

Curriculum Vita

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EDUCATION

- 1993** **Postdoctoral Research Scientist**, Swiss Federal Institute for Water Resources and Water Pollution Control (EAWAG), CH-8600 Dübendorf, Switzerland
- 1992** **Ph.D. in Civil (Environmental) Engineering**, University of Arizona, Tucson, AZ
Dissertation: Mechanisms of Reductive Dehalogenation of Carbon Tetrachloride by *Shewanella putrefaciens*, 1992
- 1988** **M.Eng. in Environmental Engineering**, Stevens Institute of Technology, Hoboken, NJ
- 1972** **B.A. in Biology**, University of Rochester, Rochester, NY

ACADEMIC APPOINTMENTS

- Jun 1999 – present** **Associate Professor**, School of Public and Environmental Affairs, Indiana University, Bloomington, IN
- Aug 1993 – May 1999** **Assistant Professor**, School of Public and Environmental Affairs, Indiana University, Bloomington, IN
- Additional appointments** **Member**, Graduate Faculty, Indiana University, Bloomington, IN
Adjunct Associate Professor, Department of Biology, Indiana University, Bloomington, IN
Adjunct Associate Professor, Department of Geological Sciences, Indiana University, Bloomington, IN
Senior Fellow, Indiana Molecular Biology Institute, Indiana University, Bloomington, IN

PROFESSIONAL DEVELOPMENT

- 2008-2009** **Visiting Scientist**, Environmental Microbiology Department, Technical University–Berlin, Berlin Germany
- 2001-2002** **Visiting Scientist**, Biogeochemistry Department, Max Planck Institute for Marine Microbiology, Bremen, Germany
- 1999** **Short-Term Faculty Exchange Program**, Bayreuth Institute of Terrestrial Ecology (BITÖK), University of Bayreuth, Bayreuth, Germany
- 1991** Department of Energy 13 Week Summer Research Practicum, Savannah River Laboratory, Aiken, SC
- 1989** Summer Course in Microbial Ecology and Diversity, Marine Biological Laboratory, Woods Hole, MA

PROFESSIONAL EMPLOYMENT

- Aug 1988 – Oct 1992** **Graduate Research Assistant / Teaching Assistant**, The University of Arizona, Civil Engineering Department, Tucson, AZ
- Jan 1987 – Aug 1988** **Director of Product Management**, AIG Consultants, Inc., New York, NY
- May 1985 – Jan 1987** **Manager of Casualty Services**, AIG Consultants, Inc., New York, NY
- Jan 1983 – May 1985** **Loss Control Consultant**, AIG Consultants, Inc., New York, NY
- Jun 1977 – Jan 1983** **Loss Control Representative**, Insurance Company of North America, Hialeah, FL

PROFESSIONAL SOCIETIES

- American Society for Microbiology
- Association of Environmental Engineering and Science Professors

HONORS

- Fulbright Senior Scholar - Germany Program, 2001-2002
- SPEA Undergraduate Teaching Award, 1997
- Indiana University Teaching Excellence Recognition Award (TERA), 1997

TEACHING ASSIGNMENTS**Indiana University, School of Public and Environmental Affairs, Bloomington, IN**

- E544/E400 Subsurface Microbiology and Bioremediation (12 times, 1994-2013)
- E570 Environmental Soil Science (10 times, 1994-2014)
- E552 Environmental Engineering (12 times, 2000-2014)
- E431 Water Supply and Wastewater Treatment (16 times, 1994-2014)
- E537 Environmental Chemistry Laboratory (2 times, 1998-2000)
- E562 Solid and Hazardous Waste Management (5 times, 1993-1997)
- E579 Readings in Environmental Science (4 times, 1994-1997)
- E542 Hazardous Materials Control (1993)
- E452 Solid and Hazardous Waste Management (1994)
- E162 Environment and People (2003)
- E680 Seminar in Environmental Science and Policy (3 times, 1995-1998)

SERVICES**School of Public and Environmental Affairs, Indiana University, Bloomington, IN**

- BSES Program Committee (2004-2008, 2011-2014)
- MSES Admissions Committee (2011-2014)
- PhD Policy- Environmental Sciences Committee (1999-2001, 2003)
- MSES Curriculum Committee (2006-2007)
- Undergraduate Environmental Science Coordinator (2004)
- Undergraduate BSPA/BSPH Curriculum Committee (2005, 2006)
- ESAP Faculty BSES Subcommittee (Spring 1994)
- Executive (one-year) MPA Degree Committee (1994)
- Graduate Policy Committee (1994-1997, 1999, 2000), Chair (2000-2001)
- Masters Admission and Financial Aid Committee (1996-2001, 2003)
- Undergraduate Policy Committee (1997)
- Ad Hoc Joint MPA/MSES Committee (2000-2001)
- BSPA/BSPH Curriculum Committee (2006-2008)
- Panel Chair for Association of SPEA PhD student Conference (2013)
- Academic Advisor - Hazardous Materials Management Concentration (1993-1999)
- Academic Advisor - Joint MPA/MSES Program (1994-1996, 2000)

- Faculty Search Committee – Environmental Chemistry Hire (2009-2010)
- Faculty Search Committee – Environmental Technology Hire (2009-2010)
- Search and Screen Committee for Director of Student Services (1994)
- Library Committee (1993-1994)
- Career Services Committee (1993-1994)
- Policy Committee (2002-2003)
- Task Force on the Assessment of Instruction (1995-1998)
- Awards Committee (1997-1998)
- Systemwide International Affairs Committee (1999-2000)
- ESAP Alumni Relations Committee (2000-2001)
- Panel Moderator, 1st Annual SPEA PhD Student Conference, Science and Policy (2001)
- International Affairs Committee (2007-2008)
- Overseas Education Committee (2014)
- SPEA 2020 Committee (2014)
- Budgetary Affairs Committee (2002-2005)
- SPEA Personnel Committee (2013-2014)
- Represented SPEA and participated in the development of an advanced BSES degree offered by Vietnam National University – Hanoi University of Science during meetings in Vietnam and subsequent planning with VNU-HUS faculty and administrators, Hanoi (May 2010)
- Presented fifteen 50-minute lectures on soil chemistry at the VNU-University of Science in Hanoi, Vietnam, while co-teaching a soils science course with a Vietnamese colleague. Teaching was done as part of our collaborative work with VNU (HUS) - (May 7-16, 2013)

Indiana University, Bloomington, IN

- Engineering Task Force Member to develop an engineering program at IU-Bloomington (2014-2015)
- Affirmative Action and Diversity Committee (2003-2008, 2010)
- Affirmative Action Grievance Committee Panel (2004-2008)
- Member of Advisory Board for the Alliance for Graduate Education and the Professoriate Program (AGEP) to increase minority PhD's awarded in science and technology (2005-2008)
- Participation in IU STEM initiative to increase minority recruitment in science and technology fields via presentations at meetings and hosting of students during the 9-week STEM Summer Scholars Institute (2007-2008)
- Herman B Wells Library, Kent Cooper Room Services Faculty Advisory Committee (2006-2008)
- IU Bloomington General Education Committee (2011-2014)
- IUB Light Microscopy Imaging Center Advisory Board Member (2010-2014)
- Review Panel for Faculty Research Support Program proposals (Feb 2013)
- University Research Policy Committee - (1998-2000)

- Research Affairs Committee (2005)
- IU Track and Cross Country umpire/referee (1996-1997)
- IU Jujitsu Club Faculty Advisor (1998-2001)
- IU General Education Committee (2011-2014)

Public Service (local and state)

