenary lecture, Symposium on Sample Return Missions, 86th Annual Meeting of the Meteoritical Society, August 2023 (scheduled)
Plenary lecture, 242nd Meeting of the American Astronomical Society (Albuquerque, NM), June 2023 (scheduled)
James Arnold Endowed Lecture, Department of Chemistry and Biochemistry, University of California at San Diego, May 2023
Lunar and Planetary Laboratory, University of Arizona, October 2022
Plenary lecture, Astrobiology Science Conference (Atlanta, GA), May 2022
Space Center Houston, October 2021
Universidad Nacional Autónoma de México, April 2021 (virtual)
Department of Geology, University of Maryland at College Park, October 2020 (virtual)
UCLA Meteorite Gallery Lecture Series, August 2020 (virtual)
Baldwin Frontiers in Geology Lecture, Miami University, February 2020
Department of Geology and Environmental Earth Science, Miami University, February 2020

Department of Earth and Atmospheric Sciences, University of Houston, February 2020
 Department of Geological Sciences, University of North Carolina at Chapel Hill, February 2020
 Documentary Filmmakers Retreat, National Academies Science and Entertainment Exchange Program,
 October 2019
 Northrup Distinguished Lecture, Department of Earth and Planetary Sciences, University of New Mexico,
 April 2019
 Lunar and Planetary Laboratory, University of Arizona, April 2018
 Shoemaker Lecture, American Geophysical Union Fall Meeting, December 2016
 PLANEX Division, Physical Research Laboratory, Ahmedabad, India, April 2016
 Geological Survey of India, Kolkata, India, April 2016
 Department of Geology and Geophysics, Indian Institute of Technology, Kharagpur, India, April 2016
 Department of Earth Sciences, Indian Institute of Technology, Kanpur, India, March 2016
 Department of Geology, University of Delhi, Delhi, India, March 2016
 Department of Physics, Panjab University, Chandigarh, India, February 2016
 Department of Geology, Panjab University, Chandigarh, India, February 2016
 Prof. Sukheswala Memorial – TERRA Lecture, St. Xavier's College, Mumbai, India, February 2016
 Indian Institute of Technology Bombay, Mumbai, India, February 2016
 Indian Institute of Science Education and Research, Pune, India, February 2016
 Physical Research Laboratory, Ahmedabad, India, January 2016
 25th Anniversary Invited Lecture, Planetary Chemistry Theme, Annual Goldschmidt Conference, Prague,
 July 2015
 Shoemaker Lecture, Beyond Center, Arizona State University, November 2014
 Lamont Doherty Earth Observatory, Columbia University, October 2014
 Department of Earth and Planetary Science, American Museum of Natural History, October 2014
 Annual Goldschmidt Conference, Sacramento, June 2014
 Department of Earth and Atmospheric Sciences, MIT, May 2013
 Department of Geophysical Sciences, University of Chicago, April 2013
 Department of Geological Sciences, University of Tennessee, February 2013
 Department of Earth Science, Rice University, October 2012
 Workshop on the Mantle of Mars, Houston, TX, September 2012
 Nuclei in the Cosmos Conference, Cairns, Australia, August 2012
 Workshop on Formation of the First Solar System Solids, Kauai, Hawaii, November 2011
 International Primitive Body Exploration Working Group Workshop, Jet Propulsion Laboratory, Pasadena,
 CA, August 2011
 Department of Earth and Space Sciences, University of California at Los Angeles, March 2011
 Department of Geology and Planetary Science, University of Pittsburgh, April 2010
 Annual Lunar Exploration and Analysis Group Meeting, Houston, TX, November 2009
 School of Earth and Space Exploration, Arizona State University, October 2009
 American Geophysical Union Fall Meeting, San Francisco, CA, December 2007
 Workshop on Chronology of Meteorites and the Early Solar System, Kauai, Hawaii, November 2007
 Gordon Research Conference on Origins of Solar Systems, Mt. Holyoke College, July 2007
 Zinner Impact Symposium, Washington University, February 2007
 Department of Earth and Planetary Sciences, University of New Mexico, December 2006
 Department of Earth Sciences, ETH, Zurich, November 2006
 Division of Geological Sciences, California Institute of Technology, April 2006
 Department of Earth and Space Sciences, UCLA, April 2006
 Department of Earth and Planetary Sciences, Washington University, March 2006
 Department of Earth and Atmospheric Sciences, MIT, February 2006
 Protostars and Planets V Conference, October 2005
 15th Annual Goldschmidt Conference, May 2005
 Woods Hole Oceanographic Institution Geodynamics Seminar, WHOI, April 2005
 Max Planck Institut für Chemie, Mainz, Germany, April 2005
 Department of Geophysical Sciences, University of Chicago, February 2005
 Department of Earth and Environmental Sciences, University of Illinois at Chicago, February 2005

