CURRICULUM VITAE FOR JOHN M. SENKO

Department of Geology and Environmental Science
The University of Akron
126 Crouse Hall
Akron, OH 44325
(330)-972-8047
senko@uakron.edu

CURRENT POSITION

Assistant Professor, Department of Geology and Environmental Science, University of Akron, Akron, OH

RESEARCH INTERESTS

The ecology and physiology of microorganisms that mediate important geochemical reactions; microbially mediated redox cycling of elements, with particular emphasis on metal cycling; exploitation of microbiological activity for the bioremediation of metals.

EDUCATION

Ph.D., Microbiology, 2004, University of Oklahoma, Norman, OK
Thesis: "Microbially-mediated redox cycling of uranium: implications for the bioremediation of U(VI)-contaminated aquifers."
Advisors: Lee R. Krumholz and Joseph M. Suflita

M.S., Biology, 1999 Duquesne University, Pittsburgh, PA
Thesis: "Characterization of proteins involved in dissimilatory nitrate reduction by *Geobacter metallireducens*."
Advisor: John F. Stolz

B.S., Biology, 1997 Saint Vincent College, Latrobe, PA
Thesis: "The effects of non-acidic mine drainage on the introduced freshwater bivalve, *Corbicula fluminae*."
Advisor: Cynthia Walter

POSITIONS HELD

8/08-present Assistant Professor, Department of Geology and Environmental Science, University of Akron, Akron, OH
10/05-8/08 Post-Doctoral Research Associate, Department of Civil and Environmental Engineering, The Pennsylvania State University, University Park, PA
10/04-10/05 Post-Doctoral Research Associate, Center for Environmental Chemistry and Geochemistry, The Pennsylvania State University, University Park, PA
1/00-10/04 Graduate Research Assistant, University of Oklahoma, Norman, OK
8/03-12/03 Graduate Teaching Assistant, Geomicrobiology, University of Oklahoma, Norman, OK
8/99-12/99 Graduate Teaching Assistant, Fundamentals of Microbiology Laboratory, University of Oklahoma, Norman, OK
8/97-5/99 Graduate Teaching Assistant, Biology I and II Laboratories, Introductory Microbiology Laboratory, Duquesne University, Pittsburgh, PA

COURSES TAUGHT

University of Akron, Introduction to Environmental Science (Fall 2008, Fall 2009, Spring 2010, Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012)
University of Akron, Seminar in Geology (Spring 2009)
University of Akron, Geochemistry (Fall 2009, Fall 2011)
University of Akron, Geomicrobiology (Spring 2010, Spring 2012)
University of Akron, Microbiology (in UA Biology Department) (Fall 2010)
University of Akron, Analytical Methods in Geology (Spring 2011)

PROFESSIONAL SERVICE ACTIVITIES

Ad hoc reviewer: *American Society for Mining and Reclamation, Applied and Environmental Microbiology, Applied Geochemistry, Canadian Journal of Earth Sciences, Canadian Journal of Microbiology, Electronic Journal of Biotechnology, Elements, Environmental Science and Technology, Frontiers in Microbiology, Geobiology, Geochemical Journal, Geochimica et Cosmochimica Acta, Geomicrobiology Journal, Hydrometallurgy, Journal of Contaminant Hydrology, Journal of Environmental Quality, Mine Water and the Environment, Nature Geoscience, PLoS Biology, Soil and Sediment Contamination An International Journal, Water International.*

Proposal reviewer for the National Science Foundation's Geobiology and Low-Temperature Geochemistry and Education and Human Resources (Earth Sciences) Programs, Stanford Synchrotron Radiation Lightsource, U.S. Department of Defense Defense Threat Reduction Agency.

Vice President, Northern Ohio Geological Society, 2010-present

Judge, Ohio Branch American Society for Microbiology Meeting, April 2009.

Judging Coordinating Staff Member Center for Environmental Chemistry and Geochemistry Student Symposium, April 2005, University Park, PA.

