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Director, NSF Engineering Research Center for Re-inventing the Nation's Urban Water Infrastructure, ReNUWIt (renuwit.org) (2011-2021)

University Appointments:

- Senior Fellow, Woods Institute for the Environment, Stanford University, Stanford, CA (2005 - 2017)
- Chair, Department of Civil and Environmental Engineering, Stanford University, Stanford, CA (2003-2009)
- Silas H. Palmer Professor of Civil and Environmental Engineering, Stanford University, Stanford, CA (2000 - Present)
- Thomas Lord Chair Professor of Environmental Engineering, Carnegie Institute of Technology, Carnegie Mellon University (1996-1999)
- Head, Department of Civil and Environmental Engineering, Carnegie Institute of Technology, Carnegie Mellon University (1989-1996)
- Associate Dean, Carnegie Institute of Technology, Carnegie Mellon University (1986-1988), Acting Dean (June, 1988-December, 1988)
- Faculty Chairman-Chairman/Elect, Carnegie Institute of Technology, Carnegie Mellon University (1984-1986, 1997-1999)
- Professor, Department of Civil and Environmental Engineering, Carnegie Institute of Technology (1983-1999), Acting Head of Department (July, 1985-January, 1986)
- Associate Professor, Department of Civil Engineering, Carnegie Institute of Technology, Carnegie Mellon University (1980-1983)
- Assistant Professor, Department of Civil Engineering, Carnegie Institute of Technology, Carnegie Mellon University (1975-1980)

Previous Professional Positions:

- Research Assistant, Division of Sanitary and Hydraulic Engineering, Department of Civil Engineering, University of California, Berkeley, California (1973-1975)
- Research Assistant, Department of Civil Engineering, University of Hawaii, Honolulu, Hawaii (1968-1969)
- Graduate Assistant, International Business Machines, Data Processing Center, Honolulu, Hawaii (Summer, 1969)
- Research Aide, Stanford Electronics Laboratory, Stanford University (Summer, 1967)
- Junior Chemical Engineer, Hercules Incorporated, Hercules, California (Summer, 1966)

Research Interests: Environmental Engineering and Water Quality

- Bioavailability and physicochemical processes for sediment management and restoration
- Physicochemical processes affecting organic contaminant fate and transport in water
- Water reuse and stormwater for water supply

- Advancing more sustainable solutions for urban water as informed by a deeper understanding of institutional frameworks and systems integration

Education & Honorary Degrees:

- Honorary Doctor of Science, Clarkson University, Potsdam, NY (2005)
- PhD in Civil Engineering (Environmental Engineering), University of California, Berkeley, California (1976)
- MS in Civil Engineering (Environmental Engineering), University of California, Berkeley, California (1974)
- MS in Civil Engineering (Ocean Engineering), University of Hawaii, Honolulu, Hawaii (1969)
- BS in Chemical Engineering, University of California, Berkeley, California (1967)

Military Status:

- U.S. Navy Civil Engineer Corps, Ensign, Research Project Officer, U.S. Navy Civil Engineering Laboratory, Port Hueneme, California (1970-1971)
Qualified US Navy Ship Salvage Diving Officer,
Qualified US Navy Deep Submergence Vehicle Operator (Naval Experimental Manned Observatory, NEMO)
- U.S. Navy Civil Engineer Corps, Lieutenant Junior Grade, Assistant Officer in Charge, Underwater Construction Team One, Davisville, Rhode Island (1971-1972)
- Navy Achievement Medal (1973)
- U.S. Navy Civil Engineer Corps, Lieutenant, Inactive Reserve (1973-1979)

Memberships in Honoraria, Societies, Associations:

- American Society of Civil Engineers
- American Water Works Association
- Water Environment Federation, Fellow
- American Chemical Society
- Association of Environmental Engineering and Science Professors
- American Academy of Environmental Engineers, Diplomate
- National Academy of Engineering (elected 1999)

Academic Awards, Honors:

- Gordon Maskew Fair Award, American Academy of Environmental Engineers and Scientists, for significant contributions to the practice of environmental engineering and improvement of the world's environment (2015)
- WEF Fellow, Water Environment Federation, 2013
- "Re-Inventing Urban Water Systems to Increase the Sustainability of Cities," R. G. Luthy, Invited Plenary Speaker, 2nd Water Research Conference, International Water Association, January 20-23, 2013, Singapore
- Invited Congressional Brief, "Designing Urban Water Infrastructure to Save Energy and Water," Honorary Host, Senator Harry Reid, Discover Magazine and the National Science Foundation, Senate Visitors Center, April 25, 2012

- Inaugural Class, Department of Civil and Environmental Engineering Academy of Distinguished Alumni, University California Berkeley, Berkeley, CA (2012)
- New Horizons in Engineering Distinguished Lecture, Clarkson University (2012)
- Association of Environ. Engineering and Science Professors Service Award (2012)
- Association of Environ. Eng. and Science Professors Distinguished Lecturer, presentations at 12 locations in the US and Canada (2011-2012)
- Inaugural Pool Lecture, U. So. Carolina (2011)
- Chancellor's Lecture, U. Missouri (2011)
- Visiting Professorship, Swiss Federal Institute of Aquatic Science and Technology [Eawag], Dübendorf, Switzerland, September – November, 2009
- CH2M-Hill Inaugural Lecture, Virginia Institute of Technology (2008)
- Feng Lecture, Univ. of Mass. (2007)
- Lichtenstein Distinguished Lecture, Ohio State University (2007)
- Distinguished Lecturer, University of Texas, Dept. Civil, Arch. & Env. Eng. (2007)
- Shaw Distinguished Lecture, North Carolina State University (2006)
- Vernon L. Snoeyink Distinguished Lecturer, University of Illinois (2006)
- PhD thesis award (Outstanding Doctoral Dissertation Award), Association of Environmental Engineering and Science Professors [with John R. Zimmerman] 2006
- Elected Einstein Professor of the Chinese Academy of Sciences, Beijing, China (August 22, 2005)
- Honorary Doctor of Science, Clarkson University (2005) [“For his significant contributions to interdisciplinary research in physicochemical processes in environmental systems and the safety of our Nation's water supply.”]
- Chair Professor, Dept. of Environ. Sci. and Eng., Tsinghua University, Beijing, China (2004-2007)
- John Henske Distinguished Lecture, Yale University (2004)
- Board Member, Water Environment Research Foundation (2003-2006)
- Appointed Chair Professor, Department of Environmental Science and Engineering, Tsinghua University, Beijing, China [2003-2006]
- Recognized as a Highly Cited Researcher in “Ecology and the Environment”, and in “Engineering,” by Thomson ISI [Institute for Scientific Information], awarded to the top ranked researchers (0.5 percentile) in their field in terms of citations (<http://www.isihighlycited.com/>), 2003
- National Science Foundation, Advisory Comm. for Environmental Res. and Education (2000-2003)
- National Research Council, Chair, Committee on Bioavailability of Contaminants (2000-2002)
- National Research Council, Member and Vice Chair/Chair, Water Science and Technology Board (1997-2004)
- Lifetime National Associate of the National Academies, NAS, First class of National Associates (2001)
- Jack Edward McKee Medal, Water Environment Federation (2000)

- Association of Environmental Engineering and Science Professors, Service Award (1999)
- Member, National Academy of Engineering (elected 1999)
- Cleanup Project of the Year, US Department of Defense, Strategic Environmental Research and Development Program (1999)
- Shimizu Corporation Visiting Professor, Department of Civil and Environmental Engineering, Stanford University, Stanford, California (1996-1997)
- Pennsylvania Water Environment Federation, Professional Research Award (1996)
- Reith Distinguished Lecture, School of Civil Engineering, Purdue University (1996)
- Chair, 1994 Gordon Research Conference on Environmental Sciences
- Founders Award, best paper award in Water Research for 1992, presented by the USA National Committee of the International Association on Water Quality (1993)
- PhD thesis award (Engineering-Science Doctoral Thesis Award), presented by the Association of Environmental Engineering Professors as advisor for outstanding thesis, with J.R. Mihelcic (1988)
- Chair, NSF/AEEP Conference on Fundamental Research Directions in Environmental Engineering (1988)
- Professor of the Year Award, Pittsburgh Section of the American Society of Civil Engineers for distinction in civil engineering education and research (1987)
- Vice President/President, Association of Environmental Engineering Professors (1986-1988)
- Kappe Distinguished Lecture, Department of Civil Engineering, Pennsylvania State University, (1987)
- Founders Award, best paper award in Water Research for 1985, presented by the USA National Committee of the International Association on Water Pollution Research and Control (1986)
- PhD thesis award (Nalco Award), presented by the Association of Environmental Engineering Professors for significant physiochemical research with R.W. Walters (1982)
- Harrison Prescott Eddy Medal, best paper award presented by the Water Pollution Control Federation for outstanding research in fundamentals of wastewater treatment (1980)
- PhD thesis award (Nalco Award), presented by the Association of Environmental Engineering Professors for significant chemical research in industrial waste treatment, with R.E. Selleck (1978)
- George Tallman Ladd Award, Carnegie Institute of Technology; research award presented to young engineering faculty (1977)

Professional Registration:

- Professional Engineer, Commonwealth of Pennsylvania, PE-24546-E.

Patents:

- Provisional Patent Application: OTL for S15-136, "Black carbon-based electrolysis system and methods of use", W. A. Mitch, R. G. Luthy, Application No. 62/196,908, Filed 07/24/2015; and filings Feb 16, 2016
- "Method for Automated Control of a Combined Greywater/Stormwater System with Forecast Integration," Inventors: Marcus Quigley, Geosyntec Consultants; Brian

- Halaburka, Stanford University; Richard Luthy, Stanford University; David Sedlak, University of California, Berkeley. Patent Award: US20160115675 A1, April 28, 2016.
- Richard G. Luthy and Eun Ah Kim, “Polysulfide-Rubber Coated Activated Carbon (PSR-AC) as a Multi-Sorbent for Mercury and Polychlorinated Biphenyls (PCBs),” US Patent No. 8,748,338 B2, June 10, 2014.
 - R. G. Luthy and U. Ghosh, “In Situ Stabilization of Persistent Hydrophobic Organic Contaminants in Sediments Using Coal- and Wood-Derived Carbon Sorbents,” US Patent Application, October 16, 2002, patent award, US 7,101,115 B2, Sept. 5, 2006
 - Method for Treating Water Contaminated with Cyanide, Co-inventors, Rajat S. Ghosh, David A. Dzombak, and John R. Smith, Patent No. 5,837,145 issued November 17, 1998
 - Underwater Angle Measuring Device (with J.B. Ciani), U.S. Patent Number 3,783,624, issued January 8, 1974.

Professional Activities (selected):

- Editorial Advisory Board, ACS Environmental Science & Technology—Engineering (2020-)
- Academic Advisory Council, Water Research Foundation (2016-2020)
- Board, CEE Academy of Distinguished Alumni, U. of California, Berkeley (2013-)
- National Academy of Engineering: Nominating Committee (2016-17)
- Department of Civil and Environmental Engineering, University of California, Berkeley, External Review Committee, October 2014
- Chair, NRC Committee on Beneficial Use of Graywater and Stormwater (2013 - 15)
- National Academy of Engineering: Peer Committee, Civil Engineering, Vice Chair and Chair (2013-2016)
- Chair and Member, AEESP Foundation Board (2009-2011)
- International Advisory Committee, Division of Environment, Hong Kong University of Science and Technology, July 26-27, 2010, Hong Kong.
- Visiting Committee, College of Engineering, Nanyang Technological University, March 3-5, 2010, Singapore
- Extramural Review Committee, Graduate Programs in Chemical and Environmental Engineering, University of California – Riverside, January 25-26, 2010
- Chair, Committee to Review Communication Activities, Board on Environmental Studies and Toxicology, Division on Earth and Life Sciences, National Research Council, Washington, DC. 2009-2010.
- Chair, Peer Review, Swiss Federal Institute of Aquatic Science and Technology (2009)
- Chair, Review Panel, Helmholtz Program on Sustainable Water Resources Management, Leipzig (2009)
- Civil and Environmental Engineering Advisory Council, University of California, Berkeley, CA [2007- 2011]
- MIT Corporation Visiting Committee, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology [2006-2008]
- National Research Council, Committee on Effectiveness of Dredging at Superfund Megsites [2006-2007]
- External Reviewer, Department of Civil and Environmental Engineering, UCLA, 2005

- Member, Community Resource Group for Implementation of Stanford University's General Use Permit, Santa Clara County Planning Department [2003-2019]
- External Review Team Member, Department of Civil and Environmental Engineering, Duke University, March 25-26, 2004
- Board Member, Water Environment Research Foundation, Alexandria, VA [2003-2006]
- Chair, Peer Review Committee, Swiss Federal Institute for Environmental Science and Technology (EAWAG), September 29-October 3, 2003, Dübendorf, ETH, Switzerland
- Co-Chair, National Science Foundation, U.S./Italy Workshop on Sediment Management Research: A CLEANER Scenario, December 9-10, 2002, Arlington, VA
- Asst. Chair, Workshop 2: Collaborative Large-scale Engineering Networks for Environmental Research, Defining the Concept of Environmental Field Facilities (EFFs), University of Minnesota, October 20-22, 2002
- Reviewer, Making the Nation Safer: The Role of Science and Technology, Committee on Science and Technology for Countering Terrorism, National Research Council, National Academies, June, 2002
- Host and co-chair, NSF workshop on Collaborative Large-scale Engineering Networks for Environmental Protection, Stanford University, Stanford, CA, Dec 4-5, 2001
- Workshop on Graduate Enrollment Issues in Environmental Engineering, University of California, Berkeley (September 7, 2001)
- National Research Council, Chair, Water Science and Technology Board (2001-2004)
- Program Review Committee, Department of Civil and Environmental Engineering, The University of Washington (2001)
- Advisory Committee, Department of Geography and Environmental Engineering, The Johns Hopkins University (1998-)
- National Science Foundation, Advisory Comm. for Environmental Res. and Education (2000-2003)
- National Research Council, Water Science and Technology Board, Chair, Committee on Bioavailability (2000-2002)
- External Review Team, Division of Environmental Engineering, University of Toronto (1999)
- Advisory Council, School of Engineering, Stanford University, Stanford, CA (1998-2000)
- Progress Review, Environmental Science, The Ohio State University (1998)
- Visiting Committee, Co-Chair, Department of Civil and Environmental Engineering, Stanford University, Stanford, CA (1997)
- National Research Council, Water Science and Technology Board, Committee on Intrinsic Remediation (1997-2000)
- National Research Council, Member and Vice Chair, Water Science and Technology Board (1997-2001)
- Shimizu Visiting Professor, Department of Civil and Environmental Engineering, Stanford University, Stanford, CA (1996-97)
- Chair, Workshop on Chemical Processes that May Bind or Sequester Hydrophobic Organic Contaminants on Soils or Sediments, US Air Force Office of Scientific Research, Pittsburgh, PA (1996)
- International Association on Water Quality, USA National Committee (1996-1999)

