

R E S U M E

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Nick Pingitore is an analytic geochemist with some 40 years of research interest and experience in such areas as environmental and economic geology, remote sensing and geographic information systems, environmental health, materials science, and archaeology. Nick holds the rank of Professor of Geological Sciences at the University of Texas at El Paso (UTEP), and has authored or co-authored more than 100 scientific articles. Since 2000 he has been project director of some \$7,000,000 in research funding, and a co-investigator on another \$10,000,000 in grants. He has established a record for successfully managing and completing large institutional projects on time and in budget.

EXPERIENCE

<u>Institution</u>	<u>Position</u>	<u>Dates</u>
Texas Rare Earth Resources (stock ticker TRER)	Board of Directors, Independent Director	2012 -
University of Texas at El Paso	Adjunct Professor, School of Nursing	2008 -
University of Texas at El Paso	Adjunct Professor, College of Health Sciences	2006 - 2008
<i>Scientific American Discovering Archaeology</i>	Founding Partner, Science Editor	1999 - 2002
University of Texas at El Paso	Professor	1991 -
University of Texas at El Paso	Director, Electron Microprobe Laboratory	1985 -
University of Texas at El Paso	Associate Professor	1981 - 1991
University of Texas at El Paso	Assistant Professor	1977 - 1981
Brooklyn College, CUNY	Assistant Professor	1972 - 1977
Brooklyn College, CUNY	Instructor	1970 - 1972

EDUCATION

<u>Institution</u>	<u>Degree</u>	<u>Date</u>	<u>Major</u>	<u>Thesis Advisor</u>
Brown University, Providence, RI	Ph.D.	1973	Geology	R.K. Matthews
Brown University, Providence, RI	Sc.M.	1968	Geology	R.K. Matthews
Columbia College, New York, NY	A.B.	1965	Geology	J. Imbrie

GRANTS AND CONTRACTS

- \$ 237,943** – Texas Rare Earth Resources Corp.
Element Extraction From Round Top Rhyolite (2012-2014)
Project Director
- \$ 412,249** – NIEHS-NIH
Air Pollution, Systemic Inflammation, and Sub-Clinical Atherosclerosis in High-Altitude Children 1 R21
ES16637-01A1 (9/19/09-7/31/11)
Co-Investigator with R. Armijos *et al.*
- \$ 600,000** - UTEP Star Award
Environmental Health Major Equipment (2008-2009)
Project Co-Director (Pingitore, Amaya)
- \$ 250,000** - UTEP Star Award
Mobile Environmental Health Laboratories (2007-2009)
Project Director
- \$ 5,117,244** - National Institute of Environmental Health Sciences (NIEHS) of the National Institutes of Health (NIH)
UTEP-UNM HSC ARCH Program on Border Asthma (2005-2010)
Project Director; PI of Administrative and Facilities Cores
- \$ 6,611,591** - National Institutes of Health-NCMHHD
Hispanic Health Disparities Research Center (2007-2012)

Co-Investigator with R. Anders et al.

\$ 195,000 - Stanford Linear Accelerator Center, DOE
Synchrotron Based Studies at UTEP (2003-2004)
Co-PI, Project Coordinator (R. Chianelli, PD & J. Gardea-Torresdey)

\$ 45,103 - DOE-HBCU-MI
Mobilization, Immobilization, and Sequestration of Metals in the Subsurface (2003-2004)
Project Director

\$ 39,000 - Bureau of Reclamation
Experimental Dating Project for Petroglyphs - Chemical Analyses of Rock Varnish and Base Rock Samples (2002-2004)
Project Director

\$ 188,000 - Stanford Linear Accelerator Center, DOE
Synchrotron Based Studies at UTEP (2002)
Co-PI, Project Coordinator (R. Chianelli, PD & J. Gardea-Torresdey)

\$ 60,000 - NSF
Acquisition of Electron Microprobe Upgrade (2001-2004)
Project Director
\$ 75,345 UTEP match

\$ 1,755,695 - NIH-NIEHS
Community-Based Participatory Research in Environmental Health (2002- 2006)
Co-PI (M. Amaya, PD; J. Gardea-Torresdey, Co-PI)

\$ 25,000 - Bureau Reclamation
Experimental Dating Project for Petroglyphs - Chemical Analyses of Rock Varnish and Base Rock Samples (2001-2002)
Project Director

\$ 14,000 - UTEP Border Health
Childhood Lead Exposure in El Paso-Juarez (2001)
Co-PI (M. Amaya, PD; J. Gardea-Torresdey, Co-PI)

\$ 55,732 - DOE-HBCU-MI
Induced Subsurface Mineral Growth to Sequester Radionuclides and Toxic Elements by Coprecipitation with Calcite (2000-2002)
Project Director

\$ 116,660 - Stanford Linear Accelerator Center, DOE
Synchrotron Based Studies at UTEP (2001)
Co-PI, Project Coordinator (R. Chianelli, PD & J. Gardea-Torresdey)

\$ 215,000 - NASA
Connecting Sun City with Sun-Earth Connections (2000-2002)
Co-PI (R. Lopez, PD)

\$ 190,000 - EPA
Characteristics of Ambient Particulate Matter in the Paso del Norte Region (2000-2002)
Co-PI (with others from 5 institutions); approximate value of my part, \$ 45,000

\$ 55,000 - Stanford Linear Accelerator Center, DOE
Synchrotron Based Studies at UTEP (2000)
Co-PI (with R. Chianelli & J. Gardea-Torresdey)

\$ 15,000 - Bureau of Reclamation
Experimental Dating Project for Petroglyphs - Chemical Analyses of Rock Varnish and Base Rock Samples (2000)
Project Director

\$ 29,998 - EPA
Speciation of Metals in El Paso--Juarez Air Particulates and Soils (1999-2000)
Project Director