Coordinating Staff Member, Pennsylvania Natural History Conference, May, 1997, Ligonier, PA.

STUDENT SUPERVISION

Guided the work of three undergraduate researchers at the University of Oklahoma and The Pennsylvania State University.

Assisted in the supervision of three Master's-level students at the Pennsylvania State University.

Mentored ten undergraduate research projects at the University of Akron.

Currently advising four M.S. students in Geology and one Ph.D. student in Integrated Biosciences at the University of Akron.

Past graduate students: Doug Bertel, M.S. 2011
Dominique Poncelet, M.S. 2011
Theresa McQuade, M. S. 2012

PROFESSIONAL SOCIETIES

American Chemical Society
American Geophysical Union
American Society for Microbiology
American Society for Mining and Reclamation
Ohio Branch American Society for Microbiology

Geological Society of America
International Society for Subsurface Microbiology
International Society for Microbial Ecology
Northern Ohio Geological Society

AWARD

Department of Energy, Natural and Accelerated Bioremediation Research (NABIR) PI Meeting Student Travel Grant, 2003.

WORKSHOP ATTENDANCE

"4th Annual Penn State Bioinformatics Workshop" University Park, PA. July, 2006.
"Do Species Matter In Microbial Communities?" Bozeman, MT. July 2007.

FUNDING ACQUISITION

Expanding and Refining Application-Based Service Learning in Several STEM Disciplines. Co-PI. 2012-2016. National Science Foundation. $503,280.

Collaborative Research: Mechanisms, Modeling, and Geochemical Consequences of Electron Flow in Acid Mine Drainage-Induced Sediments. PI. 2012-2015. National Science Foundation. $447,419.

Assessment and Treatment of Sulfate-Bearing Soils. Co-PI. 2012-2014. Ohio Department of Transporation. $149,369.

Real Time Corrosion Monitoring of Microbially Induced Corrosion in Water Cooling Systems. Co-PI. 2012-2013. US Department of Defense. $120,024.

Microbial Modulation of Acidic Mine Drainage Chemistry. PI. 2012. United States Geological Survey/Ohio Water Resources Research Institute. $11,377.

Initial Stages of Biofilm Formation and Microbiologically Influenced Corrosion. Co-PI. 2011-2012. US Department of Defense. $140,000.

Risk Management of Microbiologically Influenced Corrosion. Co-PI. 2011-2012. US Department of Defense. $120,000

Microbial Community Evaluation and Analysis of Formation and Catalysis of Manganese-Rich Films. PI. 2011. Babcock & Wilcox Company (contract). $18,058.

Acquisition of Materials for Geochemistry Laboratory. PI. 2010. University of Akron Stoller Fund. $8,135.

Influence of Bacterially Mediated Oxidation and Reduction Reactions on Properties of Fe-Rich Clay. University of Akron Faculty Research Grant. $10,000.

Bainbridge Review Committee. PI. 2009. Ohio Department of Natural Resources. $5,600.

Aeration Terraces for Biological low-pH Iron(II) Oxidation in Acid Mine Drainage. Co-PI. 2007-2008. Pennsylvania Department of Environmental Protection. $186,392.

Improving Passive Mine Treatment Through Better Understanding of Biogeochemistry and Mineralogy Associated with Mn(II) Oxidation. Co-PI. 2007-2008. United States Office of Surface Mining (OSM) 2007 National Technology Transfer Team (NTTT) Applied Science Program. $140,714.

The Effect of Oxygen Availability on Fe Cycling Microbial Communities within an Acid Mine Drainage-Induced Kill Zone. Co-PI. 2007. United States Geological Survey/Pennsylvania Water Resources Research Institute. $19,668.

Evaluation of low-pH biological Fe(II) oxidation in deep mine discharges: comparisons of Gum Boot mine, McKean County, and Fridays-2 mine, Elk County, Pennsylvania. Co-PI. 2006. Pennsylvania Department of Environmental Protection. $94,490.