- The Environmental City Task Force, Pittsburgh as an Environmental Research, Technology and Education Center Working Group (1995-1997)
- National Research Council, Water Science and Technology Board, Committee on Innovative Remediation Technologies, Washington, DC (1994-1997)
- Project Review Team, NAPL Contaminated Soil/ Groundwater Remediation Using Foams, Argonne National Laboratory, Argonne, IL (1995)
- Group Leader, Session on Soil, Workshop on Environmentally Acceptable Endpoints in Soil, Gas Research Institute, Arlington, VA, (1995)
- Chair, Pre-Conference Impacts Assessment Seminar, AEEP/NSF Research Opportunities Conference (1995)
- Panel for Review of Soil Quality Criteria, Bureau of Waste Management, Department of Environmental Resources, Commonwealth of Pennsylvania, Harrisburg, PA (1994-1996).
- National Institute of Environmental Health Sciences, Superfund Hazardous Substances Basic Research Program Panel, National Institutes of Health, Research Triangle Park, NC, (1994)
- Scientific Advisory Committee, Western Region Hazardous Substance Research Center, Department of Civil and Environmental Engineering, Stanford University (1994-1999)
- University of Arizona, Review Panel, Center for Toxicology, Hazardous Waste Research Projects, College of Pharmacy and Department of Hydrology, Tucson, Arizona (1994)
- Engineering Advisory Council, School of Engineering, Clarkson University, Potsdam, NY (1993-1996)
- US EPA, Environmental Research Laboratory, Athens, GA, Review Panel on Effects of Nonionic Surfactants on Microbial Anaerobic Dechlorination of Hazardous Organic Compounds (1993)
- Academic Research Infrastructure Program, National Science Foundation, Review Panel, Washington, DC (1993)
- US EPA Science Advisory Board, Environmental Engineering Committee, Subcommittee on Superfund Ground-Water Strategic Plan and Dense Non-Aqueous Phase Liquids (1992)
- Editorial Advisory Board, Environmental Science and Technology (1992-1994)
- Water Environment Federation, Research Foundation, Project Subcommittee on Dehalogenation of Organic Pollutants in Anaerobic Digestion (1992-1996).
- Science Advisory Committee, US EPA Great Plains and Rocky Mountains Hazardous Substance Research Center (1992-1994)
- Chairman, AEESP Committee on Future Concerns in Environmental Engineering Graduate Education (1991)
- US EPA Bioremediation Action Committee, Research and Education Subcommittee (1990-1992)
- US EPA Science Advisory Board, Environmental Engineering Committee, Toxic Treatability Subcommittee (1990)
- Conference Organizing Committee, 16th Biennial Conference, Washington, D.C., International Association on Water Pollution Research and Control (1990-1992)
- Water Environment Federation, Awards Committee (1989-1994)
- Groundwater Committee, Water Pollution Control Federation (1989-1991)
- Board of Editors, Research Journal Water Pollution Control Federation (1989-1992)

- US EPA, Environmental Research Laboratory, Athens, GA, Physicochemical Processes Research Review (1989)
- American Academy of Environmental Engineers, Engineering Education Committee (1988-1992)
- US EPA R.S. Kerr Environmental Research Laboratory, Ada, OK, Abiotic Processes Research Program Review (1989)
- US Department of Energy, Subsurface Science Program Review, Gaithersburg, MD (1989)
- National Research Council, U.S. Scientific Delegation on Clean and Efficient Utilization of Water in Iron and Steel Making, National Academy of Sciences, Beijing (1988).
- Visiting Committee, University of California, Berkeley, Environmental Engineering Program (1987)
- Research Symposia Subcommittee, Water Pollution Control Federation (1985-1987)
- Association of Environmental Engineering Professors: Distinguished Lecturer Committee (1982-1984), Chairman (1984-1985); Awards Committee (1983-1984; 1989-1991); Director (1985-1988), Vice President/President (1986-1988)
- Pesticide Manufacturing Waste Treatment and Effluent Standards, U.S. EPA, Science Advisory Board, Environmental Engineering Committee, Washington, D.C., (1983).
- Consultant, US EPA Science Advisory Board, Environmental Engineering Committee (1983-present)
- Director, Pittsburgh Section ASCE (1982-1984)
- Awards Committee, Water Pollution Control Federation (1981-1984)
- Hazardous Waste Management Committee, American Society of Civil Engineers (1979-1982)
- Technical Advisor, Allegheny County Health Department, Water Quality and Solid Waste Control (1977-1981)
- Reviewer various journals--Journal Water Pollution Control Federation/Water Environment Research --Environmental Science and Technology --Water Research --Journal of Environmental Engineering, etc.
- Joint Task Group Committee for Standard Methods: Oil and Grease, Cyanide (1975-present); Chairman, Joint Task Group on Cyanide (1985-1995)
- Faculty Advisor, Student Chapter ASCE, Carnegie Mellon University (1975-1979); ASCE Award for Outstanding Service (1978)

Funded Research:

- NSF INTERN Supplement, Bay Area One Water Network and Delivering Both Stormwater and Recycled Water to Existing Groundwater Recharge Ponds, R.G. Luthy, PI, \$160,000, 10/1/18-9/30/19
- Woods Institute, Stanford, REIP Prog., Advanced Planning Methods to Enhance Urban Water Security by Delivering both Stormwater and Recycled Water to Existing Groundwater Recharge Ponds, R.G. Luthy, PI, \$130,000, 10/1/18-9/30/20
- Anaerobic Fluidized Bed Reactor Fouling Control & Dissolved Methane Management, Singapore Public Utility Board C. Criddle, PI, P. McCarty, Co-PI, R. Luthy, Co-PI, \$349,747, 6/13/18-6/12/20

- Prevention of Sediment Recontamination By Improved BMPs to Remove Organic and Metal Contaminants from Stormwater Runoff, US DOD Strategic Environmental Research & Development Program, R.G. Luthy, PI, C. Higgins, Co-PI, \$1,497,803, 9/18/2018-9/17/2021
- Activated Carbon Treatability Studies for the United Heckathorn Superfund Site, Montrose Chemical Corporation, Add-on continuation, R.G. Luthy, PI, \$181,414, 7/1/17-9/30/18
- Reducing the Environmental Impacts of Food-Energy-Water Systems in and Around Cities, National Science Foundation, INFIEWS/T1, A. Horvath, PI; R.G. Luthy co-PI, \$2,431,217, 1/1/218-12/31/20
- New Stormwater Schemes to Improve Water Quality for Groundwater Recharge and Urban Water Supply, UPS Endowment Fund, Stanford, R.G. Luthy, PI, \$78,388, 10/1/17-9/30/19
- Activated Carbon Treatability Studies for the United Heckathorn Superfund Site, Montrose Chemical Corporation, R.G. Luthy, PI, \$277,351, 7/1/16-6/30/17
- REU Site: Re-Inventing the Nation's Urban Water Infrastructure, NSF Research Experiences for Undergrads, R.G. Luthy, PI, \$354,450, 9/15/13-8/31/19
- In-situ Remediation of Petroleum Hydrocarbons in Sediment: Advancing the State-of-the-Art; Phase 2: Chevron Energy Technology Company, Richmond, CA, R.G. Luthy, PI, Continuation, \$220,000, 10/1/15-12/31/16
- Long-Term Risk Reduction from Activated Carbon Treatment of Sediment; US Dept. of Defense, Strategic Environmental Research and Development Program, Incremental extension to March 30, 2016, R. G. Luthy, \$126,689
- Improved Stormwater Best Management Practices (BMPs) to Meet Water Quality Standards, UPS Endowment Fund, Stanford University, R.G. Luthy, \$499,905, 10/1/2015 – 9/30/2017
- Geomedia to Sequester or Transform Contaminants from Urban Stormwater at the Rory M. Shaw Wetlands Park, Los Angeles Department of Water & Power, Department of Public Works-Bureau of Sanitation and Los Angeles County Flood Control District, R. G. Luthy and D. L. Sedlak, \$855,000, 11/15-06/19
- Enhanced Removal of Nutrients from Urban Runoff with Novel Unit-Process Capture, Treatment, and Recharge Systems; Water Research Foundation, US EPA Nutrient Center, R. G. Luthy and D. L. Sedlak, \$459,125, 11/1/14-11/17
- REU Site: Re-Inventing the Nation's Urban Water Infrastructure, NSF, \$371,250, 6/17/13-8/16/15
- In-situ Remediation of Petroleum Hydrocarbons in Sediment: Advancing the State of the Art; Phase 2, Chevron Energy Technology Company, Richmond, CA, R.G. Luthy PI, O. Fringer, S. Monismith, Co-PI, \$1,101,500, 7/1/12-6/30/15
- Trace Organics in Recycled Water: Analysis of Plant Uptake and Processing, Woods Institute for the Environment, Stanford University, E. S. Sattely, PI, R.G. Luthy, Co-PI \$175,000 [7/1/12- 6/30/14]
- Engineering Research Center for Re-inventing America's Urban Water Infrastructure, National Science Foundation, R.G. Luthy, Director and PI, David L. Sedlak, Jörg E. Drewes, J. McCray, N. Khandan, Co-PIs, August 1, 2011 – July 31, 2016, \$18.5 million; continued through 2021, \$18.5 M additional; \$37 M total

- Environmental Remediation: Sediment Management and Restoration (Fate and Environmental Risk of DDT and Metabolites in Lake Maggiore, Italy), Eni, S.p.A., Italy, R.G. Luthy, PI, O. Fringer, S. Monismith Co-PI, \$1,356,930, 2/1/2011-12/31/2015
- Long-Term Risk Reduction from Activated Carbon Treatment of Sediment, US Dept. of Defense, Strategic Environmental Research and Development Program, R.G. Luthy, PI, \$1,055,714, 9/28/10-9-27/14 (additional supplement, \$126,000)
- Pilot-Scale Deployment of Activated Carbon at Castro Creek, Richmond, CA, Chevron Environmental Management Co., R.G. Luthy, \$96,000, 9/1/2011- 5/31/2011
- In-Situ Immobilization of Mercury from Sediment Using Reduced-Sulfur-Enriched Activated Carbon; National Institute of Health National Institute of Environmental Health Sciences, Superfund Research Program, R. G. Luthy, PI, \$150,000 (7/1/2010 - 7/31/12)
- In-situ Remediation of Petroleum Hydrocarbons in Sediment: Advancing the State-of-the-Art, Chevron Energy Technology Company, Richmond, CA, R.G. Luthy, PI, \$499,000, 7/1/10-5/31/12
- Evaluation of Amendment for In-situ Management of Sediment from a Chevron Site in Northern California, ChevronTexaco Corp., Chevron Energy, Technology Co., Richmond, CA, R. G. Luthy, PI, \$271,280, 6/1/09- 9/30/10; \$48,000 supplement, 10/1/10-12/31/10; Supplement \$48,000 [10/1/10 – 12/31/10]
- Decision-making in Recycled Water Project Implementation: Symmetry in Scientific Knowledge and Political Economy, Woods Institute for the Environment, Stanford University, R.G. Luthy, PI \$199,587, [7/1/08- 6/30/11]
- Activated Carbon as a Multifunctional Amendment to Treat Mercury and PCBs, National Institute of Health, National Institute of Environmental Health Sciences; R. G. Luthy, PI, S. Fendorf Co-PI, \$920,172 [10/1/07 – 9/30/10]
- Measurement and Modeling of Ecosystem Risk and Recovery for In Situ Treatment of Contaminated Sediments, US Department of Defense, Strategic Environmental Research and Development Program, R. G. Luthy, PI, S. N. Luoma and J. K. Thompson, Co-PIs, \$1,474,000, 3/1/2007 – 2/28/2010.
- Biodynamic Modeling of Perfluorchemical Bioaccumulation to Assess the Use of Recycled Wastewater for Urban Stream Flow Augmentation and Habitat Restoration, UPS Foundation, \$50,000, R.G. Luthy, M. Reinhard, D. Epel, Stanford University [2006-2008]
- Field Testing of Activated Carbon Mixing and In Situ Stabilization of PCBs In Sediment US, Dept. of Defense Environmental Security and Technology Certification Program, \$1,006,000, R.G. Luthy, PI, T. Bridges, Co-PI, U. Ghosh, Co-PI (6/13/05-12/31/07)
- PAH Analyses in Lampblack-Impacted Sediments from Lake Union, Puget Sound Energy and ReTeC Group, \$64,500, R. G. Luthy, PI (1/1/05-9/30/05)
- Smart Chemical Design: Integrating Functional Performance with Environment with Environmental Fate and Toxicity, \$120,000, C.W. Frank, C.S. Criddle, R.G. Luthy, D. Epel, Woods Institute for the Environment, Stanford University [2004-2006]
- Preliminary Field Testing of Activated Carbon Mixing and In situ Stabilization of PCBs in Sediment, Southwest Division Naval Facilities Engineering Command, US Navy, San Diego, \$104,000, R. G. Luthy, PI (7/1/04- 3/31/05)
- Analysis of Lampblack Samples, Gas Technology Institute, \$12,000, R.G. Luthy, PI (4/1/03-09/30/03)