Department of Biological Sciences, Loyola University, September 2004
 Oxygen in the Terrestrial Planets Workshop, July 2004
 Harvard-Smithsonian Astrophysics of Planetary Systems Conference, Harvard University, May 2004
 Iota Sigma Pi (National Honor Society of Women in Chemistry), Chicago Chapter, May 2004
 Division of Geological and Planetary Sciences, California Institute of Technology, October 2003
 Gordon Research Conference on Origins of Solar Systems, July 2003
 Advanced Photon Source Colloquium, Argonne National Laboratory, May 2003
 Robert M. Walker Symposium, Washington University, February 2003
 Department of Geological Sciences, University of Illinois at Urbana-Champaign, September 2002
 American Geophysical Union Spring Meeting, May 2002
 Department of Geology, Northern Illinois University, March 2002
 American Geophysical Union Fall Meeting, December 2001
 Department of Mineral Sciences, American Museum of Natural History, November 2001
 Department of Geological Sciences, Rutgers University, November 2001
 Department of Earth and Atmospheric Sciences, MIT, October 2001
 Department of Geological Sciences, Indiana University, Bloomington, October 2001
 Department of Geology, Southern Illinois University, Carbondale, September 2001
 Department of Astronomy, Cornell University, May 2001
 Earth Science Club of Northern Illinois, September 2000
 Max Planck Institut für Chemie, Mainz, Germany, February 2000
 Department of Geophysical Sciences, University of Chicago, January 2000
 Department of Chemistry, University of California at San Diego, December 1999
 State Microscopical Society of Illinois, Chicago, October 1999
 Department of Planetary Sciences, University of Arizona, Tucson, May 1999
 Department of Geophysical Sciences, University of Chicago, December 1998
 Department of Terrestrial Magnetism, Carnegie Inst. of Washington, Washington DC, June 1998
 Sigma Xi Chapter at University of Illinois at Chicago, March 1998
 Department of Geological Sciences, University of Michigan, Ann Arbor, July 1997
 State Microscopical Society of Illinois, Chicago, July 1997
 Department of Astronomy, Northwestern University, Evanston, May 1997
 Department of Chemistry, University of California at San Diego, December 1996
 Department of Geology, Calvin College, Grand Rapids, October 1996
 Department of Geophysical Sciences, University of Chicago, October 1996
 Department of Geological Sciences, University of Illinois, Chicago, September 1996
 Department of Geology, Northwestern University, Evanston, March 1996

MEDIA AND PUBLIC ENGAGEMENT

Delivered numerous public talks; featured in news media (television, radio and print) outlets, including documentaries on the Discovery Channel (How the Universe Works), History Channel (The Universe; How the Earth was Made), PBS (Nova ScienceNow), and Science Channel (Space's Deepest Secrets; Meteorite Men); and involved in the development of public outreach, educational programs and exhibits. Highlights include the following:

- In "Fireball: Visitors from Darker Worlds" directed by Werner Herzog and Clive Oppenheimer, 2020
- On CBS Sunday Morning, September 13, 2020
- New Discoveries Lecture ("Exploring the Solar System Through Meteorites"), School of Earth and Space Exploration, October 2018
- On NPR Science Friday, June 2018; <https://www.sciencefriday.com/segments/science-friday-presents-two-wrongs-dont-make-a-meteorite/>
- On NPR Science Friday, November 2017; <https://www.sciencefriday.com/segments/a-space-rock-makes-an-interstellar-visit/>
- TEDxASU: Innovation Worth Sharing, 2017; <https://www.youtube.com/watch?v=iukJJ2u0vlo>
- Arizona State University KEDTalks: Conversations for the Curious, 2016; <https://www.youtube.com/watch?v=i-JmdMYOEII&t=43s>