- Bloomington Citizens Information Committee (CIC) for PCB - Contaminated Sites, member (1994-1998)
- Technical Advisor to City of Bloomington on PCB issues (1996-1998)
- Consultation with the City of Bloomington, Parks and Recreation Department with respect to soil contamination at former McDoel Switchyard. Developed treatability study plan with SPEA intern (2010-2011)
- Special Awards Judge, Intel International Science and Engineering Fair, Louisville, Kentucky (May 10-16, 1997)
- Panelist: Indiana Electronic Town Meeting on the Environment: Too Much Trash (Feb 7, 1997)
- Indiana Science Olympiad, Water Quality/Water Chemistry Event Coordinator (1994-1995)
- Speaker at citizen's group meeting at Brown County Library, Nashville, IN, to discuss potential oil and fuel contamination of Yellowwood Lake. Talk given at request of Indiana Dept. of Natural Resources representative (Aug 16, 2005)
- Consultation with the Upland Brewery, Bloomington, IN with respect to responsible handling of brewery waste during planned brewery expansion (2010)

PROFESSIONAL ACTIVITIES

Editorial Board

- Applied and Environmental Microbiology (2005-2013)
- ES&T Letters (2013-14)

Ad Hoc Peer Review for Professional Journals

- Applied and Environmental Microbiology, 1997, 2000 (4 articles, excluding those done as a member of the Editorial Board)
- Environmental Science and Technology, 1994-2013 (20+ articles)
- ISME Journal, 2014 (1 article)
- Nature Microbiology Reviews, 2014 (1 article)
- Fuel Processing Technology, 2014 (1 article)
- Archives of Microbiology, 2007 (1 article)
- Environmental Engineering Science, 2005-2006 (2 articles)
- Water Research, 2004 (1 article)
- Naturwissenschaften, 2004 (2 articles)

- Journal of Industrial Microbiology, 1995 (1 article)
- Advances in Environmental Research, 1996 (1 article)
- Water Resources Research, 1996 (1 article)
- Bulletin of Environmental Contamination and Toxicology, 1999 (1 article)
- Biodegradation, 1999 (1 article)
- Environmental Toxicology and Chemistry, 2000-2003 (4 articles)
- Bioremediation Journal, 2000 (1 article)
- Geomicrobiology Journal, 2000 (1 article)
- Policy and Management Review, 2001 (1 article)
- Research in Microbiology, 2001 (1 article)
- Journal of Environmental Engineering, 2000-2003 (3 articles)
- Geochemical et Cosmochimica Acta, 2000-2001 (2 articles)
- Environmental Microbiology, 2001 (1 article)
- Science, 2001 (1 article)
- Frontiers in Microbiology, 2011 (1 article)
- Geobiology, 2011-2014 (5 articles)

Peer Review - Other

- Review of book chapter (“Biodegradation” by L. Nies and C. Jafvert) for the Handbook of Groundwater Engineering (2005)
- Review of book, *Biology for Environmental Engineering*, Vaccari and Alleman, WCB/McGraw-Hill, (1999)

Peer Review Panels and Committees

- National Science Foundation Earth Sciences Review Panel for proposals submitted to the Geobiology and Low Temperature Geochemistry Program, Division of Earth Sciences, Washington D.C., Nov 2014
- Environmental Protection Agency review panel for proposals submitted to the GRO and STAR fellowship programs. Silver Spring, MD, Feb 27-28, 2006
- National Science Foundation review panel for Unsolicited Proposals Program in Environmental Engineering and Technology (EET). Washington, DC, February 10-11, 2005
- National Institute of Environmental Health Science review panel for proposals submitted to the program, Molecular Assessment of the Structure and Function of Ecological Populations in the Sequestration/Degradation of Environmental Contaminants, Research Triangle Park, NC, July 2003
- National Science Foundation review panel for proposals submitted to the Environmental Engineering section of the faculty Early Career Development Program, Washington D.C., 1996, 1998, 1999 (3 panels)
- National Science Foundation review panel for proposals submitted to the Small Business Innovation Research (SBIR) panel for Environmental Systems: Biological, Washington, D.C., 1997

- National Science Foundation review panel for proposals submitted to the Bioengineering and Environmental Systems section of the NSF/EPA Partnership for Environmental Research and Technology for a Sustainable Environment, 1996-1997 (2 panels)
- Faculty Research Support Program (FRSP) Proposal Review Committee Panels. Reviewed research proposals submitted to the Indiana University FRSP, 2008, 2012
- Chemistry Committee, Specialist Peer Review Committee for Fulbright Scholar Applications, Council for International Exchange of Scholars, 2005-2006
- Chemistry Committee, Specialist Peer Review Committee for Fulbright Distinguished Chairs Applications, Council for International Exchange of Scholars, 2007
- Selection Panel (Final Interviews) for German Student Applicants for Fulbright Scholarships for the Academic Year 2002-2003 at American Universities, Berlin, Germany, Oct. 11, 2001
- Technical Review committee to review abstracts for the 1997 Battelle Bioremediation Symposium, 1997

Ad Hoc Individual Proposal Peer Review

- IPODI Technische Universitaet Berlin Postdoctoral Fellowship for female scientists, 2014 (1 proposal)
- NASA Astrobiology Institute, Director's Discretionary Fund, 2012 (1 proposal)
- US Civilian Research and Development Foundation Climate Change and Energy Competition, 2010 (1 proposal)
- National Science Foundation, Division of Earth Sciences, 2005 (1 proposal)
- USDA, Cooperative State Research, Education and Extension Service, 2004 (1 proposal)
- USDA, National Research Initiative Competitive Grants Program, 2004 (1 proposal)
- Volkswagen Stiftung, Germany, 2003 (1 proposal)
- U. S. Department of Energy, Office of Basic Energy Sciences, 2002 (1 proposal)
- M. J. Murdock Charitable Trust, Murdock College Research Program for Life Sciences, 2002-2003 (2 Proposals)
- U.S. Department of Energy; Natural and Accelerated Bioremediation Research Program, 1998 (1 proposal)
- North Central Regional U.S. Geological Survey, 1998 (2 proposals)
- National Science Foundation, Environmental Engineering Section, 1998 (3 proposals)

Professional Committees

- Member of the Diversity Committee of the American Society of Environmental Engineering and Science Professors, 1999-2001

Other Professional Service

- Scientific and Business Advisory Board, Microvi Biotech LLC, Overland Park, Kansas (2005-2007)
- Fulbright Academy of Science and Technology (FAST)
 - Member of the Board of Directors (2003-2009)
 - Treasurer (2003-2004)
 - Member of the International Advisory Board (2009-2012)
- American Society of Environmental Engineering and Science Professors (AEESP) Liason with the American Chemical Society (ACS) regarding organization of joint AEESP-ACS symposia (2003-2007)
- Participation in the online American Society for Microbiology Minority Online Mentoring Program (2005-2007).
- Helped staff the Minority Affairs Booth at the American Society for Microbiology Annual Meeting at the request of the ASM Underrepresented Members Committee (2006-2007)
- Participated as a judge for student research presentations at the Historically Black Colleges and Universities Undergraduate Program (HCBU-UP) National Research Conference held in Washington, D.C., Oct 4-7, 2007
- Panel member at a Career Development Workshop, “International Research Opportunities: The Fulbright Network for Students and Professionals”, American Association for the Advancement of Science (AAAS) Annual Meeting, St. Louis, MO, Feb 17, 2006
- Participated in the Annual Fulbright Berlin Seminar sponsored by the German-American Fulbright Commission in Berlin, Germany, March 5-8, 2006

GRANTS, FELLOWSHIPS AND AWARDS**External Funding**

- “Collaborative Research: Biogenic Methanogenesis and Biodegradation of Organic Matter in Coals”. **National Science Foundation** Geobiology and Low-Temperature Geochemistry Program. PI at IU with co-investigators Simon Brassell and Maria Mastalerz. 8/1/2014 – 2016 \$175,000.
- "Biogenic coalbed methane production: Determination of chemical compound classes supporting microbial methanogenesis". **American Chemical Society Petroleum Research Fund**. PI at IU. 9/1/09 – 9/1/12 \$100,000
- “Investigating Morphological and Isotopic Biosignatures of Terrestrial Iron Bacteria – A Potential Mars Analog”. **National Aeronautic and Space Administration**. 10/1/05 to 3/12/09. \$24,753 (my portion). Co-PI with J. Schieber (PI) of IU Geological Sciences Dept and other co-PI's at IU and the University of Wisconsin.

