

## XIAHONG FENG

Department of Earth Sciences  
6105 Fairchild, Dartmouth College  
Hanover, NH 03755-3571  
Phone: (603)646-1712, Fax: (603)646-3922  
E-mail: xiahong.feng@dartmouth.edu

### Education:

Case Western Reserve University  
Department of Geological Sciences  
Ph.D. August 1991  
Advisor: Samuel M. Savin  
Dissertation: Stable isotope studies of zeolites

Peking University, Beijing, China  
Department of Geology  
M.S. July 1985  
Advisor: Zhuhui Zheng  
Thesis: Stable isotope studies of manganese nodules from the North Pacific Ocean

Peking University, Beijing, China  
Department of Geology  
B.S. February 1982

### Honors:

Frederick Hall Professor of Mineralogy and Geology 2003-  
Fellow – Geological Society of America, 2006-  
CAREER award – NSF, 1996-2001  
Susan and Gib Myers 1964 Faculty Fellow, Dartmouth, 2000  
Faculty Fellow – Dartmouth College, 1999  
Foley Fellow – Dartmouth College, 1999

### Experience:

Professor July 1, 2006 -- Present

Chair, Department of Earth Sciences, July, 2004 – June 2007  
Dartmouth College

Associate Professor July 1, 2000 – June 30, 2006  
Department of Earth Sciences, Dartmouth College

Assistant Professor June 1994 – June 30, 2000  
Department of Earth Sciences, Dartmouth College

Research Fellow in Geochemistry August 1991 - June, 1994  
California Institute of Technology, Pasadena CA. Advisor: Samuel Epstein

Graduate Assistant September 1985 - July 1991  
Case Western Reserve University, Cleveland, Ohio  
Department of Geological Science

Consultant 1988-1989  
Geosciences Associates, Inc., Burton, Ohio

Research Assistant July 1988 - July 1991  
Case Western Reserve University, Cleveland, Ohio  
Weatherhead School of Management

Research Assistant February 1982 - June 1985  
Peking University, Beijing, China  
Department of Geology

Factory Worker July 1976 – February 1978  
Yan Shan Petrochemical Industry Corporation, Beijing, China

High School Teacher February 1976 - July 1976  
172<sup>nd</sup> High School, Beijing, China. (Teaching high school physics.)

## **Research Interests**

Studies of climate and environmental change using stable isotopes and major/trace elements, including: i) hydrogen, oxygen and carbon isotopes of tree rings and their significance in climate and environmental studies; ii) nitrogen and carbon cycles in soils; iii) CO<sub>2</sub>-H<sub>2</sub>O exchange within soil profiles and its implication for carbon fluxes between soil and the atmosphere; iv) studies of global carbon cycles using carbon isotopes of tree rings and soil organic matter; v) zeolites as a tool to study paleohydrology; vi) studies of snow hydrology and snow-soil interactions using trace elements and stable oxygen and hydrogen isotopes; vii) studies of watershed hydrochemistry using oxygen isotopes and major and trace elements.

## **Professional Membership**

American Geophysical Union  
Geological Society of America  
Geochemical Society of America  
The Clay Minerals Society  
American Geographical Society  
IPACES (International Professionals for Advancement of Chinese Earth Sciences)

## **Synergistic activities and Professional Services**

Panelist: NSF/GEO POWRE, 1999  
Panelist: NSF/EAR/IF, 2000-2003  
Panelist: NSF/BE/CBC, 2004  
Director: Dartmouth Trace Element Analysis Core Facility, July 2001-2003  
Member of the Board of Directors of CUAHSI (Consortium of Universities for Advancement of Hydrological Science, Inc.) 2003-2004  
Dartmouth Representative of CUAHSI 2003-present  
Reviewer for many professional journals, and US and international funding agencies.  
Associate Editor: *Advances in Earth Science*, Vol. 4, The International Professionals for Advancement of Chinese Earth Science.  
Associate Editor: *Journal of Hydrology*, 2005-2008  
Panelist: NSF/IGERT/Preproposal, June 2008  
Panelist: NSF/IGERT/Preproposal, June 2009

## **Research Grants**

### Grants Awarded

Chinese National Science Foundation, Program of Short-Term Scientific Exchange with Oversea Chinese Scholars, ¥7,000, 1994.

“Stable Oxygen and Hydrogen Isotope Studies of Groundwater and Wood from the Last Glacial

Maximum to the Present” NSF EAR-9506752, Principal Investigator, \$17,997, September 1995-February 1997.

Chinese National Science Foundation, Program of Short-term Scientific Exchange with Oversea Chinese Scholars, ¥16,000, 1995.

“Dendrochronology and Stable Isotope Studies of Tree Rings for Selected Areas of the United States” NSF ATM-9628759 CAREER, Principal Investigator, \$219,177, 06/01/96–05/31/00, plus \$29,725 supplement for 06/01/00–05/31/01.

“Studies of Diagenetic and Post-Formational Processes of Zeolite Formations Using Stable Oxygen and Nitrogen Isotopes, K/Ar Dating and Major and Trace Elements” NSF EAR-9628402, Principal Investigator, \$139,905, August 1996 - August 1999.

Collaborative Research with Peking University: “Post-formational alteration of zeolite ore deposits and its environmental significance” Chinese National Science Foundation, CNSF-49672118, Principal Investigator at Dartmouth College, ¥120,000, January, 1997 – December, 1999.

Chinese National Science Foundation, Program of Short-Term Scientific Exchange with Oversea Chinese Scholars, ¥6,000, 1997.

“Acquisition of a Particle Size Analyzer for Geochemical Research at Dartmouth College”, NSF EAR-9727362, Principal Investigator, \$29,700, 03/01/98 - 02/29/00.

Collaborative Research with the Cold Region Research and Engineering Laboratory: “Measuring and modeling the isotopic variability of snowmelt”. The Department of Defense to the Army, Snow Ice and Frozen Ground Program, Co-Principal Investigator, \$100,000, 06/01/98-05/31/00.

Exchange and collaboration with overseas Chinese scholars, The Chunhui Project, Education Committee of China, \$600, summer, 1998.

Dartmouth Faculty Fellowship, Spring, 1999.

Foley Fellowship, Dartmouth College, 1999, \$2,000.

Collaborative Research with Dr. Edward Cook at Lamont-Doherty Earth Observatory: “Developing an absolutely-dated Holocene tree-ring chronology from sub-fossil huon pine in Tasmania for paleoclimatic and isotopic studies” NOAA (NA96GP0480) (NSF/NOAA ESH program), Principal investigator at Dartmouth College, \$83,200, 09/01/99–08/31/02.

Technician support: gas-isotope ratio mass spectrometry laboratory at Dartmouth College. Co-Principal investigator, NSF (EAR-9903082) \$179,925, September 1999 – August 2002.