- In documentary “Meteorites – Visitors from Another Planet” by Petra Haffter, 2015
- On Australian Broadcasting Corporation’s “The Science Show”, May 2014; <http://www.abc.net.au/radionational/programs/scienceshow/meteorites-bring-the-history-of-the-solar-system-to-earth-and-m/5427388>
- On NPR Science Friday, March 2013; <https://www.sciencefriday.com/segments/studying-rocks-found-on-earth-for-clues-about-space/>
- In PBS Channel’s NOVA ScienceNOW show “Where did we come from?”, 2011
- In History Channel’s “United States of America”, 2012
- Oversight of the design and content for “Meteorite Gallery” exhibit in Interdisciplinary Science Technology Building 4 on ASU’s Tempe campus, 2011 – 2012
- In Science Channel’s “Meteorite Men”, aired 2009 – 2012
- In Discovery Channel documentary “Inside Planet Earth”, aired 2009
- In History Channel documentary “How the Earth was Made: Asteroids”, aired 2009
- Oversight of the development, production and distribution of loanable classroom modules on “Origin of Meteorites” for K-12 and informal educators, 2008 – 2019
- Featured in “Faces of Exploration” by Joanna Vestey, Wigwam Press, London, 2006
- Content development for “Evolving Planet” permanent exhibit, The Field Museum, 2005 – 2006
- Featured in (and contributed content to) article in Discover magazine, March 2004; <http://discovermagazine.com/2004/mar/meteoriticist-in-her-own-words>
- On “Seeking Solutions with Suzanne”; aired on CNN Headline News, Oct 6, 2003
- Featured in “Women of Discovery” by Milbry Polk and Mary Tiegreen, Clarkson Potter Publishers, New York, 2001
- Content Specialist for temporary exhibit of a Moon rock to commemorate 30th Anniversary of first Moon landing, The Field Museum, 1999
- Content development for (and featured in) “Women in Science” on-line exhibit, The Field Museum, 1998 – 1999
- Content Specialist for “Grainger Gallery of Meteorites” permanent exhibit, The Field Museum, 1998

POPULAR SCIENCE ARTICLES

1. Wadhwa M. (2014) What are we learning from cosmic dust? *Astronomy*, February 2014 issue, 56-59.
2. Wadhwa M. (2013) Exploring the Solar System from the ends of the Earth. *Slate*, Future Tense project (http://www.slate.com/articles/technology/future_tense/2013/09/the_best_meteorites_are_found_in_antarctica.html)
3. Wadhwa M. (2013) What are we learning from Moon rocks? *Astronomy*, June 2013 issue, 54-57.
4. Wadhwa M. (2013) Order from chaos – Genesis samples the solar wind. *Astronomy*, Oct 2013 issue, 54-57.
5. Fussman C. and Wadhwa M. (2004) In her own words: Meenakshi Wadhwa. *Discover Magazine*, March 2004 issue (<http://discovermagazine.com/2004/mar/meteoriticist-in-her-own-words>).
6. Robinson M. and Wadhwa M. (1995) Messengers from Mars. *Astronomy* 23, 44-48.

PUBLICATIONS

Total Citations (Google Scholar, May 21, 2023): 13725

h-index (Google Scholar, May 21, 2023): 56

i10-index (Google Scholar, May 21, 2023): 116

ORCID ID: orcid.org/0000-0001-9187-1255

PEER-REVIEWED ARTICLES

([†]Students or researchers supervised by M. Wadhwa)

2023

1. Horgan B.H.N., +44 co-authors, including Wadhwa M. (2023) Mineralogy, morphology, and emplacement history of the Maaz formation on the Jezero crater floor from orbital and rover observations. *Journal of Geophysical Research: Planets*, in press.
2. [†]Mane P., Bose M., Wadhwa M., and Defouilloy C. (2023) Protracted timescales for nebular processing of first-formed solids in the solar system. *The Astrophysical Journal* 946, DOI 10.3847/1538-4357/acb156.
3. Paquet M., +93 co-authors, including Wadhwa M. (2023) Contribution of Ryugu-like material to Earth's volatile inventory by Cu and Zn isotopic analysis. *Nature Astronomy* 7, 182-189.
4. Piani L., +87 co-authors, including Wadhwa M. (2023) Hydrogen isotopic composition of hydrous minerals in asteroid Ryugu. *The Astrophysical Journal Letters* 946, DOI 10.3847/2041-8213/acc393.
5. Simon J.I., +67 co-authors, including Wadhwa M. (2023) Samples collected from the floor of Jezero crater with the Mars 2020 Perseverance rover. *Journal of Geophysical Research: Planets*, DOI 10.1029/2022JE007474.
6. [†]Torrano Z.A., [†]Brenneka G.A., [†]Mercer C.M., [†]Romaniello S.J., [†]Rai V.R., [†]Hines R.R., and Wadhwa M. (2023) Titanium and chromium isotopic compositions of calcium-aluminum-rich inclusions: Implications for the sources of isotopic anomalies and the formation of distinct isotopic reservoirs in the early Solar System. *Geochimica Cosmochimica Acta* 324, 194-220.