- “Collaborative Research: Adaptive response of microbial communities and Fe biomineralization pathways to anaerobic redox cycling of Fe and N in sediments”, **National Science Foundation** Division of Earth Sciences. PI at IU. 9/1/2005-2/28/09. \$246,552
- “Demonstration and Evaluation of Air Sparging and Soil Vapor Extraction for Remediation of Contaminated Soil at a Manufactured Gas Plant”. **Battelle Memorial Institute**. Funded 10/1/2000 - 8/31/2002 through three separate grants totaling \$201,800.
- Influence of Microbial Nitrate Reduction on Subsurface Iron Biogeochemistry, Microbial Chromium Reduction, and Chromium Redox Chemistry. **US Department of Energy**. Co-PI with Eric Roden at U Wisconsin. Funded 1997-2001. IU portion \$661,260.
- Biodegradation and Biologically Mediated Transformation of Polychlorinated Biphenyls. **National Science Foundation**. Principle investigator. Proposed duration 1 year. 1996 \$18,000.

Internal Indiana University Grants

- "Gene expression profiling in *Daphnia pulex* as a measure of iron-oxide nanoparticle toxicity." Co-PI with Joe Shaw. SPEA Seed Grant. 6/10-6/12, \$16,324
- "Establishment of Sycamore Creek as a CRES watershed research area." Co-PI with Jeff White and Todd Royer. Indiana University Center for Research in Environmental Sciences. 12/09-6/12, \$36,635
- “Production of bacterial nanowires as a community response to electron acceptor limitation in biofilms.” Indiana University Faculty Research Support Program. 5/1/07-11/30/08, \$75,000
- Short-Term Faculty Exchange Program award for research at the Bayreuth Institute for Terrestrial Ecology (BITÖK) at the University of Bayreuth, Germany, Summer 1999
- 9 proposals to the Undergraduate Research and Creativity Program for funding undergraduate research were funded at a level of \$1500 each for the periods 1994-2000
- A Center for Environmental and Biogeochemical Research (with Craig Cooper, Lisa Pratt, Deb Backhus, and Jeff White), Indiana University Research Facility Fund, Commitment for up to \$50,000 in matching funds for analytical equipment, used to purchase a high performance liquid chromatograph, 1998
- Improved Biological Removal of Phosphate from Wastewater with *Caulobacter* (with Yves Brun, Dept. of Biology), Indiana University Dean of Faculties Multidisciplinary Ventures Fund, 1996, \$3500
- Sequential Anaerobic:Aerobic Treatment of Chlorinated Organic Compounds in Batch Reactors. Grant in Aid of Research from RUGS, 1996, \$2000.

PATENTS

- United States Patent No. US6,537,797 B1, Compositions and Methods Useful in Bioremediation of Polychlorinated Biphenyls, Flynn Picardal and Sanggoo Kim, Awarded March 25, 2003

PUBLICATIONS

Publications in Refereed Journals

- 44) An, T. T., and **Picardal, F. W.** (2015). *Desulfuromonas carbonis* sp. nov., an Fe(III)-, So-, and Mn(IV)-reducing bacterium isolated from an active coalbed methane gas well. International Journal of Systematic and Evolutionary Microbiology (*in press*).
- 43) Klueglein, N., Zedda, M., Zwiener, C., **Picardal, F. W.**, and Kappler, A. (2015). Oxidation of Fe(II)-EDTA by nitrite and by two nitrate-reducing Fe(II)-oxidizing *Acidovorax* strains. Geobiology **13**:198-207.
- 42) Nguyen, M. N., Dultz, S., **Picardal, F. W.**, Bui, A. T. K., Van Pham, Q., and Schieber, J. (2015). Release of potassium accompanying the dissolution of rice straw phytolith. Chemosphere **119**:371-376.
- 41) An, T. T., and **Picardal, F. W.** (2014). *Desulfocarbo indianensis* gen. nov., sp. nov., a benzoate-oxidizing, sulfate-reducing bacterium isolated from water extracted from a coal bed. International Journal of Systematic and Evolutionary Microbiology **64**:2907-2914.
- 40) Chakraborty, A., and **Picardal, F. W.** (2013). Induction of Nitrate-Dependent Fe(II) Oxidation by Fe(II) in *Dechloromonas* sp. Strain UWNR4 and *Acidovorax* sp. Strain 2AN. Applied and Environmental Microbiology **79**:748-752.
- 39) Furmann, A., Schimmelmann, A., Brassell, S. C., Mastalerz, M., and **Picardal, F. W.** (2013). Chemical compound classes supporting microbial methanogenesis in coal. Chemical Geology **339**:226-241.
- 38) Furmann, A., Mastalerz, M., Brassell, S. C., Schimmelmann, A., and **Picardal, F. W.** (2013). Extractability of biomarkers from high- and low-vitrinite coals and its effect on the porosity of coal. International Journal of Coal Geology **107**:141-151.
- 37) Chakraborty, A. and **Picardal, F. W.** (2013). Neutrophilic, nitrate-dependent, Fe(II) oxidation by a *Dechloromonas* species. World Journal of Microbiology and Biotechnology **29**(4):617-623.
- 36) Ilori, M. O., **Picardal, F. W.**, Aramayo, R., Adebusoye, S. A., Obayori, O. S., and Benedik, M. J. (2013). Catabolic plasmid specifying polychlorinated biphenyl degradation in *Cupriavidus* sp. strain SK-4: Mobilization and expression in a pseudomonad. Journal of Basic Microbiology **53**:1-8.