- Major Research Instrumentation Grant for Acquisition of Analytical Equipment for Interdisciplinary Research on Emerging Contaminants in Aquatic Environments National Science Foundation, \$638,381, R.G. Luthy, PI, C. Criddle, Co-PI, D. Epel, Co-PI, M. Reinhard, Co-PI, S. Fendorf, Co-PI (8/1/02-7/31/05)
- Perfluorinated Organic Compound Biotransformation, Fate, and Availability in the Environment, National Science Foundation, \$398,989, R.G. Luthy, PI, C. Criddle, Co-PI (7/15/02-6/30/05)
- Measurement of Site-Specific Partition Coefficients and Risk Assessment for PAHs at Alameda Point, Department of the Navy, \$160,000, R. Luthy, PI, U. Ghosh, Co-PI (5/20/02-5/31/03)
- Nitromusk Compounds: Are They Bioavailable and Do They Compromise Toxin Defense Systems?, California Sea Grant Program, \$397,221 D. Epel, PI, R. Luthy, Co-PI (3/1/02-2/28/05)
- “Microscale Characterization of the Binding and Sequestration of Nitroaromatics in Soils.” US Army Engineer Research and Development Center, \$100,000, R.G. Luthy, PI, U. Ghosh Co-PI (2001-2002)
- “In Situ Stabilization of Persistent Organic Contaminants in Marine Sediments,” US Dept. of Defense, Strategic Environmental Research and Development Program, \$1,500,000, R.G. Luthy, PI, R.N. Zare, U. Ghosh, J.W. Talley, Todd S. Bridges, Co-PIs, (2001-2004)
- “Contaminated Sediment Processes and Bioavailability,” Stanford University Bio-X Interdisciplinary Initiative Program, \$166,000, R.G. Luthy, PI, SG. Monismith, D. Epel, and R.N. Zare Co-PIs (2001-2003)
- “Geochemistry of PCBs in Sediments.” Ford Fund, Ford Motor Company, \$245,000, R.G. Luthy, PI (2000-2003)
- “Characterization of Lampblack Materials in Soils,” Gas Technology Institute (\$125,000), R.G. Luthy, PI (2000-2002)
- “Biostabilization of Polycyclic Aromatic Hydrocarbons Under Denitrification Conditions in Sediments,” US Army Research Office (\$100,000), Gas Research Institute (\$100,000), and R.G. Luthy and R.N. Zare (1998-1999)
- “Assessment and Prediction of Biostabilization of Polycyclic Aromatic Hydrocarbons (PAHs) in Sediments,” US Dept. of Defense, Strategic Environmental Research and Development Program, \$1,500,000, J.W. Talley, R.G. Luthy, R.N. Zare and H. Pritchard, Co-PIs (1997-2000)
- “Subsurface Fate and Transport of Cyanide at MGP Sites,” Electric Power Research Institute, Palo Alto, CA, and Wisconsin Power and Light Company, Madison, WI, \$59,430 (continuation funding), D.A. Dzombak and R.G. Luthy, Principal Investigators (1995-1999).
- “Cyanide Formation and Fate in Complex Effluents and Its Relation to Water Quality Criteria,” Water Environment Research Foundation, Electric Power Research Institute, and Gas Research Institute, \$210,000, D.A. Dzombak and R.G. Luthy, Principal Investigators (1998-2001). Other collaborators with separate funding: Malcolm-Pirnie, Oakland, CA, and Clarkson University.
- “Characterization of the Distribution and Assessment of the Bioavailability of Hydrophobic Organic Contaminants on Geosorbents.” US Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS, \$166,000, R.G. Luthy, Principal Investigator (1997-2000)

- "Bioavailability and Biostabilization of PCBs in Soil," DOE/EPA/NSF/ONR Joint Program on Bioremediation, US Environmental Protection Agency, Office of Research and Development, Washington, DC, \$524,000, R.G. Luthy, Principal Investigator (1997-2001)
- "Chemical Processes that Affect the Persistence and Release of Hydrophobic Organic Contaminants in Soils or Sediments," Gas Research Institute, Chicago, IL, and Remediation Technologies, Inc., for support of sabbatical leave to Stanford University, \$40,000, R.G. Luthy, Principal Investigator (1996-1997)
- "Focused Workshop on Chemical Processes that May Bind or Sequester Organic Contaminants in Soils or Sediment," Air Force Office of Scientific Research, Directorate of Chemistry and Life Sciences, Bolling Air Force Base, DC, \$19,400, R.G. Luthy, Principal Investigator (1996-1997).
- "Evaluation of Physical-Chemical Mechanisms Controlling PCB Release from Contaminated River Sediment," Aluminum Company of America, Alcoa Technical Center, Alcoa Center, PA, \$101,678, D. A. Dzombak and R. G. Luthy, Co-Principal Investigators (1995-1996).
- "Treatment of Cyanide-Contaminated Water via Iron-Cyanide Precipitation," Aluminum Company of America, Alcoa Technical Center, Alcoa Center, PA, \$150,000, D. A. Dzombak and R. G. Luthy, Co-Principal Investigators (1995-1997).
- "Subsurface Fate and Transport of Cyanide at Manufactured Gas Plant Sites", Electric Power Research Institute, Palo Alto, CA, \$270,000, D. A. Dzombak, R. G. Luthy and D. V. Nakles, Co-Principal Investigators (1995-1997).
- "Laboratory Investigations of Leaching of PCB Congeners from Contaminated Sludges and Soils," Aluminum Company of America, Alcoa Technical Center, Alcoa Center, PA, \$193,900, D.A. Dzombak and R.G. Luthy, Co-Principal Investigators (1994-1995).
- "Laboratory Investigations of Leaching of PCB Congeners from Contaminated Sludges and Soils," Aluminum Company of America, Alcoa Technical Center, Alcoa Center, PA, \$88,900, D.A. Dzombak and R.G. Luthy, Co-Principal Investigators (1994).
- "Support for the 1994 Gordon Research Conference on Environmental Sciences: Water," US EPA, Athens Environmental Research Laboratory, Athens, GA, \$15,790; US Air Force, Environmental Research Division, Tyndall Air Force Base, Panama City, FL, \$15,000; R.G. Luthy, Principal Investigator (1994).
- "Modeling of Transport of PCB Congeners in Porous Media", Aluminum Company of America, Alcoa Technical Center, Alcoa Center, PA, \$29,900, D.A. Dzombak and R.G. Luthy, Co-Principal Investigators (1993).
- "Product Design for the Environment", IBM Corporation, Environmental Research Program, Stamford, CT, \$1,920,000, R.G. Luthy, Principal Investigator, 15 Co-PIs (1993-1997).
- "Renovation of the Environmental Engineering Laboratories at Carnegie Mellon University", National Science Foundation, Academic Research Infrastructure Program, \$429,800, R.G. Luthy, C.I. Davidson and D.A. Dzombak, Co-Principal Investigators (1993-1995).
- "Surfactant-aided Pump-and-Treat Remediation of Dense Non-aqueous Phase Liquids", US Environmental Protection Agency, Office of Exploratory Research, Washington, DC, \$319,000, R.G. Luthy and D.A. Dzombak, Co-Principal Investigators (1992-1995).
- "Graduate Fellowship in Bioremediation and Cleanup of Soil or Aquifer Media Contaminated by Coal Tar", Baltimore Gas and Electric Co., \$186,000, R.G. Luthy, Principal Investigator (1992-1995).

- "Process Evaluation of Landfill Leachate Treatment by Evaporation", Chambers Development Corporation, Pittsburgh, PA, \$100,000, R.G. Luthy and F.C. McMichael, Co-Principal Investigators (1992-1993).
- "Solubilization of Polycyclic Aromatic Hydrocarbon Contaminants in Soil-Water Systems Using Surface Active Agents", U.S. Environmental Protection Agency, Office of Exploratory Research, Washington, D.C., \$208,700, R.G. Luthy, Principal Investigator, A.M. Jacobson, Co-Principal Investigator (1991-1993).
- "Graduate Student Fellowship for Research on Bioremediation", Environmental Technology Applications, subsidiary of Beazer PLC, Monroeville, PA, \$16,000, R.G. Luthy, Principal Investigator (1991-1992).
- "Biodegradation of PAH Compounds in Porous Media", Texaco Inc., Research and Development, Beacon, NY, Graduate Fellowship, \$60,000, R.G. Luthy, Principal Investigator (1991-1993).
- "In Situ Solvent Extraction for Remediation of Coal Tar Sites", U.S. Geological Survey, Reston, VA, \$61,000, D.A. Dzombak and R.G. Luthy, Co-Principal Investigators (1990-1991).
- "Center for Solid Waste Management", Ben Franklin Technology Center, Pittsburgh, PA, \$20,000, F.C. McMichael and R.G. Luthy, Co-Principal Investigators (1990-1991).
- "Distillation of Landfill Leachate", Chambers Development Corporation, Pittsburgh, PA, \$103,400, R.G. Luthy, Principal Investigator (1990-1991).
- "Microbial Mineralization of Coal-Derived Hydrophobic Organic Contaminants", U.S. Department of Energy, Advanced Coal Research at U.S. Colleges and Universities, Pittsburgh Energy Technology Center, Pittsburgh, PA, \$210,000, R.G. Luthy, Principal Investigator (1990-1993).
- "Microbial Denitrification and Degradation of Hydrophobic Aromatic Hydrocarbon Compounds in Soil-Water Systems", U.S. Environmental Protection Agency, Office of Exploratory Research, Washington, D.C., \$209,500, R.G. Luthy, Principal Investigator (1989-1991).
- "In Situ Solvent Extraction for Remediation of Coal Tar Sites", Electric Power Research Institute, Palo Alto, CA, \$315,000, R.G. Luthy, Principal Investigator, David A. Dzombak, Co-Investigator (1989-1992).
- "Enhanced Bio-Remediation of Hydrophobic Organic Contaminants in Soil-Water Systems Through Addition of Solubilizing Agents", U.S. Environmental Protection Agency, Office of Exploratory Research, Washington, DC, \$181,000, R.G. Luthy, Principal Investigator (1988-1990).
- "Conference on Fundamental Research Directions in Environmental Engineering", National Science Foundation, \$44,400; U.S. Environmental Protection Agency, \$10,000, R.G. Luthy, Principal Investigator, C.R. O'Melia and J.J. Morgan, Co-Principal Investigators (1988-1989).
- "Chemical Degradation of Substituted Aromatic Hydrocarbons in Soil/Sediment Systems," Advanced Coal Research at US Colleges and Universities, US Department of Energy, Pittsburgh Energy Technology Center, Pittsburgh, PA, \$141,000, R.G. Luthy Principal Investigator (1986-1988)
- "Prediction of Solute Solubility in Solvent/Water Mixtures", U.S. Environmental Protection Agency, Robert S. Kerr Environmental Research Laboratory, Ada, OK, \$84,500, R.G. Luthy, Principal Investigator (1985-1986).

- "Adsorption and Degradation of PAH Compounds in Soil," U.S. Department of Energy, Grand Forks Project Office, Grand Forks, ND, \$320,000, R.G. Luthy, Principal Investigator (1984-1987).
- "Engineering Chemistry and Biochemistry of Hydantoins," Advanced Coal Research at U.S. Colleges and Universities, U.S. Department of Energy, Pittsburgh Energy Technology Center, Pittsburgh, PA, \$142,000, R.G. Luthy, Principal Investigator (1984-1986).
- "The Effect of Electrical Gradients on Movement of Organic Chemical Pollutants in Saturated Flow Through Soil," Office of Toxic and Hazardous Waste Management, Pennsylvania State University, University Park, PA, \$15,000, R.G. Luthy and F.C. McMichael, Co-Principal Investigators, (1983-1984).
- "Pollutant Sorption to Soils/Sediments in Organic/Aqueous Solvent Systems," U.S. Environmental Protection Agency, Environmental Research Laboratory, Athens, GA, \$60,000, R.G. Luthy, Principal Investigator (1983-1984).
- "Cooling Tower Simulation with Wastewater", U.S. Department of Energy, \$100,400, R.G. Luthy, Principal Investigator, (1982-1983).
- "Investigation of Limiting Engineering and Chemical Factors for Recycle and Reuse of Blast Furnace Scrubber Waters Under the Clean Water Act and RCRA," U.S. Environmental Protection Agency, Washington, D.C., \$172,000, R.G. Luthy and F.C. McMichael, Principal Investigators (1981-1983).
- "Ion Chromatography for Analysis of Environmental Samples," National Science Foundation, \$13,400 Equipment Grant, C.I. Davidson and R.G. Luthy, Principal Investigators (1981-1982).
- "Studies for Removal of Organic Constituents in Process Wastewater From Modified In-Situ Oil Shale Retort," Argonne National Laboratory, Argonne, IL, \$35,000, R.G. Luthy, Principal Investigator (1981).
- "Treatment of Slagging Fixed-Bed Gasification Process Wastewater: Disposition of Trace Organic Compounds," Grand Forks Energy Technology Center (US DOE), \$188,500, R.G. Luthy, Principal Investigator (1981-1982).
- "Water Management and Wastewater Reuse in Coal Conversion Facilities," U.S. Department of Energy, Pittsburgh Energy Technology Center, \$138,700, R.G. Luthy, Principal Investigator (1980-1983).
- "Physicochemical Adsorption Phenomena of Polycyclic Aromatic Hydrocarbons in Coal Conversion Wastewaters," U.S. Department of Energy, \$101,600, R.G. Luthy, Principal Investigator (1980-1982).
- "Removal of Organic Constituents from Gasification Wastewater by Solvent Extraction and Powdered Activated Carbon/Activated Sludge Treatment," Argonne National Laboratory, Argonne, IL; \$44,000, R.G. Luthy, Principal Investigator (1980).
- "Treatment of Slagging Fixed-Bed Gasification Process Wastewater," Grand Forks Energy Technology Center, Grand Forks, ND; \$65,400; R.G. Luthy, Principal Investigator (1979-1980).
- "Removal of Polycyclic Aromatic Compounds in Coke Plant Wastewater," MPC Corporation, Pittsburgh, Pennsylvania; \$44,000; R.G. Luthy, Principal Investigator (1979-1980).
- "Development of Procedures for Evaluating Wastewater Emulsified Oil Separation," Lancy Division of Dart Environment and Services Co., \$23,000; R.G. Luthy, Principal Investigator (1979-1980).