2022

7. Barosch J., +124 co-authors, including Wadhwa M. (2022) Presolar stardust in asteroid Ryugu. *The Astrophysical Journal Letters* 935, L3 (DOI 10.3847/2041-8213/ac83bd).
8. [†]Cartwright J.A., Hodges K.V., and Wadhwa M. (2022) Evidence against a late heavy bombardment on Vesta. *Earth and Planetary Science Letters* 590, 117576.
9. [†]Dunham E. T., Wadhwa M., Desch S. J., Liu M.-C., Fukuda K., Kita N., Hertwig A. T., Hervig R.L., Defouilloy C., Simon S.B., [†]Davidson J., Schrader D., and Fujimoto Y. (2022) Uniform initial ¹⁰Be/⁹Be inferred from refractory inclusions in CV3, CO3, CR2, and CH/CB chondrites. *Geochimica Cosmochimica Acta* 324, 194-220.
10. Farley K.A., +114 co-authors, including Wadhwa M. (2022) Aqueously altered igneous rocks sampled on the floor of the Jezero crater, Mars. *Science* 377, DOI 10.1126/science.abo2196.
11. Hopp T., + 91 co-authors, including Wadhwa M. (2022) Ryugu's nucleosynthetic heritage from the outskirts of the Solar System. *Science Advances* 8, DOI 10.1126/sciadv.add8141.
12. Kawasaki N., +93 co-authors, including Wadhwa M. (2022) Oxygen isotopes of anhydrous primary minerals show kinship between asteroid Ryugu and comet 81P/Wild2. *Science Advances* 8, DOI 10.1126/sciadv.ade2067.
13. [†]Mane P., Wallace S., Bose M., Wallace P., Wadhwa M., Weber J., and Zega T. (2022) Earliest evidence of nebular shock waves recorded in a calcium-aluminum-rich inclusion. *Earth and Planetary Science Letters* 332, 369-388.
14. Moynier F., +93 co-authors, including Wadhwa M. (2022) The Solar System calcium isotope composition inferred from Ryugu samples. *Geochemical Perspectives Letters* 24, 1-6.
15. Yokoyama T., +149 co-authors, including Wadhwa M. (2022) Samples returned from the asteroid Ryugu are similar to Ivuna-type carbonaceous meteorites. *Science*, DOI 10.1126/science.abn7850.

2021

16. Garvie A. J. L., Chi M., [†]Ray S., Domanik K., Wittmann A., and Wadhwa M. (2021) Carletonmooreite, Ni₃Si, a new silicide from the Norton County aubrite meteorite. *American Mineralogist* 106, 1828-1834.
17. [†]Ray S., Garvie L. A. J., [†]Rai V. K., and Wadhwa M. (2021) Correlated iron isotopes and silicon contents in aubrite metals reveal structure of their asteroidal parent body. *Scientific Reports* 11, 1-13.
18. [†]Sanborn M. and Wadhwa M. (2021) Trace element geochemistry of coarse-grained angrites from Northwest Africa: Implications for their petrogenesis on the angrite parent body. *Meteoritics and Planetary Science* 56, 482-499.
19. [†]Stephant A., Wadhwa M., Hervig R., Bose M., Zhao X., Barrett T.J., Anand M., and Franchi I.A. (2021) A deuterium-poor water reservoir in the asteroid 4 Vesta and the inner Solar System. *Geochimica Cosmochimica Acta* 297, 203-219.
20. [†]Torrano Z. A., Schrader D.L., [†]Davidson J., Greenwood R.C., [†]Dunlap D., and Wadhwa M. (2021) The relationship between CM and CO chondrites: Insights from combined analyses of titanium, chromium, and oxygen isotopes in CM, CO, and ungrouped chondrites. *Geochimica Cosmochimica Acta* 301, 70-90.