COLLABORATORS (PAST FIVE YEARS)

Ala Abbas, Alper Buldum, Homero Castaneda-Lopez, Gang Cheng, Curtis Clemons, Teresa Cutright, Lu-Kwang Ju, Peter Lavrentyev, Francisco Moore, Bi-Min Newby, Joseph Payer, John Peck, Gerald Young (The University of Akron); William Burgos, Mary Ann Bruns (The Pennsylvania State University); Alice Dohnalkova, Tetyana Peretyazhko, Zheming Wang, John Zachara (Pacific Northwest National Laboratory); Gengxin Zhang (Oak Ridge National Laboratory); Maxim Boyanov, Shelly Kelly, Kenneth Kemner (Argonne National Laboratory); Nancy Trun, Sarah Woodley (Duquesne University); Hailiang Dong (Miami University); Gregory Stephanopoulos (Massachusetts Institute of Technology); Georg Bohm (Appia, LLC); Yuri Gorby (University of Southern California); Elizabeth Griffith (Kent State University); Colleen Hansel (Harvard University)

MANUSCRIPTS AND PUBLICATIONS

Poncelet, D. M., N. Cavender, T. J. Cutright, **J. M. Senko**. 2013. Biogeochemical transformations associated with the weathering of overburden disturbed by surface mining. In preparation for *Soil and Sediment Contamination: An International Journal.*

Chen, Y., Q. Tang, R. Howdyshell, X. He, B.-m. Zhang Newby, G. Cheng, H. Castaneda, **J. Senko**, L.-K. Ju. 2013. Biofilm morphology change of a sulfate-reducing bacterium surviving on carbon steel surface and the accelerated pitting corrosion. In preparation for *Applied and Environmental Microbiology*.

Gouin, M., E. Saracusa, C. B. Clemons, G. W. Young, **J. Senko**. 2012. A mathematical model of acid mine drainage using iron-oxidizing bacteria. *International Journal on Geomathematics*. doi 10.1007/s13137-012-044-3

Brown, B., S. Brown, **J. M. Senko**. 2012. Characterization of microbial communities associated with flue gas desulfurization systems. *Frontiers in Microbiology.* 3:142.

Cutright, T. J., **J. M. Senko**, S. Sivaram, S., M. York. 2012. Evaluation of the phytoextraction potential at an acid mine drainage impacted site. *Soil and Sediment Contamination: an International Journal*. 21:970-984.

Bertel, D., Peck, J. A., Quick, T. J., **Senko, J. M.** 2012. Iron transformations induced by acid-tolerant *Desulfosporosinus* species. *Applied and Environmental Microbiology.* 78:81-88.

Zhang, G., W. D. Burgos, **J. M. Senko**, M. E. Bishop, H. Dong, M. I. Boyanov, K. M. Kemner. 2011. Microbial reduction of chlorite and uranium followed by air oxidation. *Chemical Geology*. 283: 242-250.

Senko, J. M., D. Bertel, T. J. Quick, W. D. Burgos. 2011. The Influence of Phototrophic Biomass on Fe and S Redox Cycling in an Acid Mine Drainage-Impacted System. *Mine Water and the Environment.* 30: 38-46.

Zhang, G., **J. M. Senko**, S. D. Kelly, H. Tan, K. M. Kemner, W. D. Burgos. 2009. Microbial reduction of iron(III)-rich notronite and uranium(VI). *Geochimica et Cosmochimica Acta*. 73: 3523-3538.

Senko, J. M., G. Zhang, M. A. Bruns, W. D. Burgos. 2009. Metal reduction at low pH by a *Desulfosporosinus* species: implications for the biological treatment of acidic mine drainage. *Geomicrobiology Journal*. 26: 71-82.

Burgos, W. D., McDonough, J. T., **J. M. Senko,** G. Zhang, A. C. Dohnalkova, S. D. Kelly, K M. Kemner, Y. A. Gorby. 2008. Characterization and reactivity of uraninite nanoparticles produced by *Shewanella oneidensis* MR-1. *Geochimica et Cosmochimica Acta*. 72: 4901-4915.

