

Michael D. Marsolek
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Education

Postdoc	Biodesign Institute, Arizona State University	2006
Ph.D.	Chemical Engineering, Northwestern University	2005
B.S.	Chemical Engineering, University of Minnesota	1999
B.S.	Chemistry, University of Minnesota	1999

Appointments

Seattle University, Department of Civil and Environmental Engineering, Seattle, WA		
Assistant Professor		2008-present
Adjunct Professor		2006-2008
Blue Tree Strategies, Portland, OR		
Consultant		2008-2011
Arizona State University, Biodesign Institute, Tempe, AZ		
Postdoctoral Fellow		2005-2006
Northwestern University, Department of Chemical Engineering, Evanston, IL		
Graduate Research Assistant		1999-2005
Northwestern University, Department of Chemical Engineering, Evanston, IL		
Teaching Assistant		1999-2001
University of Minnesota, Department of Chemistry, Minneapolis, MN		
Undergraduate Research Assistant		1997-1999

Teaching Experience

Seattle University, Seattle, WA	
CEEGR 341 – Applied Environmental Biology	
CEEGR 342 – Environmental Engineering Chemistry	
CEEGR 473 – Principles of Environmental Engineering	
CEEGR 474 – Water Supply and Wastewater Engineering	
CEEGR 475 – Hazardous Waste Engineering	
Northwestern University, Evanston, IL	
Teaching Assistant	

Scholarship

- Michael D. Marsolek, Elizabeth Kendall, Phillip L. Thompson, and Teodora Rutar-Shuman, “Thermal Pretreatment of Algae for Anaerobic Digestion”, *Bioresource Technology*, submitted June, 2013
- Michael D. Marsolek, Mary Jo Kirisits, Kimberly A. Gray, and Bruce E. Rittmann, “Coupled photocatalytic-biodegradation of 2,4,5-trichlorophenol: effects of photolytic and photocatalytic effluent composition on bioreactor process performance, community diversity, and resistance and resilience to perturbation”, *Water Research*, submitted April 2013.

- Michael D. Marsolek, Patrick Cummings, Joshua Alcantara, Michael Wynne, Luis Quintero, Carlos Vallejos, Charles Jackels, and Susan Jackels, “Wastewater Treatment for a Coffee Processing Mill in Nicaragua: A Service-Learning Design Project”, *International Journal for Service Learning in Engineering*, June 2012.
- Susan Jackels, Charles Jackels, Carlos Vallejos, and Michael Marsolek, “Coffee for Justice: Chemistry and Engineering in Service to the Jesuit Mission with Small-holder Coffee Farmers of Nicaragua,” a book chapter for “Justice in Jesuit Higher Education, *Transforming the World and Being Transformed*,” Fordham University Press, New York, NY, 2012.
- Michael D. Marsolek and Bruce E. Rittmann, Invention disclosure and patent application entitled: “Intimate Coupling of Photocatalysis and Biodegradation in a Photocatalytic Circulating-Bed Biofilm Reactor.” [PCT/US2008/072657][60/955,310]
- Michael D. Marsolek, Cesar E. Torres, Martina Hausner, and Bruce E. Rittmann, “Intimate Coupling of Photocatalysis and Biodegradation in a Photocatalytic Circulating-Bed Biofilm Reactor.”, *Biotechnology and Bioengineering*, Vol. 101 (1), March, 2008.
- Michael D. Marsolek, Bruce E. Rittmann, “Biodegradation of 2,4,5-Trichlorophenol by Mixed Microbial Communities: Biorecalcitrance, Inhibition, and Adaptation.”, journal publication, *Biodegradation*, Vol. 18 (3), June, 2007.

Conference Presentations

- Michael D. Marsolek, Mary Jo Kirisits, Kimberly A. Gray, and Bruce E. Rittmann, 246th National American Chemical Society Meeting, “Coupled photocatalytic-biodegradation of 2,4,5-trichlorophenol: Effects of photocatalytic effluent composition on bioreactor community diversity and performance”, Presentation, September 2013
- Polka, J., Anh Pham, Nicholas Johnson, Codee Samala Passos, Justin Barnes, and Michael D. Marsolek, “Algae kinetics and utilization for nutrient removal from wastewater effluent”, Student Presentation, Pacific Northwest Clean Water Association, September 2013.
- Marsolek, Michael D., 3rd *International Conference on Algal Biomass, Biofuels, and Bioproducts*, “Enhanced Digestion of Algae and Lipid Extracted Algal Byproduct”, Poster, June 2013.
- Marsolek, Michael D., Elizabeth Kendall, Phillip L. Thompson, and Teodora Rutar Shuman, 1st *International Conference on Algal Biomass, Biofuels, and Bioproducts*, “The Impact of Thermal Pretreatment on Biogas Yields From Anaerobic Digestion of Algae”, Poster, July 2011.
- Marsolek, Michael D., Elizabeth Kendall, Phillip L. Thompson, and Teodora Rutar Shuman, *AIChE-IfS Pacific Northwest Sustainability Conference*, “The Impact of Thermal Pretreatment on Biogas Yields From Anaerobic Digestion of Algae”, Presentation, April 2011.
- Kendall, Elizabeth, and Michael D. Marsolek, Student Poster Presentation, *National Conference on Undergraduate Research*, “The Effect of Heat-based Marine Algae Substrate Pretreatment on Digester Sludge Bacteria Biogas Production”, March 2011.
- Alcantara, Josh, Patrick Cummings, Luis Quintero, Michael Wynne, Michael Marsolek, and Grizelda Sarria, Student Presentation, *Design of an Ecological Coffee Beneficio*, Pacific Northwest Clean Water Association, September 2008.

