

Curriculum Vitae

Sharon L. Walker, Ph.D.

**Marlan & Rosemary Bourns College of Engineering
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Current Position

Interim Dean 2016 – Present
Marlan & Rosemary Bourns College of Engineering
University of California Riverside
Riverside, California

Education

Ph.D., Environmental Engineering, Yale University 2000 – 2004
New Haven, Connecticut
Dissertation Title: Mechanisms of Bacterial Adhesion to Solid Surfaces in Aquatic Systems
Dissertation Advisor: Menachem Elimelech
Graduation with distinction (Defense 2004, Degree conferred 2005)

M.S., Chemical Engineering, Yale University 1999 – 2000
New Haven, Connecticut

B.S., Environmental Engineering, University of Southern California 1994 – 1998
Los Angeles, California
Major: Environmental Engineering

B.S., Environmental Studies, University of Southern California 1994 – 1998
College of Letters, Arts and Sciences; Environmental Studies Program
Los Angeles, California
Major: Environmental Studies – Biological Emphasis

Administrative Appointments

Interim Dean 2016 – Present
Marlan & Rosemary Bourns College of Engineering
University of California Riverside
Riverside, California

Associate Dean, Student Academic Affairs 2015 – 2016
Marlan & Rosemary Bourns College of Engineering
University of California Riverside
Riverside, California

Associate Dean, Recruitment, Retention and Student Success 2014 – 2015
University of California Riverside
Graduate Division
Riverside, California

Graduate Advisor, Recruitment and Enrolled Student Management 2010 – 2014
University of California Riverside
Department of Chemical and Environmental Engineering
Riverside, California

Academic Appointments

Professor & The John Babbage Chair in Environmental Engineering	2014 – Present
Associate Professor & The John Babbage Chair in Environmental Engineering	2010 – 2014
Assistant Professor & The John Babbage Chair in Environmental Engineering	2005 – 2010
Marlan & Rosemary Bourns College of Engineering University of California Riverside Riverside, California	

Research & Project Appointments

Editorial Advisory Board Member, <i>Environmental Science: Nano</i> Journal of the Royal Society of Chemistry, impact factor 5.89	2016-present
Panel Manager, National Institute of Food and Agriculture (NIFA), USDA Small Business Innovative Research (SBIR) 8.4 Soil and Water Resources	2015 – 2016
Graduate Research Assistant, Yale University	1999 – 2004
Project Assistant, USC Wrigley Institute for Environmental Studies	1999
Research Scholar, USC School of Engineering	1994 – 1997

Leadership and Development Training

Executive Leadership in Academic Technology and Engineering (ELATE) at Drexel (2014-2015) leadership development program for senior women faculty in science, technology, engineering, mathematics, (STEM) and related disciplines. Year-long fellowship:
<http://www.drexel.edu/engineering/programs/special-programs/ELATE/>.

University of California CORO Leadership Program (2016) Professional development and leadership program for academic and staff leaders across UC system. Year-long fellowship program:
<http://www.ucop.edu/human-resources/coro/index.html>.

NSF Advance Program at UCR (2012-2015) Ongoing professional development programming for women faculty supported by the NSF. CO-PI for UCR's Advance grant.

Honors and Awards

Academic

<i>Environmental Science and Technology</i> Journal's Excellent Reviewer Award	2014
Chancellor's Award for Excellence in Undergraduate Research & Creative Achievement	2011
NSF Career Award	2010-2015
Fulbright Fellowship (visitor at Ben Gurion University of the Negev, Israel)	2009-2010
John Babbage Chair in Environmental Engineering	2005-present
UC Regents Faculty Fellowship	2005, 2007
UC Faculty Senate Research Award	2005, 2008
U.S. Environmental Protection Agency STAR Fellowship	2001-2004
American Chemical Society Certificate of Merit, Environmental Chemistry Division	2003
American Chemical Society Graduate Student Award in Environmental Chemistry	2002
National Water Research Institute Graduate Fellowship	2000-2003
Yale University Graduate Fellowship	1999-2000
Yale University Becton Scholarship	1999-2000
USC-Anita Wilson Environmental Scholarship	1998
USC- Hugo R. Santora Fellowship	1998
USC- Deans' Scholarship	1994-1998
Tyler Environmental Scholar	1996-1997
USC- Golden State Scholarship	1994-1997
USC- Merit Research Scholarship Recipient	1994-1997

Honors Societies

Golden Key National Honors Society – honorary member (inducted fall 2013)

Tau Beta Pi- National Engineering Honors Society - member (inducted 1997)

Chi Epsilon- Civil Engineering Honors Society – member (inducted 1997)

Leadership

AEESP Distinguished Service Award	2014
<i>Assoc. of Environmental Engineering & Science Professors (for service as Chief Information Officer 2011-2014)</i>	
ELATE Fellow	2014-2015
<i>Executive Leadership Program for Academic Women in STEM fields (Drexel University)</i>	
Woman of the Year, Sisters in Strength (Women's service group at UCR)	2013-2014
Woman of Distinction, Girl Scouts of San Geronio Award	2008
Women in Science at Yale (WISAY), Undergraduate Mentoring Program	2000-2004
Graduate Affiliate, Trumbull College, Yale University	2000-2002
USC Order of Troy - Senior Excellence Award	1999
USC Order of the Torch – Top ten students in graduating class	1998
Girl Scout Gold Award – highest honor	1992

Professional Memberships and Activities

Memberships

American Chemical Society (ACS), member	2000-present
American Institute of Chemical Engineers (AIChE), member	2005-present
Society of Women Engineers (SWE), member	2005-present
Association of Environmental Engineering and Science Professors (AEESP), member	2005-present
Association of Women in Science (AWIS), member	2010-present
American Association for the Advancement of Science (AAAS), member	2013-present
Society of Environmental Toxicology and Chemistry (SETAC), member	2011-2013

Professional Leadership

Chair, 2017 Gordon Research Conference in Environmental Nanotechnology (elected)	2015-2017
Vice-Chair, 2015 Gordon Research Conference in Environmental Nanotechnology (elected)	2013-2015
Organizer, 87th Colloid & Surface Science Symposium, American Chemical Society	2013
<i>Hosted at UC Riverside (selected from national competition to host)</i>	
AEESP Foundation, Financial Investment Committee (by nomination)	2014-present
Division Officer, ACS Division of Colloid and Surface Science	2009-2013
<i>Symposium Committee Standing Member (elected)</i>	

Professional Service

Visiting committee member, Colorado School of Mines' Civil and Environmental Department	2017
External review committee member, University of Texas, San Antonio's Department of Civil and Environmental Engineering	2016
External review committee member, University of Arizona's Department of Chemical and Environmental Engineering	2014
AEESP Education Committee	2010-2011
AWIS Educational Awards Committee Member	2009-2011
Co-organizer of "Fate and Transport of Graphene in the Environment" session 248th ACS National Meeting (San Francisco, CA)	2014
Co-organizer of "Starting out on the right foot: Tips for success for aspiring and new faculty", workshop organized for the AEESP National Meeting Golden, CO	2013
Co-Organizer - Nanoparticle Interactions at Key Environmental Interfaces" Session	2012

Environmental Chemistry Division, ACS National Meeting

Co-organizer of "Environmental Implications of Nanomaterials: Microbial Interactions" and "Environmental Implications of Nanomaterials: Fate and Transport" Sessions, AIChE National Meeting	2011
Co-organizer of "Navigating the Pre-Tenure Years" workshop organized for the AEESP National Meeting	2011
Co-organizer of "Environmental Implications of Nanomaterials: Microbial Interactions" and "Environmental Implications of Nanomaterials: Fate and Transport" Session, AIChE National Meeting	2010
Co-organizer of "Nano and Colloidal Materials: Environmental Applications and Implications" Symposium, 84th Colloid & Surface Science Symposium, American Chemical Society	2010
Co-organizer of "Water Sustainability" session, Association for Environmental Engineering and Science Professors (AEESP) Meeting	2009
Co-organizer of "Bacterial Adhesion Phenomena" Symposium, 83st Colloid & Surface Science Symposium, American Chemical Society	2009
Co-organizer of "Understanding and Controlling Bacterial Adhesion at Molecular to Macro-Scales" Session, AIChE and ACS Joint National Meeting	2008
Co-organizer of "Colloidal Fouling in Water Treatment Applications" Sessions (Parts I and II), AIChE National Meeting	2007
Co-organizer of "Water Quality Sensing and Detection Methods" Session AIChE National Meeting	2007
Co-organizer of "Colloid & Interfacial Phenomena in Environmental Systems" Symposium, 81st Colloid & Surface Science Symposium, American Chemical Society	2007
Co-organizer of "Colloidal & Interfacial Phenomena in Aquatic Systems" Symposium, Topical 1: Water Resource Conservation: Purification, Reclamation and Reuse (T1), AIChE National Meeting	2007
Co-organizer of "Water Quality Sensing and Detection Methods" Symposium, Topical 1: Water Resource Conservation: Purification, Reclamation and Reuse (T1), AIChE National Meeting	2006
Co-organizer of "Understanding and Controlling Biofouling in Aquatic Systems" Symposium, Division of Environmental Chemistry and Association of Environmental Engineering and Science Professors (AEESP) Joint-Session, 232nd American Chemical Society National Meeting	2006
Co-organizer of "Colloid Separation and Transport in Aquatic Environments" Symposium, Division of Colloid and Surface Chemistry, 229th American Chemical Society National Meeting	2005

University Committee and Administrative Service

Department of Chemical and Environmental Engineering

Graduate Advisor	2010-2014
Graduate Committee	2010-present
Faculty Search Committee	2004-2011
Faculty Search Committee	2014-2016
Department Seminar Series Coordinator	2007-2008
Environmental Engineering Search Chair	2005-2006
Environmental Engineering Search Chair	2015-2016
Undergraduate Committee	2005-2010
Staff Recruitment and Search Committee	2005

ABET Committee	2005-2010
Awards Committee	2006-2008
<u>Bourns College of Engineering</u>	
Associate Dean (Student Academic Affairs)	2015-2016
BCOE Executive Committee Member (Ex-Officio)	2015-present
BCOE Civil Engineering Faculty Search Committee	2008-2009
BCOE Faculty Search Committee	2005-2006
BCOE Computer Systems Committee	2005-2006
Society of Women Engineers, Chapter Advisor at UCR	2005-present
Tau Beta Pi - Alpha Beta Chapter Advisor at UCR	2005-present
<u>University level</u>	
Deans Council	2016-present
Associate Vice Chancellor of Diversity and Inclusion Search Committee	2015
Committee on Preparatory Education (Ex-officio)	2015-2016
Center for the Agriculture & Food Enterprise Executive Committee Member	2015-present
STEM Education Cluster Hire Committee	2015-2016
Associate Dean, Graduate Division (Recruitment, Retention & Student Success)	2014-2015
Chair, Vice Chancellor for Academic Personal Search Committee	Fall 2014
Executive Vice President and Provost Search Committee	2013-2014
Graduate Student Mentoring Program	2013-2014
College of Natural and Agricultural Sciences Redesign Committee (Excellence in Service and Outreach)	2012-2013
Chancellor's Budget Advisory Committee	2011-2014
Endowed Chair Policy Revision Committee	2013
Undergraduate Honors Program Faculty Advisor	2010-2015
Vice Provost for Academic Personnel Hellman Award Committee	2011- 2013
Athletic Director Search Committee	2011
Advisory Council to the Associate Vice Provost for Faculty Equity & Diversity	2007
Chancellor's Advisory Committee on Intercollegiate Athletics	2006-present
Vice Provost for Undergraduate Education Scholarship Committee	2007
Vice Provost's Committee on Undergraduate Women in STEM Fields	2006
Athletics Appeals Committee	2006-present
Academic Senate member	