2020

21. [†]Davidson J., Wadhwa M., Hervig R. L., and [†]Stephant A. (2020) Water on Mars: Insights from apatite in regolith breccia Northwest Africa 7034. *Earth and Planetary Science Letters* 552, 116597.
22. [†]Dunham E.T., Wadhwa M., Desch S.J., and Hervig R.L. (2020) Best practices for determination of initial ¹⁰Be/⁹Be in early solar system materials by secondary ion mass spectrometry. *Geostandards and Geoanalytical Research* 44, 695-710.
23. Fukuda K., Beard B.L., [†]Dunlap D.R., Spicuzza M.J., Fournelle J.H., Wadhwa M., and Kita N. (2020) Magnesium isotope analysis of olivine and pyroxene by SIMS: Evaluation of matrix effects. *Chemical Geology* 540, 119482.
24. Jurewicz A.J.G., Reick K.D., Hervig R., Burnett D.S., Wadhwa M., Olinger C.T., Wiens R., Laming J. M., Guan Y., Huss G.R., Reisenfeld D.B., and Williams P. (2020) Magnesium isotopes of the bulk solar wind from Genesis diamond-like carbon films. *Meteoritics and Planetary Science* 55, 352-375.
25. [†]Torrano Z. A., [†]Davidson J., and Wadhwa M. (2020) A reclassification of Northwest Africa 299 from CV3 to CK3.8 chondrite. *Meteoritics and Planetary Science* 55, 2539-2550.
26. Wadhwa M., Schrader D., and McCoy T. (2020) Advances in cosmochemistry enabled by Antarctic meteorites. *Annual Review of Earth and Planetary Sciences* 48, 233-258.

2019

27. [†]Dunham E., Balta J. B., Wadhwa M., and McSween H. Y., Jr. (2019) Petrology and geochemistry of olivine-phyric shergottites LAR 12095 and LAR 12240: Implications for their petrogenetic history on Mars. *Meteoritics and Planetary Science* 54, 811-835.
28. Shollenberger Q. A., Wittke A., Render J., [†]Mane P., Schuth S., Weyer S., Gussone N., Wadhwa M., and Brennecke G. (2019) Combined mass-dependent and nucleosynthetic isotope variations in refractory inclusions and their mineral separates to determine their original Fe isotope compositions. *Geochimica Cosmochimica Acta* 263, 215-234.
29. [†]Torrano Z. A., Brennecke G. A., [†]Williams C. D., [†]Romaniello S. J., [†]Rai V. K., and Wadhwa M. (2019) Titanium isotope signatures of calcium-aluminum-rich inclusions from CV and CK chondrites: Implications for early Solar System reservoirs and mixing. *Geochimica Cosmochimica Acta* 263, 13-30.

2018

30. Srinivasan P., [†]Dunlap D. R., Agee C. B., Wadhwa M., Coleff D., Ziegler K., Zeigler R., and McCubbin F. M. (2018) Earliest dated silica-rich volcanism in the Solar System. *Nature Communications* 9, 3036.
31. [†]Stephant A., Garvie L. A. J., [†]Mane P., Hervig R., and Wadhwa M. (2018) Terrestrial exposure of a fresh martian meteorite causes rapid changes in hydrogen isotopes and concentrations. *Scientific Reports* 8, DOI 10.1038/s41598-018-30807-w.

2017

32. Balta J. B., [†]Sanborn M. E., Mayne R. G., Wadhwa M., McSween H. Y., Jr., and Crossley S. D. (2017)

Northwest Africa 5790: A previously unsampled portion of the upper part of the nakhlites pile. *Meteoritics and Planetary Science* 52, 36-59.