\$ 32,435 - DOE-HBCU-MI
Induced Subsurface Mineral Growth to Sequester Radionuclides and Toxic Elements by Coprecipitation with Calcite (1999-2000)
Project Director

\$ 25,000 - EPA
The Border Basket: Reaching the Consumer (1999-2000)
Co-PI (with M. Amaya, PD)

\$ 15,000 - Bureau of Reclamation
Experimental Dating Project for Petroglyphs - Chemical Analyses of Rock Varnish and Base Rock Samples (1999)
Project Director

\$ 750,000 - EPA

- Characteristics of Ambient Particulate Matter in the Paso del Norte Region (1998-2000)
Co-PI (with 14 others from 5 institutions); approximate value of my part, \$ 75,000
- \$ 230,000 - NSF**
Incorporation of Minor and Trace Elements into Coral Skeletal Aragonite: An X-Ray Absorption Spectroscopy and Microstructural Study (1999-2003)
Project Director
- \$ 10,000 - NASA-PACES**
Rio Grande Water Resource Management: Documenting Decadal Trends in Agricultural and Urban Demands, Water Quality and Availability, and El Niño Teleconnections with Satellite Imagery (1999-2000)
PI on component project of UTEP's Pan-American Center for Earth and Environmental Studies
- \$ 28,640 - DOE-HBCU-MI**
Induced Subsurface Mineral Growth to Sequester Radionuclides and Toxic Elements by Coprecipitation with Calcite (1998-1999)
Project Director
- \$ 110,699 - EPA**
Identity, Elemental/Isotopic Composition, and Origin of Particulates in El Paso-Juarez Air, 1968-1998" (1997-2000)
Project Director
- \$ 10,000 - NASA-PACES**
Research and Interpretation of the Camino Real from Taos, New Mexico, to Parral and Chihuahua, Chihuahua (1998-1999)
Co-PI with J. Peterson on component project of Pan-American Center for Earth & Environmental Studies
- \$ 10,000 - NASA-PACES**
Rio Grande Water Resource Management: Documenting Decadal Trends in Agricultural and Urban Demands, Water Quality and Availability, and El Niño Teleconnections with Satellite Imagery (1998-1999)
PI on component project of UTEP's Pan-American Center for Earth and Environmental Studies
- \$ 10,000 - NASA-PACES**
Geological, Hydrological, Environmental, Geochemical and Agricultural Investigations in the Cd. Chihuahua Region, Chihuahua, Mexico (1997-1998)
PI on component project of UTEP's Pan-American Center for Earth and Environmental Studies
- \$ 10,000 - NASA-PACES**
Research and Interpretation of the Camino Real from Taos, New Mexico, to Parral and Chihuahua, Chihuahua (1997-1998)
Co-PI with J. Peterson on component project of Pan-American Center for Earth & Environmental Studies
- \$ 111,126 - NSF**
Acquisition of X-ray Microfluorescence Instrumentation (1996-2000)
Project Director
- \$ 128,211 - EPA**
The Border Basket: Analysis of Toxic Metals in Retail Foods, El Paso-Juarez (1996-1998)
Project Director
- \$ 10,000 - NASA-PACES**
Geological, Hydrological, Environmental, Geochemical and Agricultural Investigations in the Cd. Chihuahua Region, Chihuahua, Mexico (1996-1997)
PI on component project of UTEP's Pan-American Center for Earth and Environmental Studies
- \$ 159,624 - EPA**
The Border Basket: Analysis of Toxic Metals in Retail Foods, El Paso-Juarez (1995-1997)
Project Director
- \$ 3,000 - BEB** Erdgas und Erdöl GmbH (Germany)
Evaluation of H₂S Formation in the Basal Zechstein (1995)
Project Director
- \$ 459,000 - NSF**
Synthesis, Characterization, and Simulations of Silver Chalcogenides, Ag₂(S,Se,Te) (1994-1999)
Project Director
- \$ 2,500 - University of Houston**
Development of a Technique for High-Precision Measurement of Sr/Ca Ratios in Corals (1994)
Subcontract, Texas Advanced Research Program, Project Director
- \$ 150,000 - Tinker Foundation**
Strategies for Minimizing Ground Water Quality Impact of Irrigation Using Untreated Sewage Effluent (1992-1995)
Project Director, years 2 & 3
- \$ 205,000 - NSF**
Interdisciplinary Course in Science, its History, and its Cultural Implications: A University/Community College Collaboration (1993-1995)
Co-PI with J. Bristol (PD) & 5 others.

\$ 17,741 - DOE
Acquisition of Tem-Pres Unit (1992)
Project Director (equipment).

\$ 18,000 - BDM-Defense Nuclear Agency
Laboratory Techniques for Splice Detection in the BDM/DNA Slits Tag (1992)
Co-PI with L. Murr (PD) and 2 others.

\$ 4,000 - Exxon Production Research
Elemental Analyses of Carbonate Rocks by DCP-AES (1991-1992)
Project Director

\$ 6,385 - DOE
Acquisition of Scanning Calorimeter (1991)
Project Director (equipment value)

\$ 284,008 - NSF
The System Ag-S-Se: Phase Relations, Electrical and Optical Properties, and Applications (1990-1994),
Project Director

\$ 1,500 - DOE
Acquisition of Ultrasonic Unit (1990)
Project Director (equipment value)

\$ 8,000 - UTEP Faculty Development Award
Establishment of Electron Microprobe Laboratory (1988)
Project Director

\$ 11,000 - Texas Low-Level Waste Authority
Exploratory Studies for Sorption Behavior of Radionuclides (1987)
Co-PI with H. Fuentes (PD) et al.