Senko, J. M., M. A. Bruns, W. D. Burgos. 2008. Characterization of Fe(II) oxidizing bacterial communities at two acidic Appalachian coal mine drainage impacted sites. *The International Society for Microbial Ecology Journal*. 2: 1134-1145.

Senko, J. M., S. D. Kelly, A. C. Dohnalkova, J. T. McDonough, K. M. Kemner, W. D. Burgos. 2007. The effect of U(VI) bioreduction kinetics on subsequent reoxidation of U(IV). *Geochimica et Cosmochimica Acta.* 71: 4644-4654.

Burgos, W. D., **J. M. Senko**, J. J. Stone, B. A. Dempsey, E. E. Roden, K. M. Kemner, S. D. Kelley, B. Gu. 2007. Humic materials decrease biological U(VI) reduction by *Shewanella putrefaciens* CN32. *Environmental Engineering Science*. 24: 755-761.

Senko, J. M., T. A. Dewers, L. R. Krumholz. 2005. The effect of Fe(II) form and oxidation rate on microbial nitrate-dependent Fe(III) mineralogy. *Applied and Environmental Microbiology*. 71:7172-7177.

Senko, J. M., J. M. Suflita, L. R. Krumholz. 2005. Geochemical controls on microbial nitrate-dependent U(IV) oxidation. *Geomicrobiology Journal*. 22: 371-378.

Senko, J. M., Y. Mohammed, T. A. Dewers, L. R. Krumholz. 2005. Role for Fe(III) minerals in nitrate-dependent microbial U(IV) oxidation. *Environmental Science and Technology.* 39:2529-2536.

Senko, J. M., B. J. Campbell, J. R. Henriksen, M. S. Elshahed, T. A. Dewers, L. R. Krumholz. 2004. Barite deposition resulting from phototrophic sulfide-oxidizing bacterial activity. *Geochimica et Cosmochimica Acta*. 68: 773-780.

Istok, J. D., **J. M. Senko**, L. R. Krumholz, D. Watson, M.-A. Bogle, A. Peacock, Y.-J. Chang, D. C. White. 2003. In-situ bio-reduction of technetium and uranium in a nitrate-contaminated aquifer. *Environmental Science and Technology*. 38: 468-475.

Elshahed, M. S., **J. M. Senko**, T. A. Dewers, J. A. Spear, F. Z. Najar, S. M. Kenton, B. A. Roe, L. R. Krumholz. 2003. Bacterial diversity and sulfur cycling in a mesophilic sulfide-rich spring. *Applied and Environmental Microbiology*. 69: 5609-5621.

Elias, D. A., **J. M. Senko**, L. R. Krumholz. 2003. A procedure for the quantitation of total oxidized uranium for bioremediation studies. *Journal of Microbiological Methods*. 53: 343-353.

Senko, J. M., J. D. Istok, J. M. Suflita, L. R. Krumholz. 2002. In-situ evidence for uranium immobilization and remobilization. *Environmental Science & Technology*. 36: 1491-1496.

Senko, J., J. Stolz. 2001. Evidence for iron-dependent nitrate respiration in the dissimilatory iron-reducing bacterium *Geobacter metallireducens*. *Applied & Environmental Microbiology*. 67: 3750-3752.

Martinez Murillo, F., T. Gugliuzza, **J. Senko**, P. Basu, J. Stolz. 1999. A heme-*C*-containing enzyme complex that exhibits nitrate and nitrite reductase activity from a dissimilatory iron-reducing bacterium *Geobacter metallireducens. Archives of Microbiology*. 172: 313-320.

Bumpus, J. A., **J. Senko**, G. Lynd, R. Morgan, K. Sturm, J. Stimpson, S. Roe. 1998. Biomimetic solubilization of a low rank coal: implications for its use in methane production. *Energy and Fuels*. 12: 664-671.