- 35) Nwinyi, O. C., **Picardal, F. W.**, An, T. T., and Amund, O. O. (2013). Aerobic degradation of naphthalene, fluoranthene, pyrene and chrysene using indigenous strains of bacteria isolated from a former industrial site. Canadian Journal of Pure & Applied Sciences **7**(2): 2303-2314.
- 34) **Picardal, F. W.** (2012). Abiotic and Microbial Interactions during Anaerobic Transformations of Fe and NO_x⁻. Frontiers in Microbiology **3**:112.
- 33) Chakraborty, A., Roden, E.E., Schieber, J., and **Picardal, F. W.** (2011). Enhanced Growth of *Acidovorax* sp. Strain 2AN during Nitrate-Dependent Fe(II) Oxidation in Batch and Continuous-Flow Systems. Applied and Environmental Microbiology **77**:8548-8556.
- 32) Coby, A.J., **Picardal, F. W.**, Shelobolina, E., Xu, H., and Roden, E.E. (2011). Repeated Anaerobic Microbial Redox Cycling of Iron. Applied and Environmental Microbiology **77**:6036-6042.
- 31) **Picardal, F. W.**, Zaybak, Z., Chakraborty, A., Schieber, J., and Szewzyk, U. (2011). Microaerophilic, Fe(II)-dependent growth and Fe(II) oxidation by a *Dechlorospirillum* species. FEMS Microbiology Letters **319**:51-57.
- 30) Regberg, A., Singha, K., Tien, M., **Picardal, F. W.**, Zheng, Q., Schieber, J., and Brantley, S. (2011). Electrical conductivity as an indicator of iron reduction rates in abiotic and biotic systems: Water Resources Research **47**(4):W04509.
- 29) Gößner, A. S., **Picardal, F. W.**, Tanner, R. S., and Drake, H. L. (2008). Carbon metabolism of the moderately acid-tolerant acetogen *Clostridium Drakei* isolated from peat. FEMS Microbiology Letters **287**:236-242.
- 28) Strapoć, D., **Picardal, F. W.**, Turich, C., Schaperdoth, I., Macalady, J. L., Lipp, J. S., Lin, Y.-S., Ertefai, T. F., Schubotz, F., Hinrichs, K.-U., Mastalerz, M., and Schimmelmann, A. (2008). Methane-producing microbial community in a coal bed of the Illinois Basin. Applied and Environmental Microbiology **74**:2424-2432.
- 27) Adebusoye, S. A., Ilori, M. O., **Picardal, F. W.**, and Amund, O. O. (2008). Extensive biodegradation of polychlorinated biphenyls in Aroclor 1242 and electrical transformer fluid (Askarel) by natural strains of microorganisms indigenous to contaminated African systems. Chemosphere **73**:126-132.
- 26) Adebusoye, S. A., Ilori, M. O., **Picardal, F. W.**, and Amund, O. O. (2008). Evidence of aerobic utilization of *di-ortho*-substituted trichlorobiphenyls as growth substrates by *Pseudomonas* sp. SA-6 and *Ralstonia* sp. SA-4. Environmental Microbiology **10**(5):1165-1174.

- 25) Adebuseye, S. A., Ilori, M. O., **Picardal, F. W.**, and Amund, O. O. (2008). Influence of chlorobenzoic acids on the growth and degradation potentials of PCB-degrading microorganisms. World J of Microbiology and Biotechnology **24**(7):1203-1208.
- 24) Adebuseye, S. A., Ilori, M. O., **Picardal, F. W.**, and Amund, O. O. (2008). Cometabolic degradation of polychlorinated biphenyls (PCBs) by axenic cultures of *Ralstonia* sp. strain SA-5 and *Pseudomonas* sp. strain SA-6 obtained from Nigerian contaminated soils. World J of Microbiology and Biotechnology **24**(1):61-68.
- 23) Adebuseye, S. A., Ilori, M. O., **Picardal, F. W.**, and Amund, O. O. (2008). Metabolism of chlorinated biphenyls: Use of 3,3'- and 3,5-dichlorobiphenyl as sole sources of carbon by natural species of *Ralstonia* and *Pseudomonas*. Chemosphere **70**:656-663.
- 22) Adebuseye, S. A., Ilori, M. O., **Picardal, F. W.**, Amund, O. O., and Fuqua, C. (2008). Characterization of multiple novel aerobic polychlorinated biphenyl (PCB)-utilizing bacteria strains indigenous to contaminated tropical African soils. Biodegradation **19**:145-159.
- 21) Adebuseye, S. A., **Picardal, F. W.**, Ilori, M. O., Amund, O. O., Fuqua, C. and Grindle, N. (2007). Growth on *ortho*-substituted dichlorobiphenyls with chlorine substitution on each ring by tropical bacteria. Applied Microbiology and Biotechnology **74**:484-492.
- 20) Adebuseye, S. A., **Picardal, F. W.**, Ilori, M. O., Amund, O.O., Fuqua, C. and Grindle, N. (2007). Aerobic degradation of di- and trichlorobenzenes by two bacteria isolated from polluted tropical soils. Chemosphere **66**(1):1939-1946.
- 19) Cooper, D. C., Coby, A. J., and **Picardal, F. W.** (2006). Interactions between Microbial Iron Reduction and Metal Geochemistry: Effect of Redox Cycling on Transition Metal Speciation in Iron Bearing Sediments. Environmental Science and Technology **40**(6): 1884-1891.
- 18) Coby, A. J. and **Picardal, F. W.** (2006). Influence of sediment components on the immobilization of Zn during microbial Fe-(hydr)oxide reduction. Environmental Science and Technology **40**(12):3813-3818.
- 17) Coby, A. J. and **Picardal, F. W.** (2005). Inhibition of NO_3^- and NO_2^- Reduction by Microbial Fe(III) Reduction: Evidence of a Reaction Between NO_2^- and Cell Surface-Bound Fe^{2+} . Applied and Environmental Microbiology **71**(9): 5267-5274
- 16) Cooper, D. C., Neal, A. L., Kukkadapu, R. K., Brewe, D., Coby A., and **Picardal, F. W.** (2005). Effects of surface area and sediment mineralogy on microbially mediated changes in divalent metal speciation: Importance of ferrihydrite Geochimica et Cosmochimica Acta **69**(7): 1739-1754.

- 15) Cooper, D.C., **Picardal, F. W.**, Schimmelmann, A., and Coby, A. J. (2003). Chemical and Biological Interactions During Nitrate and Goethite Reduction by *Shewanella putrefaciens* 200. Applied and Environmental Microbiology **69**(6):3517-3525.
- 14) Weber, K. A., **Picardal, F. W.**, and Roden, E. E. (2001). Microbially-Catalyzed Nitrate-Dependent Oxidation of Biogenic Solid-Phase Fe(II) Compounds. Environmental Science and Technology **35**:1644-1650.
- 13) Kim, S. and **Picardal, F. W.** (2001). Microbial Growth on Dichlorobiphenyls Chlorinated on Both Rings as a Sole Carbon and Energy Source. Applied and Environmental Microbiology **67**(4):1953-1955.
- 12) Kim, S. and **Picardal, F. W.** (2000). A Novel Bacterium that Utilizes Monochlorobiphenyls and 4-Chlorobenzoate as Growth Substrates. FEMS Microbiology Letters **185**:225-229.
- 11) Cooper, D. C., **Picardal, F. W.**, Rivera, J, and Talbot, C. (2000). Zinc Immobilization and Magnetite Formation Via Ferric Oxide Reduction by *Shewanella putrefaciens* 200. Environmental Science and Technology **34**:100-106.
- 10) Collins, R., and **Picardal, F. W.** (1999). Enhanced Anaerobic Biotransformation of Carbon Tetrachloride by Soil Organic Matter. Environmental Toxicology and Chemistry **18**(12): 2703-2710.
- 9) Kim, S., and **Picardal, F. W.** (1999). Enhanced Anaerobic Biotransformation of Carbon Tetrachloride in the Presence of Reduced Iron Oxides. Environmental Toxicology and Chemistry **18**(10):2142-2150.
- 8) Backhus, D., **Picardal, F. W.**, Johnson, S., Knowles, T., Collins, R., Radue, A., and Kim, S. (1997). Soil- and Surfactant-Enhanced Reductive Dechlorination of Carbon Tetrachloride in the Presence of *Shewanella putrefaciens* 200. Journal of Contaminant Hydrology **28**:337-361.
- 7) **Picardal, F. W.**, Kim, S., Radue, A., and Backhus, D. (1997). Anaerobic Transformations of Carbon Tetrachloride: Combined Bacterial and Abiotic Processes in *Emerging Technologies in Hazardous Waste Management VII* (American Chemical Society Special Symposium Book). Ed: Tedder and Pohland. Plenum Press, New York.
- 6) **Picardal, F. W.**, Huey, B., and Arnold, R. G. (1995). Effects of Electron Donor and Acceptor Condition on the Reductive Dehalogenation of Tetrachloromethane by *Shewanella putrefaciens* 200. Applied and Environmental Microbiology **61**:8-12.