Graduate Student, Post-Doctoral Fellow, Undergraduate Student, and Visiting Scholar Mentoring

PhD students (Ph.D. in Chemical and Environmental Engineering – unless otherwise stated): (9 defended/graduated to date; advising 6 currently; 6 of 15 PhD students are women and 1 URM) Gexin Chen (Jan. 2005-Aug. 2009) Berat Haznedaroglu (Sept. 2005-Dec. 2009), Hyunjung Kim (Sept. 2005-Aug. 2009), Amy Gong (Sept. 2006-Aug. 2011), Indranil Chowdhury (Sept. 2008-June 2012), Ian Marcus (Sept. 2008-December 2012), Ryan Honda (Sept. 2010- Jun 2014), Alicia Taylor (Sept. 2011-Feb 2015, Environmental Toxicology Graduate Program), Jacob Lanphere (Sept. 2011-Jun 2014), Travis Waller (Sept. 2013-present), Chen Chen (Sept. 2013-present), Drew Story (Sept. 2013-present), Caroline Kim (Sept. 2014-present), Holly Mayton (Sept 2014-present), Unnati Rao (Sept 2015-present)

Master students (M.S. in Chemical and Environmental Engineering – unless otherwise stated): Olgun Zorlu (Sept. 2008-June 2010), Parham Javadinajjar (Sept. 2010-August 2011), Kelsey Whittaker (Sept. 2010- August 2011), Jessamine Quijano (March 2012-Dec. 2013; Microbiology Program)

Post-doctoral advisor: (6 post-doctoral scholars to date) Saeed Torkzaban (2007 PhD, University of Utrecht; 1/2007-1/2008); Yongsuk Hong (2007 PhD, Lehigh University; 1/2008-9/2009); David Ginsburg (2006 PhD, University of Southern California; 1/2008- 1/2009); Nichola Kinsinger (2013 PhD, UCR, 10/2013-8/2015); Avner Ronen (2014 PhD, Technion, 7/2014-6/2016), Ian Marcus (2012 PhD, UCR, 8/2016-present)

Graduate student committee member (Ph.D.) Chemical and Environmental Engineering (24 students), Env. Sciences (7 students), Chemistry (3 students), Microbiology (6 students), Bioengineering (2 students), Env. Toxicology (5 students), Material Science and Engineering (1 students)

Graduate student committee member (M.S. in Chemical and Environmental Engineering: Dora Iliana Medina, Wenling Huang (co-chair), Nicole McBean, Mandeep Kular, Dawit Wardofa, Matthew Chen

Visiting scholars: Shiva ShojaeiTazehkand (MS candidate, University of Utrecht; 2005-2007); Saeed Torkzaban (PhD candidate, University of Utrecht; 2005-2006); Dr. Karin Westerling (Science Teacher, Matthew Gage Middle School; Summer 2009); Cristina Pablos (PhD candidate, University Rey Juan Carlos, Spain; Summer 2011); Dr. Cai Peng (Associate Professor at Huazhong Agricultural University, China; August 2011-September 2012); Jenia Gutman (PhD candidate, Ben Gurion University, Israel; Summer 2012); Meirav Cohen (PhD student, Ben Gurion University, Israel; Summer 2012); Diana Ferrando (PhD student, Ben Gurion University, Israel; Fall 2012); Monica Palomo (Associate Professor at Cal Poly Pomona; March 2015-September 2015).

Undergraduate research advisor:

Environmental Engineering students: Christopher Salam (05-07, UC LEADS); Hahn Phuc Nyguyen (05, MS RIP); Breanne Borneman (05-07); Troy Ezech (07, MS RIP; 08, UC LEADS), Matthew Graham (07-08); Ryan Honda (08-10, MY BEST); Rosalva Chavez (08-09), James Gutierrez (08-09), Adam Alonzo (10-11), Alexander Duchon (10-12), Stephen Opot (10-12, CCRAA), Jose Valle (10-13, CCRAA), Shanin Quazi (11-12, UC LEADS), Tyler Abercrombie (11-12, UC Leads), Risa Guysi (11-13), Brian Cruz (12-14; MY BEST); Melanie Zecca (2013); Tim Chow (2012-14), Diego Novoa (14-16); Carola Acurio (15-16); Andrew Sanchez (2015-2016), Stephen Boggs (2016-present)

Non-Environmental Engineering students: Dewi Nilasari (05-07 – Chemical Eng.); Teresa Buckingham (05- 06– Chemical Eng.); Su New (05-06– Chemical Eng.), Parham Javadinajjar (09-10– Chemical Eng.), James Kim (10-11– Chemical Eng.), Elizabeth Hortsman (11-12, MY BEST– Chemical Eng.), Hailey Wilder (11-12, UC LEADS – bioengineering student), Corey Luth (12-14); Vinh Hue (14, RISE); Stacey A. Nwagbara (13-present – biology); Aaron Coyoca (12-present – biochemistry); Madeline Luth (14-present, microbiology); Robin Riehn (14-present, – Chemical Eng.); Igor Irianto (14-present, – Chemical Eng.); Lahari Suma Kuchibhotla (15-present – bioengineering); Randy Ly (15-present – chemistry).

Visiting students: Crystal Bray (06, UC Berkeley, MS RIP), Matthew Yates (06 and 07, UC Davis), Magda Benavides (07, MS RIP, Univ. of Maryland), Kathy Nguyen Huynh (07, BRITE REU, UCLA), James Gutierrez (08, BRITE REU, RCC), Melissa Sy (08, BRITE REU, Cal Poly Pomona), Samantha Begnoche (09, BRITE REU, Clarkson Univ.), Chad Thompson (09, Oregon State University), Clarisse Rangel Ottero (2014, Brazilian exchange student), Christina E. Gerges (2013-2014, Martin Luther King High School student), Stephanie Lara (2015, Cal Baptist Univ); Chantel McKoy (2016, North Carolina A&T)

Community College students: DJ Cummings (06-07), Jose Avila (06-07), Yasmine Salas (07-08), Juan Lucio (07-08), Karynn Kirby (08-09), Melissa Reimer (08-09), Brian Perez (09); Louise Daniels (11-12); Valerie Keene (12-13); Brandon Rodgers (12-13); Cassandra Bennett (12-13); Christine Brown (13-14); Cody Gonzalez (13-14), Diana Iwias (13-14); William Wellman (13-14); Cody Taylor (14-15); Alex Burton (14-15); Daniel White (Summer 14), Danielle Fierro (Summer 15), David Huxley (Summer 15- present)

Teaching Experience

Courses taught at UC Riverside

Undergraduate:

ENVE 142 – Water Quality Engineering

ENVE 171 – Introduction to Environmental Engineering

ENVE 146 – Fate and Transport of Chemicals in the Environment

CEE 158 – Professional Development for Chemical and Environmental Engineers

Honors 150 – Research and Creativity Across Disciplines (co-taught)

Honors 151 – Individual Projects Research or Creative Activity (co-taught)

Graduate:

CEE 225 – Physical and Chemical Separation Processes in Aquatic Environments

CEE 265 – Special Topics in Microbial Fate and Transport in Aquatic Environments

Course taught at Ben Gurion University (during Fulbright Fellowship)

Graduate Seminar: Physical, Chemical, and Biological Processes Controlling Fate of Particles in Aquatic Environments

Publications (peer reviewed journal articles) (Underlined authors are undergraduate students)

h-index of 33 and 3674 citations (as of 9/11/16 on Google Scholar)

1. Walker, S.L.; Bhattacharjee, S.; Hoek, E.M.V.; Elimelech, M. (2002) "A Novel Asymmetric Clamping Cell for Measuring Streaming Potential of Flat Surfaces", *Langmuir*, 18: 2193-2198.
2. Redman, J.A., Walker, S.L. and Elimelech, M. "Bacterial Adhesion and Transport in Porous Media: Role of the Secondary Minimum", *Environmental Science and Technology*, 2004, 38, 1777-1785.
3. Walker, S. L., J. A. Redman, and M. Elimelech. 2004. "Role of Cell Surface Lipopolysaccharides in Escherichia coli K12 Adhesion and Transport." *Langmuir* 20:7736-7746.
4. Walker, S.L., Hill, J., Redman, J.A. and Elimelech, M., 2005 "The Influence of Growth Phase on Adhesion Kinetics of *Escherichia coli* D21g" *Applied and Environmental Microbiology*, 71:3093-3099.
5. Walker, S.L 2005 "The Influence of Bacterial Surface Polymers on Bacterial Adhesion and Transport in Groundwater Environments" *Journal of Harbin Institute of Technology* (new series), 12: 19-26.
6. Walker, S.L., Redman, J.A., and Elimelech, M. 2005 "Influence of Growth Phase on Bacterial Deposition: Interaction Mechanisms Involved in Packed-Bed Column and Radial Stagnation Point Flow Systems" *Environmental Science and Technology*, special issue "Particles and Interfaces in Aquatic Systems, A tribute to Prof. Charles R. O'Melia" 39: 6405-6411.
7. Walker, S.L. 2005 "The Role of Nutrient Presence on the Adhesion Kinetics of *Burkholderia cepacia* G4g and ENV435g" *Colloids and Surfaces B: Biointerfaces* 45: 181-188.
8. Bradford, S.A., Simunek, J., and Walker, S.L., 2006 "Transport and Straining of *E. coli* O157:H7 in Saturated Porous Media" *Water Resources Research*, Special Section: Colloid Transport in Subsurface Environments 42 (12), W12S12, doi:10.1029/2005WR004805.