Contaminant loading of watersheds from snowmelt: An integrated study using stable isotopes and rare earth elements. NSF (EAR-9903281), Principal investigator, \$191,442, 02/01/00 – 07/31/04; supplement: \$22,481 (1.5 year extension).

Susan and Gib Myers 1964 Faculty Fellowship, \$2,000, 2000.

Technician support: Watershed studies at Dartmouth College. NSF (EAR-0111403), Principal investigator, \$141,700, 09/01/01 – 08/31/04

Collaborative Research: Investigating timescales of hydrologic transport, storage, and mixing in catchments, using natural tracer time series, theoretical models, and laboratory-scale simulations. NSF (EAR0125338), Principal investigator at Dartmouth (with James Kirchner at UC Berkeley), \$39,181, 03/01/2002 – 02/28/2005.

Acquisition of continuous-flow stable isotope analytical equipment at Dartmouth College. NSF (EAR/IF-0132018), Principal investigator \$68,945, 03/15/02-02/29/04.

Acquisition of a Gas Chromatography-Inductively Coupled Plasma Mass Spectrometry System for Interdisciplinary Environmental and Health Sciences Research at Dartmouth College NSF/MRI/DBI 0215913, PI with Folt and Sturup as Co-PIs, \$159,346, 07/01/02-06/30/05.

TECHNICIAN SUPPORT: Watershed Studies at Dartmouth College [Phase II], NSF/EAR-IF 0418809, PI with Renshaw as Co-PI, \$149,503, 01/01/05-12/31/06.

IGERT Polar Environmental Change: NSF 0801490. Co-PI (PI: Ross Virginia); \$2,999,613, August 1 2008 – July 31 2013.

DOE: ARM Climate Research Facility (ACRF): “Effect of sea ice on Arctic precipitation” PI (with Posmentier as Co-PI); \$10,000, January 1 2009 – December 31 2010.

Strategic University Research Partnership, Director’s Research and Development Fund, Jet Propulsion Laboratory: Estimating sources of Arctic moisture using ground and space based measurements of water vapor and its isotopes; \$100,000, July 1 2009 – June 30 2010.

### Grants Pending

Collaborative Research: A pan-Arctic, storm-by-storm isotopic investigation of the influence of Arctic sea ice on precipitation – a crucial link in the coupled climate system. NSF 0909392, PI \$546,864.

### **Thesis and Research Advising**

#### Undergraduate:

Ann Melander (1996-1997) Trace metal deposition around Claremont Incinerator.

Mark Wenzel (1997-1998) Oxygen and hydrogen isotope studies of meteoric water.

Kathleen G Catapano (1998 – 1999) Reconstruction of Holocene climates in the Yellowstone region using hydrogen isotopes in wood cellulose (Co-advisor with C. Page Chamberlain)

Katharine Maher (1998-1999) Forest vitality and metal pollution along an acidified watershed, Cooke City, Montana (Co-advisor with C. Page Chamberlain)

Andrew S. Perlstein (1999-2000) Isotopic composition of soil water in Mink Brook watershed.

Raymond H.R. Dums (2000-2001) Determining the flowpaths of water through a natural soil column (Co-advisor with Carl Renshaw)

Cheryl Peyser (2000-2001) A study of water percolation through soil using stable isotopes (Co-advisor with Carl Renshaw)

Valisa E. Nez (2000-2001) A simulation of contaminant transport in unsaturated media using sand columns (Co-advisor with Carl Renshaw)

Molly C. Redmond (2001-2002) Reconstruction of climate change of Tasmania Australia using oxygen and hydrogen isotopes of tree rings.

Elizabeth S. Winston (2002-2003) Arsenic mobility in soil.

Ian D. Turnbull (2003-2004) Global Seasonal Variations in Precipitation  $\delta^{18}\text{O}$

Allison L. Reddington (2003-2004) Reconstruction of Paleohumidity for the North American Continent using Oxygen and Hydrogen Isotopes in Wood Cellulose.

Ross J. Markwort (2004) Independent project, Environmental Reconstruction of Ethiopia during the African Humid Period (Coadvising with Jim Aronson and Gary Johnson)

Merrick H. Johnston (2002-2005) Tracing atmospheric pollutant along Storm Tracks in Northwest Alaska.

Eleanor E. Campbell (2005) Changes in stable carbon isotope signatures in three temperature lakes associated with autumn lake destratification (Co-advisor with Cottingham).

Kelly K. Everhart (2008-2009) Isotopic variations in atmospheric water vapor.

Woman In Science Interns: Christine DeLorenzo (1996), Candice E. Buckley (1996), Jennifer Flight (1997), Emily K. Leshner (1998), Sara Szkola (1999), Emily Schaller (1999), Jennifer C. Miller

(2000), Reiko Harigaya (2002), Kristina M. Conner (2005); Shreoshi Majumdar (2007 and 2008); Kelly S. Aho (2008), Suzanne Kelson (2009).  
Presidential Fellow: Jessica T. Rush (2008); Florence T. Ling (2009).  
Research Assistant: Christina M. Supino (2008-2009)

Graduate:

*Primary Advisor/Co advisor of*

Jennifer Peterson (M.S. 1997)  
Kuilian Tang (Ph.D 2000)  
Susan Taylor (Ph.D 2001)  
James Holmes (M.S. 2001, Coadvisor)  
Kelsey Sinclair (M.S. 2001, Coadvisor)  
Margaret Quinn (M.S. 2001, Coadvisor)  
Anthony Faiia (Ph.D 2002)  
Christine K. Wong (M.S. 2002, Coadvisor)  
Valisa E. Nez (M.S. 2003)  
Raymond H. R. Dums (M.S. 2003)  
Jamie L. DeLemos (M.S. 2003)  
Yong Shu (Ph.D. expected 2006)  
Jeonghoon Lee (Ph.D. expected 2007)  
Ye Wang (M.S. Left the program)  
Alexis L. Coplin (M.S. expected 2009)

*Graduate Advisory/Thesis Defense Committee Member for*

Hans Manske (M.S, 1998)  
Stephen Peters (M.S. 1999)  
Michael A. Poage (Ph.D. 2000)  
James F. Hogan (PhD. 2000)  
Jennifer L. Marcer (Ph.D 2002)  
Derek J. Sjostrom (Ph.D 2002)  
James M. Kaste (Ph.D. 2004)  
Zhaohui Zhang, Summer, 2002  
Yali Sun, Fall 2002, External examiner at the University of Hong Kong.  
Andrew W. Schroth (Ph.D. 2007)  
Andrew Quicksall (Ph.D. 2008)  
Rebekka M. Stucker (M.S. 2006)  
Rasmus Andreasen (Ph.D. 2007)  
D. Bradley Bate (M.S. 2007)  
Cynthia Chen (Ph.D. 2009)  
Samantha L Saalfield (Ph.D. 2009)  
Derek A. Smith (Ph.D. expected 2012)  
Yingzhe Wu (Ph.D. expected 2013)  
Jing Sun (Ph.D. expected 2013)  
Lynne M. Zummo (Ph.D. expected 2013)

**Courses Taught at Dartmouth:**

Ears 3	Elementary Oceanography
Ears 28	Environmental Geology
Ears 73	Environmental Isotope Geochemistry
Ears 36/115	Analysis of Environmental Data
Ears 201/202	Geochemical Models in Earth Sciences
Ears 119	Stable Isotope Geochemistry
Ears 113	Watershed Hydrochemistry
Ears 45/46/47 (D.F.S.P.)	Field methods
Ears 121	Graduate Seminar

Ears 88 Culminating Experience  
WISP Sponsor for 1995, 1997, 1998, 1999, 2000, 2002, 2004, 2006, 2007, 2008, 2009.  
Presidential Scholar Sponsor for 2008, 2009.