- 5) Enzien, M. V., **Picardal, F. W.**, Hazen, T. C., Arnold, R. G., and Fliermans, C. F. (1994). Reductive Dechlorination of Trichloroethylene and Tetrachloroethylene under Aerobic Conditions in a Sediment Column. Applied and Environmental Microbiology **60**(6):2200-2204.
- 4) **Picardal, F. W.**, Arnold, R. G., Couch, H., Little, A. M., and Smith, M. E. (1993). Involvement of Cytochromes in the Anaerobic Biotransformation of Tetrachloromethane by *Shewanella putrefaciens* 200. Applied and Environmental Microbiology **59**(11):3763-3770.
- 3) Arnold, R. G., Hoffman, M. R., DiChristina, T. J., and **Picardal, F. W.** (1990). Regulation of Dissimilatory Fe(III) Reduction Activity in *Shewanella putrefaciens*. Applied and Environmental Microbiology **56**:2811-2817.
- 2) Kupillas, G. E., Pill, K. G., **Picardal, F. W.**, and Arnold, R. G. (1991). A Multiparameter Chemical Toxicity Test Using *Salmonella typhimurium* and *Spirochaeta aurantia*. Environmental Toxicology and Water Quality **6**:293-308.
- 1) Pill, K. G., Kupillas, G. E., **Picardal, F. W.**, and Arnold, R. G. (1991). Estimating the Toxicity of Chlorinated Organic Compounds Using a Multiparameter Bacterial Assay. Environmental Toxicology and Water Quality **6**:271-291.

Other Publications

- Picardal, F. W.** and Cooper, D. C. (2005). *Microbially Mediated Changes in the Mobility of Contaminant Metals in Soils and Sediments*. In: Heavy Metal Contamination of Soil: Problems and Remedies; Editors: I. Ahmad, S. Hayat, and J. Pitchel. Science Publishers, USA.

PRESENTATIONS AT MEETINGS AND CONFERENCES

- 78) An, T. T. and Picardal, F. W. (2014). *Desulfocarbo indianensis* gen. nov., sp. nov., a benzoate-oxidizing, sulfate-reducing bacterium isolated from water extracted from a coal bed. Presented at the annual meeting of the Indiana Branch of the American Society for Microbiology, Turkey Run State Park, Marshall, IN. March 28-29, 2014.
- 77) Chakraborty, A., O'Connor, B. R., Picardal, F. W. (2012). Induction of nitrate-dependent Fe(II) oxidation by Fe(II); Possibility of substrate-dependent enzyme expression. Presented at the annual meeting of the Indiana Branch of the American Society for Microbiology, Wabash College, Crawfordsville, IN. April 20-21, 2012.

- 76) Furmann, A., Schimmelmann, A., Brassell, S. C., Mastalerz, M., Picardal, F. W. (2011). Chemical compound classes supporting microbial methanogenesis in coal. Presented at the 11th International Conference on Gas Geochemistry, Scripps Institute of Oceanography, La Jolla, CA, November 29-December 3, 2011.
- 75) Chakraborty, A. and Picardal, F. W. (2011). Enhanced Growth of *Acidovorax delafieldii* 2AN during Nitrate-Dependent Fe(II) Oxidation in Continuous Flow Systems. Presented at the 2011 Goldschmidt Conference, Prague, Czech Republic, August 14-19, 2011.
- 74) Furmann, A., Schimmelmann, A., Brassell, S. C., Mastalerz, M., Picardal, F. W. (2011). Chemical compound classes supporting microbial methanogenesis in coal. Presented at the 2011 Goldschmidt Conference, Prague, Czech Republic, August 14-19, 2011.
- 73) Chakraborty, A. and Picardal, F. W. (2011). Energetic Benefits of Nitrate-Dependent, Fe(II) Oxidation on Growth of *Acidovorax delafieldii* 2AN: A Comparative Approach. Presented at the American Society for Microbiology 111th General Meeting, New Orleans, LA, May 21-24, 2011.
- 72) Picardal, F. W., Zaybak, Z., Chakraborty, A., Schieber, J., and Szewzyk, U. (2011). Microaerophilic, Fe(II)-Dependent Growth During Fe(II) Oxidation by a *Dechlorospirillum* Species. Presented at the American Society for Microbiology 111th General Meeting, New Orleans, LA, May 21-24, 2011.
- 71) Chakraborty, A. and Picardal, F. W. (2011). Influence of Nitrate-Dependent, Fe(II) Oxidation on Growth of *Acidovorax delafieldii* 2AN: A Comparative Approach. Presented at the 2011 Spring Meeting of the Indiana Branch of the American Society for Microbiology, Brown County State Park, Nashville, IN, April 15-16, 2011.
- 70) Coby, A. J., Shelobolina, E., Zu, H., Roden, E., and Picardal, F. W. (2009). Microbially-mediated anaerobic redox cycling of iron and nitrogen in sediments. Presented at the Goldschmidt Conference 2009, Davos, Switzerland, June 21-26, 2009.
- 69) Regberg, A., Singha, K., Picardal, F. W., Yheng, Q., Bond, D., and Brantley, S. (2009). Electrical conductivity associated with dissimilatory iron reduction: Do biofilms decrease resistivity? Presented at the Goldschmidt Conference 2009, Davos, Switzerland, June 21-26, 2009.
- 68) Picardal, F. W. (2009). Microbially-mediated redox cycling of iron in sediments. Presented at "Microbiology of River Associated Wetlands," Brandenburgische Akademie, Schloss Crieven, Swedt, Germany, May 11-13, 2009.

- 67) Picardal, F. W. (2009). Chair of Research and Development Panel, Fulbright Academy of Science and Technology 2009 Annual Meeting at FON University in Skopje, Macedonia March 24-27, 2009.
- 66) Regberg, A., Zheng, Q., Picardal, F. W., Singha, K., and Brantley, S. (2008). Anomalous electrical signals associated with microbial activity: Results from iron and nitrate reducing columns. Presented at the American Geophysical Union (AGU) 2008 Fall Meeting, San Francisco, CA, December 15-19, 2008.
- 65) Barlett, M., Stefan, M. F., and Picardal, F. W. (2008). Formation of cell clusters and connective appendages in *Agrobacterium tumefaciens* under oxygen-limiting conditions. Presented at the 2008 Joint Spring Meeting of the Indiana Branch and Ohio Branch of the American Society for Microbiology at Ball State University, Muncie, IN, March 28-29, 2008.
- 64) Coby, A., Dockrey, J., Roden, E., Picardal, F. W., Mohanty, S., and Shelobolina, E. (2008). Anaerobic redox cycling of iron in flow-through reactors. Presented at the 108th General Meeting of the American Society for Microbiology, Boston, MA, June 1-5, 2008.
- 63) Picardal, F. W. (2008). Chair of session, "Microbiology and Energy", at the Fulbright Academy of Science and Technology 2008 Annual Meeting, Boston, MA, February 14-17, 2008.
- 62) Coby, A. J., Picardal, F. W., and Roden, E. E. (2007). Microbially-mediated anaerobic redox cycling of iron in culture and resulting microbial community. Presented at the 107th Annual General Meeting of the American Society for Microbiology, Toronto, Ontario, Canada, May 21-25, 2007.
- 61) Strapoć, D., Picardal, F. W., Schaperdoth, I., Macalady, J., Turich, C., Mastalerz, M., and Schimmelmann, A. (2007). Coalbed methane-producing microbial community in the Illinois Basin. Presented at the 107th Annual General Meeting of the American Society for Microbiology, Toronto, Ontario, Canada, May 21-25, 2007.
- 60) Strapoć, D., Picardal, F. W., Lin, Y.-S., Hinrichs, K.-U., Schaperdoth, I., Macalady, J., Turich, C., Freeman, K. H., Mastalerz, M., and Schimmelmann, A. (2007). Microbial Coalbed Methane in the Illinois Basin: Substrate Competition Among Genetic Pathways. Presented at the 23rd International Meeting on Organic Geochemistry, Torquay, Devon, UK, September 9-14, 2007.
- 59) Roden, E.E., Coby, A. J., and Picardal, F. W. (2007). Microbially-mediated anaerobic redox cycling of iron in sediments. 10th International Symposium on Wetland Biogeochemistry, Annapolis, MD, April 1-4, 2007.