REPORTS

Bair, E. S., Freeman, D. C., **Senko, J. M.** 2010. Expert Panel Technical Report: Subsurface Gas Invasion Bainbridge Township, Geauga County, Ohio. Ohio Department of Natural Resources, Division of Mineral Resources Management. Submitted June, 2010.

Burgos, W. D., Hansel, C., **Senko, J. M.** 2009. Improving passive mine treatment through better understanding of biogeochemistry and mineralogy associated with Mn(II) oxidation. United States Office of Surface Mining. Cooperative Agreement S07AP12478.

Burgos, W. D., **Senko, J. M.**, Bruns, M. A. 2008. Improving Passive Mine Treatment Through Better Understanding of Biogeochemistry and Mineralogy Associated with low-pH Fe(II) Oxidation. Commonwealth of Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation, Division of Acid Mine Drainage Abatement. PA DEP_AMD 42(0420)102.1

INVITED SEMINARS AND GUEST LECTURES

Microbially mediated iron cycling in acid mine drainage-impacted systems. Missouri University of Science and Technology Environmental Resource Center. November 2012. Rolla, MO.

Microbial communities associated with flue gas desulfurization systems. Oklahoma State University Department of Microbiology and Molecular Genetics. September 2012. Stillwater, OK.

Microbial communities associated with flue gas desulfurization systems. American Society for Microbiology General Meeting. June 2012. San Francisco, CA.

Microbially mediated iron cycling in acid mine drainage. Ohio University Department of Geological Sciences. May 2012. Athens, OH.

Mining to combustion: microorganisms associated with the use of coal. Bowling Green State University Department of Geology. March, 2012. Bowling Green, OH.

Microbial iron transformations in acid mine drainage. Kent State University Department of Geology. October, 2011. Kent, OH.

Microbial iron cycling in acid mine drainage impacted systems. Duquesne University Department of Biological Sciences. March 2011. Pittsburgh, PA.

Cleaning Up the Hot Leftovers of the Cold War. Natural Sciences Honors Colloquium, The University of Akron, February 2011. Akron, OH.

Iron eating and breathing microorganisms in acid mine drainage. Research for Lunch, The University of Akron, January 2011. Akron, OH.

Microbially mediated iron cycling in acid mine drainage. Biology Brown Bag Seminar. The University of Akron, November 2010. Akron, OH.

Redox cycling of Fe mediated by an acid-tolerant sulfate reducing bacterium. Session Keynote, Goldschmidt Conference, June 2010. Knoxville, TN.

Iron Transformations in an acid mine drainage-impacted system in southeastern Ohio, USA. China-US Collaborative Research on Geomicrobiological Processes in Extreme Environments, May 2010. University Park, PA.

Iron-Eating and -Breathing (But Not Sleeping) Microbes in Acid Mine Drainage. Department of Geology, The College of Wooster. April 2010. Wooster, OH.

Cleaning Up the Hot Leftovers of the Cold War. Natural Sciences Honors Colloquium, The University of Akron, March 2010. Akron, OH.

Microbially mediated Fe cycling in acidic mine drainage. The University of Pittsburgh, February 2010. Pittsburgh, PA.

Anaerobic microbial processes associated with acid mine drainage. The University of Akron Department of Biology, January 2010. Akron, OH.

Microbial communities in coal mine derived acidic mine drainage. Ohio University, May 2009. Athens, OH.

Metal-munching microbes: what do they do with uranium? Northern Ohio Geological Society. April 2009. Cleveland, OH.

Microbially-mediated redox cycling of Fe in coalmine-derived acidic mine drainage (AMD). Kent State University, March 2009. Kent, OH.

Microbially-mediated redox cycling of Fe in coalmine-derived acidic mine drainage (AMD). Miami University, December 2008. Oxford, OH.

Microbially-mediated redox cycling of Fe in coalmine-drived acidic mine drainage (AMD). University of Akron Department of Biology, October 2008. Akron, OH

Fe(II) oxidizing bacterial communities and activities associated with Appalachian coal mine drainage. American Chemical Society National Meeting, August 2008. Philadelphia, PA.