#### **Invited Talks:**

Geophysical Laboratory, Carnegie Institution of Washington, March 18, 1996  
Department of Geological Sciences, University of Michigan, September 12, 1997  
Department of Geological Sciences, Brown University, September 18, 1997  
Department of Geology, Peking University, China, December 8, 1997  
Department of Geology and Geophysics, University of Connecticut, September 14, 2000.  
Institute of Geomechanics, Chinese Academy of Geological Sciences, August, 2001.  
Department of Geology, Peking University, China, August, 2001  
Department of Earth and Space Sciences, Chinese Institute of Science and Technology, August, 2001.  
Department of Geological Sciences, Case Western Reserve University, Oct. 2001  
Department of Geophysics, Peking University, China, June 14, 2002  
Biogeomon, the 4<sup>th</sup> International Symposium on Ecosystem Behavior, Reading University, United Kingdom, August 17-21, 2002  
Department of Geology, the University of Hong Kong, December 2, 2002  
Department of Geological Sciences, University of Oregon, February 26, 2003  
2003 Gordon Research Conference on Catchment Science: Interactions of Hydrology, Biology and Geochemistry, July 20-25, 2003  
Department of Plant Nutrient, School of Sources and Environment, Chinese Agriculture University, China, June 3, 2004  
Institute of Earth Environment, Chinese Academy of Science, Xi'an, China, June 7, 2004.  
Panel Meeting on Computation in Earth System Science, July 10-12, 2004, Beijing, China.  
Department of Earth and Environmental Sciences, Rensselaer Polytechnic Institute, November 3, 2004.  
Kirchner, J.W., Feng, X. and Neal, C. (2004) The Fine Structure of Water-Quality Dynamics: the Wave of the Future in Catchment Hydrochemistry? *Eos Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract H51G-02 INVITED.  
Department of Geological Sciences, Brown University, April 10, 2006.  
Department of Earth Science, China University of Geoscience, Wuhan, China, August 7, 2006.  
Department of Hydrogeology, Nanjing University, China, July 30, 2007.  
Department of Geography, Peking University, China, August 4, 2007.  
Barrow Arctic Science Consortium, Barrow, Alaska, July 19, 2008.  
Center of Environmental Sciences, Peking University, China, December 22, 2008.  
College of Resources and Environment, China Agriculture University, Beijing, China, December 17, 2008.

#### **Invited Conferences:**

REKIHAKU International Symposium – Terrestrial Environmental Changes and Natural Disasters during the Last 10,000 years, Japan, November, 1997.  
National Science Foundation CAREER Program Symposium, Washington, D.C., January 1999.  
Forum for Young Scientists, China Association for Science and Technology, August, 2001.  
The 167<sup>th</sup> Xiangshang Science Conference: “Active Tectonics, Environments and Natural Hazards”, Xiangshang, Beijing, August, 2001.  
Biogeomon, the 4<sup>th</sup> International Symposium on Ecosystem Behavior, Reading University, United Kingdom, August 17-21, 2002  
2003 Gordon Research Conference on Catchment Science: Interactions of Hydrology, Biology and Geochemistry, July 20-25, 2003  
Panel Meeting on Computation in Earth System Science, July 10-12, 2004, Beijing, China.