\$ 299,000 - NSF
Acquisition of Electron Microprobe (1985-1989).
Project Director

\$ 15,000 - Hewlett-Packard Corporation
Application of Computers in Laboratory Instruction (1984)
Co-PI with M.P. Eastman (equipment value)

\$ 2,000 - UTEP University Research Institute
Experimental Determination of Partition Coefficients of +2 Cations into Calcite (1982)
Project Director

\$ 370 - UTEP University Research Institute
Lithification of the Capitan Reef: Trace Element Evidence (1979)
Project Director

\$ 1,600 - UTEP University Research Institute
Trace element analysis of submarine cements in limestone (1978)
Project Director

X-RAY BEAM TIME AWARDS Peer-reviewed competitive program for beam time allotment

DOE-NIH - Stanford Synchrotron Radiation Laboratory
Speciation of Rare Earth Elements to Develop the Round Top Mt. Deposit, West Texas (2013-2015) # 3874
Project Director

DOE-NIH - Stanford Synchrotron Radiation Laboratory
Speciation of Metals in 8 Size Cuts of Airborne Particulate Matter: Sources, Toxicity, and Health Risks (2010-2012) # 3455
Project Director

DOE-NIH - Stanford Synchrotron Radiation Laboratory
Speciation by XAS of Toxic Elements in Airborne Particulate Matter from the El Paso, Texas, Airshed (2006-2010)
Project Director

DOE-NIH - Stanford Synchrotron Radiation Laboratory
Trace Elements in Archaeological and Modern Human Bone (2001-2005)
Peer-reviewed competitive program for beam time allotment
Project Director

DOE-NIH - Stanford Synchrotron Radiation Laboratory
Induced Subsurface Mineral Growth to Sequester Radionuclides and Toxic Elements by Coprecipitation with Calcite (2001-2005)
Peer-reviewed competitive program for beam time allotment
Project Director

DOE-NIH - Stanford Synchrotron Radiation Laboratory

Speciation of Toxic Elements in Air Particulates from the El Paso–Juarez Border Region (2002-2005)
Peer-reviewed competitive program for beam time allotment
Co-PI (with Gustavo Cruz, Project Director)

DOE-NIH - Stanford Synchrotron Radiation Laboratory
Incorporation of Minor and Trace Elements in Coral Skeleton (1999-2001)
Peer-reviewed competitive program for beam time allotment
Project Director

DOE-NIH - Stanford Synchrotron Radiation Laboratory
Dating Petroglyphs with X-Ray Absorption Spectroscopy (1999-2001)
Peer-reviewed competitive program for beam time allotment
Co-PI (with Farrel Lytle, Project Director)

PUBLICATIONS AND REPORTS

- Laidlaw MAS, Zahran S, Pingitore N, Clague J, Devlin G, Taylor MP. 2014. Reply to comments on “Identification of lead sources in residential environments: Sydney Australia. **Environmental Pollution** 192:216-218 DOI 10.1016/j.envpol.2014.02.002.
- Pingitore NE, Clague JW, Gorski D. 2014. Round Top Mountain rhyolite (Texas, USA), a massive, unique Y-bearing-fluorite-hosted heavy rare earth element (HREE) deposit. **Journal of Rare Earths** 32(1) 90-96.
- Laidlaw MAS, Zahran S, Pingitore N, Clague J, Devlin G, Taylor MP. 2014. Identification of lead sources in residential environments: Sydney Australia. **Environmental Pollution** 184:238-246. DOI 10.1016/j.envpol.2013.09.003.
- Bindi L, Pingitore NE., 2013, On the symmetry and crystal structure of aguilarite, Ag₄ SeS. **Mineralogical Magazine** 77(1):21-31.