Microbially Mediated Metal Cycling. Saint Vincent College. March 2007. Latrobe, PA

Guest Lecturer, Evolution and Systematics, (BL 234), Saint Vincent College. Biogeochemistry of Early Earth.

Life on Earth: Vladimir Vernadsky, Todd Townsend, and Energy. Saint Vincent College. October 2006. Latrobe, PA.

Guest Lecturer, Introduction to Environmental Engineering (CE 370), The Pennsylvania State University. Remediation of Acid Mine Drainage.

Microbially mediated, nitrate-dependent U(IV) oxidation: mechanisms and controls. American Chemical Society National Meeting, September 2006. San Francisco, CA.

Guest Lecturer, Biogeochemical Analysis (GEOSC 597), The Pennsylvania State University. Geomicrobiology of AMD Genesis and Treatment.

Guest Lecturer, Geochemistry of Aqueous Systems (GEOSC 522), The Pennsylvania State University. Biogeochemistry of Fe(III) Respiration.

Geomicrobiological characterization of Fe(II)- and Mn(II)-oxidizing activity at two mine drainage treatment sites. Mine Drainage Treatment Technology Conference, August 2005. Pittsburgh, PA.

Rates and mechanisms of nitrate-dependent U(VI) oxidation. DOE-NABIR PI Workshop, March, 2004. Warrenton, VA.

Factors influencing nitrate-dependent U(VI) oxidation. DOE-NABIR PI Workshop, March 2003. Warrenton, VA.

ABSTRACTS

Mass dependent stable isotopic fractionation ($\delta^{88/86}$Sr) during the precipitation of barite, Zodletone Spring, Oklahoma. Widanagamage, I. H., Scher, H. D., **Senko, J. M.**, Griffith, E. M. Goldschmidt Conference. June, 2012. Montreal, Canada.

Extracellular Electron Transfer and Survival Strategies in Acid Mine Drainage Impacted Soils *(Invited)*. Gorby, Y. A., **Senko, J. M.** American Geophysical Union Fall Meeting. December 2011. San Francisco, CA.

Evaluation of iron(III) respiration by an acid-tolerant bacterium. Smith, D., **Senko, J. M.** University of Akron Conference on Graduate and Undergraduate Student Research. April 2011. Akron, OH.

Assessment of biogeochemical maturation of overburden disturbed by surface mining. Poncelet, D., **Senko, J. M.** University of Akron Conference on Graduate and Undergraduate Student Research. April 2011. Akron, OH.

Anaerobic microorganisms associated with coal mine-derived acid mine drainage. Traikiff, D., **Senko, J. M.** University of Akron Conference on Graduate and Undergraduate Student Research. April 2011. Akron, OH.

Assessment of biogeochemical maturation of overburden disturbed by surface mining. Poncelet, D., **Senko, J. M.** Geological Society of America Northeastern/North-Central Joint Meeting. March 2011. Pittsburgh, PA.

Assessment of biogeochemical maturation of overburden disturbed by surface mining. Poncelet, D., **Senko, J. M**. The Geological Society of Americal National Meeting. November, 2010. Denver, CO.

The effects of acid-tolerant sulfate reducing activities on Fe speciation. Bertel, D., **Senko, J. M**. National Meeting of the American Society of Mining and Reclamation. June 2010. Pittsburgh, PA.

There and back again: the effects of redox reactions on iron rich clays. McQuade, T. L., Roys, S., **Senko, J. M.** University of Akron Conference on Graduate and Undergraduate Student Research. April 2010. Akron, OH.

The effects of acid tolerant sulfate reducing activities on Fe speciation. Bertel, D., **Senko, J. M.** University of Akron Conference on Graduate and Undergraduate Student Research. April 2010. Akron, OH.

Long-term biostimulation in uranium-contaminated iron-rich saprolite, followed by reoxidation. Zhang, G., **J. Senko**, K. Kemner and W.D. Burgos. American Chemical Society National Meeting. March 2009. Salt Lake City, UT.