#### **Refereed Publications** (\* student or postdoc authors):

063. Jeonghoon Lee\*, X. Feng, A.M. Faiia, E.S. Posmentier, J.W. Kirchner, R. Osterhuber, S. Taylor (in review) Evolution of the isotopic composition of an alpine snow cover and its melt by isotopic exchange between liquid and ice, *Chemical Geology*.
062. Feng, X., A. M. Faiia, and E. S. Posmentier (2009), Seasonality of isotopes in precipitation: A global perspective, *J. Geophys. Res.*, 114, D08116, doi:10.1029/2008JD011279.
061. Committee on Chinese Groundwater Science (a 12-member committee, including Feng, appointed by The Chinese National Science Foundation) (2009) Opportunities and Challenges in Chinese Groundwater Science. Science Press, Beijing, China.
060. Zheng, C. and Feng, X. (2008) Editors: *Environmental Geosciences*, Advances in Earth Sciences, Vol. 4, Higher Education Press, Beijing, China.
059. **Feng, X.** (2008) Residence Time of Water and Solutes in Drainage Basins, in *Environmental Geoscience*, eds. Zheng, C. and **Feng, X.**, Higher Education Press, Beijing, China, pp.69-85.
058. Lee\*, J., **Feng, X.**, Posmentier, E.S., Faiia A.M. and Taylor S. (2009) Stable isotopic exchange rate constant between snow and liquid water. *Chemical Geology*, 260, 57-62.
057. Lee\*, J., Nez\*, V., **Feng, X.**, Kirchner, J.W., Osterhuber, R., Renshaw, C.E. (2008) A study of solute redistribution and transport in seasonal snowpack using natural and artificial tracers. *Journal of Hydrology*, 357 (3-4), 243-254.
056. Wang, G., **Feng, X.**, Han, J., Zhou, L., Tan, W. and Su, F. (2008) Paleovegetation reconstruction using  $\delta^{13}\text{C}$  of soil organic matter. *Biogeosciences*, 5, 1325-1337.
055. Shu\*, Y., **Feng, X.**, Posmentier, E.S., Faiia, A.M., Ayres, M.P., Conkey L.E. and Sonder L.J. (2008) Isotopic studies of leaf water 2. Between-age isotopic variations in pine needles. *Geochimica et Cosmochimica Acta*, 72, 5189-5200.
054. Shu\*, Y., **Feng, X.**, Posmentier, E.S., Sonder L.J., Faiia, A.M. and Yakir, D. (2008) Isotopic studies of leaf water 1. A physically based two-dimensional model for pine needles. *Geochimica et Cosmochimica Acta*, 72, 5175-5188.
053. Lee\*, J., **Feng, X.**, Posmentier, E.S., Faiia, A.M., Osterhuber, R., Kirchner J.W. (2008) Modeling of solute transport in snow using conservative tracers and artificial rain-on-snow experiments, *Water Resources Research*, 44, W02411, doi:10.1029/2006WR005477.
052. Pellerin\*, B.A. Wollheim, W.M., **Feng, X.**, Vörösmarty, C.J. (2007) The role of surface runoff in urban stormflow generation: Inferences from chemical and isotopic hydrograph separation, *Hydrological Processes*. DOI: 10.1002/hyp.6786
051. **Feng, X.**, Reddington\*, A.L., Faiia\*, A.M., Posmentier, E.S., Shu\* Y., and Xu, X. (2007) Changes in North American atmospheric circulation patterns indicated by wood cellulose, *Geology*, 35(2), 163-166, doi: 10.1130/G22884A.1.
050. Bostick, B.C., C. E. Renshaw, J. L. de Lemos, S. Stürup, and **X. Feng**. Response to Comment on Arsenic contamination caused by groundwater remediation. 2006. *Environmental Science and Technology*, 40, 4039.
049. Lennon\*, J.T. Faiia, A.M. **Feng, X.**, Cottingham, K.L. (2006) Evidence for CO<sub>2</sub> recycling in lakes along a terrestrial carbon gradient, *Limnology and Oceanography*, 51(4), 1602-1613.
048. DeLemos\*, J.L., Bostick, B.C., Renshaw, C.E., Stürup, S., and Feng X. (2006) Landfill-Stimulated Iron Reduction and Arsenic Release at the Coakley Superfund Site (NH), *Environmental Science and Technology*. 40(1), 67-73.
047. Renshaw, C.E., Bostick, B.C., **Feng, X.**, Wong\*, C.K., Winston, E.S., Karimi, R. Folt, C.L. and Chen, C.Y. (2006), Impact of land disturbance on the fate of arsenical pesticides, *Journal of Environmental Quality*, 35, 61-67
046. Graham, S.A., Chamberlain, C.P., Yue Y., Ritts, B.D. Hanson, A.D., Horton, T.W., Waldbauer, J.R., Poage, M.A. and **Feng, X.** (2005) Stable isotope records of Cenozoic climate and topography, Tibetan Plateau and Tarim Basin, *American Journal of Science*, 305, 101-118.
045. Liu, W., **Feng, X.**, Ning, Y., Zhang, Q., Cao, Y., and An, Z. (2005)  $\delta^{13}\text{C}$  variation of C<sub>3</sub> and C<sub>4</sub> plants across an Asian monsoon rainfall gradient in arid northwestern China, *Global Change Biology*, 11, 1094-1100.
044. Shu\*, Y., **Feng, X.**, Gazis, C., Anderson, D. Faiia\*, A.M., Tang\*, K., Ettl, G.J. (2005) Relative humidity recorded in tree rings: a study along a precipitation gradient in the Olympic Mountains, *Geochimica et Cosmochimica Acta*, 69, 791-799.
043. Posmentier, E.S. **Feng, X.**, Zhao, M. (2004) Seasonal variations of precipitation  $\delta^{18}\text{O}$  in Eastern Asia, *Journal of Geophysical Research*, 109, D23106, doi:10.1029/2004JD004510

042. Liu, W., **Feng, X.**, Liu, Y., Zhang, Q., An, Z. (2004)  $\delta^{18}\text{O}$  values of tree rings as a proxy of monsoon precipitation in arid Northwest China. *Chemical Geology*, 206, Issues 1-2, 73-80.
041. Poage\*, M.A. and **Feng, X.** (2004) A theoretical model of steady state  $\delta^{13}\text{C}$  vs. depth profiles of decomposing soil organic matter. *Global Biogeochemical Cycles*, 18, GB2016, doi:10.1029/2003GB002195.
040. **Feng, X.** (2004) Isotopic evolution of seasonal snowpacks and its significance to surface water hydrochemistry, in *Environment, Natural Hazards, and Global Tectonics of the Earth*, ed. Chen, Y.J., Higher Education Press, Beijing, China, 1-19.
039. Kirchner, J.W., **Feng, X.**, Neal, C. and Robson, A.J. (2004), INVITED COMMENTARY, The fine structure of water-quality dynamics: the (high-frequency) wave of the future, *Hydrological Processes*, 18(7), 1353-1359.
038. **Feng, X.**, Kirchner, J.W., and Neal, C. (2004b) Spectral analysis of chemical time series from long-term catchment monitoring studies: hydrochemical insights and data requirements, *Water, Air and Soil Pollution: Focus* 4, 221-235.
037. **Feng, X.**, Kirchner, J.W., and Neal, C. (2004a) Measuring catchment-scale chemical retardation using spectral analysis of reactive and passive chemical tracer time series, *Journal of Hydrology*, 292, 296-307
036. Gazis\*, C. and **Feng, X.** (2004) A stable isotope study of soil water: Evidence for mixing and preferential flow paths, *Geoderma*, 119, no. 1, pp. 97-111.
035. Quinn\*, M.R., **Feng, X.**, Folt, C.L. and Chamberlain, C.P. (2003) Analyzing trophic transfer of heavy metals in stream food webs using nitrogen isotopes. *Science of the Total Environment*, 317, Issues 1-3, 73-89.
034. Quideau, S.A., Graham, R.C., **Feng, X.** and Chadwick, O. (2003) Natural isotopic distribution in soil surface horizons differentiated by vegetation. *Soil Science Society of America Journal*, 67: 1544-1550.
033. Renshaw, C.E. **Feng, X.** Sinclair\*, K.J. and Dums\*, R.H.R. (2003) The use of stream flow routing for direct channel precipitation with isotopically-based hydrograph separations: the role of new water in stormflow generation. *Journal of Hydrology*, 273, 205-216.
032. **Feng, X.** (2002) A theoretical analysis of carbon isotope evolution of decomposing plant litters and soil organic matter. *Global Biogeochemical Cycles*, 16(4), Art. No.1119, doi:10.1029/2002GB001867.
031. Chen\*, Z.L., Wang X.F., **Feng, X.**, Wang, C.Q., and Liu, J. (2002) New evidence from stable isotopes for the uplift of mountains in northern edge of the Qinghai-Tibetan Plateau, *Science In China Series B-Chemistry*, 45: 1-10 Suppl. S.
030. Taylor\*, S., **Feng, X.**, Williams, M. and McNamara, J. (2002b) How isotopic fractionation of snowmelt affects hydrograph separation, *Hydrological Processes*, 16, 3683-3690.
029. Taylor\*, S., X. Feng, C.E. Renshaw, and J.W. Kirchner (2002a) Isotopic evolution of snowmelt: II. Verification and parameterization of a 1-D model using laboratory experiments, *Water Resources Research*, 38(10), 1218, doi:10.1029/2001WR000815.
028. **Feng, X.**, S. Taylor\*, C.E. Renshaw, and J.W. Kirchner (2002) Isotopic evolution of snowmelt: I. A physically based 1-D model, *Water Resources Research*, 38(10), 1217, doi:10.1029/2001WR000814.
027. Kirchner, J.W., **Feng, X.** and Neal, C. (2001) Catchment-scale advection and dispersion as a mechanism for fractal scaling in stream tracer concentrations. *Journal of Hydrology*, 254, 81-100.
026. **Feng, X.**, Kirchner, J.W., Renshaw, C.E., Osterhuber, R., Klaue, B. Taylor, S. (2001) A study of solute transport mechanisms using REE tracers and artificial rain storms on snow. *Water Resources Research*, 37, 1425-1435.
025. Taylor\*, S., **Feng, X.**, Kirchner, J.W., Osterhuber, R., Klaue, B. and Renshaw, C.E. (2001) Isotopic evolution of a seasonal snowpack and its melt. *Water Resources Research*, 37, 759-769.
024. Tang\*, K. and **Feng, X.** (2001) The effect of soil hydrology on the oxygen and hydrogen isotopic compositions of plants' source water. *Earth and Planetary Science Letters*, 185, 355-367.
023. Connin\*, S.L. **Feng, X.** and Virginia, R.A. (2001) Isotopic discrimination during long-term decomposition in an aridland ecosystem. *Soil Biology and Biochemistry*, 33, 41-51.
022. Faiia\*, A and **Feng, X.** (2000) Kinetics and mechanism of oxygen isotope exchange between analcime and water vapor and assessment of isotopic preservation of analcime in geological