- Gonzales M, Myers O, Smith L, Olvera HA, Mukerjee S, Li WW, Pingitore N, Amaya M, Burchiel S, Berwick M; ARCH Study Team, 2012, Evaluation of land use regression models for NO₂ in El Paso, Texas, USA. **Science of the Total Environment**. 2012 Aug 15;432:135-42. Epub 2012 Jun 21. PMID: 22728301 [PubMed - in process].
- Olvera HA, Perez D, Clague J, Cheng Y-S, Li W-W, Amaya M, Burchiel SW, Berwick MA, Pingitore NE, 2012, The Effect of Ventilation, Age, and Asthmatic Condition on Ultrafine Particle Deposition in Children. **Pulmonary Medicine** 2012 Article ID 736290, 9 pages. doi:10.1155/2012/736290
- Olvera HA, Garcia M, Li W-W, Yang H, Amaya M, Myers O, Burchiel SW, Berwick MA, Pingitore NE, 2012, PCA optimization of PM_{2.5} land use regression model with small monitoring network. **Science of the Total Environment** 425:27-34. PMID:22464030 [PubMed - in process] PMCID:PMC3334460 [Available on 2013/5/15]
- Lapeyrouse LM, Morera O, Heyman JMC, Amaya MA, Pingitore NE, Balcazar H, 2011, A profile of US-Mexico border mobility among a stratified random sample of Hispanics living in the El Paso-Juarez area. **Journal of Immigrant Health** DOI: 10.1007/s10903-011-9453-x PMID: 21336846.
- Amaya MA, Jolly K, Pingitore NE, 2010, Blood lead in the 21st century: The submicrogram challenge. **Journal of Blood Medicine** v. 2010:1 71-78. DOI 10.2147/JBM.S7765 PMCID: PMC3262323
- Pingitore Jr NE, Clague J, Amaya MA, Maciejewska B, Reynoso JJ, 2009, Urban Airborne Lead: X-ray Absorption Spectroscopy Establishes Soil as Dominant Source: **Public Library of Science One (PLoS One)** 4(4): e5019. doi:10.1371/journal.pone.0005019
<http://www.plosone.org/article/info:doi/10.1371/journal.pone.0005019>.
- Lauer FT, Mitchell LA, Bedrick E, McDonald JD, Lee W-Y, Li W-W, Olvera H, Amaya MA, Berwick M, Gonzales M, Currey R, Pingitore NE Jr, Burchiel SW, 2009, Temporal-spatial analysis of U.S.-Mexico border environmental fine and coarse PM air sample extract activity in human bronchial cells. **Toxicology and Applied Pharmacology** 238: 1–10.
- Abdel-Fattah, A, and Pingitore, N.E., 2008/9, Low levels of toxic elements in Dead Sea black mud and mud-derived cosmetic products : **Environmental Geochemistry and Health** (available online 8 August 2008; journal hard copy 2009) 31:487-492. DOI 10.1007/s10653-008-9201-x.
- Zeiler, C.P., Velasco, A., and Pingitore Jr., N.E., and Anderson, D., 2008, Seismogram “Picking Error” Experiment: **Eos Transactions, American Geophysical Union**, v. 89(41) 390-391.
- Pingitore, N.E., Espino, T.T., Barnes, B.E., Gardea-Torresdey, Clague, J.W., Mackay, W.P., Amaya, M.A., Reynoso, J.J., Li, W.-W., Currey, R.M., Moss, R.D., Delgado, M., Juarez, P., Bader, J., Zevallos, J.C., and Herrera, I., 2005, Toxic Metals in the Air and Soil of the Paso del Norte Region: *In* R.M. Currey, K.E. Kelley, H.L.C. Meuzelaar, and A.F. Serafim (eds.), **The U.S.–Mexican Border Environment: Integrated Approach to Defining Particulate Matter Issues in the Paso del Norte Region**, SCERP Monograph Series, no. 12, , Chapter V, p. 131-136.
- Espino, T., Pingitore, N.E., Gardea-Torresdey, J., and Reynoso, J.J., 2005, Seasonal and Spatial Variation of Metals in Airborne Particulate Matter in El Paso (USA)–Juarez (Mexico) Airshed: *In* R.M. Currey, K.E. Kelley, H.L.C. Meuzelaar, and A.F. Serafim (eds.), **The U.S.–Mexican Border Environment: Integrated Approach to**