Microbial reduction of uranium in the presence of nontronite and chlorite. Burgos, W. D., Zhang, G., **Senko, J. M.**, Tan, H. Kelly, S., Kemner, K. American Chemical Society National Meeting. August 2008. Philadelphia, PA.

Characterization of Fe(II)-oxidizing bacterial communities in Appalachian coal mine drainage. **Senko, J.**, Burgos, W., Bruns, M. European Geosciences Union General Assembly. April 2008. Vienna, Austria.

Microbial reduction of iron(III)-rich smectite and uranium(VI). Zhang, G., **Senko, J.**, Tan, H., Burgos, W. European Geosciences Union General Assembly. April 2008. Vienna, Austria.

Characterization of uraninite nanoparticles produced by different *Shewanella* species. Burgos, W., **Senko, J.**, Dohnalkova, A., Kelly, S., Kemner, K. European Geosciences Union General Assembly. April 2008. Vienna, Austria.

Use of genes involved in Fe(II) oxidation to assess abundance of iron-oxidizing bacteria in acid mine drainage. Wanjugi, P., Bruns, M. A., **Senko, J.**, Lucas, M., Burgos, W. Allegheny Branch American Society for Microbiology Meeting Abstracts. October, 2007. Pittsburgh, PA.

Cryogenic laser-induced time-resolved fluorescence spectroscopy studies of uranium adsorbed at minerals and soil sediments. Wang, Z., Zachara, J. M., Chang, H.-S., Korshin, G., **Senko, J. M**., Burgos, W. D., Wang, J. 2007. American Chemical Society National Meeting

Abstracts. August, 2007. Boston, MA.

Use of Fe(II)-Oxidizing Genes to Assess Iron-Oxidizing Prokaryotes in Acid Mine Drainage. Wanjugi, P., Bruns, M. A., **Senko, J**., Burgos, W. 2007. American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America International Annual Meetings. November 2007. New Orleans, LA.

Characterization of Fe oxidizing microbial communities from two acid mine drainage impacted sites. Wanjugi P.; **Senko, J.**, Burgos, W., Bruns, M. A. 2006. Allegheny Branch American Society for Microbiology Meeting Abstracts. October, 2006. Latrobe, PA.

Microbially mediated Fe(II) removal from acidic coal mine drainage. Burgos, W. D**., Senko, J. M.**, Bruns, M. A. American Chemical Society National Meeting Abstracts. September, 2006. San Francisco, CA.

The effect of U(VI) bioreduction rate on subsequent biological and abiotic reoxidation of biogenic U(IV). **Senko, J. M.**, McDonough, J. T., Burgos, W. D. American Society for Microbiology General Meeting Abstracts. May, 2006. Orlando, FL.

Kinetics of U(VI) reduction control kinetics of U(IV) reoxidation. **Senko, J. M.**, Minyard, M. L., McDonough, J. T., Dempsey, B. A., Roden, E. E., Yeh, G.-T., Burgos, W. D. U.S. Department of Energy Environmental Remediation Science Program PI Meeting, April, 2006, Warrenton, VA.

Geomicrobiological characterization of Fe(II)- and Mn(II)-oxidizing activity at two mine drainage treatment sites. **Senko, J. M.**, Davidson, A., Burgos, W. D. Allegheny Branch American Society for Microbiology Branch Meeting. October, 2005. Clearfield, PA.

Mechanisms of nitrate-dependent, Fe-mediated U(IV) oxidation. **Senko, J. M.**, Krumholz, L. R. American Society for Microbiology General Meeting Abstracts. May, 2004. New Orleans, LA.

Geochemical and microbiological factors influencing nitrate-dependent U(IV) oxidation**. Senko, J. M.**, McKinley, J. P., Heald, S. M., Suflita, J. M., Krumholz, L. R. American Society for Microbiology General Meeting Abstracts. May, 2003. Washington, DC.