9. Bolster, C.H., Walker, S.L., and Cook, K.L. 2006 "Comparison of *Escherichia coli* and *Campylobacter jejuni* Transport in Saturated Porous Media" *Journal of Environmental Quality* 35: 1018-1025.
10. Torkzaban, S., Bradford. S.A., and Walker, S.L., 2007, "Resolving the coupled effects of hydrodynamics and DLVO forces on colloid attachment to collector surfaces" *Langmuir* 23 (19), 9652 -9660. (10.1021/la700995e S0743-7463(70)00995-2).
11. Chen, G. and Walker, S.L., 2007 "The role of solution chemistry and ion valence on the adhesion kinetics of groundwater and marine bacteria" *Langmuir* 23 (13) 7162-7169, doi:10.1021/la0632833.
12. Bradford. S.A., Torkzaban, S., and Walker, S.L., 2007 "Coupling of physical and chemical mechanisms of colloid deposition in saturated porous media" *Water Research* 41: 3012-3024, doi:10.1016/j.watres.2007.03.030.
13. Tazehkand, S.S., Torkzaban, S., Walker, S.L., and Bradford. S.A. 2008, "Cell preparation methods influence *E. coli* D21g surface chemistry and transport in saturated porous media" *Journal of Environmental Quality* 37:2108-2115.
14. Torkzaban, S., S. S. Tazehkand, S. L. Walker, and S. A. Bradford, 2008, Transport and fate of bacteria in porous media: Coupled effects of chemical conditions and pore space geometry, *Water Resour. Res.*, 44, W04403, doi: 10.1029/2007WR006541.
15. Torkzaban, S., Bradford. S.A., and Walker, S.L., 2008, "Colloid transport in unsaturated porous media: The role of water content and ionic strength on particle straining" *Journal of Contaminant Hydrology* 96:113-127.
16. Haznedaroglu, B., Bolster, C.H., and S. L. Walker, 2008, "The role of starvation on bacterial adhesion and transport in saturated porous media" *Water Research* 42:1547-1554.
17. Chen, G., Hong, Y., and S.L. Walker, 2009 "Colloidal and Bacterial Deposition: Role of Gravity" *Langmuir* 26(1)314-319 (doi: 10.1021/la903089x).
18. Hong, Y., Honda, R.J., Myung, N., and Walker, S.L. 2009 "Transport of iron-based nanoparticles: Role of magnetic properties" *Environmental Science and Technology* 43 (23) 8834–8839.
19. Bradford, S.A., Kim, H.N., Haznedaroglu, B.Z., Torkzaban, S., and S. L. Walker 2009 "Coupled factors influencing concentration dependent colloid transport and retention in saturated porous media" *Environmental Science and Technology* 43, 6996–7002.
20. Gong, A.S., Bolster, C., Benavides, M., and S.L. Walker 2009 "Extraction and Analysis of Extracellular Polymeric Substances (EPS): Comparison of Methods and EPS Levels in *Salmonella pullorum* SA 1685" *Environmental Engineering Science* 26, 10 (1523-1532).
21. Kim, H.N., Bradford, S.A., and Walker, S.L. 2009 "Surface Characteristics of Pathogenic *E. coli* O157:H7: Role of Solution Chemistry and Surface Macromolecules" *Biomacromolecules* 43: 4340-4347 (doi: 10.1021/bm900516y).
22. Haznedaroglu, B.Z., Haznedaroglu, I.C., Walker, S.L., Bilgili, H., Goker, H., Kosar, A., Aktas, A., Captug, O., Kurt, M., Ozdemir, O., Kirazli, S., and Firat, H.C. 2009 "Ultrastructural and Morphological Analyses of the *in vitro* and *in vivo* hemostatic effects of Ankaferd Blood Stopper", *Clinical and Applied Thrombosis/Hemostasis* 16(4)446-453 (doi:10.1177/1076029609343706).
23. Kim, H.N., Bradford, S.A., and Walker, S.L. 2009 "Escherichia coli O157:H7 Transport in Saturated Porous Media: Role of Solution Chemistry and Surface Macromolecules" *Environmental Science and Technology* 43, 4340-4347.
24. Prado, O.J., Papat, S.C., Chen, G., Walker, S.L., Lafuente, J., Gabriel, D., Deshusses, M.A. 2009 "The effect of packing hydrophilization on bacterial attachment and the relationship with the Performance of Biotrickling Filters." *Biotechnology and Bioengineering* 103(6) 1060-1067.
25. Lin, H.K., Pryadko, L.P., Walker, S.L., and Zandi, R., 2009, "Attachment and detachment rate distributions in deep bed filtration" *Physical Review E* 79, 046321.
26. Kim, H.N., and Walker, S.L., 2009, "*Escherichia coli* transport in porous media: Influence of cell strain, solution chemistry, and temperature" *Colloids and Surfaces B: Biointerfaces* 71:1(160-167) (doi:10.1016/j.colsurfb.2009.02.002).

27. Hong, Y., Rheem, Y., Lai, M., Cwiertny, D.M., Walker, S.L. and Myung, N.V., 2009, "Electrochemical synthesis of Fe_xNi_{1-x} nanostructures for environmental remediation" *Chemical Engineering Journal* 151 (2009) 66–72.
28. Haznedaroglu, B.Z., Kim, H.N., Bradford, S.A., and Walker, S.L., 2009, "Relative Transport Behavior of *Escherichia coli* O157:H7 and *Salmonella enterica* serovar *pullorum* in Packed Bed Column Systems: Influence of Solution Chemistry and Cell Concentration" *Environmental Science and Technology* 43, 6: 1838-1844.
29. Bolster C.H., Cook, K.L., Haznedaroglu, B.Z., and Walker, S.L., 2009, "The Transport of *Mycobacterium avium* subsp. *paratuberculosis* through Saturated Aquifer Materials" *Letters in Applied Microbiology* 48:307–312.
30. Chen, G., Bedi, R., Beving, D, Yan, Y., and Walker, S.L., 2009, "Initial Bacterial Deposition on Bare and Zeolite-Coated Aluminum Alloy and Stainless Steel" *Langmuir* 25 (3), 1620-1626.
31. Kline, T.R., Chen, G., and Walker, S.L., 2008, "Colloidal deposition on remotely controlled charged micropatterned surfaces in a parallel plate flow chamber" *Langmuir* 24 (17), 9381-9385.
32. Bolster, C.H., Haznedaroglu, B., and Walker, S. L., 2009, "Diversity in cell properties and transport behavior among 12 environmental *Escherichia coli* isolates" *Journal of Environmental Quality* 38:465–472.
33. Chowdhury, I., Hong, Y., and Walker, S. L. 2010 "Container to Characterization: Impacts of Metal Oxide Nanoparticle Handling, Preparation and Solution Chemistry on Particle Stability" *Colloids and Surfaces A*. 368(1-3) 91-95. doi: 10.1016/j.colsurta.2010.07.019.
34. Chen, G., Bedi, R.S., Yan, Y. and S. L. Walker 2010 "Initial Colloid Deposition on Bare and Zeolite-Coated Stainless Steel and Aluminum: Influence of Surface Roughness" *Langmuir* 26 (15) 12605-12613.
35. Bolster, C., Cook, K., Marcus, I., Haznedaroglu, B.Z., and Walker, S.L. 2010 "Correlating Transport Behavior with Cell Properties for Eight Porcine *Escherichia coli* Isolates" *Environmental Science and Technology* 44 (13) 5008-5014.
36. Vanoyan, N., Gillor, O., Walker, S.L., and Herzberg, M., 2010 "Reduced Bacterial Deposition and Attachment by The Quorum Sensing Inhibitor, 4-nitro-pyridine-*N*-oxide: The Role of Physicochemical Effects" *Langmuir* 26 (14) 12089-12094.
37. Haznedaroglu, B.Z., Zorlu, O., Hill, J.E., and Walker, S.L., 2010. "Identifying the Role of Flagella in the Transport of Motile and Nonmotile *Salmonella enterica* Serovars" *Environmental Science and Technology* 44 (11)4184-4190.
38. Wang, Y., Li, Y, Kim, H., Walker, S.L., Abriola, L.M., and Pennell, K.D. 2010 "Transport and Retention of Fullerene Nanoparticles (nC₆₀) in Natural Soils" *Journal of Environmental Quality* 39: 1925-1933.
39. Kim, H.N., Walker, S.L., and Bradford, S.A., 2010 "Macromolecule Mediated Transport and Retention of *Escherichia coli* O157:H7 in Saturated Porous Media" *Water Research* 44:1082–1093.
40. Kim, H. N., Walker, S. L., and Bradford, S. A. 2010 "Coupled Factors Influencing the Transport and Retention of *Cryptosporidium parvum* Oocysts in Saturated Porous Media" *Special Issues in Water Research* 44:1213–1223.
41. Orgad, O; Oren, Y.; Walker, S.; Herzberg, M. 2011 "The Role of Alginate in *Pseudomonas aeruginosa* EPS Adherence, Viscoelastic Properties, and Cell Attachment" *Biofouling* 27(7)787-798.
42. Chowdhury, I., Hong, Y., Honda, R., Walker, S. L. 2011 "Mechanisms of TiO₂ nanoparticle transport in porous media: Role of solution chemistry, nanoparticle concentration, and flowrate" *Journal of Colloid and Interface Science* 360(2)548-555 doi:10.1016/j.jcis.2011.04.111.
43. Magal, Einat; Weisbrod, Noam; Yechieli, Yoseph; Walker, Sharon L.; and Yakirevich, Alexander 2011 "Colloid Transport in Porous Media: Impact of Hyper-saline Solutions" *Water Research* 45(11)3521-3532.

44. Fang, L.; Cao, Y.; Huang, Q.; Walker, S.L.; Cai, P. 2012 "Reactions between bacterial exopolymers and goethite: A combined macroscopic and spectroscopic investigation" *Water Research* 46(17):5613-5620.
45. Chowdhury, I.; Duch, M.C.; Gits, C.C.; Hersam, M.C.; Walker, S.L. 2012 "Impact of Synthesis and Purification Methods on the Transport of Single Walled Carbon Nanotubes in the Aquatic Environment" *Environmental Science and Technology* 46(21):11752-60.
46. Priester, J.H.; Ge, Y.; Mielke, R.E.; Horst, A.M.; Cole Moritz, S.; Espinosa, K.; Gelb, J.; Walker, S.L.; Nisbet, R.M.; An, Y-J; Schimel, J.P.; Palmer, R.G.; Hernandez-Viezcas, J.A.; Zhao, L.; Gardea-Torresdey, J.L.; Holden, P.A. 2012 "Soybean Susceptibility to Manufactured Nanomaterials: Evidence for Food Quality and Soil Fertility Interruption" *PNAS* 109, (37), E2451–E2456.
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Conference Presentations and Posters (Underlined authors are undergraduate students)

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2. Chen, J.C.; Walker, S.L.; Elimelech, M., "Novel technique for studying the role of microscopic chemical heterogeneity on colloid and bacterial adhesion" Presented at the American Chemical Society 22nd National Meeting August 26-30, 2001, Chicago, IL, USA.
3. Walker, S.L., Chen, J.C.; Elimelech, M, "A novel technique for synthesizing microscopic chemical heterogeneity for studying colloidal and bacterial adhesion" Poster at the 5th Annual Environmental Chemistry Symposium, Pennsylvania State University, March 22-23, 2002, State College, PA, USA.
4. Redman, J., Walker, S.L., Elimelech, M, "Tailing in particle and bacterial breakthrough curves in flow through porous media" Presented at the American Chemical Society 76th Colloid and Surface Science Symposium, June 20, 2002, Ann Arbor, MI, USA.
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7. Redman, J. A., Walker, S., Elimelech, M. "Observations of Tailing in Particle Breakthrough Curves in Porous Media" presented at the 224th American Chemical Society National Meeting, August 18, 2002, Boston, MA, USA.