- 58) Coby, A., Roden, E., and Picardal, F. W. (2007). Biogeochemical Interactions during Microbial Iron and Nitrogen Cycling in Anoxic Sediments. 2007 Presented at the Center for Biodiversity and Conservation's 12th Annual Symposium, "Small Matters: Microbes and their Role in Conservation" at the American Museum of Natural History, New York, NY, April 26-27, 2007.
- 57) Coby, A., Roden, E., and Picardal, F. W. (2007). Biogeochemical Interactions during Microbial Iron and Nitrogen Cycling in Anoxic Sediments. Presented at the Fulbright Academy of Science and Technology 2007 Annual Conference, Panama City, Panama, March 2, 2007.
- 56) Picardal F. W. and Roden, E. (2006). Symposium Organizers and Chairs, "Microbially Mediated Redox Dynamics in the Shallow Subsurface". Division of Environmental Chemistry, American Chemical Society Annual Meeting, San Francisco, CA, September 10-14, 2006.
- 55) Picardal, F. W. (2006). Microbial degradation and biological treatment of chlorinated organic pollutants in wastewaters and sludges. Presented at the APEC Medium & Small Enterprises Technology Conference and Fair, Qingdao, China, May 18-19, 2006
- 54) Adebuseye, S. A., Picardal, F. W., Amund, O. O., Ilori, M. O., Oyetibo, G. O., Obayori, O., and Omotayo, E. A. (2006). Metabolism of polychlorinated biphenyls (PCBs) by novel organisms isolated from polluted soils: Evidence for growth on *ortho*-substituted di- and trichlorobiphenyls. Presented at the 2006 Society for Industrial Microbiology Annual Meeting, Baltimore, MD, July 30-Aug 3, 2006.
- 53) Picardal, F. W. (2006). Biogeochemical Interactions in the Transformation of Pollutants. Presented at the Fulbrighters in Science Conference sponsored by the Fulbright Academy of Science and Technology in Berlin, Germany, March 3-5, 2006.
- 52) Adebuseye, S. A., Amund, O. O., Ilori, M. O., Fuqua, C., Grindle, N., and Picardal, F. W. (2005). Aerobic Dechlorination of Di- and Trichlorobenzenes by Two Novel PCB-Degrading Bacterial Strains Isolated from Contaminated Tropical Soil. Presented at the 105th Annual Meeting of the American Society for Microbiology, Atlanta, GA, June 5-9, 2005.
- 51) Coby, A. and Picardal, F. W. (2005). Factors Influencing the Bio-Immobilization of Zn in Natural Sediments by the Iron-Reducing Bacterium *Shewanella putrefaciens*. Presented at the 105th Annual Meeting of the American Society for Microbiology, Atlanta, GA, June 5-9, 2005.

- 50) Cooper, D. C., Picardal, F. W., and Coby, A. (2005). Interactions Between Microbial Iron Reduction and Metal Geochemistry: Effect of Redox Cycling on Transition Metal Speciation in Iron Reducing Systems. Presented at the Joint International Symposia for Subsurface Microbiology (ISSM 2005) and Environmental Biogeochemistry (ISEB XVII), Jackson Hole, WY, August 14-19, 2005.
- 49) Benn, D. and Picardal, F. W. (2004). Inhibitory Effects of Chlorobenzoic Acids on Aerobic Metabolism of Monochlorinated Biphenyls. Presented at the 27th Annual Midwest Environmental Chemistry Workshop, University of Wisconsin, Madison, WI, Oct 15-17, 2004.
- 48) Coby, A. and Picardal, F. W. (2004). Factors Influencing the Bio-immobilization of Zn in Natural Sediments. Presented at the 27th Annual Midwest Environmental Chemistry Workshop, University of Wisconsin, Madison, WI, October 15-17, 2004.
- 47) Adebuseye, S. A., Kim, S., Amund, O. O., Ilori, M. O., Fuqua, C., Grindle, N., and Picardal, F. W. (2004). Aerobic Growth on Dichlorobiphenyls as a Sole Carbon Source by Bacteria Isolated from Contaminated Tropical Soils. Presented at the Annual Meeting of the American Chemical Society, Philadelphia, PA, August 22-26, 2004.
- 46) Coby, A. J. and Picardal, F. W. (2004). The Mutual Inhibition of Goethite and Nitrate Reduction by *Shewanella putrefaciens*- Effects of Surface-Bound Fe²⁺. Presented at the 104th Annual General Meeting, American Society for Microbiology, New Orleans, LA, May 23-27, 2004.
- 45) Adebuseye, S. A., Amund O. O., Ilori M. O. and Picardal F. W. (2004). Rapid Aerobic Metabolism of Polychlorinated Biphenyls (PCBs) by Novel Microorganisms Isolated from Tropical Soils Contaminated with Electrical Transformer Fluid. Presented at the 104th Annual General Meeting, American Society for Microbiology, New Orleans, LA, May 23-27, 2004.
- 44) Coby, A. J. and Picardal, F. W. (2003). The Mutual Inhibition of Goethite and Nitrate Reduction by *Shewanella putrefaciens*. 26th Midwest Environmental Chemistry Workshop, University of Iowa, Iowa City, IA, October 11-12, 2003.
- 43) Adebuseye, S. A., Picardal, F. W., Amund, O. O., and Ilori, M. O. (2003). Occurrence of PCB-Degrading Organisms in Nigerian Contaminated Soils. 26th Midwest Environmental Chemistry Workshop, University of Iowa, Iowa City, IA, October 11-12, 2003.