- formations. *Geochimica et Cosmochimica Acta*, 64(18), 3181-3188.
021. Tang\*, K., **Feng, X.** and Ettl, G. (2000) The Variations in  $\delta D$  of Tree Rings and the Implications for Climatic Reconstruction. *Geochimica et Cosmochimica Acta*, 64(10), 1663-1673.
020. **Feng, X.**, Melander\*, A.P. and Klaue, B. (2000) Contribution of municipal waste incineration to trace metal deposition on the vicinity. *Water, Air and Soil Pollution*, 119, 295-316.
019. Chamberlain, C.P., Bensch S., **Feng, X.**, Åkesson, A. and Andersson, S.A.T. (2000) Stable isotopes examined across a migratory divide in Scandinavian willow warblers (*Phylloscopus trochilus trochilus* and *Phylloscopus trochilus acredula*) reflect their African winter quarters. *Proc. R. Lond. B* 267, 43-48.
018. Kirchner, J.W., **Feng X.** and Neal, C. (2000) Fractal stream chemistry and its implication for contaminant transport in catchments. *Nature*, 403, 524-527.
017. **Feng, X.**, Faiia\*, A., WoldeGabriel G., Aronson, J.L., Poage\*, M. and Chamberlain, C.P. (1999c) Oxygen isotope studies of clays and clinoptilolite from Yucca Mountain: Implications for paleohydrological conditions. *Earth and Planetary Science Letters*, 171, 95-106.
016. **Feng, X.** (1999) Trends in intrinsic water-use efficiency of natural trees for the past 100-200 years: A response to atmospheric CO<sub>2</sub> concentration. *Geochimica et Cosmochimica Acta*, 63(13-14), 1891-1903.
015. **Feng, X.**, Peterson\*, J. C., Quideau, S.A., Virginia, R.A., Graham, R.C. Sonder, L.J., and Chadwick, O.A. (1999b) Distribution, accumulation and fluxes of soil carbon in four monoculture lysimeters at San Dimas Experimental Forest, California. *Geochimica et Cosmochimica Acta*, 63(9), 1319-1333.
014. **Feng, X.**, Cui, H., Tang\*, K. and Conkey, L.E. (1999a) Tree-ring  $\delta D$  as an indicator of Asian monsoon intensity. *Quaternary Research*, 51, 262-266.
013. Tang\*, K., **Feng, X.** and Funkhouser, G. (1999) The  $\delta^{13}C$  of tree rings in full-bark and strip-bark bristlecone pine trees in the White Mountains of California, *Global Change Biology* 5, 33-40.
012. Taylor\*, S., **X. Feng**, B. Klaue, M. Albert and J. Kirchner (1998) Rare Earth Elements as Chemical Tracers in Snow Studies. Proceedings of the 55<sup>th</sup> Eastern Snow Conference, Jackson, New Hampshire, 1998, pp13-20.
011. **Feng, X.** (1998) Long-term  $c_i/c_a$  response of trees in western North America to atmospheric CO<sub>2</sub> concentration derived from carbon isotope chronologies. *Oecologia*, 117, 19-25.
010. C.P. Chamberlain, J.D. Blum, R.T. Holmes, **X. Feng**, T.W. Sherry, and G. R. Graves (1997) The Use of Isotope Tracers for Identifying Populations of Migratory Birds. *Oecologia*, 109, 132-141.
009. **Feng, X.** and Epstein, S. (1996) Climatic trends from isotopic records of tree rings: The past 100-200 years. *Climatic Change*, 33, 551-562.
008. **Feng, X.** and Epstein, S. (1995b) Climatic temperature records in  $\delta D$  data from tree rings. *Geochimica et Cosmochimica Acta*, 59, 3029-3037.
007. **Feng, X.** and Epstein, S. (1995a) Carbon isotopes of trees from arid environments and implications for reconstructing atmosphere CO<sub>2</sub> concentration. *Geochimica et Cosmochimica Acta*, 59, 2599-2608.
006. Pizzarello, S., **Feng, X.**, Epstein, S. and Cronin, J.R. (1994) Isotopic analyses of nitrogenous compounds from the Murchison Meteorites: Ammonia, amines, amino acids, and polar hydrocarbons. *Geochimica et Cosmochimica Acta*, 58, 5579-5587.
005. **Feng, X.** and Epstein S. (1994) Climatic implications of an 8000-year hydrogen isotope time series from bristlecone pine trees. *Science*, 265, 1079-1081.
004. **Feng, X.**, Krishnamurthy, R.V. and Epstein, S. (1993) Determination of D/H Ratios of Nonexchangeable Hydrogen in Cellulose: A Method based on the Cellulose Water Exchange Reaction. *Geochimica et Cosmochimica Acta* 57, 4249-4256.
003. **Feng, X.** and Savin, S.M. (1993b) Oxygen isotope studies of zeolites: stilbite, analcime, heulandite and clinoptilolite III. Oxygen isotope fractionation between stilbite and water vapor. *Geochimica et Cosmochimica Acta* 57, 4239-4248.
002. **Feng, X.** and Savin, S.M. (1993a) Oxygen isotope studies of zeolites: stilbite, analcime, heulandite and clinoptilolite II. Kinetics and mechanisms of isotopic exchange between zeolites and water Vapor. *Geochimica et Cosmochimica Acta* 57, 4219-4238.
001. **Feng, X.** and Savin, S.M. (1991) Oxygen Isotope Studies of Zeolites: Stilbite, Analcime, Heulandite and Clinoptilolite - I. Analytical technique. in *Stable Isotope Geochemistry: A*

## Other Publications

- Feng, X.**, Cui, H. and Conkey, L.E. (2002) Reply to the letter to the editor by Zhou on “Tree-ring  $\delta D$  as an indicator of Asian monsoon intensity” *Quaternary Research*, 58, 212-213.
- Bostick, B.C., C. E. Renshaw, J. L. de Lemos, S. Stürup, and **X. Feng** (2006) Response to Comment on Arsenic contamination caused by groundwater remediation. *Environ. Sci. Technol.*, 40, 4039.