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9. Walker, S.L., "Bacterial Adhesion and Transport in Groundwater Environments: The Role of Cell Surface Characteristics and Geochemical Heterogeneity " Presented at the National Water Research Institute Research Advisory Board meeting, November 2, 2002, Chicago, IL, USA.
10. Walker, S.L., Redman, J.A., and Elimelech, M, "The Role of LPS Composition on Bacterial Adhesion and Detachment under Flow Conditions" Presented at the 225th American Chemical Society National Meeting, March 24, 2003, New Orleans, LA, USA.
11. Walker, S.L., Redman, J.A., Elimelech, M, "Measuring Effect of Bacterial Lipopolysaccharides on Adhesion and Detachment Under Flow Conditions" Presented at the American Chemical Society 77th Colloid and Surface Science Symposium, June 16, 2003, Atlanta, GA, USA.
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13. Walker, S.L., Redman, J.A., Elimelech, M, "Role of Secondary Minimum on Bacterial Adhesion and Transport" Presented at the 226th American Chemical Society National Meeting, *Symposium in Honor of Professor Walter J. Weber Jr.*, September 10, 2003, New York, NY, USA.
14. Redman, J.A., Walker, S.L., Hill, J.E., Elimelech, M, "Influence of Growth Phase on Bacterial Adhesion and Transport" Presented at the American Chemical Society 78th Colloid and Surface Science Symposium, June 22, 2004, New Haven, CT, USA.
15. Walker, S.L., Redman, J.A., Elimelech, M, "Influence of Lipopolysaccharides on Bacterial Adhesion and Transport in Aquatic Systems" Presented at the American Chemical Society 78th Colloid and Surface Science Symposium, June 22, 2004, New Haven, CT, USA.
16. Walker, S.L., Redman, J.A., Elimelech, M, "Bacterial Transport and Deposition in Porous Media: Role of Cell Surface Lipopolysaccharides (LPS)" Presented at the 228th American Chemical Society National Meeting, *Symposium in Honor of Professor Charles O'Melia*, August 2004, Philadelphia, PA, USA.
17. Walker, S.L. "Adhesion Kinetics of *Burkholderia cepacia* G4g and ENV435g" presented at the 229th American Chemical Society National Meeting, March 13-17, 2005, San Diego, CA, USA.
18. Nilasari, D. and S. L. Walker, "Influence of Nutrient Condition on the Adhesion Kinetics of *Burkholderia cepacia* G4g and ENV435g" presented at the American Chemical Society 79th Colloid and Surface Science Symposium, June 12-15, 2005, Potsdam, NY, USA.
19. Walker, S.L. "Transport and Adhesion of *Burkholderia cepacia* G4g and ENV435g in Aquatic Environments" poster presented at the 105th General Meeting of the American Society for Microbiology, June 5-9, 2005, Atlanta, GA, USA.
20. Walker, S.L "The Influence of Bacterial Surface Polymers on Bacterial Adhesion and Transport in Groundwater Environments" presented at the International Workshop on Novel and Enhanced Water Treatment Technologies for Upgrading Water Quality, September 6, 2005, Tianjan, China
21. Chen G. and S.L. Walker "Adhesion kinetics of freshwater and marine bacteria: Role of solution chemistry" poster presented at the 106th General Meeting of the American Society for Microbiology, May 21-25, 2006, Orlando, FL, USA.
22. Bradford, S., S. Torkzaban, and S.L. Walker "Coupling of Physical and Chemical Mechanisms in Colloid Deposition" presented at the American Chemical Society 80th Colloid and Surface Science Symposium, June 18-21, 2006, Boulder, CO, USA.
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27. Walker, S.L. and G. Chen, "Adhesion kinetics of freshwater and marine bacteria: Role of solution chemistry" to be presented at the 232nd American Chemical Society National Meeting, Division of Environmental Chemistry Symposia Co-Sponsored with Association of Environmental Engineering and Science Professors, September 10-14, 2006, San Francisco, CA, USA.
28. Kim, H., S. ShojaeTazehkand, and S. L. Walker, "*E. coli* deposition and transport in porous media: Influence of solution chemistry and bacterial surface polymers" presented at the American Institute of Chemical Engineers National Meeting, Topical 1: Water Resource Conservation: Purification, Reclamation and Reuse (T1), November 12-17, 2006, San Francisco, CA, USA.
29. Torkzaban, S., S.A. Bradford and S.L. Walker, "Hydrodynamic and DLVO Forces on Colloid Retention in Porous Media" presented at the Soil Physics Multi-State Research Group Annual Meeting, January 2-4, 2007, Las Vegas, NV, USA.
30. Haznedaroglu, B.Z., C.H. Bolster, and S.L. Walker "Establishing the influence of starvation upon the transport of environmental *Escherichia coli* isolates" poster to be presented at the 107th General Meeting of the American Society for Microbiology, May 20-24, 2007, Toronto, Canada.
31. Chen, G., S. Torkzaban, S.A. Bradford and S. L. Walker "Colloid deposition in a radial stagnation point flow system: The role of hydrodynamic and DLVO forces" presented at the American Chemical Society 81st Colloid & Surface Science Symposium, June 24-27, 2007, Newark, DE, USA.
32. Torkzaban, S., S. Bradford and S. L. Walker "Resolving the Coupled Effects of Hydrodynamic and Physicochemical Forces on Colloid Attachment in Porous Media" presented at the American Chemical Society 81st Colloid & Surface Science Symposium, June 24-27, 2007, Newark, DE, USA.
33. Kim, H.J. and S. L. Walker "*Escherichia coli* Deposition and Transport in Porous Media: The coupled role of temperature and solution chemistry" presented at the American Chemical Society 81st Colloid & Surface Science Symposium, June 24-27, 2007, Newark, DE, USA.
34. Bradford, S.A., S. Torkzaban, S. L. Walker, and J. Simunek "Colloid Retention in Porous Media at Different Scales: Processes and Models" presented at the American Chemical Society 81st Colloid & Surface Science Symposium, June 24-27, 2007, Newark, DE, USA.
35. Benavides, M., Gong, A., and S. L. Walker "Comparing Methods of Extraction of Extracellular Polymeric Substances of Salmonella through Protein and Sugar Analysis", poster presented at the Annual Biomedical Research Conference for Minority Students (ABRCMS), November 10, 2007, Austin, TX, USA.
36. Huilian Ma, Meiping Tong, Vishal Gupta, William P. Johnson, Saeed Torkzaban, Scott A. Bradford, H. Kim, and Sharon L. Walker, "A New Paradigm for Pathogen Transport and Deposition in Porous Media: The Role of Pore Structure and Colloid-Colloid Interactions", Poster presented at the 2008 NRI Water & Watersheds Project Directors Meeting, Feb. 3-7, 2008, Sparks, NV, USA.
37. Haznedaroglu, B.Z. and S.L. Walker "Establishing the influence of starvation upon the transport of environmental *Escherichia coli* isolates" presented at the Joint American Chemical Society and American Institute of Chemical Engineers Spring Meeting, April 6-10, 2008, New Orleans, LA, USA.

38. Block: K. B. Mika, C. M. Lee, V. Thulsiraj, D. W. Ginsburg, S. L. Walker, J. A. Jay, "Rapid Quantitative Methods for Fecal Source-Tracking in Southern California Urban Watersheds and Beach Areas", Poster presented at the 108th General Meeting of the American Society for Microbiology, June 1-5, 2008, Boston, MA, USA.
39. Gong, A.S., Benavides, M., and Walker, S.L. "Extraction and Analysis of Extracellular Polymeric Substances: Comparison of Methods and EPS Levels in *Salmonella* sp.", poster presented at the 108th General Meeting of the American Society for Microbiology, June 1-5, 2008, Boston, MA, USA.
40. Haznedaroglu, B.Z., and S. L. Walker, 2008. "Monitoring the Pathogenicity and Transport Behavior of *Escherichia coli* O157:H7 and *Salmonella enterica* spp. in Packed Bed Column Systems", poster presented at the 108th General Meeting of the American Society for Microbiology, June 1-5, 2008, Boston, MA, USA.
41. Chen, G., Beving, D.E., Bedi, R.S., Yan, Y. and Walker, S.L. "The Antifouling Effect of Zeolite Surfaces on Bacterial Deposition in a Parallel Plate Flow Cell" presented at the American Chemical Society 82nd Colloid & Surface Science Symposium, June 15-18, 2008, Raleigh, NC, USA.
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45. Haznedaroglu, B.Z. and Walker, S.L. "Fate of Pathogenicity and Transport Characteristics of *Salmonella* and *E. coli* O157:H7 in Groundwater" poster presented at the Gordon Research Conference, Environmental Sciences: Water, Holderness School, June 22-27, 2008, Plymouth, NH, USA.
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47. Cook, K.L., Bolster, C.H., and Walker, S.L. "Evaluation of *Mycobacterium Avium* Subsp. *Paratuberculosis* Transport in Saturated Porous Media" presented at the Geological Society of America Annual Meeting, October 5-9, 2008, Houston, TX, USA.
48. Chen, G., Hong, Y. and Walker, S.L. "Particle and Bacterial Deposition: Role of Gravity" presented at the American Institute of Chemical Engineers National Meeting, November 16-21, 2008, Philadelphia, PA, USA.
49. Haznedaroglu, B.Z., and S. L. Walker, 2008. "Determining the Extent and Influence of Flagella, Injection Concentration, and Solution Chemistry in *Salmonella* Transport, presented at the 100th Annual Meeting of American Institute of Chemical Engineers, November 16-21, 2008, Philadelphia, PA, USA.
50. Ryan Honda and Sharon L. Walker. "Studies on Electrochemical Synthesis, Characterization, and Fate of Nanoparticles in Aquatic Environments." Poster presentation at the Southern California Conference for Undergraduate Research. Cal Poly Pomona. Nov. 22, 2008, Pomona, CA, USA.
51. Hong, Y., Honda, R. J., Myung, N. V. and Walker, S. L. "Fate and transport of (Fe_xNi_{1-x})_yO_z nanoparticles in aquatic environments" poster presented at the AGU Fall Meeting, December 15-19, 2008. San Francisco, CA, USA.