Bacterial diversity and sulfur cycling in an anaerobic sulfide-rich spring in Southwestern Oklahoma. Krumholz, L. R., Elshahed, M. S., **Senko, J. M.**, Campbell, B. J., Henriksen, J. R., Dewers, T. A., Spear, J. R., Najar, F. Z., Kenton, S., Roe, B. A. American Society for Microbiology General Meeting Abstracts. May, 2003. Washington, DC.

Sulfur cycling in an anoxic surficial spring. Dewers, T. A., **Senko, J. M.**, Elshahed, M. S. Campbell, B., Henricksen, J. R., Krumholz, L. R. Geological Society of America Abstracts. October 2002. Denver, CO.

Stimulation of nitrate-reducing activity in a U(VI) contaminated aquifer. **Senko, J. M.**, Jones, J., Istok, J. D., Suflita, J. M., Krumholz, L. R. September, 2002. Copenhagen, Denmark.

A procedure for measurement of solid-associated uranium(VI) during bioreduction experiments. Elias, D. A., **Senko, J. M.**, Krumholz, L. R. May, 2002. American Society for Microbiology General Meeting Abstracts., Salt Lake City, UT.

Geochemical and microbiological aspects of two terrestrial methane seeps, Oklahoma, USA. Miller, G., **Senko, J.**, Krumholz, L., Dewers, T. American Association of Petroleum Geologists Abstracts. March, 2002. Houston, TX.

In-situ evidence for uranium immobilization and remobilization. Krumholz, L. R., **Senko, J. M.**, Istok, J. D., Suflita, J. M. American Geophysical Union Fall Meeting. December 2001. San Francisco, CA.

Influence of alternative electron acceptors on in-situ uranium immobilization. **Senko, J. M.**, Krumholz, L. R., Istok, J. D., Suflita, J. M. American Society for Microbiology General Meeting Abstracts. May 2001. Orlando, FL.

Barite precipitation occurs as a result of photosynthetic sulfide oxidation at a sulfide-bearing spring. Krumholz, L. R., **Senko, J. M.**, Campbell, B., Henriksen, J. R., Grossman, E. L., Dewers, T. A. American Society for Microbiology General Meeting Abstracts. May, 2001. Orlando, FL.

Measuring variability of in-situ biodegradation rates in a heterogeneous aquifer contaminated by landfill leachate. Scholl, M. A. Cozzarelli, I. M., Christenson, S. C., Istok, J. D., Jaeschke, Ferree, D. M., **Senko, J. M.** American Geophysical Union Spring Meeting. May, 2001. Boston, MA.

Microbial processes in a sulfide-bearing spring near Zodletone Mountain, South Western Oklahoma, USA. Campbell, B., **Senko, J.**, Krumholz, L., Sanders, W. E., Dewers, T. American Geophysical Union Fall Meeting, December, 2000. San Francisco, CA.

Uranium transformations in contaminated subsurface sediments. Elias, D., Wong, D., **Senko, J.**, Long, P., McKinley, J., Suflita, J., Krumholz, L. American Geophysical Union Fall Meeting. December, 2000. San Francisco, CA.

The fate of uranium in the Norman Landfill as influenced by the addition of electron donors and acceptors. **Senko, J.**, Krumholz, J., Suflita, J, Istok, J. Norman Landfill Site Meeting. May, 2000. Norman, OK.

Biological and abiotic immobilization of uranium. **Senko, J.**, Krumholz, L., Suflita, J. Missouri Valley Branch American Society for Microbiology Meeting. March, 2000. Kansas City, MO.

Nitrate reduction in the dissimilatory iron-reducing bacterium *Geobacter metallireducens***.** **Senko, J.**, Stolz, J. Allegheny Branch American Society for Microbiology Meeting. February, 1999. Slippery Rock, PA.

Involvement of c-type cytochromes in nitrate reduction by *Geobacter metallireducens*. **Senko, J.**, Stolz, J. Northeast Microbiologists: Physiology, Ecology, Taxonomy Meeting. June, 1998. Blue Mountain Lake, NY.