## Abstracts and Conference Presentations (\* Student and postdocs)

- Posmentier, E.S., **Feng, X.**, Faiia, A.M., Michel, F.A. (2008) Isotopic Fingerprint of Polar Sea Ice Extent in High Latitude Precipitation. *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract A21D-0206.
- Coplin A.L.\* , K.S. Aho\* , A.M. Faiia, **X. Feng**, X. Xu and R.A. Virginia (2008) Trends in Carbon and Nitrogen Isotopes Associated with Particle Size Distribution in a New England Forest Soil. 2008 Joint Annual Meeting, GSA | ASA-CSSA-SSSA | GCAGS-SEPM | HGS, 5-9 October 2008, Houston, Texas, USA.
- Majumdar\* , S., **Feng, X.**, Hou, J., Faiia, A.M., Huang, Y. (2007) Relationship between Leaf Water and Leaf Waxes in Growing Pine Needles. *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract PP43B-1246.
- Feng, X.**, Shu, Y., Posmentier, E. S., Sonder, L. J. and Yakir, D. (2007) Revisiting the Boundary Layer Leaf Water Isotopic Model. *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract B33D-1580.
- Lee\* , J., **Feng, X.**, Posmenrier, E. S., and Faiia, A M (2007) Isotopic exchange rate constant between snow and liquid water. *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract H11C-0651.
- Faiia\* , A.M., Feng, X., Renshaw,C.E., Posmentier, E.S (2007) Frequency response of streams and soil moisture to rain input. Northeastern Section, GSA, 42nd Annual Meeting, 12-14 March 2007, University of New Hampshire, Durham, New Hampshire.
- Feng, X.**, Posmentier, E.S., Shu, Y., Faiia, A.M., Xu, X. (INVITED) Reconstruction of wind patterns and moisture transport using oxygen and hydrogen isotopes of wood cellulose. 2006 Western Pacific Geophysics Meeting, Beijing China, July 24 – 27, 2006.
- Posmentier, E.S., **Feng, X.** (INVITED) Temporal and spatial variations of precipitation isotopes in China, 2006 Western Pacific Geophysics Meeting, Beijing China, July 24 – 27, 2006.
- Lee\* , J. **Feng, X.**, Posmentier, E.P., Faiia, A.M., Osterhuber, R., Kirchner, J.W. Prediction of Solute Transport in Snow Using Artificial Rain-on-Snow Experiments and a Physically Based One-Dimensional Model. 2006 Western Pacific Geophysics Meeting, Beijing China, July 24 – 27, 2006.
- Feng, X.**, Sharma, M., Landis, J.D., Gazis, C., Posmentier, E.S. and McDowell, W.B. (2005) Strontium isotopes evolution of groundwater in a floodplain, Rio Icacos, Luquillo Experimental Forest, Puerto Rico. *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract V41G-1546.
- Shu\* , Y., **Feng, X.** and Faiia\* , A.M. (2005) Temporal Isotopic Variations of Leaf Water in Pine Needles. *Eos Trans. AGU*, 86(18), Jt. Assem. Suppl., Abstract H51C-07.
- Feng, X.**, Reddington\* , A.L., Faiia, A.M., Shu\* , Y. Posmentier, E.S., Xu, X. (2005) Covariation of Precipitation  $\delta^{18}O$  and Relative Humidity and the Implication for Changing the Atmospheric Circulation Pattern between Glacial and Interglacial Periods. *Eos Trans. AGU*, 86(18), Jt. Assem. Suppl., Abstract PP21A-01.
- Posmentier, E.S., Faiia\* , A.M., **Feng, X.** (2005) A New Look at the Global Distribution of Isotopes in Precipitation. *Eos Trans. AGU*, 86(18), Jt. Assem. Suppl., Abstract PP21A-03.
- Johnston\* , M.H., **Feng, X.**, Posmentier, E.S., Albert, M.R., Weatherly, J.W., Stürup, S. (2005) Tracing Pollutants in Northwest Alaskan Snow *Eos Trans. AGU*, 86(18), Jt. Assem. Suppl., Abstract C43B-06.
- Kirchner, J.W., **Feng, X.** and Neal, C. (2004) The Fine Structure of Water-Quality Dynamics: the Wave of the Future in Catchment Hydrochemistry? *Eos Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract H51G-02 INVITED.

