

# Nicolas Dauphas

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Last updated September 29, 2009

## CONTACT INFORMATION

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## RESEARCH INTERESTS

Meteorites, isotope cosmochemistry, nuclear cosmochronology and nucleosynthesis, early Earth geochemistry and the origin of life, formation of the terrestrial atmosphere.

## EDUCATION

**2002** Ph.D. Institut National Polytechnique de Lorraine, Nancy, France.  
**1998** M.Sc. Institut National Polytechnique de Lorraine, Nancy, France.  
**1998** B.Sc. École Nationale Supérieure de Géologie, Nancy, France.

## EMPLOYMENT

**2008-** Associate Professor, Department of the Geophysical Sciences and Enrico Fermi Institute, The University of Chicago.  
**2004-2008** Assistant Professor, Department of the Geophysical Sciences and Enrico Fermi Institute, The University of Chicago.  
**2002-** Research Associate, Field Museum.  
**2002-2004** Research Associate, Enrico Fermi Institute, The University of Chicago.

## HONORS AND AWARDS

- Moore Distinguished Scholar, Caltech, 2009
- Houtermans Medal of the European Association for Geochemistry, 2008
- David and Lucile Packard Foundation Fellowship, 2007.
- Nier Prize of the Meteoritical Society, 2005.
- Paul Pellas-Graham Ryder Award, 2002, Meteoritical Society and the Geological Society of America Division of Planetary Geology, for "Dauphas N., Marty B., and Reisberg L. (2002). Molybdenum evidence for inherited planetary scale isotope heterogeneity of the protosolar nebula. *Astrophys. J.* **565**, 640-644".
- *Geochemical Journal* best paper award, 2002, for "Dauphas N., Reisberg L., and Marty B. (2002). An alternative explanation for the distribution of highly siderophile elements in the Earth. *Geochem. J.* **36**, 409-419".
- Best Ph.D. thesis award, 2002, for "Cosmochimie Isotopique du Molybdène" (2002), Institut National Polytechnique de Lorraine.

## FUNDING

- 2009-2012? NSF EAR-Geobiology & Low Temp Geochem, NASA Astrobiology Institute. Collaborative Research: Environmental and Biogeochemical Reorganization during the Rise of Atmospheric Oxygen (\$35,000+), PI (with L.R. Kump, O. Rouxel, T.W. Lyons, J.L. Hannah, H.J. Stein).
- 2009-2010 FACCTS. Fossil isotopes in meteorites and redox-controlled kinetic isotope fractionation in melts: collaboration between Chicago, Nancy (Ecole Nationale Supérieure de Géologie), and Lille (Université des Sciences et Technologies) (\$10,407), Lead PI.
- 2009-2012 NASA Cosmochemistry. Isotopic constraints on mixing and timescales in the early solar system (\$402,000), Lead PI.

- 2008-2009 FACCTS. Probes of stellar nucleosynthesis in the laboratory: collaboration between Chicago, Nancy (Ecole Nationale Supérieure de Géologie), and Lyon (Ecole Normale Supérieure de Lyon) (\$9,607), Lead PI.
- 2007-2012 David and Lucile Packard Foundation Fellowship (\$825,000).
- 2007-2008 France-Chicago-Center. Collaboration in isotope cosmochemistry between Chicago, Nancy, and Paris: unraveling the source of isotopic anomalies in planets and meteorites (\$3,300), Lead PI.
- 2006-2009 NASA Cosmochemistry NNG06GG75G. Nuclear cosmochronology and solar system isotopic heterogeneities (\$210,000), Lead PI.
- 2006-2007 NASA Cosmochemistry NNG06GG75G. Acquisition of a MC-ICPMS instrument for isotope cosmochemistry (\$484,175), Lead PI.

STUDENTS AND  
POSTDOCTORATES

**Current**

- Paul Craddock (Postdoc, 2008-) Iron isotope geochemistry of banded iron formations.
- Thomas Ireland (Postdoc, 2009-) Nucleosynthetic anomalies in acid leachates of meteorites.
- Haolan Tang (graduate student, 2007-).
- Corliss Sio (graduate student, 2008-).
- François Tissot (graduate student, 2009-).