- "Evaluation of Treatment Technologies for Water Reuse in Coal Coking and Coal Gasification," U.S. Department of the Interior, Office of Water Research and Technology, \$58,580; R.G. Luthy, Principal Investigator (1978-1979).
- "Environmental Assessment in the DOE Coal Gasification Development Program," U.S. Department of Energy, \$359,000; M.J. Massey and R.W. Dunlap, Principal Investigators; R.G. Luthy, F.C. McMichael and E.S. Rubin, Co-Investigators (1976-1978). J.P. Fillo, R.G. Luthy, M.J. Massey, Principal Investigators, \$380,000 (1978-1979).
- "Biological Oxidation of High Strength Coal Refinery Wastewaters," National Science Foundation, \$19,900; R.G. Luthy, Principal Investigator (1977-1978).

Journal Papers, Book Chapters and Discussions Critically Reviewed Before Publication:

- Spahr, S., Teixido, M., Sedlak, D. L., & Luthy, R. G. (2020). Hydrophilic trace organic contaminants in urban stormwater: occurrence, toxicological relevance, and the need to enhance green stormwater infrastructure. *Environmental Science-Water Research & Technology*, 6(1), 15-44. doi:10.1039/c9ew00674e
- Ashoori, N., Teixido, M., Spahr, S., LeFevre, G. H., Sedlak, D. L., & Luthy, R. G. (2019). Evaluation of pilot-scale biochar-amended woodchip bioreactors to remove nitrate, metals, and trace organic contaminants from urban stormwater runoff. *Water Research*, 154, 1-11. doi:10.1016/j.watres.2019.01.040
- Bradshaw, J. L., Ashoori, N., Osorio, M., & Luthy, R. G. (2019). Modeling Cost, Energy, and Total Organic Carbon Trade-Offs for Stormwater Spreading Basin Systems Receiving Recycled Water Produced Using Membrane-Based, Ozone-Based, and Hybrid Advanced Treatment Trains. *Environmental Science & Technology*, 53(6), 3128-3139. doi:10.1021/acs.est.9b00184
- Bradshaw, J. L., Osorio, M., Schmitt, T. G., & Luthy, R. G. (2019). System Modeling, Optimization, and Analysis of Recycled Water and Dynamic Storm Water Deliveries to Spreading Basins for Urban Groundwater Recharge. *Water Resources Research*, 55(3), 2446-2463. doi:10.1029/2018wr024411
- Halaburka, B. J., LeFevre, G. H., & Luthy, R. G. (2019). Quantifying the temperature dependence of nitrate reduction in woodchip bioreactors: experimental and modeled results with applied case-study. *Environmental Science-Water Research & Technology*, 5(4), 782-797. doi:10.1039/c8ew00848e
- Luthy, R. G., Sharvelle, S., & Dillon, P. (2019). Urban Stormwater to Enhance Water Supply. *Environmental Science & Technology*, 53(10), 5534-5542. doi:10.1021/acs.est.8b05913
- Wolfand, J. M., Seller, C., Bell, C. D., Cho, Y. M., Oetjen, K., Hogue, T. S., & Luthy, R. G. (2019). Occurrence of Urban-Use Pesticides and Management with Enhanced Stormwater Control Measures at the Watershed Scale. *Environmental Science & Technology*, 53(7), 3634-3644. doi:10.1021/acs.est.8b05833
- Wu, L. W., Ning, D. L., Zhang, B., Li, Y., Zhang, P., Shan, X. Y., . . . Consortium, G. W. M. (2019). Global diversity and biogeography of bacterial communities in wastewater treatment plants. *Nature Microbiology*, 4(7), 1183-1195. doi:10.1038/s41564-019-0426-5
- Lin, D. N., Cho, Y. M., Tommerdahl, J. P., Werner, D., & Luthy, R. G. (2018). Bioturbation facilitates DDT sequestration by activated carbon against recontamination by sediment deposition. *Environmental Toxicology and Chemistry*, 37(7), 2013-2021. doi:10.1002/etc.4128
- Pritchard, J. C., Cho, Y. M., Ashoori, N., Wolfand, J. M., Sutton, J. D., Carolan, M. E., . . . Luthy, R. G. (2018). Benzotriazole Uptake and Removal in Vegetated Biofilter

- Mesocosms Planted with *Carex praegracilis*. *Water*, 10(11). doi:ARTN 1605 10.3390/w10111605
- Wolfand, J. M., Bell, C. D., Boehm, A. B., Hogue, T. S., & Luthy, R. G. (2018). Multiple Pathways to Bacterial Load Reduction by Stormwater Best Management Practices: Trade-Offs in Performance, Volume, and Treated Area. *Environmental Science & Technology*, 52(11), 6370-6379. doi:10.1021/acs.est.8600408
- Bradshaw, J. L., & Luthy, R. G. (2017a). Modeling and Optimization of Recycled Water Systems to Augment Urban Groundwater Recharge through Underutilized Stormwater Spreading Basins. *Environmental Science & Technology*, 51(20), 11809-11819. doi:10.1021/acs.est.7b02671
- Bradshaw, J. L., & Luthy, R. G. (2017b). Correction to Modeling and Optimization of Recycled Water Systems to Augment Urban Groundwater Recharge through Underutilized Stormwater Spreading Basins (vol 51, pg 11809, 2017). *Environmental Science & Technology*, 51(24), 14483-14483. doi:10.1021/acs.est.7b05866
- Halaburka, B. J., LeFevre, G. H., & Luthy, R. G. (2017). Evaluation of Mechanistic Models for Nitrate Removal in Woodchip Bioreactors. *Environmental Science & Technology*, 51(9), 5156-5164. doi:10.1021/acs.est.7b01025
- LeFevre, G. H., Lipsky, A., Hyland, K. C., Blaine, A. C., Higgins, C. P., & Luthy, R. G. (2017). Benzotriazole (BT) and BT plant metabolites in crops irrigated with recycled water. *Environmental Science-Water Research & Technology*, 3(2), 213-223. doi:10.1039/c6ew00270f
- Lin, D., Cho, Y. M., Oen, A., Eek, E., Tommerdahl, J. P., & Luthy, R. G. (2017). Toolset for assessment of natural recovery from legacy contaminated sediment: Case study of Pallanza Bay, Lake Maggiore, Italy. *Water Research*, 121, 109-119. doi:10.1016/j.watres.2017.05.024
- Wu, Y. W., Cho, Y. M., Luthy, R. G., Kim, K., Jung, J., Gala, W. R., & Choi, Y. (2017). Assessment of hydrophobic organic contaminant availability in sediments after sorbent amendment and its complete removal. *Environmental Pollution*, 231, 1380-1387. doi:10.1016/j.envpol.2017.08.117
- Academies of Sciences, Engineering, Medicine. (2016). *Using Graywater and Stormwater to Enhance Local Water Supplies: An Assessment of Risks, Costs, and Benefits*. Washington, DC: The National Academies Press
- Choi, Y., Cho, Y. M., Gala, W. R., Hoelen, T. P., Werner, D., & Luthy, R. G. (2016). Decision-making framework for the application of in-situ activated carbon amendment to sediment. *Journal of Hazardous Materials*, 306, 184-192. doi:10.1016/j.jhazmat.2015.12.019
- Choi, Y., Cho, Y. M., Luthy, R. G., & Werner, D. (2016). Predicted effectiveness of in-situ activated carbon amendment for field sediment sites with variable site- and compound-specific characteristics. *Journal of Hazardous Materials*, 301, 424-432. doi:10.1016/j.jhazmat.2015.09.016
- Choi, Y., Thompson, J. M., Lin, D. N., Cho, Y. M., Ismail, N. S., Hsieh, C. H., & Luthy, R. G. (2016). Secondary environmental impacts of remedial alternatives for sediment contaminated with hydrophobic organic contaminants. *Journal of Hazardous Materials*, 304, 352-359. doi:10.1016/j.jhazmat.2015.09.069
- Choi, Y., Wu, Y. W., Luthy, R. G., & Kang, S. (2016). Non-equilibrium passive sampling of hydrophobic organic contaminants in sediment pore-water: PCB exchange kinetics. *Journal of Hazardous Materials*, 318, 579-586. doi:10.1016/j.jhazmat.2016.07.045
- Choi, Y., Wu, Y. W., Sani, B., Luthy, R. G., Werner, D., & Kim, E. (2016). Performance of retrievable activated carbons to treat sediment contaminated with polycyclic aromatic hydrocarbons. *Journal of Hazardous Materials*, 320, 359-367. doi:10.1016/j.jhazmat.2016.08.047

- Ismail, N. S., Tommerdahl, J. P., Boehm, A. B., & Luthy, R. G. (2016). Escherichia coli Reduction by Bivalves in an Impaired River Impacted by Agricultural Land Use. *Environmental Science & Technology*, 50(20), 11025-11033. doi:10.1021/acs.est.6b03043
- LeFevre, G. H., Portmann, A. C., Muller, C. E., Sattely, E. S., & Luthy, R. G. (2016). Plant Assimilation Kinetics and Metabolism of 2-Mercaptobenzothiazole Tire Rubber Vulcanizers by Arabidopsis. *Environmental Science & Technology*, 50(13), 6762-6771. doi:10.1021/acs.est.5b04716
- Li, Y. Q., Kemper, J. M., Datuin, G., Akey, A., Mitch, W. A., & Luthy, R. G. (2016). Reductive dehalogenation of disinfection byproducts by an activated carbon-based electrode system. *Water Research*, 98, 354-362. doi:10.1016/j.watres.2016.04.019
- Muller, C. E., LeFevre, G. H., Timofte, A. E., Hussain, F. A., Sattely, E. S., & Luthy, R. G. (2016). Competing Mechanisms for Perfluoroalkyl Acid Accumulation in Plants Revealed Using an Arabidopsis Model System. *Environmental Toxicology and Chemistry*, 35(5), 1138-1147. doi:10.1002/etc.3251
- Thompson, J. M., Hsieh, C. H., Hoelen, T. P., Weston, D. P., & Luthy, R. G. (2016). Measuring and Modeling Organochlorine Pesticide Response to Activated Carbon Amendment in Tidal Sediment Mesocosms. *Environmental Science & Technology*, 50(9), 4769-4777. doi:10.1021/acs.est.5b05669
- Wolfand, J. M., LeFevre, G. H., & Luthy, R. G. (2016). Metabolization and degradation kinetics of the urban-use pesticide fipronil by white rot fungus *Trametes versicolor*. *Environmental Science-Processes & Impacts*, 18(10), 1256-1265. doi:10.1039/c6em00344c
- Choi, Y., & Luthy, R. G. (2015). Activated Carbon Performance for the Treatment of Diesel-Derived Polycyclic Aromatic Hydrocarbons. *Ecology and Resilient Infrastructure*, 2, 177-184. doi:10.17820/eri.2015.2.2.177
- Ismail, N. S., Dodd, H., Sassoubre, L. M., Horne, A. J., Boehm, A. B., & Luthy, R. G. (2015). Improvement of Urban Lake Water Quality by Removal of Escherichia coli through the Action of the Bivalve *Anodonta californiensis*. *Environmental Science & Technology*, 49(3), 1664-1672. doi:10.1021/es5033212
- LeFevre, G. H., Muller, C. E., Lo, R. J. X., Luthy, R. G., & Sattely, E. S. (2015). Rapid Phytotransformation of Benzotriazole Generates Synthetic Tryptophan and Auxin Analogs in Arabidopsis. *Environmental Science & Technology*, 49(18), 10959-10968. doi:10.1021/acs.est.5b02749
- Lin, D., Eek, E., Oen, A., Cho, Y. M., Cornelissen, G., Tommerdahl, J., & Luthy, R. G. (2015). Novel Probe for in Situ Measurement of Freely Dissolved Aqueous Concentration Profiles of Hydrophobic Organic Contaminants at the Sediment-Water Interface. *Environmental Science & Technology Letters*, 2(11), 320-324. doi:10.1021/acs.estlett.5b00239
- Luthy, R. G., & Sedlak, D. L. (2015). Urban Water-Supply Reinvention. *Daedalus*, 144(3), 72-82. doi:10.1162/DAED_a_00343
- Luthy, R. G., Sedlak, D. L., Plumlee, M. H., Austin, D., & Resh, V. H. (2015). Wastewater-effluent-dominated streams as ecosystem-management tools in a drier climate. *Frontiers in Ecology and the Environment*, 13(9), 477-485. doi:10.1890/150038
- Nelson, R., Bischel, H. N., Luthy, R. G., & Thompson, B. H. (2015). Issues of Governance, Policy, and Law in Managing Urban-Rural and Groundwater-Surface Water Connections. *Understanding and Managing Urban Water in Transition*, 15, 463-488. doi:10.1007/978-94-017-9801-3_22
- Patmont, C. R., Ghosh, U., LaRosa, P., Menzie, C. A., Luthy, R. G., Greenberg, M. S., . . . Quadrini, J. (2015). In Situ Sediment Treatment Using Activated Carbon: A