- Lee\*, J., Faiia\*, A., **Feng, X.**, Osterhuber, R and Kirchner, J.W. (2004) Hydrological responses of snowmelt in artificial rain-on-snow experiments. Proceedings of the 2004 Annual meeting, 61<sup>st</sup> Eastern Snow Conference, Portland, Maine, USA.
- Turnbull\*, I.D., Faiia\*, A.M., Posmentier, E.S. **Feng, X.** (2004) Seasonal Variations in the  $\delta^{18}\text{O}$  Values of Global Meteoric Water and Climate Dynamic Patterns, *Eos Trans. AGU*, 85(17), Jt. Assem. Suppl., Abstract A41B-02.
- Poage\*, M.A. and **Feng, X.** (2004) A theoretical analysis of steady state  $\delta^{13}\text{C}$  profiles of soil organic matter. *Eos Trans. AGU*, 85(17), Jt. Assem. Suppl., Abstract B42A-05.
- Pellerin\*, B., W. Wollheim, **X. Feng**, C. Vorosmarty, A. Faiia (2004) Quantifying new water contributions to stormflow in an urban watershed using electrical conductivity and isotopic tracers, *Eos Trans. AGU*, 85(17), Jt. Assem. Suppl., Abstract H13B-02.
- Bostick, B.C., Renshaw, C.E., deLemos\*, J.L., Stürup, S., **Feng, X.**, Arsenic contamination caused by groundwater remediation, Presented at the 2003 National Superfund Meeting, Dartmouth College, Hanover, NH 03755, November, 2003.
- Posmentier, E.S. **Feng, X.**, Zhao, M. (2003) Seasonal variations of precipitation  $\delta^{18}\text{O}$  in Eastern Asia, *Eos Trans. AGU*, 84(46), Fall Meet. Suppl., Abstract GC12A-0153, 2003.
- deLemos\* J.L., Renshaw, C.E., Bostick B.C., Stürup S., and **Feng, X.** Arsenic release coupled with biodegradation of organic compounds in contaminated groundwater plumes. 226th ACS National Meeting, New York, NY, September 7-11, 2003.
- Kirchner, J.W., **Feng, X.**, and Neal, C. (2002) Linkages between hydrology and biogeochemistry, explored via spectral analysis of catchment hydrochemical data. *Eos Trans. AGU*, 83(47), Fall Meet. Suppl., Abstract H52D-0907, 2002.
- Shu\*, Y. and **Feng, X.** (2002) Relative humidity recorded in the hydrogen and oxygen isotopic compositions of tree rings. *Eos Trans. AGU*, 83(47), Fall Meet. Suppl., Abstract GC21B-0158, 2002.
- Feng, X.** (2002) A theoretical analysis of carbon isotope evolution of decomposing plant litter and soil organic matter. *Eos Trans. AGU*, 83(47), Fall Meet. Suppl., Abstract GC72B-0218, 2002.
- Feng, X.**, Kirchner, J.W., and Neal, C. (2002) Hydrological and geochemical dynamics, on time scales from days to decades, revealed through long-term monitoring studies. Book of Conference Abstracts, Biogeomon-4<sup>th</sup> International Symposium on Ecosystem Behavior, August 17-21, 2002, Reading, UK, pp 58.
- Wong\*, C.K., Renshaw, C.E., **Feng X.** and Stürup, S. (2002) New Hampshire apple orchards as a source of arsenic contamination. *Eos Trans. AGU*, Spring Meet. Suppl., Abstract H42A-05, 2002.
- Feng, X.**, Nez\*, V., Kirchner, J.W., Renshaw, C.E., Osterhuber, R. and Stürup, S. (2002) Solute transport processes in temperate snowpacks Revealed from nitrate and sulfate concentrations. *Eos Trans. AGU*, Spring Meet. Suppl., Abstract H42D-09, 2002.
- Taylor\*, S. **X. Feng**, M. Williams and J. McNamera (2002) Evaluating how uncertainties in the snowmelt isotopic composition affect hydrograph separation. In "Proceedings 59th Eastern Snow Conference", June 5-7, Stowe, Vermont.
- Quideau, S.A., R.C. Graham, **X. Feng**, and O.A. Chadwick (2002) Isotopic fractionation linked to soil carbon sequestration under oak and pine vegetation, submitted to the CSSS Annual meeting, Banff, Canada, May 18 - 24 2002.
- Feng, X.**, J.W. Kirchner, C.E. Renshaw and C. Neal (2001) Estimating whole-catchment chemical retardation factors using spectral analysis of reactive and passive chemical tracer time series. *Eos Trans. AGU*, 82(47), Fall Meet. Suppl., Abstract H21E-11, 2001.
- Kirchner, J.W., **Feng, X.**, Renshaw, C.E. and Neal, C. (2001) Spectral analysis in catchment hydrology and geochemistry. *Eos Trans. AGU*, 82(47), Fall Meet. Suppl., Abstract H21E-10, 2001.
- Feng, X.** and Tang\*, K. (2001) Isotopic systematics in atmosphere-soil-plant systems: Climatic reconstruction using oxygen and hydrogen isotopes of tree rings. *Eos, Transactions, American Geophysical Union*, 83, No 20, S67.
- Holmes\*, J., Renshaw, C. E. and **Feng, X.** (2001) Stream response to storm events downstream of mine tailings: Hydrograph separation and metals Contamination. *Eos, Transactions, American*

Geophysical Union, 83, No 20, S183.

- Taylor\*, S., **Feng, X.** and Williams, M. Estimating snowmelt's isotopic composition for hydrograph separation from field, laboratory and modeling work. Submitted to Eastern Snow Conference, 2001.
- Kirchner, J.W., Feng, X., Neal, C., Skjelkvaale, B.L., Clair, T.A., Langan, S., Soulsby, C., Kahl, J.S. and Norton, S.A. (2000) Generality of--and a Proposed Mechanism for--Fractal Fluctuations in Stream Tracer Chemistry. *Eos, Transactions, American Geophysical Union*, 81, F554, 2000.
- Faiia\*, A.M., Aronson, J.L., **Feng, X.**, and WoldeGabriel, G. (2000). K/Ar in clinoptilolite: K variability and rock permeability. Abstracts with Programs - Geological Society of America Annual Meeting, Reno, NV, Nov. 9-18, 2000. v. 32 (7), p. 479.
- Tang\*, K. and **Feng, X.** and Flight\*, J. (2000) Isotopic variations in precipitation, soil water and leaf water and their temporal relationships, submitted to Spring AGU. *EOS*, Vol.18, No.19, S122.
- Sjostrom\*, D., Catapano\*, K., Poage\*, M., **Feng, X.** Chamberlain, C. P., Furniss, G (2000) Holocene climate change in the Montana Rocky Mountains recorded by stable isotope composition of ferricretes and ancient trees: *GSA Abstracts with Programs*, v.32, n.5.
- Feng, X.**, Kirchner, J.W., Renshaw, C.E., Osterhuber, R., Klaue, B. and Taylor S. (1999) A study of solute transport mechanism using REE tracers and artificial rain storms on snow. *EOS*, vol. 80, no. 46, F345.
- Kirchner, J.W., **Feng, X.** and Neal C. (1999) Fractal fluctuations in stream chemistry and their implications for contaminant persistence in catchments. *EOS*, vol. 80, no. 46, F375.
- Anderson, D.R., Gazis, C., Tang, K., and **Feng, X.** (1999) Rain-shadow effects on the stable isotope character of precipitation, soil water and tree rings in the Olympic Peninsula, Washington State. *EOS*, vol. 80, no. 17, S149-150.
- Taylor\*, S., **X. Feng**, R. Osterhuber, J.W. Kirchner, B. Klaue and C. Renshaw (1999), The isotopic Evolution of snow and its melt. Eastern Snow Conference, Fredericton, New Brunswick, Canada, 2-4 June 1999.
- Feng, X.**, Renshaw, C.E., and Taylor\*, S. (1998) Impact of Uncertainty in the Isotopic Composition of Snowmelt on Hydrograph Separation of Spring Runoff. AGU Annual Fall Meeting, 1998. *Eos, Transactions, a supplement*, Vol. 79, pp F269.
- Taylor\*, S., **Feng, X.**, Renshaw, C.E., Kirchner J.W., and Osterhber, R. (1998) evolution of the isotopic composition of snow and its melt. AGU Annual Fall Meeting, 1998. *Eos, Transactions, a supplement*, Vol. 79, pp F269.
- Tang\*, K., **Feng, X.**, and Ettl, G. J. (1998) The hydrogen isotopic composition of tree rings in the Olympic Peninsula area. *Chinese Science Bulletin*, 43, supplement: Abstracts of ICOG-9, 1998 Beijing, pp127.
- Gazis\*, C.A., Tang\*, K. and **Feng, X.** (1998) Stable isotope variations in precipitation, soil water and soil CO<sub>2</sub> *Chinese Science Bulletin*, 43, supplement: Abstracts of ICOG-9, 1998 Beijing, pp44.
- Faiia\*, A. and **Feng, X.** (1998) Zeolite oxygen exchange kinetics. *Chinese Science Bulletin*, 43, supplement: Abstracts of ICOG-9, 1998 Beijing, pp138.
- Taylor\*, S., **Feng, X.**, Osterhuber R., Kirchner, J.W. and Klaue, B. (1998) Oxygen and Hydrogen isotope compositions of snowmelt from an isotopically well characterized snowpack. Eastern Snow Conference, June 2-4, 1998, Jackson, New Hampshire.
- Taylor\*, S., **Feng, X.** and Renshaw C. (1998) Laboratory Studies of Snowmelt Using Stable Isotopes and Rare Earth Element Tracers. Abstracts from the International Conference on Snow Hydrology: The integration of physical, chemical and biological systems. Eds. J. Hardy, M. Albert and P. Marsh, US Army Corps of Engineers, P73.
- Ettl, G.J., Cottone, N., and **X. Feng** (1998). Dendroecology of Douglas-fir in the Olympic Mountains, WA. Ecological Society Annual Meeting, Baltimore, MD.
- Ettl, G.J., DelPrato, P.G., Cottone, N., Tang\*, K., **Feng, X.** (1997) Dendroecology: a tool to evaluate anthropogenic impacts on forest ecosystems. *Biochemistry, Molecular Biology, and Biology Joint Research Forum*, Penn State University, State College, PA, October 4, 1997.
- Feng, X.** (1997) The D/H ratios of tree rings in trees from world wide locations and the implications for climate change of the past 100-200 years. Extended Abstract for an invited presentation at