**Past**

- Ali Pourmand (Postdoc, 2006-2009) Actinide and lanthanide cosmochemistry. Now assistant professor at the University of Miami, Rosenstiel School of Marine & Atmospheric Science, Miami.
- Fang-Zhen Teng (Postdoc, 2007-2008) Iron isotopic fractionation during magmatic differentiation. Now assistant professor at the University of Arkansas, Fayetteville.
- Vincent Busigny (Postdoc, 2005-2006) Iron isotopic fractionation in terrestrial analogues of martian blueberries. Now assistant professor at the Institut de Physique du Globe, Paris.
- Liping Qin (PhD, 2007) High precision tungsten isotope measurements of iron meteorites. Now postdoctoral researcher at the Department of Terrestrial Magnetism, Carnegie Institution of Washington.
- Derek Thompson (undergrad, 2005), Alex Winney (undergrad, 2007), Anna Sacarabany (summer intern from ENSG, 2007), François Tissot (summer intern from ENSG, 2008), Myriam Telus (undergrad, 2008-2009).

SERVICE

- Referee: Astrophysical Journal, Chemical Geology, Chemie der Erde, Comptes Rendus Palevol, Contributions to Mineralogy and Petrology, Earth and Planetary Science Letters, Elements, Encyclopedia of Geochemistry, Geochemical Journal, Geochimica et Cosmochimica Acta, Geostandards Newsletter, Icarus, Journal of Geology, The Journal of Physical Chemistry, Meteorites and the Early Solar System II, NASA (Cosmochemistry, SRLIDAP), NSF (EAR Petrology and Geochemistry, Geobiology and low-temperature geochemistry, Instrumentation and Facilities), NERC (UK), and American Chemical Society (Petroleum Research Fund) proposals, Nature, Nature Physics, Nuclear Physics, Planetary and Space Science, Science, Spectrochimica Acta Part B: Atomic Spectroscopy.
- PhD thesis committee of Anne Trinquier (IPG-P, 2005).
- Curriculum committee (2004-2005), website committee (2007-), appointments committee (2008-) Department of the Geophysical Sciences.
- Chair of the committee in charge of development of the website of the Department of the Geophysical Sciences (launched in 2008, <http://geosci.uchicago.edu/>).
- Publications committee, Meteoritical Society (2007-).

- NASA SRLIDAP peer review panel 2008.
- NASA Cosmochemistry peer review panel 2009.

TEACHING GEOS 21800: Intro to petrology.  
 GEOS 33400: Geochronology and cosmochronology.  
 Preparation of a textbook of geochronology/cosmochronology (180 pages comprising 80 figures already prepared).

PROFESSIONAL SOCIETIES Meteoritical Society, Geochemical Society, American Geophysical Union

PAST AND CURRENT COLLABORATORS Nicholas Arndt (Université Joseph Fourier, Grenoble), Paul D. Asimow (Caltech), Vickie C. Bennett (ANU), Jean-Louis Birck (IPG-P), Claudia Bouman (Thermo Electron Bremen GmbH), Vincent Busigny (IPG-P), Nicole L. Cates (University of Colorado at Boulder), Robert N. Clayton (University of Chicago), David L. Cook (Rutgers University), Paul R. Craddock (University of Chicago), Andrew M. Davis (University of Chicago), Carla Fröhlich (University of Chicago), Roberto Gallino (university of Turin), Christa Göpel (IPG-P), Lawrence Grossman (University of Chicago), Philip E. Janney (ASU), Aivo Lepland (Geological Survey of Norway), Roy S. Lewis (University of Chicago), Ambre Luguët (UQAC), Bernard Marty (CRPG), Jozef Masarik (Komensky University Bratislava), Ruslan A. Mendybaev (University of Chicago), Stephen J. Mojzsis (University of Colorado at Boulder), Richard V. Morris (JSC), Larry R. Nittler (DTM), Allen P. Nutman (Chinese Academy of Geological Sciences), Daniel Ohnenstetter (CRPG), Graham Pearson (Durham University), Ali Pourmand (University of Chicago), Liping Qin (DTM-CIW), Thomas Rauscher (University of Basel), Laurie Reisberg (CRPG), Frank M. Richter (University of Chicago), François Robert (MNHN), Olivier Rouxel (WHOI), Hendrik Schatz (Michigan State University), Fang-Zhen Teng (University of Chicago), Mark van Zuilen (IPG-P), Meenakshi Wadhwa (ASU).