- Demonstrated Sediment Cleanup Technology. *Integrated Environmental Assessment and Management*, 11(2), 195-207. doi:10.1002/ieam.1589
- Thompson, J. M., Hsieh, C. H., & Luthy, R. G. (2015). Modeling Uptake of Hydrophobic Organic Contaminants into Polyethylene Passive Samplers. *Environmental Science & Technology*, 49(4), 2270-2277. doi:10.1021/es504442s
- Cho, Y.-M., Werner, D., Janssen, E. M.-L., & Luthy, R. G. (2014). In Situ Treatment for Control of Hydrophobic Organic Contaminants Using Sorbent Amendment: Theoretical Assessments. In D. D. Reible (Ed.), *Processes, Assessment and Remediation of Contaminated Sediments* (Ch. 11, pp. 305-323). New York, NY: Springer New York.
- Choi, Y. J., Cho, Y. M., & Luthy, R. G. (2014). In Situ Sequestration of Hydrophobic Organic Contaminants in Sediments under Stagnant Contact with Activated Carbon. 1. Column Studies. *Environmental Science & Technology*, 48(3), 1835-1842. doi:10.1021/es403335g
- Choi, Y. J., Cho, Y. M., Werner, D., & Luthy, R. G. (2014). In Situ Sequestration of Hydrophobic Organic Contaminants in Sediments under Stagnant Contact with Activated Carbon. 2. Mass Transfer Modeling. *Environmental Science & Technology*, 48(3), 1843-1850. doi:10.1021/es404209v
- Hering, J. G., Dzombak, D. A., Green, S. A., Luthy, R. G., & Swackhamer, D. (2014). Engagement at the Science-Policy Interface. *Environmental Science & Technology*, 48(19), 11031-11033. doi:10.1021/es504225t
- Ismail, N. S., Muller, C. E., Morgan, R. R., & Luthy, R. G. (2014). Uptake of Contaminants of Emerging Concern by the Bivalves *Anodonta californiensis* and *Corbicula fluminea*. *Environmental Science & Technology*, 48(16), 9211-9219. doi:10.1021/es5011576
- Lawrence, J. E., Pavia, C. P. W., Kaing, S., Bischel, H. N., Luthy, R. G., & Resh, V. H. (2014). Recycled water for augmenting urban streams in mediterranean-climate regions: a potential approach for riparian ecosystem enhancement. *Hydrological Sciences Journal-Journal Des Sciences Hydrologiques*, 59(3-4), 488-501. doi:10.1080/02626667.2013.818221
- Lin, D., Cho, Y. M., Werner, D., & Luthy, R. G. (2014). Bioturbation Delays Attenuation of DDT by Clean Sediment Cap but Promotes Sequestration by Thin-Layered Activated Carbon. *Environmental Science & Technology*, 48(2), 1175-1183. doi:10.1021/es404108h
- Thomas, C., Lampert, D., Reible, D., Janssen, E. M. L., & Luthy, R. G. (2014). Remedy performance monitoring at contaminated sediment sites using profiling solid phase microextraction (SPME) polydimethylsiloxane (PDMS) fibers (vol 16, pg 445, 2014). *Environmental Science-Processes & Impacts*, 16(8), 2049-2049.
- Bischel, H. N., Lawrence, J. E., Halaburka, B. J., Plumlee, M. H., Bawazir, A. S., King, J. P., . . . Luthy, R. G. (2013). Renewing Urban Streams with Recycled Water for Streamflow Augmentation: Hydrologic, Water Quality, and Ecosystem Services Management. *Environmental Engineering Science*, 30(8), 455-479. doi:10.1089/ees.2012.0201
- Choi, Y., Cho, Y. M., & Luthy, R. G. (2013). Polyethylene-Water Partitioning Coefficients for Parent- and Alkylated-Polycyclic Aromatic Hydrocarbons and Polychlorinated Biphenyls. *Environmental Science & Technology*, 47(13), 6943-6950. doi:10.1021/es304566v
- Choi, Y. J., Cho, Y. M., Gala, W. R., & Luthy, R. G. (2013). Measurement and Modeling of Activated Carbon Performance for the Sequestration of Parent- and Alkylated-Polycyclic Aromatic Hydrocarbons in Petroleum-Impacted Sediments. *Environmental Science & Technology*, 47(2), 1024-1032. doi:10.1021/es303770c
- Halaburka, B. J., Lawrence, J. E., Bischel, H. N., Hsiao, J., Plumlee, M. H., Resh, V. H., & Luthy, R. G. (2013). Economic and Ecological Costs and Benefits of Streamflow

- Augmentation Using Recycled Water in a California Coastal Stream. *Environmental Science & Technology*, 47(19), 10735-10743. doi:10.1021/es305011z
- Hering, J. G., Waite, T. D., Luthy, R. G., Drewes, J. E., & Sedlak, D. L. (2013). A Changing Framework for Urban Water Systems. *Environmental Science & Technology*, 47(19), 10721-10726. doi:10.1021/es4007096
- Jasper, J. T., Nguyen, M. T., Jones, Z. L., Ismail, N. S., Sedlak, D. L., Sharp, J. O., . . . Nelson, K. L. (2013). Unit Process Wetlands for Removal of Trace Organic Contaminants and Pathogens from Municipal Wastewater Effluents. *Environmental Engineering Science*, 30(8), 421-436. doi:10.1089/ees.2012.0239
- Lawrence, J. E., Skold, M. E., Hussain, F. A., Silverman, D. R., Resh, V. H., Sedlak, D. L., . . . McCray, J. E. (2013). Hyporheic Zone in Urban Streams: A Review and Opportunities for Enhancing Water Quality and Improving Aquatic Habitat by Active Management. *Environmental Engineering Science*, 30(8), 480-501. doi:10.1089/ees.2012.0235
- Luthy, R. G. (2013). Design Options for a More Sustainable Urban Water Environment. *Environmental Science & Technology*, 47(19), 10719-10720. doi:10.1021/es403728p
- Sedlak, D. L., Drewes, J. E., & Luthy, R. G. (2013). Introduction: Reinventing Urban Water Infrastructure. *Environmental Engineering Science*, 30(8), 393-394. doi:10.1089/ees.2013.3008
- Bischel, H. N., Simon, G. L., Frisby, T. M., & Luthy, R. G. (2012). Management Experiences and Trends for Water Reuse Implementation in Northern California. *Environmental Science & Technology*, 46(1), 180-188. doi:10.1021/es202725e
- Cho, Y. M., Werner, D., Choi, Y. J., & Luthy, R. G. (2012). Long-term monitoring and modeling of the mass transfer of polychlorinated biphenyls in sediment following pilot-scale in-situ amendment with activated carbon. *Journal of Contaminant Hydrology*, 129, 25-37. doi:10.1016/j.jconhyd.2011.09.009
- Janssen, E. M. L., Choi, Y., & Luthy, R. G. (2012). Assessment of Nontoxic, Secondary Effects of Sorbent Amendment to Sediments on the Deposit-Feeding Organism *Neanthes arenaceodentata*. *Environmental Science & Technology*, 46(7), 4134-4141. doi:10.1021/es204066g
- Kim, E. A., Masue-Slowey, Y., Fendorf, S., & Luthy, R. G. (2012). Intra-particle migration of mercury in granular polysulfide-rubber-coated activated carbon (PSR-AC). *Chemosphere*, 86(6), 648-654. doi:10.1016/j.chemosphere.2011.11.012
- Oen, A. M. P., Beckingham, B., Ghosh, U., Krusa, M. E., Luthy, R. G., Hartnik, T., . . . Cornelissen, G. (2012). Sorption of Organic Compounds to Fresh and Field-Aged Activated Carbons in Soils and Sediments. *Environmental Science & Technology*, 46(2), 810-817. doi:10.1021/es202814e
- Zhuang, Y., Jin, L. T., & Luthy, R. G. (2012). Kinetics and pathways for the debromination of polybrominated diphenyl ethers by bimetallic and nanoscale zerovalent iron: Effects of particle properties and catalyst. *Chemosphere*, 89(4), 426-432. doi:10.1016/j.chemosphere.2012.05.078
- Bischel, H. N., MacManus-Spencer, L. A., Zhang, C. J., & Luthy, R. G. (2011). Strong Associations of Short-Chain Perfluoroalkyl Acids with Serum Albumin and Investigation of Binding Mechanisms. *Environmental Toxicology and Chemistry*, 30(11), 2423-2430. doi:10.1002/etc.647
- Ela, W. P., Sedlak, D. L., Barlaz, M. A., Henry, H. F., Muir, D. C. G., Swackhamer, D. L., . . . Wiesner, M. R. (2011). Toward Identifying the Next Generation of Superfund and Hazardous Waste Site Contaminants. *Environmental Health Perspectives*, 119(1), 6-10. doi:10.1289/ehp.1002497

- Ghosh, U., Luthy, R. G., Cornelissen, G., Werner, D., & Menzie, C. A. (2011). In-situ Sorbent Amendments: A New Direction in Contaminated Sediment Management. *Environmental Science & Technology*, 45(4), 1163-1168. doi:10.1021/es102694h
- Janssen, E. M. L., Oen, A. M. P., Luoma, S. N., & Luthy, R. G. (2011). Assessment of Field-Related Influences on Polychlorinated Biphenyl Exposures and Sorbent Amendment Using Polychaete Bioassays and Passive Sampler Measurements. *Environmental Toxicology and Chemistry*, 30(1), 173-180. doi:DOI 10.1002/etc.367
- Janssen, E. M. L., Thompson, J. K., Luoma, S. N., & Luthy, R. G. (2011). PCB-Induced Changes of a Benthic Community and Expected Ecosystem Recovery Following in Situ Sorbent Amendment. *Environmental Toxicology and Chemistry*, 30(8), 1819-1826. doi:10.1002/etc.574
- Kim, E. A., & Luthy, R. G. (2011). Partitioning of dissolved organic matter-bound mercury between a hydrophobic surface and polysulfide-rubber polymer. *Water Research*, 45(17), 5441-5448. doi:10.1016/j.watres.2011.08.003
- Kim, E. A., Seyfferth, A. L., Fendorf, S., & Luthy, R. G. (2011). Immobilization of Hg(II) in water with polysulfide-rubber (PSR) polymer-coated activated carbon. *Water Research*, 45(2), 453-460. doi:10.1016/j.watres.2010.08.045
- Oen, A. M. P., Janssen, E. M. L., Cornelissen, G., Breedveld, G. D., Eek, E., & Luthy, R. G. (2011). In Situ Measurement of PCB Pore Water Concentration Profiles in Activated Carbon-Amended Sediment Using Passive Samplers. *Environmental Science & Technology*, 45(9), 4053-4059. doi:10.1021/es200174v
- Zhuang, Y., Ahn, S., Seyfferth, A. L., Masue-Slowey, Y., Fendorf, S., & Luthy, R. G. (2011). Dehalogenation of Polybrominated Diphenyl Ethers and Polychlorinated Biphenyl by Bimetallic, Impregnated, and Nanoscale Zerovalent Iron. *Environmental Science & Technology*, 45(11), 4896-4903. doi:10.1021/es104312h
- Bischel, H. N., MacManus-Spencer, L. A., & Luthy, R. G. (2010). Noncovalent Interactions of Long-Chain Perfluoroalkyl Acids with Serum Albumin. *Environmental Science & Technology*, 44(13), 5263-5269. doi:10.1021/es101334s
- Cho, Y. M., Werner, D., Moffett, K. B., & Luthy, R. G. (2010). Assessment of Advective Porewater Movement Affecting Mass Transfer of Hydrophobic Organic Contaminants in Marine Intertidal Sediment. *Environmental Science & Technology*, 44(15), 5842-5848. doi:10.1021/es903583y
- Janssen, E. M. L., Croteau, M. N., Luoma, S. N., & Luthy, R. G. (2010). Measurement and Modeling of Polychlorinated Biphenyl Bioaccumulation from Sediment for the Marine Polychaete *Neanthes arenaceodentata* and Response to Sorbent Amendment. *Environmental Science & Technology*, 44(8), 2857-2863. doi:10.1021/es901632e
- MacManus-Spencer, L. A., Tse, M. L., Hebert, P. C., Bischel, H. N., & Luthy, R. G. (2010). Binding of Perfluorocarboxylates to Serum Albumin: A Comparison of Analytical Methods. *Analytical Chemistry*, 82(3), 974-981. doi:10.1021/ac902238u
- Werner, D., Hale, S. E., Ghosh, U., & Luthy, R. G. (2010). Polychlorinated Biphenyl Sorption and Availability in Field-Contaminated Sediments. *Environmental Science & Technology*, 44(8), 2809-2815. doi:10.1021/es902325t
- Zhuang, Y. A., Ahn, S., & Luthy, R. G. (2010). Debromination of Polybrominated Diphenyl Ethers by Nanoscale Zerovalent Iron: Pathways, Kinetics, and Reactivity. *Environmental Science & Technology*, 44(21), 8236-8242. doi:10.1021/es101601s
- Cho, Y. M., Ghosh, U., Kennedy, A. J., Grossman, A., Ray, G., Tomaszewski, J. E., . . . Luthy, R. G. (2009). Field Application of Activated Carbon Amendment for In-Situ Stabilization of Polychlorinated Biphenyls in Marine Sediment. *Environmental Science & Technology*, 43(10), 3815-3823. doi:10.1021/es802931c