- Defining Particulate Matter Issues in the Paso del Norte Region, SCERP Monograph Series, no. 12, Chapter V, Section 1, p. 136- 145.
- Pingitore, N.E., Gardea-Torresdey, J., Espino, T., Reynoso, J.J., Li, W-W., Currey, R., and Moss, R., 2005, Reduction in Levels of Toxic Elements in Particulate Matter in the El Paso-Ciudad Juarez Airshed Over the Past Quarter-Century: *In* R.M. Currey, K.E. Kelley, H.L.C. Meuzelaar, and A.F. Serafim (eds.), **The U.S.-Mexican Border Environment: Integrated Approach to Defining Particulate Matter Issues in the Paso del Norte Region**, SCERP Monograph Series, no. 12, Chapter V, Section 2, p. 146-150.
- Pingitore, N.E., 2005, Toxic Metals in El Paso Soils: An Introduction: *In* R.M. Currey, K.E. Kelley, H.L.C. Meuzelaar, and A.F. Serafim (eds.), **The U.S.-Mexican Border Environment: Integrated Approach to Defining Particulate Matter Issues in the Paso del Norte Region**, SCERP Monograph Series, no. 12, Chapter V, Section 3, p. 150-151.
- Barnes, B.B., Pingitore, N.E., and Mackay, W., 2005, Levels of Toxic Metals in El Paso Soils proximal to Three Potential Industrial Point Sources: *In* R.M. Currey, K.E. Kelley, H.L.C. Meuzelaar, and A.F. Serafim (eds.), **The U.S.-Mexican Border Environment: Integrated Approach to Defining Particulate Matter Issues in the Paso del Norte Region**, SCERP Monograph Series, no. 12, SCERP Monograph Series, Chapter V, Section 4, p. 152-161.
- Pingitore, N.E., Clague, J., Delgado, M., Gardea-Torresdey, J., Amaya, M.A., Juarez, P., Bader, J., Zevallos, J.C., and Herrera, I., 2005, Lead in El Paso Soil: *In* R.M. Currey, K.E. Kelley, H.L.C. Meuzelaar, and A.F. Serafim (eds.), **The U.S.-Mexican Border Environment: Integrated Approach to Defining Particulate Matter Issues in the Paso del Norte Region**, SCERP Monograph Series, no. 12, Chapter V, Section 5, p. 161-171.
- Paschold, H., Morales, H., Li, W-W., Walton, J., Pingitore, N.E., and Maciejewska, B., 2003, Field Study of the Impact of Evaporative Coolers on Indoor PM Pollution: **Atmospheric Environment**, v. 37, p. 2681-2690.
- Donovan, J.J., Pingitore Jr., N.E., and Westphal, A., 2003, Averaging of Backscatter Intensities in Compounds: **Microscopy and Microanalysis**, v. 9, p. 202-215.
- Paschold, H., H. Morales, Li, W-W, Walton, J., Pingitore, N.E., and Maciejewska, B., 2003, Field Study of the Impact of Evaporative Coolers on Indoor PM Pollution: **Proceedings, 3rd Annual Rio Bravo/Rio Grande Environmental Conference**, Padre Island.
- Gardea-Torresdey, J.L., Pingitore, Nicholas E., Meitzner, G., and Chianelli, R., 2002, Preface, Special Issue on XAS: **Microchemical Journal**, v. 71, 2/3, 97-99.
- Pingitore, N.E., Iglesias, A., Bruce, A., Lytle, F., and Wellington, G.M., 2002, Valences of Iron and Copper in Coral Skeleton: X-Ray Absorption Spectroscopy Analysis: **Microchemical Journal**, v. 71, 2/3, 205-210.
- Pingitore, N.E., Iglesias, A., Lytle, F., and Wellington, G.M., 2002, X-Ray Absorption Spectroscopy of Uranium at Low PPM Levels in Coral Skeletal Aragonite: **Microchemical Journal**, v. 71, 2/3, 261-266.
- Donovan, J.J., Pingitore Jr., N.E., and Westphal, A., 2002, Averaging of Backscatter Intensities in Compounds: **J. Research National Institutes of Standards and Technology**, v. 107, 547-553.
- Lytle, F.W., and Pingitore, N.E., 2002, Iron Valence in the Hydration Layer of Obsidian: Characterization by X-Ray Absorption Spectroscopy: **Microchemical Journal**, v. 71, 2/3, 185-191.
- Gardea-Torresdey, J.L., Dokken, K., Tiemann, K.J., Parsons, J.G., Ramos, J., Pingitore, N.E., and Gamez, G., 2002, Infrared and X-Ray Absorption Spectroscopic Studies on the Mechanism of Chromium(III) Binding to Alfalfa Malone Biomass: **Microchemical Journal**, v. 71, 2/3, p. 157-166.
- Donovan, J.J., and Pingitore, N.E., 2002, Compositional Averaging of Continuum Intensities in Multi-Element Compounds: **Microscopy and Microanalysis** v. 8 (5), 429-436.
- Gardea-Torresdey, J., Arteaga, S., Tiemann, K.J., Chianelli, R., Pingitore, N., and Mackay, W., 2001, Adsorption of Copper(II) by Creosotebush (*Larrea tridentata*): Use of Atomic and X-Ray Absorption Spectroscopy: **Environmental Toxicology and Chemistry**, v. 20, No. 11, p. 2572-2579.
- Li, Wen-Whai, Orquiz, R., Garcia, J.H., Espino, T.T., Pingitore, N.E., Gardea-Torresdey, J., Chow, J., and Watson, J.G., 2001, Analysis of Temporal and Spatial Dichotomous PM Air Samples in the El Paso-Cd. Juarez Air Quality Basin: **Journal of Air and Waste Management Association**, v. 51, P. 1551-1560.
- Lueth, V.M., Megaw, P.K., Pingitore, N.E., and Goodell, P.C., 2000, Systematic Variation in Galena Solid Solution Compositions at Santa Eulalia, Chihuahua, Mexico: **Economic Geology**, v. 95, p.1673-1687.
- Arteaga, S., Gardea-Torresdey, J., Chianelli, R., Pingitore, N., Mackay, W., and Arenas, J., 2000, Spectroscopic Confirmation of Chromium Uptake by Creosote Bush (*Larrea tridentata*) Using Hydroponics: **Proceeding of the 2000 Conference on Hazardous Waste Research: Environmental Changes and Solutions to Resource Development, Production, and Use**. Edited by L.E. Erickson, M.M. Rankin, Kansas State Univ., Manhattan, KS., p. 115-124.
- Pingitore, N.E., Donovan, J.J., and Jeanloz, R., 2000, Response to Comment on "Electron Microprobe Quantification: A New Model Based on Electrons Rather Than on Mass:" **Journal of Applied Physics**, v. 87, p. 8221.
- Orquiz, R., Li, W.W., Pingitore, N.E., Espino, T.T., and Gardea-Torresdey, J., 2000, Temporal Measurements of PM Fine and Coarse Concentrations in El Paso: **Proceedings, Air and Waste Management Association 93rd**