JOURNAL INTERVIEWS, PUBLIC OUTREACH "Water came early to Earth" New Scientist, October 11, 2003.  
 "Beginning of life on earth may be written in stone", Baltimore Sun, December 17, 2004.  
 "Rocks could hold early secrets of life", Chicago Sun-Times, December 17, 2004.  
 "Un Nantais a analysé les roches les plus vieilles de la Terre", Ouest France, January 2005.  
 "Pister la vie dans les roches du Groenland", l'Est Républicain, January 2005.  
 Review paper on iron isotopes (Dauphas and Rouxel, 2006) referred to in the Wikipedia page on Iron.  
 "Once upon a time, when CO<sub>2</sub> was a good thing", Ottawa Citizen, February 2007.  
 "Greenhouse gas kept early Earth from becoming an ice ball." Edmonton Journal, March 2007.

PUBLICATIONS \*denotes student contribution; §denotes post-doctoral associate

### In preparation and submitted

Dauphas N., Chaussidon M., The evolution of the young sun as recorded by radionuclides. In preparation.

\*Telus M., Dauphas N., Moynier F., Nabelek P.I., Anderson A.T., Craddock P.R., Teng F.-Z., Groat L.A., Iron isotopic fractionation during continental crust differentiation: The tale from migmatites, granites, and pegmatites. In preparation.

Teng F.-Z., Li W.-Y., Ke S., Marty B., Dauphas N., Huang S., Wu F.-Y., Helz R.T., Pourmand A., Magnesium isotopic composition of the Earth and chondrites. In preparation.

<sup>§</sup>Teng F.-Z., **Dauphas N.**, Huang S., Marty B., Helz R.T., Iron isotopic systematics of global mid-ocean ridge basalts, ocean island basalts and Hawaii olivines. In preparation.

Fujii T., Moynier F., **Dauphas N.**, Abe M., Yamana H., Extraction behavior and isotope fractionation of nickel(II) using a macrocyclic ligand. In preparation.

Liu Y., Spicuzza M.J., <sup>§</sup>Craddock P.R., Day J.M.D., Valley J.W., **Dauphas N.**, Taylor L.A., Coupled oxygen and iron isotope evidence for stable isotope homogeneity in the Earth-Moon system. In preparation.

<sup>§</sup>Pourmand A. & **Dauphas N.**, Distribution coefficients of 60 elements on TODGA resin: Application to Ca, Lu, Hf, U and Th isotope geochemistry. *Talanta*, submitted.

**Dauphas N.**, Teng F.-Z., Arndt N., Magnesium and iron isotopes in a 2.7 Ga komatiite flow from Alexo: Mantle signatures with no evidence for Soret diffusion. *Geochim. Cosmochim. Acta*, submitted.

### Accepted or published

39. Levine J., Savina M.R., Stephan T., **Dauphas N.**, Davis A.M., Knight K.B., Pellin M.J. (2009) Resonance ionization mass spectrometry for precise measurements of isotope ratios. *Int. J. Mass Spectrom.*, in press.

38. **Dauphas N.**, <sup>§</sup>Craddock P.R., Asimow P.D., Bennett V.C., Nutman A.P., Ohnenstetter D., Iron isotopes may reveal the redox conditions of mantle melting from Archean to present. *Earth Planet. Sci. Lett.*, in press.

37. **Dauphas N.**, <sup>§</sup>Pourmand A., <sup>§</sup>Teng F.-Z. (2009) Routine isotopic analysis of iron by HR-MC-ICPMS: How precise and how accurate? *Chem. Geol.* **267**, 175-184.

36. Richter F.M., Watson, E.B., Mendybaev R., **Dauphas N.**, Georg B., Watkins J., Valley J., Isotopic fractionation of the major elements of molten basalt by chemical and thermal diffusion. *Geochim. Cosmochim. Acta* **73**, 4250-4263.

35. Moynier F., **Dauphas N.**, Podosek F.A., A search for <sup>70</sup>Zn anomalies in meteorites. *Astrophys. J. Lett.* **700**, L92-L95.

34. Reisberg L., **Dauphas N.**, Luguet A., Pearson D.G., Gallino R., Zimmermann C. (2009) Nucleosynthetic osmium isotope anomalies in acid leachates of the Murchison meteorite. *Earth Planet. Sci. Lett.*, **277**, 334-344.