- Hale, S. E., Tomaszewski, J. E., Luthy, R. G., & Werner, D. (2009). Sorption of dichlorodiphenyltrichloroethane (DDT) and its metabolites by activated carbon in clean water and sediment slurries. *Water Research*, 43(17), 4336-4346. doi:10.1016/j.watres.2009.06.031
- Ahn, S., Werner, D., & Luthy, R. G. (2008). Modeling PAH mass transfer in a slurry of contaminated soil or sediment amended with organic sorbents. *Water Research*, 42(12), 2931-2942. doi:10.1016/j.watres.2008.03.011
- Hong, L., & Luthy, R. G. (2008). Uptake of PAHs into polyoxymethylene and application to oil-soot (lampblack)-impacted soil samples. *Chemosphere*, 72(2), 272-281. doi:10.1016/j.chemosphere.2008.01.028
- McLeod, P. B., Luoma, S. N., & Luthy, R. G. (2008). Biodynamic modeling of PCB uptake by *Macoma balthica* and *Corbicula fluminea* from sediment amended with activated carbon. *Environmental Science & Technology*, 42(2), 484-490. doi:10.1021/es070139a
- Rhoads, K. R., Janssen, E. M. L., Luthy, R. G., & Criddle, C. S. (2008). Aerobic biotransformation and fate of N-ethyl perfluorooctane sulfonamidoethanol (N-EtFOSE) in activated sludge. *Environmental Science & Technology*, 42(8), 2873-2878. doi:10.1021/es702866c
- Rubinfeld, S. A., & Luthy, R. G. (2008). Nitromusk compounds in San Francisco Bay sediments. *Chemosphere*, 73(6), 873-879. doi:10.1016/j.chemosphere.2008.07.042
- Tomaszewski, J. E., & Luthy, R. G. (2008). Field deployment of polyethylene devices to measure PCB concentrations in pore water of contaminated sediment. *Environmental Science & Technology*, 42(16), 6086-6091. doi:10.1021/es800582a
- Tomaszewski, J. E., McLeod, P. B., & Luthy, R. G. (2008). Measuring and modeling reduction of DDT availability to the water column and mussels following activated carbon amendment of contaminated sediment. *Water Research*, 42(16), 4348-4356. doi:10.1016/j.watres.2008.07.016
- Zimmerman, J. R., Bricker, J. D., Jones, C., Dacunto, P. J., Street, R. L., & Luthy, R. G. (2008). The stability of marine sediments at a tidal basin in San Francisco Bay amended with activated carbon for sequestration of organic contaminants. *Water Research*, 42(15), 4133-4145. doi:10.1016/j.watres.2008.05.023
- Cho, Y. M., Smithenry, D. W., Ghosh, U., Kennedy, A. J., Millward, R. N., Bridges, T. S., & Luthy, R. G. (2007). Field methods for amending marine sediment with activated carbon and assessing treatment effectiveness. *Marine Environmental Research*, 64(5), 541-555. doi:10.1016/j.marenvres.2007.04.006
- Higgins, C. P., & Luthy, R. G. (2007). Modeling sorption of anionic surfactants onto sediment materials: An a priori approach for perfluoroalkyl surfactants and linear alkylbenzene sulfonates (vol 110, pg 14054, 2006). *Environmental Science & Technology*, 41(17), 6316-6316. doi:10.1021/es078006c
- Higgins, C. P., McLeod, P. B., Macmanus-Spencer, L. A., & Luthy, R. G. (2007). Bioaccumulation of perfluorochemicals in sediments by the aquatic oligochaete *Lumbriculus variegatus*. *Environmental Science & Technology*, 41(13), 4600-4606. doi:10.1021/es062792o
- Hong, L., & Luthy, R. G. (2007). Availability of polycyclic aromatic hydrocarbons from lampblack-impacted soils at former oil-gas plant sites in California, USA. *Environmental Toxicology and Chemistry*, 26(3), 394-405. doi:Doi 10.1897/06-200r.1
- McLeod, P. B., Van den Heuvel-Greve, M. J., Luoma, S. N., & Luthy, R. G. (2007). Biological uptake of polychlorinated biphenyls by *Macoma balthica* from sediment amended with activated carbon. *Environmental Toxicology and Chemistry*, 26(5), 980-987. doi:Doi 10.1897/06-278r1.1

- Tomaszewski, J. E., Werner, D., & Luthy, R. G. (2007). Activated carbon amendment as a treatment for residual DDT in sediment from a superfund site in San Francisco Bay, Richmond, California, USA. *Environmental Toxicology and Chemistry*, 26(10), 2143-2150. doi:Doi 10.1897/07-179r.1
- Handler, N. B., Payran, A., Higgins, C. P., Luthy, R. G., & Boehm, A. B. (2006). Human development is linked to multiple water body impairments along the California coast. *Estuaries and Coasts*, 29(5), 860-870. doi:Doi 10.1007/Bf02786537
- Higgins, C. P., & Luthy, R. G. (2006). Sorption of perfluorinated surfactants on sediments. *Environmental Science & Technology*, 40(23), 7251-7256. doi:10.1021/es061000n
- Schultz, M. M., Higgins, C. P., Huset, C. A., Luthy, R. G., Barofsky, D. F., & Field, J. A. (2006). Fluorochemical mass flows in a municipal wastewater treatment facility. *Environmental Science & Technology*, 40(23), 7350-7357. doi:10.1021/es061025m
- Stevenson, C. N., MacManus-Spencer, L. A., Luckenbach, T., Luthy, R. G., & Epel, D. (2006). New perspectives on perfluorochemical ecotoxicology: inhibition and induction of an efflux transporter in the marine mussel, *Mytilus californianus*. *Environmental Science & Technology*, 40(17), 5580-5585. doi:10.1021/es0602593
- Tomaszewski, J. E., Smithenry, D. W., Cho, Y. M., Luthy, R. G., Lowry, G. V., Reible, D., . . . Sylvestre, M. (2006). Treatment and containment of contaminated sediments. In *Assessment and Remediation of Contaminated Sediments* (Vol. 73, pp. 137-+).
- Werner, D., Ghosh, U., & Luthy, R. G. (2006). Modeling polychlorinated biphenyl mass transfer after amendment of contaminated sediment with activated carbon. *Environmental Science & Technology*, 40(13), 4211-4218. doi:10.1021/es052215k
- Yoon, T. H., Benzerara, K., Ahn, S., Luthy, R. G., Tyliczszak, T., & Brown, G. E. (2006). Nanometer-scale chemical heterogeneities of black carbon materials and their impacts on PCB sorption properties: Soft X-ray spectromicroscopy study. *Environmental Science & Technology*, 40(19), 5923-5929. doi:10.1021/es060173+
- Ahn, S., Werner, D., Karapanagioti, H. K., McGlothlin, D. R., Zare, R. N., & Luthy, R. G. (2005). Phenanthrene and pyrene sorption and intraparticle diffusion in polyoxymethylene, coke, and activated carbon. *Environmental Science & Technology*, 39(17), 6516-6526. doi:10.1021/es050113o
- Ahn, S., Werner, D., & Luthy, R. G. (2005). Physicochemical characterization of coke-plant soil for the assessment of polycyclic aromatic hydrocarbon availability and the feasibility of phytoremediation. *Environmental Toxicology and Chemistry*, 24(9), 2185-2195. doi:Doi 10.1897/04-564r.1
- Higgins, C. P., Field, J. A., Criddle, C. S., & Luthy, R. G. (2005). Quantitative determination of perfluorochemicals in sediments and domestic sludge. *Environmental Science & Technology*, 39(11), 3946-3956. doi:10.1021/es048245p
- McNamara, S. W., Ghosh, U., Dzombak, D. A., Weber, A. S., Smith, J. R., & Luthy, R. G. (2005). Effect of oil on polychlorinated biphenyl phase partitioning during land biotreatment of impacted sediment. *Journal of Environmental Engineering*, 131(2), 278-286. doi:10.1061/(Asce)0733-9372(2005)131:2(278)
- McNamara, S. W., & Luthy, R. G. (2005a). Sorbent wicking device for sampling hydrophobic organic compounds in unsaturated soil pore water. I: Design and hydraulic characteristics. *Journal of Environmental Engineering-Asce*, 131(1), 11-20. doi:10.1061/(Asce)0733-9372(2005)131:1(11)
- McNamara, S. W., & Luthy, R. G. (2005b). Sorbent wicking device for sampling hydrophobic organic compounds in unsaturated soil pore water. II: Chemical capture, recovery, and analysis. *Journal of Environmental Engineering-Asce*, 131(1), 21-28. doi:10.1061/(Asce)0733-9372(2005)131:1(21)

- Millward, R. N., Bridges, T. S., Ghosh, U., Zimmerman, J. R., & Luthy, R. G. (2005). Addition of activated carbon to sediments to reduce PCB bioaccumulation by a polychaete (*Neanthes arenaceodentata*) and an amphipod (*Leptocheirus plumulosus*). *Environmental Science & Technology*, 39(8), 2880-2887. doi:10.1021/es048768x
- Stroo, H. F., Nakles, D. V., Kreitinger, J. P., Loehr, R. C., Hawthorne, S. B., Luthy, R. G., . . . LaPierre, A. (2005). Improving Risk Assessments for Manufactured Gas Plant Soils by Measuring PAH Availability. *Integrated Environmental Assessment and Management*, 1(3), 259-266. doi:10.1897/2004-009r.1
- Werner, D., Higgins, C. P., & Luthy, R. G. (2005). The sequestration of PCBs in Lake Hartwell sediment with activated carbon. *Water Research*, 39(10), 2105-2113. doi:10.1016/j.watres.2005.03.019
- Zimmerman, J. R., Luthy, R. G., Ghosh, U., Millward, R. N., & Bridges, T. S. (2005). Response to comment on "Addition of carbon sorbents to reduce PCB and PAH: Bioavailability in marine sediments: Physicochemical tests". *Environmental Science & Technology*, 39(4), 1199-1200. doi:10.1021/es047983a
- Zimmerman, J. R., Werner, D., Ghosh, U., Millward, R. N., Bridges, T. S., & Luthy, R. G. (2005). Effects of dose and particle size on activated carbon treatment to sequester polychlorinated biphenyls and polycyclic aromatic hydrocarbons in marine sediments. *Environmental Toxicology and Chemistry*, 24(7), 1594-1601. doi:Doi 10.1897/04-368r.1
- McLeod, P. B., Van Den Heuvel-Greve, M. J., Allen-King, R. M., Luoma, S. N., & Luthy, R. G. (2004). Effects of particulate carbonaceous matter on the bioavailability of benzo[a]pyrene and 2,2',5,5'-tetrachlorobiphenyl to the clam, *Macoma balthica*. *Environmental Science & Technology*, 38(17), 4549-4556. doi:10.1021/es049893b
- Ortiz, E., Luthy, R. G., Dzombak, D. A., & Smith, J. R. (2004). Release of polychlorinated to water under biphenyls from river sediment low-flow conditions: Laboratory assessment. *Journal of Environmental Engineering-Asce*, 130(2), 126-135. doi:10.1061/(Asce)0733-9372(2004)130:2(126)
- Talley, J. W., Ghosh, U., Furey, J. S., Tucker, S. G., & Luthy, R. G. (2004). Thermal program desorption mass spectrometry of PAHs from mineral and organic surfaces. *Environmental Engineering Science*, 21(6), 647-660. doi:DOI 10.1089/ees.2004.21.647
- Zheng, A. P., Dzombak, D. A., & Luthy, R. G. (2004a). Effects of thiocyanate on the formation of free cyanide during chlorination and ultraviolet disinfection of publicly owned treatment works secondary effluent. *Water Environment Research*, 76(3), 205-212. doi:Doi 10.2175/106143004x141744
- Zheng, A. P., Dzombak, D. A., & Luthy, R. G. (2004b). Effects of nitrosation on the formation of cyanide in publicly owned treatment works secondary effluent. *Water Environment Research*, 76(3), 197-204. doi:Doi 10.2175/106143004x141735
- Zheng, A. P., Dzombak, D. A., & Luthy, R. G. (2004c). Formation of free cyanide and cyanogen chloride from chloramination of publicly owned treatment works secondary effluent: Laboratory study with model compounds. *Water Environment Research*, 76(2), 113-120. doi:Doi 10.2175/106143004x141636
- Zheng, A. P., Dzombak, D. A., Luthy, R. G., Kavanaugh, M. C., & Deeb, R. A. (2004). The occurrence of cyanide formation in six full-scale publicly owned treatment works. *Water Environment Research*, 76(2), 101-112. doi:Doi 10.2175/106143004x141627
- Zimmerman, J. R., Ghosh, U., Millward, R. N., Bridges, T. S., & Luthy, R. G. (2004). Addition of carbon sorbents to reduce PCB and PAH bioavailability in marine sediments: Physicochemical tests. *Environmental Science & Technology*, 38(20), 5458-5464. doi:10.1021/es034992v
- Ehlers, L. J., & Luthy, R. G. (2003). Contaminant bioavailability in soil and sediment. *Environmental Science & Technology*, 37(15), 295a-302a. doi:DOI 10.1021/es032524f

- Ghosh, U., Zimmerman, J. R., & Luthy, R. G. (2003). PCB and PAH speciation among particle types in contaminated harbor sediments and effects on PAH bioavailability. *Environmental Science & Technology*, 37(10), 2209-2217. doi:10.1021/es020833k
- Hong, L., Ghosh, U., Mahajan, T., Zare, R. N., & Luthy, R. G. (2003). PAH sorption mechanism and partitioning behavior in lampblack-impacted soils from former oil-gas plant sites. *Environmental Science & Technology*, 37(16), 3625-3634. doi:10.1021/es0262683
- National Research Council. (2003). *Bioavailability of Contaminants in Soils and Sediments: Processes, Tools, and Applications*. Washington, DC: The National Academies Press. [Committee on Bioavailability of Contaminants in Soils and Sediments, Committee Chair and a major author]
- Zheng, A. P., Dzombak, D. A., Luthy, R. G., Sawyer, B., Lazouskas, W., Tata, P., . . . Flaherty, J. M. (2003). Evaluation and testing of analytical methods for cyanide species in municipal and industrial contaminated waters. *Environmental Science & Technology*, 37(1), 107-115. doi:10.1021/es0258273
- Luthy, R. G. (2002). Bioterrorism and water security. *Environmental Science & Technology*, 36(7), 123a-123a. doi:DOI 10.1021/es0222521
- Talley, J. W., Ghosh, U., Tucker, S. G., Furey, J. S., & Luthy, R. G. (2002). Particle-scale understanding of the bioavailability of PAHs in sediment. *Environmental Science & Technology*, 36(3), 477-483. doi:10.1021/es010897f [Special issue in honor of James J. Morgan]
- Ghosh, U., Talley, J. W., & Luthy, R. G. (2001). Particle-scale investigation of PAH desorption kinetics and thermodynamics from sediment. *Environmental Science & Technology*, 35(17), 3468-3475. doi:10.1021/es0105820
- Gillette, J. S., Ghosh, U., Mahajan, T. B., Zare, R. N., & Luthy, R. G. (2001). Microprobe laser mass spectrometry studies of polycyclic aromatic hydrocarbon distributions on harbor sediments and coals. *Israel Journal of Chemistry*, 41(2), 105-110. doi:Doi 10.1560/6aph-95x3-Jf61-Mkap
- Mahajan, T. B., Ghosh, U., Zare, R. N., & Luthy, R. G. (2001). Microscale detection of polychlorinated biphenyls using two-step laser mass spectrometry. *International Journal of Mass Spectrometry*, 212(1-3), 41-48. doi:Doi 10.1016/S1387-3806(01)00470-5
- National Research Council. (2001). *Envisioning the Agenda for Water Resources Research in the Twenty-First Century*. Washington, DC: The National Academies Press. [co-author with others on the Water Science and Technology Board]
- Ringelberg, D. B., Talley, J. W., Perkins, E. J., Tucker, S. G., Luthy, R. G., Bouwer, E. J., & Fredrickson, H. L. (2001). Succession of phenotypic, genotypic, and metabolic community characteristics during in vitro bioslurry treatment of polycyclic aromatic hydrocarbon-contaminated sediments. *Applied and Environmental Microbiology*, 67(4), 1542-1550. doi:Doi 10.1128/Aem.67.4.1542-1550.2001
- Talley, J. W., Ghosh, U., & Luthy, R. G. (2001). Availability and bioslurry treatment of PAHs in contaminated dredged materials. In *Bioremediation of Energetics, Phenolics, and Polycyclic Aromatic Hydrocarbons* (Vol. 6, pp. 189-195).
- Ghosh, U., Gillette, J. S., Luthy, R. G., & Zare, R. N. (2000). Microscale location, characterization, and association of polycyclic aromatic hydrocarbons on harbor sediment particles. *Environmental Science & Technology*, 34(9), 1729-1736. doi:DOI 10.1021/es991032t
- National Research Council. (2000). *Natural Attenuation for Groundwater Remediation*. Washington, DC: The National Academies Press. [co-author with others on the Committee on Intrinsic Remediation]