Annual Conference.

- Clague, J.W., Pingitore, N.E., and Walton, J.C., 2000, Induced Subsurface Mineral Growth to Sequester Radionuclides and Toxic Elements by Coprecipitation with Calcite: **Proceedings Texas Section-American Society Civil Engineers**, Fall 2000 Meeting, p. 33-42.
- Dokken, K., Gamez, G., Herrera, I., Tiemann, K.J., Pingitore, N.E., Chianelli, R., and Gardea-Torresdey, J.L., 2000, Characterization of Chromium(VI) Bioreduction and Chromium(III) Binding to Alfalfa Biomass. **Proceedings of the 1999 Conference on Hazardous Waste Research**, L.E. Erickson and M.N. Rakin, eds, Kansas University Press, Manhattan, KS, 101-113.
- Pingitore, N.E., Donovan, J.J., and Jeanloz, R., 1999, Electron Microprobe Quantification: A New Model Based on Electrons Rather Than on Mass: **Journal of Applied Physics**, v. 86, p. 2790-2794.
- Dokken, K., Gamez, G., Tiemann, K.J., Pingitore, N.E., and Gardea-Torresdey, J.L., 1999, Effects of Metal Binding to *Medicago sativa* due to the Presence of Chromium(III) in Mixed-Metal Solutions. **Proceedings of the Ninth Annual WERC Conference on the Environment**. Albuquerque, NM p. 85-91.
- Gardea-Torresdey, J.L., Tiemann, K.J., Gamez, G., Dokken, K., and Pingitore, N.E., 1999, Recovery of Gold(III) by Alfalfa Biomass and Binding Characterization Using X-Ray Microfluorescence: **Advances in Environmental Research**, v. 3, no. 1, p. 83-93.
- Donovan, J.J., Pingitore, N.E., and Jeanloz, R., 1999, A New Model for Electron Probe Quantitation: **Microscopy and Microanalysis** v. 5, Supplement 2, p. 72-73.
- Mackay, W.P., de la Rosa, L., Zavala, M., Shelton, P., Gardea, J., Mena, R., Pingitore, N.E., and Crawford, G.M., 1999, The Distribution of Heavy Metal Contamination in the El Paso, TX / Ciudad Juarez, Mexico Area, Using Fluff Grass, *Eriogonum pulchellum*, as an Indicator Organism: In J. Barlow and D. Miller (eds.) **Proc. 4th Symposium on Resources of the Chihuahuan Desert Region**, p. 53-58.
- Rodriguez-Pineda, J.A., Pingitore, N.E., Keller, G.R., and Perez, A., 1999, An Integrated Gravity and Remote Sensing Assessment of Basin Structure and Hydrologic Resources in the City of Chihuahua Region, Mexico: **Engineering and Environmental Geology**, v. 5, p. 73-85.
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- Smith, A., Ravelo, R., and Pingitore, N.E., 1996, Molecular Dynamics Studies of Solid Solutions of the System $\text{Ag}_2\text{Se}-\text{Ag}_2\text{S}$: American Physical Society, Saint Louis.
- Barnes, B., Pingitore, N., Mackay, W., and Gardea, J., 1996, Metal Concentrations in Soils, El Paso, Texas: American Association of Petroleum Geologists, Southwest Section, El Paso.
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- Rodriguez-Pineda, J.A., Pingitore, N.E., Hendrickx, J.M., and Chavez, A., 1994, Simulation of Infiltration by *Aguas Negras* in a Stony Vadose Zone: Geological Society of America, Seattle.
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- Lueth, V.W., Goodell, P.C., and Pingitore, N.E., 1990, Mineralization at the Organ Mining District, New Mexico: Symposium on Mineral Resources of the Chihuahuan Desert, El Paso.
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- Pingitore, N.E., Eastman, M.P., and Sandidge, M., 1987, The Coprecipitation of Manganese with Calcite: An Experimental Study: American Chemical Society, Denver.
- Saenz, G., and Pingitore, E., 1987, Preliminary Statistical Study on C₁-C₇ Near-Surface Hydrocarbon Contents Over Producing and Barren Structures: American Chemical Society, Denver.
- Kwarteng, A., and Pingitore, N.E., 1987, Tectonic Classification of Basalts: An Approach Through Multivariate Statistical Analysis: Geosciences Colloquium, U.T. El Paso, El Paso.
- Maier, R.D., Dyer, J.R., Pingitore, N.E., and Cornell, W.C., 1986, Structural History During and After the Late Permian in East-Central New Mexico: New Mexico Geological Society, Socorro.
- Pingitore, N.E., Eastman, M.P., and Deshler, B., 1985, The Coprecipitation of Large Cations with Calcite: Deviations from Henry's Law Behavior: American Chemical Society, Chicago - invited presentation.
- Pingitore, N.E., and Eastman, M.P., 1984, Barium Partitioning in Carbonates: Theory and Applications: American Association Petroleum Geologists, San Antonio.
- Eastman, M.P. and Pingitore, N.E., 1984, The Coprecipitation of Divalent Metal Ions with Calcite: American Chemical Society, Rocky Mountain Region, Albuquerque.
- Pingitore, N.E., Schmidt, J.S., and Keller G.R., 1984, Radiometric Maps of the Permian Basin: Surface Uranium and Potassium Activity Derived from NURE Program: The Geologic Evolution of the Permian Basin, A Symposium: Permian Basin Section, Soc. Econ. Min. Paleontol., Midland, Texas.
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- Eastman, M.P., Pingitore, N.E., Luna, R., and Farraro, J.T., 1982, The Coprecipitation of Ba²⁺ with Calcite: American Chemical Society, Las Vegas, Nevada.
- Pingitore, N.E., 1980, Differential Diffusion during Carbonate Diagenesis: American Association of Petroleum Geologists, Denver, Colorado.
- Mitchell, S., LeMone, D.V., and Pingitore, N.E., 1980, Carbonate Facies of Sierra Gomez, Chihuahua: American Association of Petroleum Geologists, Southwest Section, El Paso, Texas.
- Stege, B.R., Pingitore, N.E., and Goodell, P.C., 1980, Limestones of the Peña Blanca Uranium District, Chihuahua, Mexico: American Association of Petroleum Geologists, Southwest Section, El Paso, Texas.
- Pingitore, N.E. and Goodell, P.C., 1979, Trace Element Geochemistry and Diagenesis in the Capitan Reef (Permian), West Texas: American Association of Petroleum Geologists, Houston, Texas.
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- Pingitore, N.E., 1978, The Behavior of Zn²⁺ and Mn²⁺ in Carbonate Diagenesis: International Sedimentology Congress, Jerusalem, Israel.
- Pingitore, N.E., 1978, A General Model for Trace Element Partitioning in Limestone: American Association of Petroleum Geologists, Oklahoma City, Oklahoma.
- Saxena, S.K., Benimoff, A.I., and Pingitore, N.E., 1975, Statistical Comparison of Luna and Terrestrial Rocks: Lunar Science VI, Houston Texas.
- Pingitore, N.E., 1972, Submarine, Vadose, and Phreatic Diagenesis: Processes, Products, and their Recognition in Corals: Fifth International Sedimentology Congress, Liverpool, United Kingdom.
- Matthews, R.K., Mesolella, K.J., Winland, H.D., Harris, W.H., Pingitore, N.E., Steinen, R.P., Harrison, R., Hussein, S.I., and Benson, L.V., 1971, Integrated Studies of Carbonate Diagenesis in Recent and Pleistocene Sediments: Geological Society of America, Washington, D.C.
- Pingitore, N.E., 1969, Diagenesis and Porosity Modification in *Acropora palmata*, Pleistocene of Barbados, W.I.: Geological Society of America, Atlantic City, New Jersey.