33. Richter, F.M., **Dauphas, N.**, <sup>§</sup>Teng, F.-Z. (2009) Non-traditional fractionation of non-traditional isotopes: evaporation, chemical diffusion and Soret effect. *Chem. Geol.*, **258**, 92-103.

32. **Dauphas N.**, Cook D.L., \*Sacarabany A., Fröhlich C., Davis A.M., Wadhwa M., <sup>§</sup>Pourmand A., Rauscher T., Gallino R. (2008) Iron-60 evidence for early injection and efficient mixing of stellar debris in the protosolar nebula. *Astrophys. J.*, **686**, 560-569. *Erratum***691**, 1943.

31. \*Qin L., **Dauphas N.**, Wadhwa M., Masarik J., Janney P.E. (2008) Rapid accretion and differentiation of iron meteorite parent bodies inferred from <sup>182</sup>Hf-<sup>182</sup>W chronometry and thermal modeling. *Earth Planet. Sci. Lett.*, **273**, 94-104.

30. <sup>§</sup>Teng F.-Z., **Dauphas N.**, Helz R.T. (2008) Iron isotope fractionation during magmatic differentiation in Kilauea Iki lava lake. *Science*, **320**, 1620-1622.

29. \*Qin L., **Dauphas N.**, Wadhwa M., Markowski A., Gallino R., Janney P.E., Bouman C. (2008) Tungsten

nuclear anomalies in planetesimal cores. *Astrophys. J.*, **674**, 1234-1241.

28. Cook D.L., Wadhwa M., Clayton R.N., **Dauphas N.**, Janney P.E., Davis A.M. (2007) Mass-dependent fractionation of nickel isotopes in meteoritic metal. *Meteoritics Planet. Sci.*, **42**, 2067-2077.
27. **Dauphas N.** (2007) Diffusion-driven kinetic isotope effect of Fe and Ni during formation of the Widmanstätten pattern. *Meteoritics Planet. Sci.*, **42**, 1597-1613.
26. **Dauphas N.**, van Zuilen M., Busigny V., Lepland A., Wadhwa M., Janney P.E. (2007) Iron isotope, major and trace element characterization of early Archean supracrustal rocks from SW Greenland: protolith identification and metamorphic overprint. *Geochim. Cosmochim. Acta* **71**, 4745-4770.
25. \*Qin L., **Dauphas N.**, Janney P.E., Wadhwa M. (2007) Analytical developments for high-precision measurements of W isotopes in iron meteorites. *Anal. Chem.* **79**, 3148-3154.
24. **Dauphas N.**, Cates N.L., Mojzsis S.J., §Busigny V. (2007) Identification of chemical sedimentary protoliths using iron isotopes in the > 3750 Ma Nuvvuagittuq supracrustal belt, Canada. *Earth Planet. Sci. Lett.* **254**, 358-376.
23. §Busigny V. & **Dauphas N.** (2007) Tracing paleofluid circulations using iron isotopes: A study of hematite and goethite concretions from the Navajo Sandstone (Utah, USA). *Earth Planet. Sci. Lett.* **254**, 272-287.
22. Cook D.L., Wadhwa M., Janney P.E., **Dauphas N.**, Clayton R.N., Davis A.M. (2006) High precision measurements of non-mass-dependent effects in nickel isotopes in meteoritic metal via multicollector ICPMS. *Anal. Chem.* **78**, 8477-8484.
21. **Dauphas N.** & Rouxel O. (2006) Mass spectrometry and natural variations of iron isotopes. *Mass Spectrom. Rev.*, **25**, 515-550. Erratum **25**, 831-832.
20. Nittler L.R. & **Dauphas N.** (2006) Meteorites and the chemical evolution of the Milky Way, in *Meteorites and the Early Solar System II*, D.S. Lauretta and H.Y. McSween Jr. Eds, *The University of Arizona Press*, Tucson, pp. 127-146.
19. **Dauphas N.** (2005) The U/Th production ratio and the age of the Milky Way from meteorites and Galactic halo stars. *Nature*, **435**, 1203-1205.
18. **Dauphas N.** (2005) Multiple sources or late injection of short-lived *r*-nuclides in the early solar system? *Nucl. Phys. A*, **758**, 757c-760c.
17. **Dauphas N.**, van Zuilen M., Wadhwa M., Davis A.M., Marty B., & Janney P.E. (2004) Clues from iron isotope variations on the origin of early Archean banded iron formations from Greenland. *Science*, **306**, 2077-2080.
16. **Dauphas N.**, Davis, A.M., Marty, B., & Reisberg, L. (2004) The cosmic molybdenum-ruthenium isotope correlation. *Earth Planet. Sci. Lett.*, **226**, 465-475.
15. **Dauphas, N.**, & Marty, N. (2004). "A large secular variation in the nitrogen isotopic composition of the atmosphere since the Archean?": response to a comment by R. Kerrich and Y. Jia. *Earth Planet. Sci. Lett.*, **225**, 441-450.
14. **Dauphas, N.**, Janney, P.E., Mendybaev, R.A., Wadhwa, M., Richter, F.M., Davis, A.M., Hines, R., & Foley C.N. (2004). Chromatographic separation and MC-ICPMS analysis of iron. Investigating mass-dependent and -independent isotope effects. *Anal. Chem.*, **76**, 5855-5863.