52. Sharon L. Walker, William P. Johnson, and Scott A. Bradford, "A New Paradigm for Pathogen Transport and Deposition in Porous Media: The Role of Pore Structure and Colloid-Colloid Interactions", Poster presented at the 2009 NRI Water & Watersheds Project Directors Meeting, Feb. 8-11, 2009, St. Louis, MO, USA.
53. Jane E. Hill and Sharon L. Walker, "Bacterial Pathogen Transport: Determining the Influence of Motility on Adhesion and Counter-Current Travel" poster presented at the 2009 NRI Water & Watersheds Project Directors Meeting, Feb. 8-11, 2009, St. Louis, MO, USA.
54. Sharon L. Walker and David Cwiertny, "Photochemical disinfection of pathogens: Influence of extracellular polymeric substances on bactericidal capacity of reactive oxygen species" poster presented at the 2009 NRI Water & Watersheds Project Directors Meeting, Feb. 8-11, 2009, St. Louis, MO, USA.
55. Ferri, J.K., Mylon, S. E. and Walker, S. L. "Elastic Moduli of *E. coli* D21g Biofilms in Chemostatic Conditions at the Aqueous-Air Interface" presented at the 237th ACS National Meeting, March 22-26, 2009. Salt Lake City, UT, USA.
56. Hong, Y., Honda, R. J., Myung, N. V. and Walker, S. L. "Transport of iron-nickel oxide nanoparticles in porous media" presented at the 237th ACS National Meeting, March 22-26, 2009. Salt Lake City, UT, USA.
57. Kim, H. N., S. L. Walker, and S. A. Bradford, "Macromolecule Mediated Transport and Retention of *Escherichia coli* O157:H7 in Saturated Porous Media", poster presented at the Microbial Transport and Survival in the Subsurface: First International Conference, May 10-13, 2009, Ontario, Canada.
58. Haznedaroglu, B.Z., and Walker, S.L., "Changes in Antibiotic Resistance and Pathogenicity of *Salmonella* Exposed to Artificial Groundwater with Residual Antibiotics", poster presented at the First International Conference on Microbial Transport and Survival in Porous Media, May 10-19, 2009, Niagara-on-the-Lake, Ontario, Canada.
59. Haznedaroglu, B.Z., and Walker, S.L., "Determining the Extent of Virulence and Influence of Motility in *Salmonella* Transport", presented at the First International Conference on Microbial Transport and Survival in Porous Media, May 10-19, 2009, Niagara-on-the-Lake, Ontario, Canada.
60. Kim, H. N., S. L. Walker, and S. A. Bradford, "*Escherichia coli* O157:H7 and *Cryptosporidium parvum* Oocysts Transport in Saturated Porous Media: Role of Solution Chemistry and Surface Macromolecules", presented at the 13th IACIS International Conference on Surface and Colloid Science and the 83rd ACS Colloid & Surface Science Symposium, June 14-19, 2009, New York, NY, USA.
61. Haznedaroglu, B.Z., Hill, J., and Walker, S.L., "Determining the Influence of Flagella and Growth Phase in *Salmonella enterica* Transport", presented at the 13th International Association of Colloid and Interface Science International Conference on Surface and Colloid Science and the 83rd American Chemical Society Colloid and Surface Science Symposium, June 14-19, 2009, New York, NY, USA.
62. Ferri, J.K., Mylon, S.E., and Walker, S.L. "Mechanics of *Escherichia coli* D21g Biofilms at the Aqueous-Air Interface" presented at the 13th International Association of Colloid and Interface Science International Conference on Surface and Colloid Science and the 83rd American Chemical Society Colloid and Surface Science Symposium, June 14-19, 2009, New York, NY, USA.
63. Gong, A. S, Lanzl, C., Cwiertny, D. M, and Walker, S. L "Photochemical Disinfection of Pathogens: Bactericidal Capacity and Rate Studies of Reactive Oxygen Species in Systems with Nitrate" poster presented at the annual conference of Association of Environmental Engineering and Science Professors, July 26-28 2009, Iowa City, IA, USA.
64. Chowdhury, I., Hong, Y., and Walker, S.L "Container to Characterization: Impacts of Sonication, Nanoparticle Concentration, and Ionic Strength on Metal Oxide Nanoparticle Stability" poster presented at the First Annual CEINs Int'l Conference, September 9-11 2009, Washington, DC, USA.
65. Walker, S.L and Hong, Y. "Transport of TiO₂ Nanoparticles: Role of Solution Chemistry and Particle Concentration" presented at the First Annual CEINs Int'l Conference, September 9-11, 2009, Washington, DC, USA.

66. Chowdhury, I. and Walker, S. L., "Fate, Transport and Removal of Nanomaterials in Environment: Fundamental Mechanisms", invited talk given by PhD student at the University of California, Santa Barbara, January 13, 2010, Santa Barbara, CA, USA.
67. Gong, A. S, Lanzl, C., Cwiertny, D. M, and Walker, S. L "Photochemical Disinfection of Pathogens: Role of Bacterial Extracellular Polymeric Substances (EPS) Coverage in Reaction with OH" poster presented at the 2010 Land Grant and Sea Grant National Water Conference, February 21-25 2010, Hilton Head Island, SC, USA.
68. Gutman, J. Walker, S.L., Freger, V. and M. Herzberg. "Effect of physico-chemical factors and motility on bacterial adhesion to surfaces" poster presented at the Israeli Water Association Conference, March 17-18, 2010, Ramat-Gan, Israel.
69. Gong, A. S, Lanzl, C., Cwiertny, D. M, and Walker, S. L "Photochemical Disinfection of Pathogens: Role of Bacterial Extracellular Polymeric Substances (EPS) Coverage in Reaction with OH" poster presented at the 239th American Chemical Society National Meeting & Exposition, March 21-25 2010, San Francisco, CA, USA.
70. Chowdhury, I. and Walker, S.L., "A Novel Microscope-based Study on Deposition and Attachment Mechanisms of TiO₂ Nanoparticle on Surfaces", poster presented at the Second Annual CEINs Int'l Conference, May 11-13 2010, Los Angeles, CA, USA.
71. Chowdhury, I. and Walker, S.L., "A Novel Microscope-based Study on Deposition and Attachment Mechanisms of TiO₂ Nanoparticle on Surfaces", presented at the 84th American Chemical Society Colloid and Surface Science Symposium, June 20-23, 2010, Akron, OH, USA.
72. Gutman, J.; Freger, V.; Walker, S.L.; and M. Herzberg," Effect of physico-chemical factors and motility on bacterial adhesion", poster presented at the NAMS-North American Membrane Society, July 2010, Washington DC, USA.
73. Gutman, J.; Freger, V.; Walker, S.L.; and M. Herzberg,"Effect of physico-chemical factors and motility on bacterial adhesion", poster presented at the Gordon Research Conference "Membranes: Materials and processes", July 2010, New London, NH, USA.
74. Gutman, J.; Freger, V.; Walker, S.L.; and M. Herzberg,"Effect of motility on bacterial adherence and viscoelastic properties", poster presented at the Israeli Microbiological Society (ISM) annual meeting, October 2010, Ramat-Gan, Israel.
75. Opot, S.R., Marcus, I.M., and Walker, S.L., "Influence of Growth Media on *Escherichia coli* Surface Characteristics," presented at the 2010 National Organization of Black Chemists and Chemical Engineers, Western Regional Conference, October 15-16, 2010, San Diego, CA, USA.
76. Bolster, C.H., Cook, K.L., Marcus, I.M., Haznedaroglu, B.Z., and Walker, S.L., 2010. "Correlating Attachment Behavior with Cell Properties for Eight Porcine *Escherichia coli* Isolates", International Annual Meeting of American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America, October 31-November 3, 2010, Long Beach, CA, USA.
77. Chowdhury, I., and Walker, S. L., "Deposition of TiO₂ Nanoparticles on Surfaces in Parallel Plate Chamber: Role of Natural Organic Matter", presented at the National Meeting of American Institute of Chemical Engineers, November 7-12, 2010, Salt Lake City, UT, USA.
78. Chowdhury, I. and Walker, S. L., "Fate, Transport and Removal of Nano-TiO₂ in Aquatic Environment: Fundamental Mechanisms and Implications", poster presented at UC Global Health Day, University of California, Irvine, November 30, 2010, Irvine, CA, USA.
79. Walker, S.L. and Smith, H. "Building Bridges Across Riverside Through Nano-Water Research" poster presented at the USDA National Institute of Food and Agriculture 1890 Capacity Building Grants Project Directors meeting, November 29-December 2, 2010, Washington, DC, USA.
80. Zorlu, O; Haznedaroglu, B.Z.; and S. L Walker, "Role of growth phase in attachment kinetics of *Salmonella enterica* Typhimurium", poster presented at Pacificchem 2010, December 15, 2010, Honolulu, HA, USA.
81. Orgad, O; Oren, Y.; Herzberg, M.; and Walker, S.L., "Role of EPS in *Pseudomonas aeruginosa* adherence to surfaces", presented at Pacificchem 2010, December 15, 2010, Honolulu, HA, USA.