CONSULTANCIES

- 1996 -- Delphi (GM Maquiladora)
- 1996 -- WesTex Metals
- 1995 -- Delphi
- 1995 -- Centro de Investigaciones Arqueologicas
- 1995 -- BEB Erdgas und Erdoel GmbH
- 1982-1993, 1998 American College Testing Program
- 1993 -- Wells Lamont Corporation

1992 -- Probe Forensic & Testing Laboratory
1992 -- Texas Magnet Wire Company
1992 -- Assaigai Laboratories
1992 -- Earl's Radiator Service
1992 -- Roger's Truck Stop
1991 -- John Wiley and Sons
1989 -- Allen-Bradley
1989 -- Mr. P. Industries
1988 -- 33 Cattle Company
1988 -- William Beaumont Army Medical Center
1987 -- La Fe Clinic
1987 -- Phelps Dodge Inc.
1987 -- Keplinger Technology
1986 -- Hatch Industries
1986 -- G & S Corporation
1985 -- El Paso Police, Criminal Investigations Division
1983 -- Jobe Concrete
1981-1985 Chevron
1981 -- Armco Material Resources
1978-1979 McAnulty and McAnulty Consulting Geologists

PROFESSIONAL AFFILIATIONS

American Association for the Advancement of Science
American Chemical Society
 ACS-Division of Environmental Chemistry
 ACS-Division of Geochemistry
American Geophysical Union
American Rock Art Research Association
Geochemical Society
International Society of Reef Studies
Materials Research Society
Microbeam Analysis Society
Mineralogical Society of America
Society for American Archaeology
Society for Commercial Archaeology
Society of Economic Paleontologists and Mineralogists
Society of Sigma Xi

PROFESSIONAL ACTIVITIES

UTEP Faculty Research Award, 2008

Stanford Synchrotron Radiation Laboratory User's Organization Executive Committee (2001-2003) I served on the SSRLO Executive Committee, which represents the interests of the hundreds of international users of this major DOE-NIH facility. This active group (four formal meetings per year and e-mail/phone communications) advises the Laboratory management on policies, access, scheduling, and other matters that affect the mission of SSRL.

Consultant, American College Testing Program (ACT)

Over the past two decades I have served as a test editor for ACT's science and science reasoning examinations. These tests have been administered to millions of high-school students seeking college admissions. ACT shares this market approximately equally with the SAT examination.

Editor, *The Compass* - The Journal of Sigma Gamma Epsilon National Honor Society of the Earth Sciences (1981-83).

National Council, Sigma Gamma Epsilon National Honor Society of the Earth Sciences (1981-83).

Reviewer, National Science Foundation (1981-84, 1986-97, 2001-2005)

Panelist, National Science Foundation, Academic Research Infrastructure (1992-94, 1996)

Reviewer, Petroleum Research Fund of American Chemical Society (1983, 1987, 1988)

Reviewer, Stanford Synchrotron Radiation Laboratory (1994, 1996-99, 2001-2005)

Reviewer, *Science* (1998, 2005)

Reviewer, *American Journal of Science* (2004)

Reviewer, *Journal Sedimentary Research* (1979-83, 1985-87, 1990-91, 1993, 1998-99, 2001)

Reviewer, *Geological Society of America Bulletin* (1997-98)

Reviewer, *Sedimentology* (1982, 1983, 1984, 1986)

Reviewer, *Coral Reefs* (1997)

Reviewer, *NASA Ancient Martian Meteorite Research Program* (1997)

Reviewer, *Chemical Geology* (1995, 1998)
 Reviewer, *Palaos* (1998-99)
 Reviewer, *Journal of Archaeological Science* (2005)
 Reviewer, *Earth and Planetary Science Letters* (2004)
 Reviewer, *Environmental Science and Technology* (1994, 1999, 2004, 2005)
 Reviewer, *New Mexico Journal Science* (1981)
 Reviewer, *Marine Chemistry* (1995, 1997)
 Reviewer, *Geological Society of America Bulletin* (1997-98)
 Reviewer, American Chemical Society (1986)
 Reviewer, *Geochimica et Cosmochimica Acta* (1987-88, 1990, 1992-99, 2002)
 Reviewer, UTEP Center for Environmental Resource Management (1997-98)
 Reviewer, Society of Economic Paleontologists and Mineralogists (1987)
 Reviewer, American College Testing Program (1982-94, 1998, 2001, 2002, 2005)
 Reviewer, Elsevier (1988)
 Reviewer, John Wiley and Sons (1991)
 Reviewer, CRC Press, *Reviews in Aquatic Sciences* (1988)
 Reviewer, *Carbonates and Evaporites* (1989)
 Reviewer, NSERC (1987-89, 1994-95)
 Reviewer, *Canadian Mineralogist* (1989-90)
 Reviewer, Society of Economic Paleontologists and Mineralogists (1987)
 Reviewer, Iowa Academy of Science (1991)
 Field Trip Leader and Instructor, Chevron Stratigraphic School (1981-85)
 Promotion Referee, Univ. Connecticut (1990)
 Promotion Referee, McGill Univ. (1992, 1996)

POST-DOCS DIRECTED

Dr. Juan Clague	Community-Based Participatory Research in Environmental Health (Co-direct with Amaya, 2002-)
Dr. Xiomara Kretschmer	X-ray Absorption Spectroscopy of Corals (2002-2003)

PHD DISSERTATIONS DIRECTED

Ali Elkelki (2013)	Lead and Associated Heavy Metal Distribution in El Paso, Texas (PhD, ESE Program; Co-Advisor with M. Amaya, Nursing)
Samia Grimida (2013)	Lead and Associated Heavy Metal Distribution in Ciudad Juarez, Mexico (PhD, ESE Program; Co-Advisor with M. Amaya, Nursing)
MacTar Mohammed (2013)	Summer land surface temperature: Small-local variation in intro-urban environment in El Paso, TX (PhD, ESE Program; Co-Advisor with M. Amaya, Nursing)
Juan Gomez (2003)	Mobilization and Immobilization of Heavy Metals in Contaminated Soils by CO ₂ Partial Pressure Manipulation (PhD, ESE Program; Co-Advisor with J. Walton, CE).
Renee V. Hilton (2003)	Mobilization and Sequestration of Subsurface Metals Through PCO ₂ Manipulation (PhD ESE Program; Co-Advisor with J. Walton, CE).
Barnes, Brenda (2001)	The Border Basket: ICP-MS Analysis of Sixty-To Elements in the Diet in the El Paso-Juarez Border Region (PhD, ESE Program).
Juan Clague (2001)	Experimental and Theoretical Investigation of the Mobilization, Immobilization and Sequestration of Subsurface Metals Through Manipulation of Carbonate Equilibria (PhD, ESE Program,; Co-Advisor with J. Walton, CE).
Jose A. Rodriguez (2000)	A Geophysical, Geochemical and Remote Sensing Investigation of the Water Resources at the city of Chihuahua, Mexico
Ingo Steinhoff (1998)	Evaluation of H ₂ S Formation in the Basal Zechstein (Upper Permian of Germany).
Ponce, Benjamin F. (1995)	Experimental and Empirical Investigations of the Ag ₂ S--Ag ₂ Se System and Discrimination of Topaz Rhyolites by Major-Element Composition.
Saenz, Guadalupe (1990)	Application of Surface Organic Geochemistry to Petroleum Exploration and Environmental Pollution.