- 42) Cooper, D. C., Neal, A. L., Kukkadapu, R. K., Brewe, D., Coby, A., and Picardal, F. W. (2003). Effects of Surface Area and Sediment Mineralogy on Microbially Mediated Changes in Divalent Metal Speciation. Program with Abstracts, 40th Annual Meeting of the Clay Minerals Society, Athens, GA, June 10, 2003
- 41) Cooper, D. C., Picardal, F. W., Neal, A., Coby, A., Kauffman, M. E. and Scott, J. (2002). Effect of Sediment Mineralogy on Microbiologically Induced (DMRB) Changes in Divalent Metal Speciation. Presented at the American Geophysical Union (AGU) 2002 Fall Meeting, San Francisco, CA, December 6-10, 2002.
- 40) Coby, A. and Picardal, F. W. (2002). The Effects of Microbial Iron-Oxide Reduction on Trace Metal Speciation. Presented at the 25th Environmental Chemistry Workshop, University of Illinois- Chicago, Chicago, IL, October 5-6, 2002.
- 39) Sloffer, C., Alleman, B., and Picardal, F. W. (2002). Changes in Soil Microbial Activity and Populations Resulting from In-situ Air Sparging/Soil Vapor Extraction at a Former Manufactured Gas Plant Site. Presented at the Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 2002.
- 38) Sloffer, C., and Picardal, F. W. (2001). Changes in Soil Microbial Activity and Populations Resulting from In-Situ Air Sparging/Soil Vapor Extraction at a Former Manufactured Gas Plant Site. Presented at the 24th Environmental Chemistry Workshop, University of Minnesota, Minneapolis, MN, October 5-7, 2001.
- 37) Cooper, D. C., Picardal, F. W., Schimmelman, A., and Coby, A. J. (2001). Chemical and Biological Interactions During Nitrate and Goethite Reduction by *Shewanella putrefaciens* 200. Presented at the 15th International Symposium on Environmental Biogeochemistry (ISEB 15), Biogeochemical Processes and Cycling of Elements in the Environment, Wroclaw, Poland, September 11-15, 2001.
- 36) Cooper, D. C., Picardal, F. W., Schimmelman, A., and Coby, A. J. (2001). Chemical and Biological Interactions During Nitrate and Goethite Reduction by *Shewanella putrefaciens* 200. Presented at the 11th Annual V. M. Goldschmidt Conference, Hot Springs, VA, May 20-24, 2001.
- 35) Cooper, D. C. and Picardal, F. W. (2000). Influence of Sequential Microbial Iron Reduction and Chemical Oxidation on Zinc Speciation in Contaminated Natural Sediments. Presented at the 21st Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nashville, TN, November 14, 2000.

- 34) Cooper, D. C., Picardal, F. W., Lloyd, R., and Coby, A. J. (2000). Chemical and Biological Interactions During Nitrate and Goethite Reduction by *Shewanella putrefaciens* 200. Presented at the 23rd annual Midwest Environmental Chemistry Workshop at Western Michigan University, Kalamazoo, MI, October 7, 2000.
- 33) Cooper, D. C. and Picardal, F. W. (2000). Influence of Sequential Microbial Iron Reduction and Chemical Oxidation on Zinc Speciation in Contaminated Natural Sediments. Presented at the Fifth International Symposium and Exhibition on Environmental Contamination in Central and Eastern Europe, Prague, Czech Republic, September 12-14, 2000.
- 32) Cooper, D. C. and Picardal, F. W. (2000). Dynamics of Nitrate and Nitrite Inhibition of Fe(II) Production via Goethite Reduction by *Shewanella putrefaciens* 200. Presented at the 100th General Meeting of the American Society for Microbiology, Los Angeles, CA, May 21-25, 2000.
- 31) Cooper, D. C., Picardal, F. W., and Gorby, Y. (1999). Effect of Biologically Induced Mineralization on Trace Metal Geochemistry in Iron Reducing Systems. Annual Meeting of the Geological Society of America, Denver, CO, October 1999.
- 30) Kim, S., and Picardal, F. W. (1999) Aerobic Biodegradation of PCBs by Bacteria that Grow on Monochlorobiphenyls, 2,2'-Dichlorobiphenyl, 2,4'-Dichlorobiphenyl, and 4-Chlorobenzoic Acid. Presented at the 22nd Midwest Environmental Chemistry Workshop, Michigan Technological University, Houghton, MI, October 1-3, 1999.
- 29) Cooper, D. C., and Picardal, F. W. (1999). Effect of Biologically Induced Mineralization on Trace Metal Geochemistry in Iron Reducing Systems. Presented at the 22nd Midwest Environmental Chemistry Workshop, Michigan Technological University, Houghton, MI, October 1-3, 1999.
- 28) Cooper, D. C., Picardal, F. W., and Rivera, J. (1999). Trace Metal Immobilization via Microbial Reduction of Iron Oxide Minerals. Presented at the 4th International Symposium on Subsurface Microbiology, Vail, CO, August 22-27, 1999.
- 27) Cooper, D. C., Picardal, F. W., Lloyd, R., and Rivera, J. (1999). Dynamics of Nitrate and Nitrite Inhibition of Fe(II) Production via Goethite Reduction by *Shewanella putrefaciens* 200. Presented at the 4th International Symposium on Subsurface Microbiology, Vail, CO, August 22-27, 1999.
- 26) Cooper, D. C., Picardal, F. W., and Rivera, J. (1999). Trace Metal Immobilization via Microbial Iron Reduction. Presented at the 5th International Symposium on In Situ and On-Site Bioremediation, San Diego, CA, April 19-22, 1999.

- 25) Kim, S. and Picardal, F. W. (1999). Aerobic Mineralization of 4-Chlorobiphenyl and 4-Chlorobenzoic Acid by a Novel Bacterium. 5th International Symposium on In Situ and On-Site Bioremediation, San Diego, CA, April 19-22, 1999.
- 24) Kim, S. and Picardal, F. W. (1998). Isolation and Preliminary Characterization of Bacteria Capable of Aerobic Growth on Dichlorobiphenyls. Presented at 21th Midwest Environmental Chemistry Workshop, University of Michigan, Ann Arbor, MI, October 17-18, 1998.
- 23) Cooper, D. C. and Picardal, F. W. (1998). Effects of Nitrate on the Rates of Goethite and Lepidocrocite Reduction by *Shewanella putrefaciens* 200. Presented at 21th Midwest Environmental Chemistry Workshop, University of Michigan, Ann Arbor, MI, October 17-18, 1998.
- 22) Cooper, D. C., Rivera, J., and Picardal, F. W. (1998). Trace Metal Immobilization During Microbial Reduction of Ferric Oxyhydroxides by *Shewanella putrefaciens* 200. Presented at 21th Midwest Environmental Chemistry Workshop, University of Michigan, Ann Arbor, MI, October 17-18, 1998.
- 21) Kim, S. and Picardal, F. W. (1998). Enrichment of Novel Bacteria from PCB-contaminated Sludge Capable of Aerobic Growth on Di- and Trichlorobiphenyls. Presented at 98th General Meeting - American Society for Microbiology, Atlanta, GA, May 1998.
- 20) Kim, S., Ojala, B., Hardin, E., and Picardal, F. W. (1997). Aerobic and Anaerobic Biodegradation of PCBs Using Contaminated Lagoon Sludge from the Winston-Thomas Sewage Treatment Plant, Bloomington, IN. Presented at "20th Midwest Environmental Chemistry Workshop", Indiana University, Bloomington, IN, November 8-9, 1997.
- 19) Collins, R., Kim, S., and Picardal, F. W. (1997). Humic Substance and Iron Mineral Effects on Reductive Dechlorination Reactions. Presented at the 4th International Symposium on *In Situ* and On-Site Bioremediation, New Orleans, LA, April 28-May 1, 1997.
- 18) Picardal, F. W. and Collins, R. (1996). Effects of Humic Substances on Anaerobic Carbon Tetrachloride Biotransformation. Presented at "19th Midwest Environmental Chemistry Workshop", Purdue University, West Lafayette, IN, October 12-13, 1996.
- 17) Backhus, D. A., Picardal, F. W., Johnson, S., Knowles, T., Collins, R., Radue, A., and Kim, S. (1996). Soil- and Surfactant-Enhanced Reductive Dechlorination of Carbon Tetrachloride in the Presence of *Shewanella putrefaciens* 200. Presented at "19th Midwest Environmental Chemistry Workshop", Purdue University, West Lafayette, IN, October 12-13, 1996.