82. Gutman, J.; Freger, V.; Walker, S.L.; and M. Herzberg, "Reclamation of tertiary wastewater with reverse osmosis membranes: Physico-chemical approaches for biofouling control", presented at Pacificchem 2010, December 14, 2010, Honolulu, HA, USA.
83. Mylon, S.E., Ferri, J.K., and S.L. Walker "Elastic moduli of *E. coli* D21g biofilms at the aqueous-air interface" presented at Pacificchem 2010, December 15, 2010, Honolulu, HA, USA.
84. Marcus, I.M, Freger, V., Walker, S.L., Herzberg, M., "Hydrophobic interactions of *Pseudomonas aeruginosa* at the interface: Molecular monitoring of water leaving the surface" presented at the Israeli Society of Microbiology, Bar Ilan University, April 12, 2011, Ramat-Gan, Israel.
85. Sharona S. Sokolow, Indranil Chowdhury, Saji George, Allison M. Horst, Angela Ivask, Zhaoxia Ji, Elizabeth Suarez, Kenneth Bradley, Patricia Holden, Andre E. Nel, Sharon L. Walker, Jeffrey I. Zink, Hilary A. Godwin, "Towards a Unified Protocol for Suspension of Nanomaterials in Environmentally-relevant Media", poster presented at Third International Conference on Environmental Implications of Nanotechnology (ICEIN), May 9-10, 2011, Durham, NC, USA.
86. Marcus, I.M., Bolster, C.H., Walker, S.L., "Effect of growth media on environmental *E. coli* isolates" poster presented at the American Society of Microbiology, May 24, 2011, New Orleans, LA, USA.
87. Chowdhury, I., Kim, J., Honda, R. J., and Walker, S. L., "Influence of Bacteria on the Transport of Nano-TiO₂ in Aquatic Environments", poster presented at Gordon Research Conference on Environmental Nanotechnology, May 29- June 3, 2011, Waterville Valley, NH, USA.
88. Chowdhury, I., J. Kim., Honda, R. J., and Walker, S. L., "Combined Factors Influencing the Deposition of Nano-TiO₂ in the Presence of Natural Organic Matter and Bacteria", presented at 85th Annual Symposium on Colloids and Surface Science, June 19-22, 2011, Montreal, Quebec, Canada.
89. Chowdhury, I; Zorlu, O; and S. L Walker, "Influence of natural organic matter on attachment kinetics of *Salmonella Typhimurium*", poster presented at the American Geophysical Union National Meeting, December 5-9, 2011, San Francisco, CA, USA.
90. Taylor, A.A., A. Gong, I. Chowdhury, D.M. Cwiertny, and S.L. Walker. "Influence of surface coatings and extracellular polymeric substances on *Escherichia coli* 0157:H7 attachment and disinfection." UCR Water Research Symposium, UC Riverside, April 17, 2012, Riverside, CA, USA.
91. Chowdhury, I., Pokhrel, S., Mädler, L., Mylon, S. E. and Walker, S. L., "Transport of nano-TiO₂ Aggregate in Porous Media: Influence of Primary Particle Size and Heterogeneity in Nanoparticle Aggregate", presented at 243rd American Chemical Society National Meeting, March 25-29, 2012, San Diego, CA, USA.
92. Taylor, A.A., A. Gong, I. Chowdhury, D.M. Cwiertny, and S.L. Walker. "Influence of surface coatings and extracellular polymeric substances on *Escherichia coli* 0157:H7 attachment and disinfection." Poster presented at the 2012 SoCal SETAC Annual Meeting, April 19-20, 2012, Costa Mesa, CA, USA.
93. van Grieken, R.; Marugán, J.; Pablos, C.; Walker, S.L. "Study of bacterial adhesion onto immobilized TiO₂: Effect on the photocatalytic activity for disinfection application" poster presented at the 7th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications 17- 20 June, 2012. Porto, Portugal.
94. R. Honda, S. Walker. "Aggregation and sedimentation phenomena of bare and coated titanium dioxide nanoparticles in conventional treatment processes." 86th ACS Colloid and Surface Science Symposium, Johns Hopkins University, June 10-13, 2012, Baltimore, MD, USA.
95. Marcus, I.M., Walker, S.L., "From ideal to real: Understanding the behavior of pathogens in the environment", poster presented at Gordon Research Conference, Environmental Sciences: Water, June 23-29, 2012, Holderness, NH, USA.
96. Chowdhury, I., Duch, M. C., Hersam, M. C., and Walker, S. L. "Synthesis Methods and Residual Metal Catalysts Affecting the Transport of Single Walled Carbon Nanotubes in the Environment", poster presented at Gordon Research Conference on Environmental Sciences: Water, June 24-29, 2012, Holderness, NH, USA.

97. Chowdhury, I. and Walker, S. L., "Fate, Transport and Removal of Nanomaterials in Aquatic Environment", invited talk presented at University of California, Santa Barbara, March 16, 2012, Santa Barbara, CA, USA.
98. Valle, J., R. Guysi, A.A. Taylor, and S.L. Walker. "Evaluating the toxicity of nano silver hair dryers via physicochemical characterization and the Kirby-Bauer assay." 25th Annual Mentoring Summer Research Internship Program (MSRIP) Symposium, UC Riverside, August 15, 2012, Riverside, CA, USA.
99. Taylor, A.A., Jose Valle, Risa Guysi, and Sharon L. Walker. "Evaluating the toxicity of nano silver hair dryers via physicochemical characterization and the Kirby-Bauer assay." Poster presented at SETAC North America 33rd Annual Meeting, November 11-15, 2012, Long Beach, CA, USA.
100. Posmanik, R., Crohn, M.D., Walker, L.S., Nejjdat, A., Gross, A. "The effect of various poultry manure management practices on emissions of ammonia and nitrous oxide" poster presented at the 10th IWA Specialized Conference on Biofiltration for Air Pollution Control, March 3-6, 2013, San Francisco, CA, USA.
101. Lanphere, J.D. and Walker, S. L. "Effects of Solution Chemistry on the Transport of Graphene Oxide in Saturated Porous Media" 245th ACS National Meeting, April 7-11, 2013. New Orleans, LA, USA.
102. Taylor, A.A. and S.L. Walker. "Fate and transport of micro copper in a model septic tank: effects on microbial community health and water treatment." UC-CEIN Nano EH&S Forum: Scientific Advances Towards Reducing Complexity in Decision Making, UCLA, May 8-9, 2013, Los Angeles, CA, USA.
103. Lanphere, J.D. and Walker, S.L. "Fate and Transport of Graphene Oxide Nanoparticles in Aqueous and Subsurface Environments" Poster presented at the Gordon Research Conference, June 2-7, 2013. Stowe, VT, USA.
104. Gutman, J.; Kaufman, Y. Kawahara, K., Walker, S.L. Arnusch, C. Helbley, J., Freger, V., Herzberg M. "Wastewater NF/RO Biofouling Research: Physico-Chemical Causes for *Sphingomonas* spp. Prevalence as Confirmed by QCM-D and Microfluidics" North American Membrane Society meeting, June 8-12, 2013, Boise, ID, USA.
105. Taylor, A. and S. Walker. "Effects of metal oxide nanoparticles on a model colon gut microbiome." Environmental Toxicology Annual Student Symposium, UC Riverside, June 21, 2013, Riverside, CA, USA.
106. Taylor A., I. Marcus, and S. Walker. "Effects of metal oxide nanoparticles on a model colon gut microbiome." 87th American Chemical Society Colloids & Surface Science Symposium, UC Riverside, June 23-26, 2013, Riverside, CA, USA.
107. Jessamine A. Quijano, Young Soo Joung, Cullen R. Buie, and Sharon L. Walker. "Antimicrobial Behavior of Novel Surfaces Generated by Electrophoretic Deposition and Breakdown Anodization" 87th ACS Colloid and Surface Science Symposium, UC Riverside, June 23-26, 2013, Riverside, CA, USA.
108. Lanphere, J.; Rogers, B.; Luth, C.; and Walker, S. "Effects of Natural Organic Matter, Surface Water, and Ground Water on the Fate and Transport of Graphene Oxide in Saturated Porous Media" 87th Colloid Surface & Science Symposium, June 23-26, 2013, Riverside, CA, USA.
109. Van Grieken, R.; Maragan, J., Pablos, C.; and Walker, S. "Study of bacterial adhesion onto immobilized TiO₂: Effect on the photocatalytic activity for disinfection applications" presented at the 7th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications, June 17-23, 2013, Porto, Portugal.
110. Walker, S. and Herzberg, M. "Water sustainability in desert agriculture: Enhancing relationships and global competency of graduate students and faculty through collaboration with Israel" poster presented at the 68th International Annual Conference of the Soil and Water Conservation Society, July 21-24, 2013, Reno, NV, USA.

111. Honda, R. and Walker, S. "Titanium Dioxide Nanoparticle Removal: Role of Solution Chemistry, Natural Organic Matter, Coating, and Source Water" talk presented at the 87th ACS Colloid & Surface Science Symposium, UC Riverside, June 23-26, 2013, Riverside, CA, USA.
112. Walker, S. L. and Cwiertny, D. M, "Photochemical disinfection of pathogens: Influence of extracellular polymeric substances on bactericidal capacity of reactive oxygen species" talk presented at the 2013 Soil and Water Conservation Society International Annual Conference, July 22, 2013, Reno, NV, USA.
113. Cruz, B., A.A. Taylor, and S.L. Walker. "The use of Live/Dead and *C. elegans* assays to determine viability and virulence in disinfection surviving bacteria." 26th Annual Mentoring Summer Research Internship Program (MSRIP) Symposium, UC Riverside, August 16, 2013, Riverside, CA, USA.
114. Bolster, C.; Abit, S.; Cantrell, K.; Quijano, J. and Walker, S "Biochar and soil properties affecting microbial transport through biochar-amended soils" presented at the SETAC North American Annual Meeting, November 17-21, 2013, Nashville, TN, USA.
115. Ryan J. Honda and Sharon L. Walker. "TiO₂ Removal via Conventional Water Treatment: Role of Nanoparticle Coating, Natural Organic Matter, and Source Water." Poster presentation at Second Sustainable Nanotechnology Organization Conference. November 4, 2013. Santa Barbara, CA, USA.
116. Lanphere, J.D. and Walker, S.L. "Environmentally Relevant Conditions Impacting Graphene Oxide Transport in Aqueous Environments" oral presentation at the Sustainable Nanotechnology Organization Conference, November 3-5, 2013. Santa Barbara, CA, USA.
117. Cruz, B., A.A. Taylor, and S.L. Walker. "The use of Live/Dead and *C. elegans* assays to determine viability and virulence in disinfection surviving bacteria." Southern California Conferences for Undergraduate Research (SCCUR), Whittier College, November 23, 2013, Whittier, CA, USA.
118. Chow, T., A.A. Taylor, and S.L. Walker. "Effects of copper nanoparticles on a microbial community in a model septic tank." Southern California Conferences for Undergraduate Research (SCCUR), Whittier College, November 23, 2013, Whittier, CA, USA.
119. Coyoca, A., A.A. Taylor, and S.L. Walker. "Fate and partitioning of copper nanoparticles in a model septic system." Southern California Conferences for Undergraduate Research (SCCUR), Whittier College, November 23, 2013, Whittier, CA, USA.
120. Taylor, A.A., Z. Ronen, and S.L. Walker. "Impact of copper nanoparticles on the function of a model septic system and microbial community." Israel Society for Microbiology Annual Meeting, April 7, 2014, Haifa, Israel.
121. Lanphere, J.D. and Walker, S.L. "Aggregate Morphology, Stability, and Transport of Molybdenum Disulfide Nanoparticles in Subsurface Environments" oral presentation at the 88th ACS Colloid and Surface Science Symposium, June 22, 2014. Philadelphia, PA, USA.
122. Nichola Kinsinger and Sharon Walker, "Efficacy of Rinsing to Detach and Disinfect *E. coli* on Baby Spinach" poster presented at Gordon Research Conference – Environmental Sciences: Water, June 22-27, 2014, Holderness, NH, USA.
123. A.A. Taylor and S.L. Walker. "Impact and fate of copper nanoparticles on a model septic system." Poster presented at the Gordon Research Conference on Environmental Sciences: Water, June 22-27, 2014, Holderness, NH, USA.
124. Story, S.D., Lanphere, J.D., and Walker, S.L. "Environmentally relevant conditions impacting graphene oxide transport in aqueous environments" presented at the 248th ACS National Meeting, August 10-14, 2014, San Francisco, CA, USA.
125. A.A. Taylor and S.L. Walker. "Release and impact of copper nanoparticles on a model septic system." 248th ACS National Meeting, August 10-14, 2014, San Francisco, CA, USA.
126. Alex Burton, Igor Irianto, Daniel White, Travis Waller and Sharon Walker "Examining the Effects of *In Vitro* Gastric Digestion of Titanium Dioxide Nanoparticles" Mentoring Summer Research Internship Program (MSRIP) Symposium, UC Riverside, August 15, 2014, Riverside, CA, USA.

