

CURRICULUM VITAE

MICHAEL GONSIOR

Chesapeake Biological Laboratory

University of Maryland Center for Environmental Science

Certification

I have reviewed this Curriculum Vita and here certify that it is a current and accurate statement of my professional record for this calendar year.

Signed:  Date: 09/24/2019

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Michael Gonsior

Chesapeake Biological Laboratory

University of Maryland Center for Environmental Science

Solomons, Maryland 20688

Phone: 410-326-7245

Email: Gonsior@umces.edu

I. Education

- 1995 “Vordiplom = intermediate diploma”, RWTH Aachen (University). Pure and Applied Chemistry
- 1997 4th year project undertaken at Strathclyde University Glasgow, Scotland. Environmental Chemistry.
- 1999 MSc. thesis work undertaken at Dalhousie University Halifax, Canada. Environmental Chemistry
- 1999 MSc., Friedrich Schiller University Jena, Germany. Environmental Chemistry.
- 2004 MSc., Technical University Dresden, Germany. Environmental Protection Engineering and urban planning.
- 2008 Ph.D., Otago University Dunedin, New Zealand. Aquatic Biogeochemistry. Thesis title: “Natural Organic Matter in New Zealand Natural Waters”.

II. Professional Background

- 2008-2009 Post-doctoral Scholar at University of California, Irvine. Urban Water Research Center.
- 2010 Volunteer in design and implementation of large scale irrigation and agricultural projects in Kenya.
- 2011-2012 Post-doctoral Scholar at Linköping University, Sweden.
- 2012-2018 Assistant Professor (tenure-track), University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory.
- 2018-present Associate Professor (tenured), University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory

Awards and Special Recognition

- 2004-2007 Otago University Scholarship (3 yr; 20 000 \$NZ per annum)
- 2007 Chemistry Dep., Otago University Scholarship (2 months; 1 300 \$NZ)
- 2007 Otago University publication bursary (5 000 \$NZ)
- 2017 Honorable mentioning to the Masao Horiba Award 2017
- 2018 Excellence in Review Award 2018 from the ACS journal Environmental Science and Technology

III. Research

A. Areas of professional expertise

Aquatic biogeochemistry, ultrahigh resolution mass spectrometry, advanced analytical chemistry, environmental chemistry, disinfection by-products, and chemical oceanography.

B. Peer-Reviewed Publications

1. Papers in Refereed Journals

2011 Gonsior, M.; M. Zwartjes; W. J. Cooper; W. Song; K. P. Ishida; L. Y. Tseng; M. K. Jeung; D. Rosso; N. Hertkorn and P. Schmitt-Kopplin. 2011 Molecular Characterization of Effluent Organic Matter identified by ultrahigh resolution Mass Spectrometry. *Water Research*. 2011,45, 2943-2953.

Gonsior, M.; B. M. Peake; W. T. Cooper; D. Podgorski; J. D'Andrilli; T. Dittmar and W. J. Cooper. 2011 Characterization of dissolved organic matter across the Subtropical Convergence off the South Island, New Zealand. *Marine Chemistry* 122, 99-110.

2012 Shakeri Yekta, S.; Gonsior, M.; Schmitt-Kopplin, P.; Svensson, B. H. Characterization of Dissolved Organic Matter in Full Scale Continuous Stirred Tank Biogas Reactors Using Ultrahigh Resolution Mass Spectrometry: A Qualitative Overview. *Environ. Sci. Technol.* 2012, 46 (22), 12711-12719.

Ayatollahi, S.; Kalnina, D.; Song, W.; Cottrell, B. A.; Gonsior, M.; Cooper, W. J., 2012 Recent advances in structure and reactivity of dissolved organic matter: radiation chemistry of non-isolated natural organic matter and selected model compounds. *Water Science & Technology* 66, (9), 1941-1949.

2013 Tseng, L. Y.; Gonsior, M.; Schmitt-Kopplin, P.; Cooper, W. J.; Pitt, P.; Rosso, D., Molecular Characteristics and Differences of Effluent Organic Matter from Parallel Activated Sludge and Integrated Fixed-Film Activated Sludge (IFAS) Processes. *Environ. Sci. Technol.* 2013, 47 (18), 10277-10284. doi: 10.1021/es4002482. UMCES contribution number: 4794.

Cottrell, B. A.; Timko, S. A.; Devera, L.; Robinson, A. K.; Gonsior, M.; Vizenor, A. E.; Simpson, A. J.; Cooper, W. J., Photochemistry of excited-state species in natural waters: A role for particulate organic matter. *Water Research* 2013, 47 (14), 5189-5199. doi: 10.1016/j.watres.2013.05.059.

Cottrell, B. A.; Gonsior, M.; Isabelle, L. M.; Luo, W.; Perraud, V.; McIntire, T. M.; Pankow, J. F.; Schmitt-Kopplin, P.; Cooper, W. J.; Simpson, A. J., A regional study of the seasonal variation in the molecular composition of rainwater. *Atmospheric Environment* 2013, 77, 588-597. doi: 10.1016/j.atmosenv.2013.05.027.