MS THESES DIRECTED

Ingrid Camacho-Araujo (2011)	Airborne lead in El Paso, Texas, 1977–1999
Adriana Perez (2000)	Satellite Detection of Land Use Changes in the Rio Grande Valley From Elephant Butte Dam, NM, to Ft. Quitman, TX
Martinez, Ruben (1995)	A Study on the Effects of the Addition of Tellurium into the Acanthite-Naumannite System. Best Thesis Award, Department of Geological Sciences, 1996

Johnson, Ada S. (1995)	Spatial Distribution of Zn, Cu, Pb, Ni, V, Ag, and Co in Irrigated Fields: Examples from the Texas-Mexico Border
Gillespie, Cindy L. (1994)	Acoustic Microscopy of Geomaterials.
Kumar, Dilip (1994)	Survey of Heavy Metal Concentrations of Soils in Downtown El Paso, Texas.*
Srinivas, Shyam (1994)	Heavy Metal Concentrations of Soils in Public Parks, El Paso, Texas.*
Ndame, Emmanuel C. (1993)	Heavy Metals in Soils in the Vicinity of the University of Texas at El Paso campus (El Paso County, Texas).
Barnes, Brenda (1993)	An Evaluation of Toxic Metals Concentrations in Soils, El Paso County, Texas.
Garibay, Gerardo (1992)	Electrophoretic and Sorptive Behavior of Lithium in Clay Suspensions. (co-chair)
Hill, Kerry W. (1989)	Geochemistry, Mineralogical Associations, and Origin of Near-Surface Dolomite from Salt Basin, West Texas.
Dicke, Craig A. (1988)	Modeling the Feasibility of Strontium Remobilization from Goethite Surfaces in a Saturated Tuff at Yucca Mountain, Nye County, Nevada. (co-chair)
Newman, Brent D. (1988)	Experimental Determination of Reactive Tracer Suitability for Groundwater Tracer Tests. (co-chair)
Sanez, Guadalupe (1987)	Geochemical Exploration for Petroleum in a Marsh Area: Examination and Statistical Analysis of C ₁ -C ₇ Hydrocarbons in Near Surface Samples Taken Over Producing and Barren Structures.
Trujillo, Mario R. (1983)	Petrology and Facies Analysis of the Drinkard Sandy Member (Lower Leonard), in the Central Drinkard Unit No. 431 Well, Lea County, New Mexico.
Stege, Bruce M. (1980)	Stratigraphy and Significance of the Carbonates of the Sierra Pena Blanca, Chihuahua, Mexico.
Benimoff, Allan (1977)	Statistical Analysis of Lunar Rock Chemistry.
Smith, Philip C. (1976)	Carbon-14 dates on a New Sea Level High Stand from Maria Galante, F.W.I.
Shotwell, James D. (1976)	Sandstone Classification.
	* Research initiated and carried out under my supervision, officially listed under direction of professors in Civil Engineering, the home department of these students.

STUDENT AWARDS

Juan Clague (2004)	American Chemical Society. Our abstract, <i>Lead in El Paso Soil</i> , has been designated as one of potential interest to the media. <i>"Thank you for your reply to our request for a nontechnical summary of the research you are presenting at the ACS national meeting in Anaheim. Your summary and those we receive from other researchers will be reviewed over the next several weeks to determine the ones we will be able to use as the basis for news releases. If your research is selected as a potential topic for a news release, someone from our office will contact you for additional information. If your research is not selected for a news release, we will still attempt to bring your research to the attention of reporters. Thank you very much for your assistance in helping us communicate science to the public."</i>
Xiomara Kretschmer (2003)	Sci-Mix, American Chemical Society. Our abstract, <i>Synchrotron Radiation Study of Pb and As in Air Filter Particulate Matter</i> , was chosen for the prestigious Sci-Mix presentation for papers of exceptional interest and quality at the Fall 2003 American Chemical Society National Meeting in New York City. <i>"Sci-Mix is a Societal Poster Session with representation from all 34 Divisions of the Society. Your paper was deemed outstanding and chosen for this honor."</i>
Tania Espino (1998)	American Geophysical Union Outstanding Student Paper Award, Atmospheric Sciences
Brenda Barnes (1996)	Best Poster Award, Modulation of Chemical Toxicity and Risk Assessment Meeting, Tucson.
Benjamin Ponce (1989)	International Precious Metals Institute Annual Award (\$ 1000 and trip to Montreal for award ceremony)

OTHER

US Department of Agriculture Soil Permit # S64916

Under the authority of the Federal Plant Pest Act of May 23, 1957, I have a Soil Permit for the Geochemical Laboratory, Room 205. This permit allows our researchers to cross or receive soil and dirt from Mexico, and store, process, and study those materials in the Geochemistry Laboratory. Permitting requirements included inspection of our facility by a uniformed and armed Homeland Security--USDA officer, as well as an understanding and familiarity with the rules of the Animal and Plant Health Inspection Service, Plant Protection and Quarantine.