127. A.A. Taylor and S.L. Walker. "Use of a model laboratory-scale septic system for studying emerging contaminants." 2014 Annual Meeting of the Southern California Society of Toxicology, October 16, 2014. Third Place Poster Prize, San Diego, CA, USA.
128. A.A. Taylor, S. Lin, Z. Ji, C.H. Chang, N.M. Kinsinger, W. Ueng, S.L. Walker, and A.E. Nel. "Understanding the transformation, speciation, and hazard potential of copper-based particles in a model septic tank using a zebrafish high throughput screening assay." 54th Society of Toxicology Annual Meeting & ToxExpo, March 22-26, 2015, San Diego, CA, USA.
129. Ronen, W.Duan, I. Wheeldon, S.L.Walker, D. Jassby "Microbial attachment inhibition through low voltage electrochemical reactions on electrically conducting membranes", NAMS June 1, 2015, Boston, MA, USA.
130. Story, S.D., Brinker, C.J. Walker, S.L. "Aggregate Morphology: A Comparison of Spherical and 2-D Nanomaterials" poster presented at the 2015 Gordon Research Conference: Environmental Nanotechnology, June 21-26, 2015, West Dover, VT, USA.
131. Chen, Chen and Sharon L. Walker, "Investigation of Filtration Mechanisms Involved in the Removal of Nanoparticles from Water" Poster presented at the Gordon Research Conference: Environmental Nanotechnology, June 21-26, 2015. Mount Snow, VT, USA.
132. Waller, Travis and Sharon L. Walker, "Impacts of Food and Industrial Grade Titanium Dioxide on Anaerobic Wastewater Treatment" Poster presented at the Gordon Research Conference on Environmental Nanotechnology, June 21-26, 2015. Mount Snow, VT, USA.
133. A.A. Taylor and S.L. Walker. "Transformation and hazard potential of copper particles in a septic system using a zebrafish high-throughput screening assay to monitor effluent." Poster presented at the Gordon Research Conference on Environmental Nanotechnology, June 21-26, 2015. Mount Snow, VT, USA.
134. Story, S.D., Brinker, C.J. Walker, S.L. "Aggregate Morphology: A Comparison of Spherical and 2-D Nanomaterials" poster presented at the 2015 Gordon Research Seminar: Environmental Nanotechnology, June 20-21, 2015, West Dover, VT, USA.
135. Waller, Travis and Sharon L. Walker, "Impacts of Food and Industrial Grade Titanium Dioxide on Anaerobic Wastewater Treatment" Poster presented at the Gordon Research Seminar, June 20-21, 2015. Mount Snow, VT, USA.
136. Chen, Chen and Sharon L. Walker, "Investigation of Filtration Mechanisms Involved in the Removal of Nanoparticles from Water" Poster presented at the Gordon Research Seminar on Environmental Nanotechnology, June 20-21, 2015. Mount Snow, VT, USA.
137. A.A. Taylor and S.L. Walker. "Transformation and hazard potential of copper particles in a septic system using a zebrafish high-throughput screening assay to monitor effluent." Poster presented at the 2015 AEESP Research and Education Conference, June 13-16, 2015, New Haven, CT, USA.
138. Stephanie Lara, Travis Waller and Sharon Walker "The environmental effects of titanium dioxide nanoparticles inside a model colon" Mentoring Summer Research Internship Program (MSRIP) Symposium, UC Riverside, August 14, 2015, Riverside, CA, USA.
139. Diego Novoa, Travis Waller and Sharon Walker "Environmental impacts of titanium dioxide through a model colon and septic tank system" Mentoring Summer Research Internship Program (MSRIP) Symposium, UC Riverside, August 14, 2015, Riverside, CA, USA.
140. Nichola Kinsinger and Sharon L. Walker, "Is our salad safe? Efficacy of current disinfection rinses and potential photocatalytic technology to prevent foodborne outbreaks" presented at ACS Fall Meeting, August 2015, Boston, MA, USA.
141. Nichola Kinsinger and Sharon L. Walker, "Is our salad safe? Efficacy of current disinfection rinses and potential photocatalytic technology to prevent foodborne outbreaks" poster presented at USDA NIFA Project Directors Meeting, August 2015, Washington, DC, USA.
142. Mayton, H. and Walker S.L., Characterization of Potential Surrogates for Produce Pathogens. Poster presented at Chemical and Environmental Engineering Annual Student Symposium, UC Riverside, September 17, 2015, Riverside, CA, USA.

143. Liu, H.; Lanphere, J.; Walker, S.L.; Cohen, Y. "Agglomeration of Nanoparticles Evaluated Via a Constant Number Monte Carlo Simulation" presented at the American Institute of Chemical Engineers National Conference, November 2015, Salt Lake City, UT, USA.
144. Chen, C. and Walker, S. L. "Novel approach for investigating mechanisms of nanoparticle filtration" presented at 251st American Chemical Society National Meeting, March 13-17, 2016, San Diego, CA, USA.
145. Mayton, H., Cook, K., and Walker, S.L. Characterization of Potential Surrogates for Produce Pathogens. Poster presented at Grow Riverside Conference, UC Riverside, March 21, 2016. Awarded 3rd Place, Riverside, CA, USA.
146. Diego Novoa, Travis Waller, Sharon Walker "Environmental Impacts of Titanium Dioxide Through a Model Colon and Septic Tank System" UCR Undergraduate Research Symposium, April 18, 2016, Riverside, CA, USA.
147. Luth, M. and Walker, S.L. Effect of Material Properties on Bacterial Attachment to Thin Film Photocatalytic Titanium Dioxide. Presentation at UCR Undergraduate Research Symposium, UC Riverside, April 20, 2016, Riverside, CA, USA.
148. Mayton, H., Cook, K., and Walker, S.L. Characterization of Potential Surrogates for Produce Pathogens. Poster presented at Borlaug Summer Institute for Global Food Security, Purdue University, June 13, 2016, West Lafayette, IN, USA.
149. Chantel McKoy, David Huxley, Travis Waller, and Sharon L. Walker "The Use of Titanium Dioxide in the Breakdown of Organic Compounds in Wastewater" 29th Annual Mentoring Summer Research Internship Program (MSRIP) Research Symposium, UCR Aug 10, 2016, Riverside, CA, USA.
150. Story, S.D., Walker, S.L. "Investigating Aggregate Morphology of Planar Engineered Nanomaterials" presented at the International Conference on the Environmental Effects of Nanoparticles and Nanomaterials (ICEENN), August 15, 2016, Golden, CO.
151. Chen Chen and Sharon Walker "Investigation of Filtration Mechanisms Involved with Removal of Engineered Nanomaterials from Drinking Water with Food-grade and Industrial TiO₂" 5th Sustainable Nanotechnology Organization (SNO) conference, Nov 12, 2016, Orlando, FL, USA.
152. Waller, Travis; Chen, Chen; and Walker, Sharon L. "Food and Industrial Grade TiO₂ Impacts to the Human Gut Microbiota" 5th Sustainable Nanotechnology Organization (SNO) conference, Nov 12, 2016, Orlando, FL, USA.

Invited Research Talks

1. Walker, S.L. "The Role of Cell Surface Macromolecules on Bacterial Adhesion and Transport in Aquatic Environments" California Institute of Technology, January 5, 2005, Pasadena, CA, USA.
2. Walker, S.L. "The Role of Cell Surface Polymers on Bacterial Adhesion and Transport" University of California, Los Angeles, February 8, 2005, Los Angeles, CA, USA.
3. Walker, S.L. "Investigation the Role of Bacterial Surface Polymers on Adhesion and Transport in Aquatic Systems" Worcester Polytechnic Institute, June 10, 2005, Worcester, MA, USA.
4. Walker, S.L. "Mechanisms of Bacterial Adhesion and Transport in Aquatic Systems" University of California, Berkeley, October, 20, 2006 Berkeley, CA, USA.
5. Walker, S.L. "What's in Your Water? Challenges and Solutions to Pathogen Problems" presented at UCR, November 6, 2006 to the UCR Affiliates Group, Riverside, CA, USA.
6. Walker, S.L. "What's in Your Water?" February 20, 2007 to the UCR Life Program at the UCR Extension, Riverside, CA, USA.
7. Walker, S.L. "Mechanisms of Bacterial Adhesion and Transport in Aquatic Systems" University of California, Davis February 26, 2007, Davis, CA, USA.

8. Walker, S.L, "Mechanisms of Bacterial Adhesion and Transport in Aquatic Systems" University of Sheffield, April 4, 2007, Sheffield, England.
9. Walker, S.L, "Evaluation of Bacterial Fate and Transport: Biological and Experimental Considerations" University of Utrecht, October 15, 2007, Utrecht, The Netherlands.
10. Walker, S.L, "Nanoparticle Fate and Transport in Aquatic Environments" UCLA/UCSB Nanotoxicology Training Program, University of California, Los Angeles, June 5, 2008, Los Angeles, CA, USA.
11. Walker, S.L, "Nanoparticle and Pathogen Fate and Transport in Aquatic Environments" University of California, Irvine, November 21, 2008, Irvine, CA, USA.
12. Walker, S.L, "Nanoparticle and Pathogen Fate and Transport in Aquatic Environments" Johns Hopkins University, December 16, 2008, Baltimore, MD, USA.
13. Walker, S.L, "Building Our Workforce Through Water Quality Research and Mentoring" presented at the 2009 NRI Water & Watersheds Project Directors Meeting, February 8-11, 2009, St. Louis, MO, USA.
14. Walker, S.L, "Water Quality and Food Safety" presented at UCR Palm Desert, March 4, 2009 as part of the Imagining the Future Lecture Series, Palm Desert, CA, USA.
15. Walker, S.L, "Fate and Transport of Metal Oxides Nanoparticles in Aquatic Environments" Bren School of the Environment and the Center for the Environmental Implications of Nanotechnology, University of California, Santa Barbara, April 22, 2009, Santa Barbara, CA, USA.
16. Walker, S. L. "*Salmonella* virulence and evolution as a function of exposure to transport in groundwater-like environments" Department of Biotechnology Engineering, Ben Gurion University of the Negev, January 4, 2010, Beersheba, Israel.
17. Walker, S.L. "The effect of extracellular and surface macromolecules on the deposition of pathogenic microorganisms in saturated porous media" Department of Desalination, Zuckerberg Institute of Water Research, Ben Gurion University of the Negev, January 13, 2010, Beersheba, Israel.
18. Walker, S.L. "The effect of extracellular and surface macromolecules on the deposition of pathogenic microorganisms in saturated porous media" Department of Environmental Engineering, Ben Gurion University of the Negev, April 29, 2010, Beersheba, Israel.
19. Walker, S.L. "What is Research?" Community College STEM Institute, University of California, August 18, 2010, Riverside, CA, USA.
20. Walker, S.L. "Environmental Implications of Nanotechnology" Ecotoxicology Graduate Program Seminar, University of California, October 20, 2010, Riverside, CA, USA.
21. Walker, S. L. "Building Our Workforce Through Water Quality Research and Mentoring" USDA National Institute of Food and Agriculture 1890 Capacity Building Grants Project Directors meeting, November 29-December 2, 2010, Washington, DC, USA.
22. Walker, S.L. "Water Quality in California and Israel" University of Southern California's "Going Back to College Day" February 17, 2011, Los Angeles, CA, USA.
23. Walker, S.L. "Living in the Desert: Water Quality Issues from Riverside to Israel", UCR LIFE Society, March 1, 2011, Riverside, CA, USA.
24. Walker, S.L "Fate and transport of nano-TiO₂ in aquatic environments" invited talk presented at the 241st ACS National Meeting & Exposition, Division of Colloid and Surface Chemistry session on "Reactivity, Transformation and Detection of Natural and Engineered Nanomaterials in the Environment" March 27-31, 2011, Anaheim, CA, USA.
25. Walker, S.L. "Fate, transport, and removal of nanomaterials in aquatic environments" invited talk presented at the UC Mexus "Toxic Earth: Toxic Bodies" Symposium, April 5, 2011, Riverside, CA, USA.
26. Walker, S.L "Fate and transport of nano-TiO₂ in aquatic environments" invited talk presented at the National Institute of Standards and Technology (NIST), June 30, 2011, Gaithersburg, MD, USA.