13. Marty, B., & **Dauphas, N.** (2003). "Nitrogen isotopic compositions of the present mantle and the Archean biosphere": response to a comment by Pierre Cartigny and Magali Ader. *Earth Planet. Sci. Lett.*, **216**, 433-439.
12. **Dauphas, N.** (2003). The dual origin of the terrestrial atmosphere. *Icarus*, **165**, 326-339.
11. **Dauphas, N.**, Rauscher, T., Marty, B., & Reisberg, L. (2003). Short-lived *p*-nuclides in the early solar system and implications on the nucleosynthetic role of X-ray binaries. *Nucl. Phys. A*, **719**, 287c-295c.
10. Marty, B., & **Dauphas, N.** (2003). The nitrogen record of crust-mantle interaction and mantle convection from Archean to Present. *Earth Planet. Sci. Lett.*, **206**, 397-410.
9. Marty, B., & **Dauphas, N.** (2002). Formation and early evolution of the atmosphere, in *The Early Earth, Physical, Chemical, and Biological Development* (Fowler C.M.R., Ebinger C.J., and Hawkesworth C.J., eds), *Geological Society, London, Special Publications*, **199**, 213-229.
8. **Dauphas, N.**, & Marty, B. (2002). Inference on the nature and the mass of Earth's late veneer from noble metals and gases. *J. Geophys. Res.*, **107(E12)**, 5129, doi: 10.1029/2001JE001617.
7. **Dauphas, N.**, Reisberg, L., & Marty, B. (2002). An alternative explanation for the distribution of highly siderophile elements in Earth. *Geochem. J.*, **36**, 409-419.
6. **Dauphas, N.**, Marty, B., & Reisberg, L. (2002). Inference on terrestrial genesis from molybdenum isotope systematics. *Geophys. Res. Lett.*, **29(6)**, 1084, doi:10.1029/2001GL014237.
5. **Dauphas, N.**, Marty, B., & Reisberg, L. (2002). Molybdenum nucleosynthetic dichotomy revealed in primitive meteorites. *Astrophys. J. Lett.* **569**, L139-L142.
4. **Dauphas, N.**, Marty, B., & Reisberg, L. (2002). Molybdenum evidence for inherited planetary scale isotope heterogeneity of the protosolar nebula. *Astrophys. J.* **565**, 640-644.
3. **Dauphas, N.**, Reisberg, L., & Marty, B. (2001). Solvent extraction, ion chromatography, and mass spectrometry of molybdenum isotopes. *Anal. Chem.* **73**, 2613-2616.
2. **Dauphas, N.**, Robert, F., & Marty, B. (2000). The late asteroidal and cometary bombardment of Earth as recorded in water deuterium to protium ratio. *Icarus* **148**, 508-512.
1. **Dauphas, N.**, & Marty, B. (1999). Heavy nitrogen in carbonatites of the Kola peninsula: a possible signature of the deep mantle. *Science* **286**, 2488-2490.