- 16) Kim, Sanggoo and Picardal, F. W. (1996). Reductive Dechlorination of Chlorinated Hydrocarbons by Surface-Bound Fe(II) from Abiotically or Microbially Reduced Iron Minerals. Presented at "19th Midwest Environmental Chemistry Workshop", Purdue University, West Lafayette, IN, October 12-13, 1996.
- 15) Kim, Sanggoo and Picardal, F. W. (1996). Enhanced Anaerobic Dechlorination of Carbon Tetrachloride by Iron Minerals. Presented at "Emerging Technologies in Hazardous Waste Management VIII", Birmingham, AL, September 1996.
- 14) Picardal, F. W. and Collins, R. (1996). Enhancement of Anaerobic Carbon Tetrachloride Biotransformation by Humic Substances. Presented at "Emerging Technologies in Hazardous Waste Management VIII", Birmingham, AL, September 1996.
- 13) Backhus, D., Picardal, F. W., Johnson, S., Knowles, T., Collins, R., Radue, A., and Kim, S. (1996). Soil- and Surfactant-Enhanced Reductive Dechlorination of Carbon Tetrachloride in the Presence of *Shewanella putrefaciens* 200. Presented at: 1996 Gordon Research Conference - Environmental Sciences: Water, New Hampton, NH, June 1996.
- 12) Picardal, F. W. (1995). Biodegradation and Bioremediation of Chlorinated Organic Compounds. Proceedings of the International Symposium on Environmental Pollution Control, Seoul, Korea, October 18, 1995.
- 11) Picardal, F. W. (1995). Biodegradation of Chlorinated Organic Compounds. Presented at the International Symposium on Environmental Pollution Control, Seoul, Korea, October 18, 1995.
- 10) Radue, A., Johnson, S., Picardal, F. W., and Backhus, D. A. (1995). The Effects of Soil and Surfactants on the Reductive Dechlorination of Carbon Tetrachloride by *Shewanella putrefaciens* 200". Presented at the 18th Midwest Environmental Chemistry Workshop, Columbus, OH, October 1995.
- 9) Picardal, F. W. (1995). Biodegradation of Chlorinated Organic Compounds. Presented at the International Symposium on Environmental Pollution Control, Seoul, Korea, October 18, 1995.
- 8) Picardal, F. W., Kim, S., Radue, A., and Backhus, D. (1995). Anaerobic Transformations of Carbon Tetrachloride: Combined Bacterial and Abiotic Processes. Presented at: Emerging Technologies in Hazardous Waste Management VII, American Chemical Society, Atlanta, GA, September 17-20, 1995.

- 7) Picardal, F. W., Arnold, R. G., Kim, S., and Paleyanda, P. (1995). Dehalogenation of Tetrachloromethane by *S. putrefaciens* in the Presence of Various Electron Acceptors and Iron Minerals. Presented at: 3rd International In Situ and On-Site Bioreclamation Symposium, San Diego, CA, April 1995.
- 6) Picardal, F. W. and Arnold, R. G. (1994). Influence of Electron Donor and Acceptor Condition on the Reductive Dehalogenation of Tetrachloromethane by *Shewanella putrefaciens* 200. Presented at the 1994 Gordon Research Conference - Environmental Sciences: Water, New Hampton, NH, June 1994.
- 5) Enzien, M., Picardal, F. W., Hazen, T. C., and Arnold, R. G. (1993). Biodegradation of Trichloroethylene and Tetrachloroethylene under Aerobic Conditions with Methane Addition in a Sediment Column. Presented at the Second International Symposium on *In Situ* and On-Site Remediation, San Diego, CA, 1993.
- 4) Picardal, F. W., Arnold, R. G., and Smith, M. E. (1992). Mechanisms of Reductive Dehalogenation of Carbon Tetrachloride by the Facultative Anaerobic Bacterium, *Shewanella putrefaciens*. Presented at the Southwestern and Rocky Mountain Division, American Association for the Advancement of Science Annual Meeting, May 1992.
- 3) Picardal, F. W., Arnold, R. G., and Smith, M. E. (1992). Mechanisms of Reductive Dehalogenation of Carbon Tetrachloride by the Iron-Reducing Bacterium, *Shewanella putrefaciens*. Presented at the American Chemical Society Annual Meeting, San Francisco, CA, April 1992.
- 2) Picardal, F. W., Enzien, M., Hazen, T. C., and Arnold, R. G. (1992). Changes in Sediment Column Microbial Community Composition Resulting From Trichloroethylene Exposure and Methane Stimulation. Presented at the American Society for Microbiology Annual Meeting, New Orleans, LA, 1992.
- 1) Arnold, R. G., Hoffman, M. R., DiChristina, T. J., and Picardal, F. W. (1990). Regulation of Dissimilatory Fe(III) Reduction in *Shewanella putrefaciens*. Presented at the Arizona Branch American Society for Microbiology Annual Meeting, Tucson, AZ, 1990.

Other Invited Presentations

- 12) Picardal, F. W. (2014). Biogeochemical Redox Cycling of Iron in Terrestrial and Aquatic Sediments. Department of Geology and Environmental Earth Science. Miami University of Ohio, Oxford, OH, February 14, 2014.
- 11) Picardal, F. W. (2013). Biogeochemical Redox Cycling of Iron: Complexities of Abiotic and Biotic Processes. Geomicrobiology Center for Applied Geoscience (ZAG), Eberhard-Karls-University Tübingen, 72076 Tübingen, Germany, July 1, 2013.

- 10) Picardal, F. W. (2012). Biogeochemical redox cycling of iron in terrestrial and aquatic sediments. Presented at the Environmental Science Graduate Program Seminar, The Ohio State University, Columbus, OH, May 4, 2012.
- 9) Picardal, F. W. (2009). Microbially-mediated redox cycling of iron in sediments. Presented at the Dept. Limnology of Stratified Lakes, IGB-Neuglobsow, Stechlin, Germany, July 22, 2009.
- 8) Picardal, F. W. (2009). Microbially-mediated redox cycling of iron in sediments. Presented at the Nordic Center for Earth Evolution (NordCEE), Institute of Biology, University of Southern Denmark, Odense, Denmark, May 20, 2009.
- 7) Picardal, F. W. (2006). Microbial and Abiotic Interactions in the Transformation of Pollutants. Presented in the Biology Department of Calvin College, Grand Rapids, MI, April 28, 2006.
- 6) Picardal, F. W. (2004). Microbial and Abiotic Interactions in the Transformation of Pollutants. Presented in the Department of Civil and Environmental Engineering, Northwestern University, Evanston, IL, June 2, 2004.
- 5) Picardal, F. W. (2003). Microbial and Abiotic Interactions in the Transformation of Pollutants. Presented in the Biology Department, Wabash College, Crawfordsville, IN, September 11, 2003.
- 4) Picardal, F. W. (1999). Microbial and Geochemical Interactions in Pollutant Transformation. Kappe Seminar in Environmental Engineering. Presented in the Civil and Environmental Engineering Department, Pennsylvania State University, State College, PA, December 3, 1999.
- 3) Picardal, F. W. (1999). Geochemical Interactions in Pollutant Transformation. Presented at the Department of Ecological Microbiology, Bayreuth Institute for Terrestrial Ecology, University of Bayreuth, Germany, July 20, 1999.
- 2) Picardal, F. W. and Arnold, R. G. (1993). Involvement of Cytochromes in the Reductive Dechlorination of Carbon Tetrachloride by *Shewanella putrefaciens*. Presented at the Swiss Federal Institute for Environmental Science and Technology (EAWAG), Dübendorf, Switzerland, June 18, 1993.
- 1) Picardal, F. W. and Arnold, R. G. (1991). Biological Reductive Dehalogenation of Halogenated Organic Compounds. Presented at United States Department of Energy Environmental Restoration and Waste Management Fellowship Meeting, Santa Fe, New Mexico, September 1991.