33. Brennecka G. A., Borg L. E., †Romaniello S. J., †Souders A. K., Shollenberger Q. R., Marks N. E., and Wadhwa M. (2017) A renewed search for short-lived ^{126}Sn in the early solar system: Hydride generation MC-ICPMS for high sensitivity Te isotopic analysis. *Geochimica Cosmochimica Acta* 201, 331-344.
34. Kleine T. and Wadhwa M. (2017) Chronology of planetesimal differentiation. *Planetesimals: Early Differentiation and Consequences for Planets* (Eds. Elkins-Tanton L. T. and Weiss B. P.), Cambridge Univ. Press, 224-245.
35. Mendybaev R., †Williams C. D., Spicuzza M. J., Richter F. M., Valley J. W., and Wadhwa M. (2017) Thermal and chemical evolution of the early Solar System materials as recorded by FUN CAIs: Part II – Laboratory evaporation of potential CMS-1 precursor material. *Geochimica Cosmochimica Acta* 201, 49-64.
36. †Williams C. D., Ushikubo T., Mendybaev R. A., †Janney P. E., Kita N. T., Bullock E. S., †Hines R. R., MacPherson G. J., Hervig R. L., Richter F. M., and Wadhwa M. (2017) Thermal and chemical evolution of the early Solar System materials as recorded by FUN CAIs: Part I – Petrology, mineral chemistry, and isotopic composition of Allende FUN CAI CMS-1. *Geochimica Cosmochimica Acta* 201, 25-48.

2016

37. †Mane P., Hervig R., Wadhwa M., Garvie L. A. J., Balta J. B., and McSween H. Y., Jr. (2016) Hydrogen isotopic composition of the martian mantle inferred from the newest martian meteorite fall Tissint. *Meteoritics and Planetary Science* 51, 2073-2091.
38. †Williams C. D., †Janney P. E., †Hines R. R., and Wadhwa M. (2016) Precise titanium isotope compositions of refractory inclusions in the Allende CV3 chondrite by LA-MC-ICPMS. *Chemical Geology* 436, 1-10.

2015

39. Balta J. B., †Sanborn M., Udry A., McSween H. Y., Jr., and Wadhwa M. (2015) Petrology and trace-element geochemistry of Tissint, the newest shergottite fall. *Meteoritics and Planetary Science* 50, 63-85.
40. Davis A. M., Richter F. M., Mendybaev R. A., †Janney P. E., Wadhwa M., and McKeegan K. D. (2015) Isotopic mass fractionation laws for magnesium and their effects on ^{26}Al - ^{26}Mg systematics in Solar System materials. *Geochimica Cosmochimica Acta* 158, 245-261.
41. Ding S., Dasgupta R., Lee C. T., and Wadhwa M. (2015) New bulk sulfur measurements of martian meteorites and modeling the fate of sulfur during melting and crystallization – implications for sulfur transfer from martian mantle to crust-atmosphere system. *Earth and Planetary Science Letters* 409, 157-167.
42. Goldmann A., †Brennecka G., Noordmann J., Weyer S., and Wadhwa M. (2015) Uranium isotope composition of the Earth and Solar System. *Geochimica Cosmochimica Acta* 148, 145-158.
43. †Sanborn M., Carlson R., and Wadhwa M. (2015) $^{147,146}\text{Sm}$ - $^{143,142}\text{Nd}$, ^{176}Lu - ^{176}Hf , and ^{87}Rb - ^{87}Sr systematics in the angrites: Implications for chronology and processes on the angrite parent body. *Geochimica Cosmochimica Acta* 171, 80-99.
44. †Spivak-Birndorf L., †Bouvier A., Benedix G. K., Hammond S., †Brennecka G., Howard K., Rogers N., Wadhwa M., Bland P. A., Spurný P., and Towner M. C. (2015) Geochemistry and chronology of the Bunburra Rockhole ungrouped achondrite. *Meteoritics and Planetary Science* 50, 958-975.

2014

45. †Brennecka G. A., Borg L. E. and Wadhwa M. (2014) Insights into the martian mantle: The age and isotopics of the meteorite fall Tissint. *Meteoritics and Planetary Science* 49, 412-418.
46. Chaumard N., Devouard B., †Bouvier A., and Wadhwa M. (2014) Metamorphosed calcium-aluminum inclusions in CK carbonaceous chondrites. *Meteoritics and Planetary Science* 49, 419-452.
47. Wadhwa M. (2014) Solar System time scales from long-lived radioisotopes in meteorites and planetary materials. *Treatise on Geochemistry 2nd Edition Vol. 1: Meteorites, Comets, and Planets* (Vol. Ed. A. M. Davis; Eds. in Chief H. D. Holland and K. K. Turekian), 397-418.