- Ghosh, R. S., Dzombak, D. A., & Luthy, R. G. (1999). Equilibrium precipitation and dissolution of iron cyanide solids in water. *Environmental Engineering Science*, 16(4), 293-313. doi:DOI 10.1089/ees.1999.16.293
- Ghosh, R. S., Dzombak, D. A., Luthy, R. G., & Nakles, D. V. (1999). Subsurface fate and transport of cyanide species at a manufactured-gas plant site. *Water Environment Research*, 71(6), 1205-1216. doi:Doi 10.2175/106143096x122474
- Ghosh, R. S., Dzombak, D. A., Luthy, R. G., & Smith, J. R. (1999). In situ treatment of cyanide-contaminated groundwater by iron cyanide precipitation. *Water Environment Research*, 71(6), 1217-1228. doi:Doi 10.2175/106143096x122456
- Ghosh, U., Luthy, R. G., Gillette, J. S., Zare, R. N., & Talley, J. W. (1999). Microscale characterization of PAH sequestration on sediments. In A. Leeson & B. C. Alleman (Eds.), *Bioremediation Technologies for Polycyclic Aromatic Hydrocarbon Compounds* (pp. 289-294).
- Gillette, J. S., Luthy, R. G., Clemett, S. J., & Zare, R. N. (1999). Direct observation of polycyclic aromatic hydrocarbons on geosorbents at the subparticle scale. *Environmental Science & Technology*, 33(8), 1185-1192. doi:DOI 10.1021/es980838a
- McNamara, S., & Luthy, R. G. (1999). In situ measurement of PCB availability in unsaturated soils. *Bioremediation of Nitroaromatic and Haloaromatic Compounds*, 241-246.
- Ortiz, E., Kraatz, M., & Luthy, R. G. (1999). Organic phase resistance to dissolution of polycyclic aromatic hydrocarbon compounds. *Environmental Science & Technology*, 33(2), 235-242. doi:DOI 10.1021/es9804417
- Brown, R. A., MacDonald, J. A., Luthy, R. G., & Allen-King, R. (1998). Technology innovation for sites contaminated with chlorinated solvents, pesticides, and polychlorinated biphenyls. In G. B. Wickramanayake & R. E. Hinchee (Eds.), *First International Conference on Remediation of Chlorinated and Recalcitrant Compounds* (Vol. 6, pp. 39-45). Columbus, OH: Battelle Press.
- Ghoshal, S., & Luthy, R. G. (1998). Biodegradation kinetics of naphthalene in nonaqueous phase liquid-water mixed batch systems: Comparison of model predictions and experimental results. *Biotechnology and Bioengineering*, 57(3), 356-366. doi:Doi 10.1002/(Sici)1097-0290(19980205)57:3<356::Aid-Bit12>3.0.Co;2-E
- Adeel, Z., Luthy, R. G., Dzombak, D. A., Roy, S. B., & Smith, J. R. (1997). Leaching of PCB compounds from untreated and biotreated sludge-soil mixtures. *Journal of Contaminant Hydrology*, 28(4), 289-309. doi:Doi 10.1016/S0169-7722(97)00017-X
- Kraatz, M., Ortiz, E., & Luthy, R. G. (1997). PAH-bioavailability from NAPLs and significance for soil biotreatment. *In Situ and on-Site Bioremediation*, Vol 5, 4(5)(5), 669-674.
- Luthy, R. G., Aiken, G. R., Brusseau, M. L., Cunningham, S. D., Gschwend, P. M., Pignatello, J. J., . . . Westall, J. C. (1997). Sequestration of hydrophobic organic contaminants by geosorbents. *Environmental Science & Technology*, 31(12), 3341-3347. doi:DOI 10.1021/es970512m
- Luthy, R. G., Dzombak, D. A., Shannon, M. J. R., Unterman, R., & Smith, J. R. (1997). Dissolution of PCB congeners from an Aroclor and an Aroclor/hydraulic oil mixture. *Water Research*, 31(3), 561-573. doi:Doi 10.1016/S0043-1354(96)00261-8
- Ramaswami, A., Ghoshal, S., & Luthy, R. G. (1997). Mass transfer and bioavailability of PAH compounds in coal tar NAPL-slurry systems .2. Experimental evaluations. *Environmental Science & Technology*, 31(8), 2268-2276. doi:DOI 10.1021/es9608508
- Ramaswami, A., & Luthy, R. G. (1997a). Measuring and Modeling Physico-Chemical Limitations to Bioavailability and Biodegradation. In *Manual of Environmental Microbiology* (Ch. 78, pp. 712-719). Washington, DC: American Society for Microbiology, ASM Press.

- Ramaswami, A., & Luthy, R. G. (1997b). Mass transfer and bioavailability of PAH compounds in coal tar NAPL-slurry systems .1. Model development. *Environmental Science & Technology*, 31(8), 2260-2267. doi:DOI 10.1021/es9608499
- Ghoshal, S., & Luthy, R. G. (1996). Bioavailability of hydrophobic organic compounds from nonaqueous-phase liquids: The biodegradation of naphthalene from coal tar. *Environmental Toxicology and Chemistry*, 15(11), 1894-1900. doi:Doi 10.1897/1551-5028(1996)015<1894:Bohocf>2.3.Co;2
- Ghoshal, S., Ramaswami, A., & Luthy, R. G. (1996). Biodegradation of naphthalene from coal tar and heptamethylnonane in mixed batch systems. *Environmental Science & Technology*, 30(4), 1282-1291. doi:DOI 10.1021/es950494d
- Nelson, E. C., Ghoshal, S., Edwards, J. C., Marsh, G. X., & Luthy, R. G. (1996). Chemical characterization of coal tar-water interfacial films. *Environmental Science & Technology*, 30(3), 1014-1022. doi:DOI 10.1021/es950482s
- Adeel, Z., & Luthy, R. G. (1995a). Sorption and Transport Kinetics of a Nonionic Surfactant through an Aquifer Sediment. *Environmental Science & Technology*, 29(4), 1032-1042. doi:DOI 10.1021/es00004a025
- Adeel, Z., & Luthy, R. G. (1995b). Concentration-Dependent Regimes in Sorption and Transport of a Nonionic Surfactant in Sand-Aqueous Systems. In D. A. Sabatini, R. C. Knox, & J. H. Harwell (Eds.), *Surfactant-Enhanced Subsurface Remediation: Emerging Technologies* (Vol. 594, Ch. 4, pp. 38-53).
- Adeel, Z., Luthy, R. G., & Edwards, D. A. (1995). Modeling Transport of Multiple Organic-Compounds - Segregated Transport-Sorption Solubilization Numerical Technique. *Water Resources Research*, 31(8), 2035-2045. doi:Doi 10.1029/95wr01331
- Adeel, Z., Roy, S. B., Dzombak, D. A., & Luthy, R. G. (1995). Sorption and transport of individual PCB congeners in the subsurface: Modeling and experimental studies. In R. D. Vidic & F. G. Pohland (Eds.), *Innovative Technologies for Site Remediation and Hazardous Waste Management* (pp. 86-91).
- Ghoshal, S., & Luthy, R. G. (1995). Biodegradation of naphthalene from coal tar: An assessment of the potential for slurry treatment at MGP sites. In R. D. Vidic & F. G. Pohland (Eds.), *Innovative Technologies for Site Remediation and Hazardous Waste Management* (pp. 211-218).
- Ghoshal, S., Ramaswami, A., & Luthy, R. G. (1995). Biodegradation of naphthalene from nonaqueous-phase liquids. *Microbial Processes for Bioremediation*, 3(8), 75-82.
- Laha, S., Liu, Z. B., Edwards, D. A., & Luthy, R. G. (1995). Surfactant Solubilization of Phenanthrene in Soil-Aqueous Systems and Its Effects on Biomineralization. In C. P. Huang, C. R. O'Melia, & J. J. Morgan (Eds.), *Aquatic Chemistry: Interfacial and Interspecies Processes* (Vol. 244, Ch. 17, pp. 339-361).
- Liu, Z. B., Jacobson, A. M., & Luthy, R. G. (1995). Biodegradation of Naphthalene in Aqueous Nonionic Surfactant Systems. *Applied and Environmental Microbiology*, 61(1), 145-151.
- Birchler, D. R., Milke, M. W., Marks, A. L., & Luthy, R. G. (1994). Landfill Leachate Treatment by Evaporation. *Journal of Environmental Engineering-Asce*, 120(5), 1109-1131. doi:Doi 10.1061/(Asce)0733-9372(1994)120:5(1109)
- Edwards, D. A., Adeel, Z., & Luthy, R. G. (1994). Distribution of Nonionic Surfactant and Phenanthrene in a Sediment Aqueous System. *Environmental Science & Technology*, 28(8), 1550-1560. doi:DOI 10.1021/es00057a027
- Edwards, D. A., Liu, Z. B., & Luthy, R. G. (1994a). Surfactant Solubilization of Organic-Compounds in Soil/Aqueous Systems. *Journal of Environmental Engineering-Asce*, 120(1), 5-22. doi:Doi 10.1061/(Asce)0733-9372(1994)120:1(5)

- Edwards, D. A., Liu, Z. B., & Luthy, R. G. (1994b). Experimental-Data and Modeling for Surfactant Micelles, Hocs, and Soil. *Journal of Environmental Engineering-Asce*, 120(1), 23-41. doi:Doi 10.1061/(Asce)0733-9372(1994)120:1(23)
- Luthy, R. G., Bella, D. A., Hunt, J. R., Johnson, J. H., Lawler, D. F., Omelia, C. R., & Pohland, F. G. (1994). Future Concerns in Environmental Engineering Graduate-Education - Closure. *Journal of Professional Issues in Engineering Education and Practice*, 120(1), 98-99. doi:Doi 10.1061/(Asce)1052-3928(1994)120:1(98)
- Luthy, R. G., Dzombak, D. A., Peters, C. A., Roy, S. B., Ramaswami, A., Nakles, D. V., & Nott, B. R. (1994). Remediating Tar-Contaminated Soils at Manufactured-Gas Plant Sites. *Environmental Science & Technology*, 28(6), A266-A276. doi:DOI 10.1021/es00055a002
- Luthy, R. G., Ramaswami, A., Ghoshal, S., & Merkel, W. (1994). Additions and Corrections: Interfacial Films in Coal-Tar Nonaqueous-Phase Liquid-Water Systems (Vol 27, Pg 2914, 1993). *Environmental Science & Technology*, 28(4), 756-756. doi:DOI 10.1021/es00053a600
- Marks, A. L., Luthy, R. G., & Diwekar, U. M. (1994). Semicontinuous Evaporation Model for Leachate Treatment Process Evaluation. *Environmental Progress*, 13(4), 278-289. doi:DOI 10.1002/ep.670130417
- Peters, C. A., & Luthy, R. G. (1994). Semiempirical Thermodynamic Modeling of Liquid-Liquid Phase-Equilibria - Coal-Tar Dissolution in Water-Miscible Solvents. *Environmental Science & Technology*, 28(7), 1331-1340. doi:DOI 10.1021/es00056a023
- Ramaswmi, A., Ghoshal, S., & Luthy, R. G. (1994). Mass-Transfer and Biodegradation of Pah Compounds from Coal-Tar. *Water Science and Technology*, 30(7), 61-70.
- Sanseverino, J., Graves, D. A., Leavitt, M. E., Gupta, S. K., & Luthy, G. A. (1994). Surfactant-Enhanced Bioremediation of Polynuclear Aromatic Hydrocarbons in Coke Waste. In D. L. Wise & D. J. Trantolo (Eds.), *Remediation of Hazardous Waste Contaminated Soils* (Ch. 16, pp. 345-372): Marcel-Dekker, NY.
- Edwards, D. A., Liu, Z. B., & Luthy, R. G. (1993). Uptake of Hydrophobic Organic-Compounds from Soil by Colloidal Surfactant Micelles. In J. F. Mccarthy & F. J. Wobber (Eds.), *Manipulation of Groundwater Colloids for Environmental Restoration* (Ch. 33, pp. 213-217): Lewis Publishers Inc, Boca Raton.
- Luthy, R. G. (1993). Manipulating Colloids and Contaminants in the Subsurface Via Surfactants. In J. F. Mccarthy & F. J. Wobber (Eds.), *Manipulation of Groundwater Colloids for Environmental Restoration* (Ch. 23, pp. 153-156): Lewis Publishers Inc, Boca Raton.
- Luthy, R. G., Ramaswami, A., Ghoshal, S., & Merkel, W. (1993). Interfacial Films in Coal-Tar Nonaqueous-Phase Liquid Water-Systems. *Environmental Science & Technology*, 27(13), 2914-2918. doi:DOI 10.1021/es00049a035
- Peters, C. A., & Luthy, R. G. (1993). Coal-Tar Dissolution in Water-Miscible Solvents - Experimental Evaluation. *Environmental Science & Technology*, 27(13), 2831-2843. doi:DOI 10.1021/es00049a025
- Westall, J. C., & Luthy, R. G. (1993). Modified Colloids, Surfactants, and Emulsions - Summary and Results - Discussion Leaders. In J. F. Mccarthy & F. J. Wobber (Eds.), *Manipulation of Groundwater Colloids for Environmental Restoration* (pp. 181-187): Lewis Publishers Inc, Boca Raton.
- Edwards, D. A., Laha, S., Liu, Z. B., & Luthy, R. G. (1992). Solubilization and Biodegradation of Hydrophobic Organic-Compounds in Soil Aqueous Systems with Nonionic Surfactants. In D. A. Sabatini & R. C. Knox (Eds.), *Transport and Remediation of Subsurface Contaminants: Colloidal, Interfacial and Surfactant Phenomena* (Vol. 491, Ch. 13, pp. 159-168): American Chemical Society.