CONFERENCE  
ABSTRACTS

59. Roskosz M., Alexander C.M.O.D., Wang J., Dauphas N., Mysen B.O. (2009) Diffusion-driven fractionation or iron isotopes in oxidized and reduced silicate melts. *72nd Annual Meeting of the Meteoritical Society. July 13-18, 2009. Nancy, France.*
58. **Dauphas N.**, <sup>§</sup>Craddock P.R., Asimow P.D., Bennett V., Nutman A.P., Ohnenstetter D. (2009) Probing the conditions of mantle melting with iron isotopes. *19th Annual V.M. Goldschmidt Conference, June 21-26, Davos, Switzerland.*
57. Moynier F., **Dauphas N.**, Podosek F. (2009) A search for <sup>70</sup>Zn anomalies in meteorites. *Lunar Planet. Sci.* **40**.
56. Qin L. & **Dauphas N.** (2009) Cosmogenic stable isotope effects in Carbo. *Lunar Planet. Sci.* **40** #2278.

55. §Pourmand A. & **Dauphas N.** (2009) The Lu and Hf isotopic composition in meteorites: a comparative study of alkali flux fusion and Parr bomb. *Lunar Planet. Sci.* 40 #2452.
54. \*Tang H., **Dauphas N.**, §Craddock P.R. (2009) High precision iron isotopic analyzes of meteorites and terrestrial rocks: <sup>60</sup>Fe distribution and mass fractionation laws. *Lunar Planet. Sci.* 40 #1903.
53. **Dauphas N.**, §Craddock P.R., Bennett V., Ohnenstetter D. (2009) The iron isotopic composition of the silicate Earth: clues from chondrites, peridotites, and Eoarchean magmas. *Lunar Planet. Sci.* 40 #1769.
52. Levine J., Savina M.R., **Dauphas N.**, Davis A.M., Isselhardt B., Knight K.B., Lewis R.S., Pellin M.J., Stephan T. (2009) First four-isotope measurements of chromium in presolar SiC grains. *Lunar Planet. Sci.* 40 #1982.
51. §Teng F.-Z., **Dauphas N.**, Helz R.T. (2008) Isotopic fractionation of iron during magmatic differentiation. *Lunar Planet. Sci.* 39, #2148.
50. Reisberg L.C., **Dauphas N.**, Luguet A., Pearson D.G., Gallino R. (2008). Osmium nucleosynthetic anomalies in meteorites: towards a better estimation of cosmoradiogenic <sup>187</sup>Os. *18th Annual Isotopic Anomalies Workshop. November 22-23, 2008, Chicago, USA.*
49. **Dauphas N.**, Morris R.V. (2008) Iron isotopes in products of acid-sulfate basalt alteration: A prospective study for Mars. *71st Annual Meeting of the Meteoritical Society. July 28-August 1, 2008. Matsue, Japan. Meteorit. Planet. Sci.*
48. **Dauphas N.**, Cook D.L., \*Sacarabany A., Fröhlich C., Wadhwa M., §Pourmand A., Rauscher T., Gallino R. (2008) Iron-60 in the cosmic blender. *18th Annual V.M. Goldschmidt Conference, July 13-18, Vancouver.*
47. **Dauphas N.** (2008) Origin and evolution of terrestrial volatiles. *Origins of Water Workshop, February 27-March 1, 2008, Molokai, Hawaii.*
46. Knight K.B., Sutton S.R., Newville M., Davis A.M., **Dauphas N.**, Lewis R.S., Amari S., Steele I.M., Savina M.R., Pellin M.J. (2008) Trace element determinations in presolar SiC grains by synchrotron X-ray fluorescence: Commencement of a coordinated multimethod study. *Lunar Planet. Sci.* 39, # 2135.
45. §Teng F.-Z., **Dauphas N.**, Helz R.T. (2008) Isotopic fractionation of iron during magmatic differentiation. *Lunar Planet. Sci.* 39, #2148.
44. **Dauphas N.**, Cook D.L., \*Sacarabany A., Fröhlich C., Wadhwa M., §Pourmand A., Rauscher T., Gallino R. (2008) Iron-60 injection in the protosolar nebula: how early and how well mixed? *Lunar Planet. Sci.* 39, #1170.
43. §Pourmand A. & **Dauphas N.** (2008) Distribution coefficients of elements on TODGA resin in HNO<sub>3</sub>, HCl and HF: Application to determination of U/Th, Lu/Hf ratios and Hf isotopic composition in meteorites. *Lunar Planet. Sci.* 39, #1367.
42. \*Qin L., **Dauphas N.**, Wadhwa M., Masarik J., Janney P.E. (2007) Combining Hf-W ages, cooling rates, and thermal models to estimate the accretion time of iron meteorite parent bodies. *AGU Fall Meeting, 10-14 December, San Francisco.*
41. Teng F.-Z., **Dauphas N.**, Helz R.L. (2007) Redox-controlled iron isotope fractionation during basalt differentiation? *AGU Fall Meeting, 10-14 December, San Francisco.*
40. Albarède F., Arnould M., Carlson R.W., **Dauphas N.**, Fujii T., Jacobsen S.B., Yin Q., Young E.D. (2007) Stable

isotope anomalies and early solar system chronology. *Workshop on the chronology of meteorites and the early solar system, November 5-7, Kauai, Hawaii*.