- Marsolek, Michael D., Mwendu Lefler, Mary Jo Kirisits, Kimberly A. Gray, and Bruce E. Rittmann, *American Chemical Society (ACS) National Conference*, “Photobiocatalysis: Coupled Photocatalytic-Biological Wastewater Treatment for Wastewaters Containing Biologically Recalcitrant and Inhibitory Organics such as 2,4,5-Trichlorophenol.”, Presentation, August, 2004
- Marsolek, Michael D., Mary Jo Kirisits, Kimberly A. Gray, and Bruce E. Rittmann, Poster, *Chicago Joint Conference on the Environment*, “Biological Degradation and Coupled Photocatalytic-Biological Degradation of a Recalcitrant and Inhibitory Model Organic, 2,4,5-Trichlorophenol.”, Poster, April, 2004 – Winner of 1st place poster award.
- Marsolek, Michael D., and Bruce E. Rittmann, Poster, *American Chemical Society (ACS) National Conference*, “Biorecalcitrance, inhibition, and acclimation of an activated-sludge microbial community to 2,4,5-trichlorophenol”, Poster, March 2003
- Marsolek, Michael D., and Bruce E. Rittmann, *Institute for Environmental Catalysis (IEC) Conference*, “The Need for Photobiocatalysis: Biodegradation of 2,4,5-Trichlorophenol and Application to Actual Photocatalytic Effluent”, Presentation, March, 2003
- Marsolek, Michael D., Mary Jo Kirisits, and Bruce E. Rittmann, *Institute for Environmental Catalysis (IEC) Conference*, “Why Photobiocatalysis is Necessary for Degrading Biorecalcitrant Compounds”, poster, September, 2002
- Marsolek, Michael D., Mary Jo Kirisits, and Bruce E. Rittmann, *Institute for Environmental Catalysis (IEC) Conference*, “Photobiocatalysis”, poster, March, 2002

Invited Presentations

- Michael D. Marsolek, *Coupled Photocatalysis and Biodegradation*, University of Washington, Civil and Environmental Engineering Seminar Series, April 2008.

Professional Reports

- Carbon Footprint Analysis of Bagasse Derived Tableware, Michael D. Marsolek and Mark Evans, BlueTree Strategies, August 2008.
- CarbonTrust Certified Carbon Footprint, Stalk Market Tableware, Blue Tree Strategies, June 2009.

Service

- College of Science and Engineering Curriculum Committee, September 2011 – present
- College of Science and Engineering Awards Committee, College of Science and Engineering, 2010-11
- Department of Civil and Environmental Engineering Faculty Search Committee, October 2009-March 2010
- Student Advisor, Civil and Environmental Engineering Department, 2008-present
- Faculty Advisor, Society of Environmental Engineers and Scientists student club, 2008-present
- Faculty and Staff Immersion, *Voices of Youth*, July 2008
- Faculty Leader, Environmental New Student Immersion, September, 2009
- Professional Referee, Northwest Clean Tech Open, October 2009
- Fellow: Community-Based Research, Academic Service-Learning, and the Duwanish River: Fostering Interdisciplinary Approaches, Center for the Study of Justice in Society, September 2010 – June 2011

- Reviewer: Applied Microbiology and Biotechnology, Biodegradation, Bioprocess and Biosystems Engineering, Environmental Science and Technology, and Separation Science and Technology.

Grants, Awards, and Fellowships

Center for Environmental Justice and Sustainability, Seattle University, Faculty Fellow, 2013-14

Seattle University, Summer Undergraduate Student Support, Father Wood Fellowship, June – September 2013

Seattle University, Office of Global Engagement, Global Grant, 2013

Seattle University, Endowed Mission Fund Award, 2012

Seattle University, Summer Faculty Fellowship, June – September 2010

Seattle University, Summer Undergraduate Student Support, Washington NASA Space Grant Consortium program, June – September 2010

Northwestern University, Walter P. Murphy Fellowship, 1999

Professional Membership

Member, American Chemical Society

Member, American Society for Engineering Education