27. Walker, S.L. "Fate and transport of nanomaterials in aquatic environments" invited talk presented at Missouri University of Science and Technology, Department of Civil, Architectural, and Environmental Engineering, October 26, 2011, Rolla, MO, USA.
28. Walker, S.L. "Fate and transport of nanomaterials in aquatic environments" invited talk presented at Washington University, Saint Louis, Department of Energy, Environment, and Chemical Engineering, October 28, 2011, Saint Louis, MO, USA.
29. Walker, S.L. "Role of Environmental Conditions on the Fate and Transport of Engineered Nanomaterials in the Subsurface" invited talk presented at the American Geophysical Union National Meeting, December 5-9, 2011, San Francisco, CA, USA.
30. Walker, S.L. "Fate and transport of nanomaterials in aquatic environments" invited talk presented at UCR's Microbiology Graduate Program Seminar Series, February 29, 2012, Riverside, CA, USA.
31. Chowdhury, I. and Walker, S. L., "Fate, Transport and Removal of Engineered Nanomaterials in the Aquatic Environment: Fundamental Mechanisms and Implications", invited talk presented at Gordon Research Seminar; Environmental Sciences Water, June 23-24, 2012 (presented by PhD student Chowdhury), Holderness, NH, USA.
32. Walker, S.L. and Taylor, A. "Linking Environmental and Human Health to Nanoparticle Exposure: Experimental and Educational Approaches" invited talk presented at the 2013 AEESP National Meeting, July 14-17, 2013, Golden, CO, USA.
33. Walker, S.L. "Environmental Implications of Nanotechnology" UCR Homecoming, November 16, 2013, Riverside, CA, USA.
34. Walker, S.L. "Fate and Transport of Nanomaterials in Aquatic Environments" Zuckerberg Institute of Water Research, Ben Gurion University of the Negev, March 30, 2014, Beersheba, Israel.
35. Walker, S.L. "Water Sustainability in Desert Agriculture: Enhancing relationships and global competency of graduate students and faculty through collaboration with Israel" invited talk presented at the USDA National Institute of Food and Agriculture, April 29, 2014, Washington, DC, USA.
36. Walker, S.L. "From Farm to Fork" talk presented to the UCR CNAS Learning Community on Agriculture and Environmental Sciences May 27, 2014, Riverside, CA, USA.
37. Walker, S.L. "From Farm to Fork: The Convergence of Water Quality and Food Safety" talk presented to the USDA NIFA Director Sonny Ramaswamy, July 21, 2014, Riverside, CA, USA.
38. Walker, S.L. and Taylor, A.A. "From ideal to real: Utilizing a model colon and septic system to elucidate the impacts of bacterial and nanoparticle contamination" invited talk presented at the 2014 ACS National Meeting, August 12, 2014, San Francisco, CA, USA.
39. Walker, S.L. "Influence of nanomaterials on microbial communities in engineered systems" invited talk presented at Tufts University, June 29, 2015, Boston, MA, USA.
40. Walker, S.L. "Transformation and hazard potential of copper particles in a septic system using a zebrafish high-throughput screening assay" invited talk presented at the 2015 Pacificchem Meeting, December 16, 2015, Honolulu, HA, USA.
41. Walker, S. L. "Investigating the Impacts of Engineered Nanomaterials on Decentralized Wastewater Treatment" invited talk presented at Oregon State University's Department of Chemical, Environmental and Biological Engineering, May 23, 2016, Corvallis, OR, USA.
42. Walker, S. L. "title TBD" invited talk to be presented at the "Advanced Materials, Discovery, Characterization, and Safety" session, American Chemical Society's national conference, April 2017, San Francisco, CA, USA.

Sponsored Research (~\$3.4 million active grants, >\$8.8 million total since January 2005)

Current

	<u>Role</u>	<u>Title</u>	<u>Agency</u>	<u>Award Dates</u>	<u>Award Amount</u>
1.	PI ; Co-PI David Jassby	Sustainable use of dairy farm anaerobic digestate: from environmental pollutant to new source of water, energy, and nutrients	NIFA	3/15/2016 - 3/14/2018	\$126,181
2.	PI ; Co-PI David Jassby	A Forensic Approach Towards Biofilm Management	NSF	2/1/2015 - 1/31/2018	\$408,704
3.	PI	Center for the Environmental Impact of Nanotechnology (CEIN)	NSF (Prime is UCLA)	9/1/2013 - 8/31/2017	\$443,300
4.	Co-PI along with Anil B. Deolalikar, Marylynn V. Yates, Mary Gauvain; PI Peter Atkinson	IGERT: Water SENSE - Water Social, Engineering, and Natural Sciences Engagement	NSF	7/1/2012 - 6/30/2017	\$2,439,984
5.	PI	MESA Engineering Program	UC MESA Program	7/1/2015 - 6/30/2017	\$30,000
6.	PI	Investigation of Filtration Mechanisms Involved with Removal of Engineered Nanomaterial from Drinking Water	NWRI	11/1/2014 - 9/30/2016	\$10,000

Past Sponsored Research

7.	Co-PI along with Nosang Myung, Charles Wyman, Mark R. Matsumoto; PI Akua Asa-Awuku	GAANN: Sustainable Energy and Environment Development Fellows (SEEDs) for the Future	Office of Postsecondary Education	8/16/2013 - 8/15/2016	\$563,584
8.	Co-PI along with Lindsey E. Malcom, Marylynn V. Yates, Cynthia K. Larive; PI Yolanda Moses	Moving FORWARD for Women in STEM Fields at UC Riverside and Beyond	NSF	8/15/2011 - 7/31/2016	\$599,219
9.	PI	CAREER: Fundamentals of Nanoparticle Behavior in Water Treatment	NSF	7/15/2010 - 6/30/2016	\$423,032
10.	PI	Selection of E. coli surrogates with attachment and survival	USDA Agricultural	4/1/2014 - 11/30/2015	\$24,065

		patterns similar to those of human pathogens associated with produce	Research Service		
11.	PI	Photocatalytic Disinfection of Agriculturally Impacted Waters: Characterization of Solution Chemistry on Bacterial Adhesion and Disinfection	NIFA	9/1/2013 - 8/31/2015	\$132,359
12.	PI	Water Sustainability in Desert Agriculture	NIFA	9/1/2010 - 8/31/2015	\$147,454
13.	PI	Building Bridges Across Riverside through Nano-Water Research	NIFA	8/1/2010 - 7/31/2015	\$290,000
14.	Co-PI along with Yushan Yan; PI Robert C. Haddon	Center for the Environmental Impact of Nanotechnology (CEIN)	NSF (Prime is UCLA)	9/1/2008 - 8/31/2014	\$497,966
15.	PI ; Co-PI Yushan Yan	Center for the Environmental Impact of Nanotechnology (CEIN)	NSF (Prime is UCLA)	9/1/2008 - 8/31/2014	\$187,831
16.	PI ; Co-PIs Victor Rodgers and Valentine Vullev	MY BEST @ UCR (Mentoring Year-round in Biological Engineering, Science and Technology at University of California, Riverside)	NSF	9/15/2007 - 8/31/2014	\$591,431
17.	PI ; Co-PI Francisco Zaera	Support for Student and Invited Speakers to participate in the 87th ACS Colloid and Surface Science Symposium at UCR, June 23-26, 2013	NSF	7/1/2013 - 6/30/2014	\$10,000
18.	PI ; Co-PI Michael David Cwiertny	Photochemical disinfection of agriculturally introduced pathogens: The influence of extracellular polymeric substances on the bactericidal capacity of	NIFA	8/1/2008 - 7/31/2013	\$400,000
19.	PI	Fate of Motile Bacterial Pathogens in the Subsurface: Determining the extent and influence of motility and counter-current movement on cell transport	NIFA (Prime is University of Vermont)	7/1/2007 - 6/30/2011	\$182,165
20.	Co-PI along with Victor Rodgers and Marko	Successful Partnerships for Increasing Recruitment into Technology (SPIRIT)	NSF	11/1/2008 - 10/31/2010	\$100,000

	Princevac; PI Chinya Ravishankar				
21.	Co-PI along with Samson Jerome Schultz and Marc Deshusses; PI Victor Rodgers	Graduate fellowship to address the national need for diverse doctoral chemical, environmental, and biological engineers in the professoriate (GAANN)	Office of Postsecondary Education	8/14/2006 - 8/13/2010	\$383,181
22.	PI	A new paradigm for pathogen deposition and transport in porous media: the role of pore structure and colloid-colloid interactions	USDA Agricultural Research Service	12/15/2006 - 8/31/2009	\$160,196
23.	PI	Coastal Environmental Quality Initiative 2007 – Multi-Campus Research Project Pre-Proposal for Year 2 Funding	UC Marine Council	7/1/2008 - 8/31/2009	\$250,000
24.	PI	Building Bridges Across Riverside Through Water Quality Research	NIFA (Prime is Riverside Community College District)	7/1/2006 - 8/30/2009	\$201,609
25.	PI; Co-PI Nosang Myung	Determining the Fate of Nanomaterials and Porous Media	UC Toxic Substances Research & Teaching	7/1/2007 - 6/30/2009	\$100,000
26.	PI	Fate and Persistence of Fecal Indicator Bacteria and Human Specific Markers in Coastal Sediments of Santa Monica Bay	UC Office of the President	7/1/2007 - 1/31/2009	\$100,000
27.	PI	Water Resources Research Institute Annual Base program, dated January 12, 2006	Geological Survey (USGS)	3/1/2007 - 2/28/2008	\$17,482
28.	PI	The Role of Extracellular Polymeric Substances (EPS) on the Fate and Transport of Fecal Coliforms in Groundwater Environments	NWRI	8/1/2005 - 10/31/2007	\$30,000