2013

48. Balta J. B., [†]Sanborn M., McSween H. Y., Jr., and Wadhwa M. (2013) Magmatic history and parental melt composition of olivine-phyric shergottite LAR 06319: Importance of magmatic degassing and olivine antecrysts in Martian magmatism. *Meteoritics and Planetary Science* 48, 1359-1382.
49. [†]Bouvier A., Wadhwa M., Simon S., and Grossman L. (2013) Magnesium isotopic fractionation in chondrules from the Murchison and Murray CM2 carbonaceous chondrites. *Meteoritics and Planetary Science* 48, 339-353.
50. [†]Brennecke G. A., Borg L. E. and Wadhwa M. (2013) Evidence of supernova injection into the solar nebula and the decoupling of r-process nucleosynthesis. *Proceedings of the National Academy of Sciences* 110, 17241-17246.

2012

51. [†]Brennecke G. A. and Wadhwa M. (2012) Uranium isotope compositions of the basaltic angrite meteorites and the chronological implications for the early Solar System. *Proceedings of the National Academy of Sciences* 109, 9221-9222.

2011

52. [†]Janney P. E., Richter F. M., Mendybaev R. A., Wadhwa M., Georg R. B., Watson E. B., and [†]Hines R. R. (2011) Matrix effects in the analysis of Mg and Si isotope ratios in natural and synthetic glasses by laser ablation-multicollector ICPMS: A comparison of single- and double-focusing mass spectrometers. *Chemical Geology* 281, 26-40.
53. [†]Bouvier A., [†]Spivak-Birndorf L., [†]Brennecke G. A., and Wadhwa M. (2011) New constraints on early Solar System chronology from Al-Mg and U-Pb isotope systematics in the unique basaltic achondrite Northwest Africa 2976. *Geochimica Cosmochimica Acta* 75, 5310-5323.

2010

54. [†]Bouvier A. and Wadhwa M. (2010) The age of the Solar System redefined by the oldest Pb-Pb age of a meteoritic inclusion. *Nature Geoscience* 3, 637-641.
55. [†]Brennecke G. A., Weyer S., Wadhwa M., [†]Janney P. E., Zipfel J., and Anbar A. D. (2010) ²³⁸U/²³⁵U variations in meteorites: Extant ²⁴⁷Cm and implications for Pb-Pb dating. *Science* 327, 449-451.
56. MacPherson G., Bullock E. S., [†]Janney P. E., Kita N., Ushikubo T., Davis A. M., Wadhwa M., and Krot A. N. (2010) Early solar nebula condensates with canonical, not supracanonical, initial ²⁶Al/²⁷Al ratios. *Astrophysical Journal Letters* 711, L117-L121.
57. Usui T., [†]Sanborn M., Wadhwa M., and McSween H. Y., Jr. (2010) Petrology and trace element geochemistry of RBT 04261 and RBT 04262 meteorites, the first examples of geochemically enriched lherzolitic shergottites. *Geochimica Cosmochimica Acta* 74, 7283-7306.

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58. Shearer C. K., Burger P. V., Neal C. R., Sharp Z., [†]Spivak-Birndorf L., Borg L. E., Fernandes V. A., Papike J. J., Karner J. M., Wadhwa M., Gaffney A. M., Shafer J., Geissman J., Atudorei N. V., Herd C., Weiss B. P., King P. L., Crowther S. A., and Gilmour J. D. (2009) Non-basaltic asteroidal magmatism during the earliest stages of solar system evolution: A view from Antarctic achondrites Graves Nunatak 06128 and 06129. *Geochimica Cosmochimica Acta* 74, 1172-1199.
59. [†]Spivak-Birndorf L., Wadhwa M., and [†]Janney P. E. (2009) ²⁶Al-²⁶Mg Systematics in D'Orbigny and Sahara 99555 Angrites: Implications for High-Resolution Chronology Using Extinct Chronometers *Geochimica Cosmochimica Acta* 73, 5202-5211.
60. Wadhwa M., Amelin Y., Bogdanovski O., Lugmair G. W., and [†]Janney P. E. (2009) Ancient relative and absolute ages for a basaltic meteorite: Implications for time scales of planetesimal accretion and differentiation. *Geochimica Cosmochimica Acta* 73, 5189-5201.