- REKIHAKU International Symposium "Terrestrial Environmental Changes and Natural Disasters during the Last 10,000 Years" Sakura City, Japan, November 25-28, 1997, pp13-16.
- Feng, X.**, Peterson, J. C., Quideau, S.A., Virginia, R.A., Graham, R.C. and Sonder, L.J. (1997) Carbon isotopes in soil carbon accumulated under four single species lysimeters at the San Dimas Experimental Forest, CA. Abstracts with Programs: GSA 1997 Annual Meeting, A85.
- Gazis\*, C.A. and **Feng, X.** (1997) Stable isotope studies of soil CO<sub>2</sub> and soil water in New Hampshire and Vermont. Abstracts with Programs: GSA 1997 Annual Meeting, A84.
- Feng, X.** (1996) A Calculation of Plant's Water Use Efficiency Using Carbon Isotopic Compositions in Tree Rings. EOS, Transactions, American Geophysical Union, Vol 77, No. 46 1996/Supplement, A42D-12, F125.
- Tang\*, K., **Feng, X.** and Funkhouser, G. (1996) The  $\delta^{13}\text{C}$  of tree rings in full-bark and strip-bark bristlecone pines in the White Mountains of California. EOS, Transactions, American Geophysical Union, Vol 77, No. 46 1996/Supplement, A32A-29, F649.
- Poage\*, M. A., Chamberlain, C.P., **Feng, X.**, and Wang, X. Oxygen isotope evidence of Late Miocene climate change in the southeastern Tarim Basin, Xinjiang Province, China. EOS, Transactions, American Geophysical Union, Vol 77, No. 46 1996/Supplement, T21B-19, F109.
- Feng, X.**, WoldeGabriel, G. and Aronson, J.L. (1996) Clinoptilolite-Illite/Smectite Oxygen Isotope Disequilibrium Related to the Groundwater Table at Yucca Mountain, Nevada. The 33rd Annual Meeting of the Clay Mineral Society, Program and Abstracts, p59.
- Feng, X.** and WoldeGabriel G. (1995) Oxygen isotopes of clinoptilolite: the oxygen isotope exchangeability in relation to the groundwater table. Fall Meeting of AGU, H21F-13, F211.
- Cronin, J.R., Pizzarello, S., **Feng, X.** and Epstein S. (1994) Chemical evolution in the early solar-system: Amino-acids, aliphatic-amines, and ammonia in the murchison meteorite. Abstracts of the Papers of the American Chemical Society, 207: 14-GEOC, Part 1.
- Feng, X.** and Epstein S. (1994) The D/H ratios of tree-rings in 12 trees from world wide locations and the implications for climate change of the past 100-200 years. Abstracts of the Eighth International Conference on Geochronology, Cosmochronology and Isotope Geology. U.S. Geological Survey Circular 1107, p97.
- Feng, X.** and Epstein S. (1992) Exchangeability of exchangeable hydrogen of cellulose and determination of the D/H ratios of non-exchangeable hydrogen in cellulose. EOS, Transactions, American Geophysical Union, Vol 73, No. 43 1992/Supplement, A51A-10, p109.
- Girard J.P., Savin, S.M., and **Feng X.** (1991) Inter-crystalline fractionation of oxygen isotopes between hydroxyl and non-hydroxyl sites in kaolinite: thermal dehydroxylation and partial fluorination approaches. Clay Minerals Society 28th Annual Meeting, Houston, p.58.
- Feng, X.** and Savin S.M. (1991) Kinetics of exchange between water vapor and the framework oxygen of analcime and stilbite: a numerical model. Abstracts with Programs: GSA 1991 Annual Meeting, p. A321, No.14518.
- Feng, X.** and Savin S.M. (1990) Oxygen isotope studies of zeolites: Kinetics of exchange and fractionation factors. Abstracts with programs: GSA 1990 Annual Meeting, P. A251, No. 23337.
- Feng, X.** and Savin, S.M. (1989a) Oxygen isotope studies of stilbite: Kinetics of exchange and suitability for isotopic geothermometry. Abstracts with Programs: GSA 1989 Annual Meeting, pA12, No.5458.
- Feng, X.** and Savin, S.M. (1989b) Oxygen isotope studies of stilbite: Kinetics of exchange and suitability for isotopic geothermometry. Extended abstract in Epstein 70th Birthday Symposium, p. 16-18.
- Zheng, S., **Feng X.** and Wu, Q. (1986) Stable Isotope Studies on the Mn-Nodules" Terra Cognita 6, No.2, p.116 .