39. **Dauphas N.** (2007) Kinetic and equilibrium iron isotopic fractionation at high temperature (Keynote). *17th Annual V.M. Goldschmidt Conference, August 19-24, Cologne*.
38. <sup>§</sup>Teng F.-Z., Wadhwa M., Janney P.E., Grossman L., Simon S., **Dauphas N.** (2007) Magnesium isotopic systematics of chondrules and CAIs from Allende, Murchison, Murray and Bjurböle. *Lunar Planet. Sci. XXXVIII, #1837*.
37. \*Qin L., **Dauphas N.**, Wadhwa M., Markowski A., Gallino R., Janney P.E. (2007) Tungsten nuclear anomalies in iron meteorites and implications for Hf-W chronology. *Lunar Planet. Sci. XXXVIII, #1771*.
36. **Dauphas N.** (2007) Diffusion-driven kinetic isotope fractionation of Fe and Ni in iron meteorites: a new dimension to the analysis of cooling rates. *Lunar Planet. Sci. XXXVIII, #1178*.
35. Reisberg L.C., **Dauphas N.**, Luguet A., Pearson D.G., Gallino R. (2007) Large s-process and mirror osmium isotopic anomalies within the Murchison meteorite. *Lunar Planet. Sci. XXXVIII, #1177*.
34. Cook D.L., Wadhwa M., Clayton R.N., Janney P.E., **Dauphas N.**, Davis A.M. (2006) Mass dependent fractionation of nickel isotopes in IIIAB iron meteorites. *69th Annual Meeting of the Meteoritical Society, August 6-11, 2006, Zurich. Meteorit. Planet. Sci.*
33. \*Qin L., **Dauphas N.**, Wadhwa M., Janney P.E. (2006) High precision W isotope measurements of iron meteorites. *69th Annual Meeting of the Meteoritical Society, August 6-11, 2006, Zurich. Meteorit. Planet. Sci.*
32. **Dauphas N.** (2006) Theory of isotopic fractionation during phase growth in a diffusion-limited regime. *69th Annual Meeting of the Meteoritical Society, August 6-11, 2006, Zurich. Meteorit. Planet. Sci.*
31. <sup>§</sup>Busigny V., **Dauphas N.** (2006) Iron isotopes in spherical hematite and goethite concretions from the Navajo sandstone (Utah, USA): a prospective study for "martian blueberries". *Lunar Planet. Sci. XXXVII, #1200*.
30. **Dauphas N.**, Cates N.L., Mojzsis S.J., van Zuilen M., Wadhwa M., Janney P.E., <sup>§</sup>Busigny V., Davis A.M. (2006) The iron isotopic composition of 3.7-3.8 Ga chemical sediments: comparison between Isua (Greenland) and Nuvvuagittuq (Northern Quebec). *Lunar Planet. Sci. XXXVII, #1053*.
29. \*Qin L., **Dauphas N.**, Wadhwa M., Janney P.E., Davis A.M., Mazarik J. (2006) Evidence of correlated cosmogenic effects in iron meteorites: implications for the timing of metal-silicate differentiation in asteroids. *Lunar Planet. Sci. XXXVII, #1771*.
28. **Dauphas N.** (2005) The U-Th age of the Milky Way. *68th Annual Meeting of the Meteoritical Society, September 12-16, 2005, Gatlinburg. Meteorit. Planet. Sci. 40, A35*.
27. <sup>§</sup>Busigny V., **Dauphas N.** (2005) Iron isotopes in Utah hematite concretions: a terrestrial analogue for martian blueberries. *68th Annual Meeting of the Meteoritical Society, September 12-16, 2005, Gatlinburg. Meteorit. Planet. Sci. 40, A27*.
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