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61. [†]Cook D., Clayton R. N., Wadhwa M., [†]Janney P., and Davis A. M. (2008) Nickel isotopic composition of troilite from iron meteorites. *Geophysical Research Letters* 35, L01203, DOI 10.1029/2007GL032431.
62. Dauphas N., [†]Cook D., Sacarabany A., Fröhlich C., Davis A. M., Wadhwa M., Pourmand A., Rauscher T., and Gallino R. (2008) Iron-60 evidence for early injection and efficient mixing of stellar debris in the protosolar nebula. *Astrophysical Journal* 686, 560-569.

63. †Qin L., Dauphas N., Wadhwa M., Markowski A., Gallino R., †Janney P. E., and Bouman C. (2008) Tungsten nuclear anomalies in planetesimal cores. *Astrophysical Journal* 674, 1234-1241.
64. †Qin L., Dauphas N., Wadhwa M., Masarik J., and †Janney P. E. (2008) Rapid accretion and differentiation of iron meteorite parent bodies inferred from ^{182}Hf - ^{182}W chronometry and thermal modeling. *Earth and Planetary Science Letters* 273, 94-104.
65. Shearer C. K., Burger P. V., Neal C. R., Sharp Z., Borg L. E., †Spivak-Birndorf L., Wadhwa M., Papike J. J., Karner J. M., Gaffney A. M., Shafer J., Weiss B. P., Geissman J., and Fernandes V. A. (2008) A unique glimpse into asteroidal melting processes in the early solar system from the Graves Nunatak 06128/06129 achondrites. *American Mineralogist* 93, 1937-1940.
66. Wadhwa M. (2008) Redox conditions on small bodies, the Moon and Mars. In *Oxygen in the Solar System* (Eds. G. MacPherson, D. W. Mittlefehldt, J. Jones), *Reviews in Mineralogy and Geochemistry* 68, 493-510.

2007

67. †Cook D., Wadhwa M., Clayton R. N., Dauphas N., †Janney P., and Davis A. M. (2007) Mass-dependent fractionation of nickel isotopes in meteoritic metal. *Meteoritics and Planetary Science* 42, 2067-2077.
68. Dauphas N., van Zuilen M., Busigny V., Lepland A., Wadhwa M., and †Janney P. E. (2007) Iron isotope, major and trace element characterization of early Archean supracrustal rocks from SW Greenland: protolith identification and metamorphic overprint. *Geochimica Cosmochimica Acta* 71, 4745-4770.
69. †Qin L., Dauphas N., †Janney P. E., and Wadhwa M. (2007) Analytical developments for high-precision measurements of W isotopes in iron meteorites. *Analytical Chemistry* 79, 3148-3154.
70. Richter F., †Janney P., Mendybaev R., Davis A. M., and Wadhwa M. (2007) Elemental and isotopic fractionation of Type B CAI-like liquids by evaporation. *Geochimica Cosmochimica Acta* 71, 5544-5564.
71. †Teng F.-Z., Wadhwa M., and Helz R. (2007) The absence of magnesium isotope fractionation during basalt differentiation: A case study from Kilauea Iki lava lake, Hawaii, USA. *Earth and Planetary Science Letters* 261, 84-92.
72. Wadhwa M., Amelin Y., Davis A. M., Lugmair G. W., Meyer B., Gounelle M., and Desch S. (2007) From dust to planetesimals: Implications for the solar protoplanetary disk from short lived radionuclides. *Protostars and Planets V* (Eds. B. Reipurth, D. Jewitt, and K. Keil), pp. 835-848.
73. Wadhwa M. (2007) Long-lived chronometers. *Treatise on Geochemistry Vol. 1: Meteorites, Comets, and Planets* (Vol. Ed. A. M. Davis; Eds. in Chief H. D. Holland and K. K. Turekian), DOI 10.1016/B978-008043751-4/00227-3.

2006

74. Beck P., Barrat J. A., Gillet Ph., Wadhwa M., Franchi I., Greenwood R. C., Bohn M., Cotten J., van de Moortele B., and Reynard B. (2006) Petrography and geochemistry of the chassignite Northwest Africa 2737 (NWA 2737), *Geochimica Cosmochimica Acta* 70, 2127-2139.
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