- Edwards, D. A., Liu, Z., & Luthy, R. G. (1992a). Enhancing Polynuclear Aromatic Uptake into Bulk Solution with Amphiphilic Colloidal Aggregates. *Water Science and Technology*, 26(9-11), 2341-2344.
- Edwards, D. A., Liu, Z., & Luthy, R. G. (1992b). Interactions between Nonionic Surfactant Monomers, Hydrophobic Organic-Compounds and Soil. *Water Science and Technology*, 26(1-2), 147-158.
- Laha, S., & Luthy, R. G. (1992). Effects of Nonionic Surfactants on the Solubilization and Mineralization of Phenanthrene in Soil-Water Systems. *Biotechnology and Bioengineering*, 40(11), 1367-1380. doi:DOI 10.1002/bit.260401111
- Liu, Z., Edwards, D. A., & Luthy, R. G. (1992). Nonionic Surfactant Sorption onto Soil. *Water Science and Technology*, 26(9-11), 2337-2340.
- Liu, Z. B., Edwards, D. A., & Luthy, R. G. (1992). Sorption of Nonionic Surfactants onto Soil. *Water Research*, 26(10), 1337-1345. doi:Doi 10.1016/0043-1354(92)90128-Q (Founders Award paper, USANC, IAWQ)
- Edwards, D. A., Liu, Z., & Luthy, R. G. (1991). Surfactant Enhanced Solubility of Hydrophobic Organic Compounds in Water and in Soil-Water Systems. In R. A. Baker (Ed.), *Organic Substances and Sediments in Water* (Vol. 2, Ch. 18): Lewis Publishers.
- Edwards, D. A., Luthy, R. G., & Liu, Z. B. (1991). Solubilization of Polycyclic Aromatic-Hydrocarbons in Micellar Nonionic Surfactant Solutions. *Environmental Science & Technology*, 25(1), 127-133. doi:DOI 10.1021/es00013a014
- Laha, S., & Luthy, R. G. (1991). Inhibition of Phenanthrene Mineralization by Nonionic Surfactants in Soil-Water Systems. *Environmental Science & Technology*, 25(11), 1920-1930. doi:DOI 10.1021/es00023a013
- Liu, Z. B., Laha, S. L., & Luthy, R. G. (1991). Surfactant Solubilization of Polycyclic Aromatic Hydrocarbon Compounds in Soil-Water Suspensions. *Water Science and Technology*, 23(1-3), 475-485.
- Luthy, R. G. (1991). Bioremediation - Promises and Problems. *Research Journal of the Water Pollution Control Federation*, 63(2), 99-99.
- Mihelcic, J. R., & Luthy, R. G. (1991). Sorption and Microbial-Degradation of Naphthalene in Soil-Water Suspensions under Denitrification Conditions. *Environmental Science & Technology*, 25(1), 169-177. doi:DOI 10.1021/es00013a020
- Edwards, D. A., & Luthy, R. G. (1990). *Nonionic Surfactant Solubilization of Polycyclic Aromatic-Hydrocarbons in Aqueous and Soil-Water Systems*. Paper presented at the Environmental Engineering : Proceedings of the 1990 Specialty Conference.
- Laha, S., Liu, Z. B., Edwards, D., & Luthy, R. G. (1990). *The Potential for Solubilizing Agents to Enhance the Remediation of Hydrophobic Organic Solutes in Soil-Water Suspensions*. Paper presented at the Gas, Oil, Coal, and Environmental Biotechnology II.
- Laha, S., & Luthy, R. G. (1990). Oxidation of Aniline and Other Primary Aromatic-Amines by Manganese-Dioxide. *Environmental Science & Technology*, 24(3), 363-373. doi:DOI 10.1021/es00073a012
- Luthy, R. G., & Benjamin, M. M. (1990). Solving Groundwater Contamination Problems Through Graduate Education in Environmental Engineering. *Water Environment & Technology*, 2(1), 48-57.
- Luthy, R. G., & Small, M. J. (1990). Environmental-Research: A Clearer Focus Across a Broader Horizon. *Environmental Science & Technology*, 24(11), 1620-1623. doi:DOI 10.1021/es00081a600
- Luthy, R. G. (1989a). Personnel and Research Shortages: Policy Recommendations for the Environmental Professions. *Environment*, 31(3), 4-&. doi:Doi 10.1080/00139157.1989.9929937

- Luthy, R. G. (1989b). Editorial: The Peer-Review Process and the Quality of the Research Journal. *Research Journal of the Water Pollution Control Federation*, 61(11-12), 1619-1619.
- Luthy, R. G., & Suzuki, M. (1989). Coagulation of Sub-Micron Colloids by Supramicron Silica Particles - Discussion. *Water Science and Technology*, 21(12), 1576-1576.
- Robuck, S. J., & Luthy, R. G. (1989). Destruction of Iron-Complexed Cyanide by Alkaline-Hydrolysis. *Water Science and Technology*, 21(6-7), 547-558.
- Mihelcic, J. R., & Luthy, R. G. (1988a). Degradation of Polycyclic Aromatic Hydrocarbon Compounds under Various Redox Conditions in Soil-Water Systems. *Applied and Environmental Microbiology*, 54(5), 1182-1187.
- Mihelcic, J. R., & Luthy, R. G. (1988b). Microbial-Degradation of Acenaphthene and Naphthalene under Denitrification Conditions in Soil-Water Systems. *Applied and Environmental Microbiology*, 54(5), 1188-1198.
- Pavlovich, G. Z., & Luthy, R. G. (1988). Complexation of Metals with Hydantoins. *Water Research*, 22(3), 327-336. doi:Doi 10.1016/S0043-1354(88)90160-1
- Smith, J. R., Luthy, R. G., & Middleton, A. C. (1988). Microbial Ferrous Iron Oxidation in Acidic Solution. *Journal Water Pollution Control Federation*, 60(4), 518-530.
- Luthy, R. G. (1987). Examination of the Zinc Cementation of Cadmium in Aqueous-Solutions. *Water Science and Technology*, 19(7), 1083-1092.
- Fu, J. K., & Luthy, R. G. (1986a). Aromatic Compound Solubility in Solvent Water Mixtures. *Journal of Environmental Engineering-Asce*, 112(2), 328-345. doi:Doi 10.1061/(Asce)0733-9372(1986)112:2(328)
- Fu, J. K., & Luthy, R. G. (1986b). Effect of Organic-Solvent on Sorption of Aromatic Solutes onto Soils. *Journal of Environmental Engineering-Asce*, 112(2), 346-366. doi:Doi 10.1061/(Asce)0733-9372(1986)112:2(346)
- Luthy, R. G., Sable, E. R., & Mcmichael, F. C. (1986). Blast-Furnace Recycle Water-Quality and Reactions of Lead and Zinc. *Journal Water Pollution Control Federation*, 58(3), 250-260.
- Mihelcic, J. R., & Luthy, R. G. (1986). Adsorption of Lead and Zinc on Blast-Furnace Iron-Oxide Solids. *Journal Water Pollution Control Federation*, 58(3), 242-249.
- Banz, I., & Luthy, R. G. (1985). Calcium-Sulfate Solubility in Organic-Laden Waste-Water. *Journal of Environmental Engineering-Asce*, 111(3), 317-335. doi:Doi 10.1061/(Asce)0733-9372(1985)111:3(317)
- Campbell, J. R., & Luthy, R. G. (1985). Prediction of Aromatic Solute Partition-Coefficients Using the Unifac Group Contribution Model. *Environmental Science & Technology*, 19(10), 980-985. doi:DOI 10.1021/es00140a016
- Walters, R. W., & Luthy, R. G. (1985). Discussion: Equilibrium Adsorption of Polycyclic Aromatic-Hydrocarbons from Water onto Activated Carbon. *Environmental Science & Technology*, 19(9), 870-871. doi:DOI 10.1021/es00139a020
- Dzombak, D. A., & Luthy, R. G. (1984). Estimating Adsorption of Polycyclic Aromatic-Hydrocarbons on Soils. *Soil Science*, 137(5), 292-308. doi:Doi 10.1097/00010694-198405000-00002
- Walters, R. W., & Luthy, R. G. (1984a). Equilibrium Adsorption of Polycyclic Aromatic-Hydrocarbons from Water onto Activated Carbon. *Environmental Science & Technology*, 18(6), 395-403. doi:DOI 10.1021/es00124a002
- Walters, R. W., & Luthy, R. G. (1984b). Liquid Suspended Solid-Phase Partitioning of Polycyclic Aromatic-Hydrocarbons in Coal Coking Wastewaters. *Water Research*, 18(7), 795-809. doi:Doi 10.1016/0043-1354(84)90263-X (Founders Award paper, USANC, IAWPRC)

- Campbell, J. R., Luthy, R. G., & Carrondo, M. J. T. (1983). Measurement and Prediction of Distribution Coefficients for Wastewater Aromatic Solutes. *Environmental Science & Technology*, 17(10), 582-590. doi:DOI 10.1021/es00116a005
- Campbell, J. R., Luthy, R. G., & Dzombak, D. A. (1983). Demineralization for Reuse of Coal Conversion Condensates. *Industrial & Engineering Chemistry Process Design and Development*, 22(3), 496-503. doi:DOI 10.1021/i200022a026
- Luthy, R. G., Stamoudis, V. C., Campbell, J. R., & Harrison, W. (1983). Removal of Organic Contaminants from Coal Conversion Process Condensates. *Journal Water Pollution Control Federation*, 55(2), 196-207.
- Torpy, M. F., Luthy, R. G., & Raphaelian, L. A. (1983). Biological Oxidation of Organic-Constituents in Tar-Sand Combustion-Process Water. *Biotechnology and Bioengineering*, 25(12), 3163-3176. doi:DOI 10.1002/bit.260251227
- Luthy, R. G. (1982). The Problem of Water Reuse in Coke Production. In E. J. Middlebrooks (Ed.), *Wastewater Reuse* (Ch. 22, pp. 501-520): Ann Arbor Science Publishers, Inc.
- Luthy, R. G. (1981). Treatment of Coal Coking and Coal-Gasification Wastewaters. *Journal Water Pollution Control Federation*, 53(3), 325-339.
- Zipf, K. A., & Luthy, R. G. (1981). Chemical-Equilibria in Split-Treatment Softening of Water. *Journal American Water Works Association*, 73(6), 304-311.
- Luthy, R. G., & Jones, L. D. (1980). Biological Oxidation of Coke Plant Effluent. *Journal of the Environmental Engineering Division-Asce*, 106(4), 847-851.
- Luthy, R. G., Sekel, D. J., & Tallon, J. T. (1980). Biological Treatment of Synthetic Fuel Waste-Water. *Journal of the Environmental Engineering Division-Asce*, 106(3), 609-629.
- Luthy, R. G., & Tallon, J. T. (1980). Biological Treatment of a Coal-Gasification Process Waste-Water. *Water Research*, 14(9), 1269-1282. doi:Doi 10.1016/0043-1354(80)90186-4
- Luthy, R. G., Vassiliou, P., & Carter, M. J. (1980). Leach Characteristics of Coal-Gasification Char. *Journal of the Environmental Engineering Division-Asce*, 106(1), 81-103.
- Luthy, R. G., & Walter, R. W. (1980). The Production, Management and Chemistry of Coal Gasification Wastewaters. In C. Karr (Ed.), *Analytical Methods for Coal and Coal Products* (Vol. III, Ch. 44, pp. 189-246): Academic Press.
- Stamoudis, V. C., & Luthy, R. G. (1980). Determination of Biological Removal of Organic-Constituents in Quench Waters from High-Btu Coal-Gasification Pilot Plants. *Water Research*, 14(8), 1143-1156. doi:Doi 10.1016/0043-1354(80)90166-9
- Luthy, R. G., & Bruce, S. G. (1979). Kinetics of Reaction of Cyanide and Reduced Sulfur Species in Aqueous-Solution. *Environmental Science & Technology*, 13(12), 1481-1487. doi:DOI 10.1021/es60160a016
- Luthy, R. G., Bruce, S. G., Walters, R. W., & Nakles, D. V. (1979). Cyanide and Thiocyanate in Coal-Gasification Wastewaters. *Journal Water Pollution Control Federation*, 51(9), 2267-2282. (H.P. Eddy Medal Award paper)
- Luthy, R. G., & Carter, M. J. (1979). Leaching Characteristics of Coal Gasification Process Ash and Char. In R. A. Baker (Ed.), *Proceedings of Symposium on Contaminants and Sediments* (Vol. 2, Ch. 9, pp. 137-167). American Chemical Society, Division of Environmental Chemistry: Ann Arbor Science Publishers, Inc.
- Luthy, R. G., Selleck, R. E., & Galloway, T. R. (1978). Removal of Emulsified Oil with Organic Coagulants and Dissolved Air Flotation. *Journal Water Pollution Control Federation*, 50(2), 331-346.
- Luthy, R. G., Selleck, R. E., & Galloway, T. R. (1977). Surface Properties of Petroleum Refinery Waste Oil-Emulsions. *Environmental Science & Technology*, 11(13), 1211-1217. doi:DOI 10.1021/es60136a015

Ciani, J. B., Brackett, R. L., & Luthy, R. G. (1972). Underwater Construction Survey. *The Military Engineer*, 64(421), 315-318.