Lavonen, E. E.; Gonsior, M.; Tranvik, L. J.; Schmitt-Kopplin, P.; Köhler, S. J., Selective Chlorination of Natural Organic Matter: Identification of Previously Unknown Disinfection By-products. *Environ.Sci. Technol.* 2013, 47 (5), 2264-2271. doi: 10.1021/es304669p

- Gonsior, M.; Schmitt-Kopplin, P.; Bastviken, D., Depth-dependent molecular composition and photo-reactivity of dissolved organic matter in a boreal lake under winter and summer conditions. *Biogeosciences* 2013, 10 (11), 6945-6956. doi:10.5194/bg-10-6945-2013. UMCES contribution number: 4764.
- 2014 Cottrell, B. A.; Gonsior, M.; Timko, S. A.; Simpson, A. J.; Cooper, W. J., Photochemistry of marine and fresh waters: A role for copper-dissolved organic matter ligands. *Marine Chemistry*, 2014, 162, 77-88. doi:10.1016/j.marchem.2014.03.005. UMCES contribution number: 4885.
- Gonsior, M.; Hertkorn, N.; Conte, M.; Cooper, W. J.; Bastviken, D.; Druffel, E.; Schmitt-Kopplin, P. Photochemical production of polyols arising from significant photo-transformation of dissolved organic matter in the oligotrophic surface ocean. *Marine Chemistry*, 2014, 163, 10-18. doi:10.1016/j.marchem.2014.04.002. UMCES contribution number: 4901.
- Gonsior, M., Schmitt-Kopplin, P.; Stavklint, H.; Richardson S.; Hertkorn, N.; and D. Bastviken. Changes in Dissolved Organic Matter during the Treatment Processes of a Drinking Water Plant in Sweden and Formation of Previously Unknown Disinfection Byproducts. *Environ. Sci. Technol.* 2014, 48 (21), 12714-12722. doi: 10.1021/es504349p. UMCES contribution number: 4967.
- 2015 Yamashita, Y.; McCallister, S. L.; Koch, B. P.; Gonsior, M.; Jaffé, R. Dynamics of dissolved organic matter in fjord ecosystems: Contributions of terrestrial dissolved organic matter in the deep layer. *Estuarine, Coastal and Shelf Science* 2015, 159, 37-49. doi: 10.1016/j.ecss.2015.03.024. UMCES contribution number: 5014.
- Gonsior, M.; Mitchelmore, C.; Heyes, A.; Harir, M.; Richardson, S. D.; Petty, W. T.; Wright, D. A.; Schmitt-Kopplin, P. Bromination of Marine Dissolved Organic Matter following Full Scale Electrochemical Ballast Water Disinfection. *Environ. Sci. Technol.* 2015, 49 (15), 9048-9055. doi: 10.1021/acs.est.5b01474. UMCES contribution number: 5051.
- Coelho, C.; Aron, A.; Roullier-Gall, C.; Gonsior, M.; Schmitt-Kopplin, P.; Gougeon, R. D. Fluorescence Fingerprinting of Bottled White Wines Can Reveal Memories Related to Sulfur Dioxide Treatments of the Must. *Analytical chemistry* 2015, 87 (16), 8132-8137. doi: 10.1021/acs.analchem.5b00388. UMCES contribution number: 5053.
- Lavonen, E. E.; Kothawala, D. N.; Tranvik, L. J.; Gonsior, M.; Schmitt-Kopplin, P.; Köhler, S. J. Tracking changes in the optical properties and molecular composition of dissolved organic matter during drinking water production. *Water Research* 2015, 85, 286-294. doi: 10.1016/j.watres.2015.08.024. UMCES contribution number: 5079.
- Timko, S. A.; Maydanov, A.; Pittelli, S. L.; Conte, M. H.; Cooper, W. J.; Koch, B. P.; Schmitt-Kopplin, P.; Gonsior, M. Depth-dependent Photodegradation of Marine

- Dissolved Organic Matter. *Frontiers in Marine Science* 2015, 2. doi: 10.3389/fmars.2015.00066. UMCES contribution number: 5083.
- Timko, S. A.; Gonsior, M.; Cooper, W. J. Influence of pH on fluorescent dissolved organic matter photo-degradation. *Water Research* 2015, 85, 266-274. doi: 10.1016/j.watres.2015.08.047. UMCES contribution number: 5084.
- 2016 Dvorski, S. E. M. et al. Geochemistry of Dissolved Organic Matter in a Spatially Highly Resolved Groundwater Petroleum Hydrocarbon Plume Cross-Section. *Environ. Sci. Technol.*, doi:10.1021/acs.est.6b00849 (2016).
- Gonsior, M., J. Valle, P. Schmitt-Kopplin, N. Hertkorn, D. Bastviken, J. Luek, M. Harir, W. Bastos, and A. Enrich-Prast, Chemodiversity of dissolved organic matter in the Amazon Basin, *Biogeosciences*, 13(14), 4279-4290 (2016).
- Li, Y., M. Harir, M. Lucio, M. Gonsior, B. P. Koch, P. Schmitt-Kopplin, and N. Hertkorn, Comprehensive structure-selective characterization of dissolved organic matter by reducing molecular complexity and increasing analytical dimensions, *Water Research*, 106, 477-487 (2016).
- 2017 Gonsior, M., J. Luek, P. Schmitt-Kopplin, J. M. Grebmeier, and L. W. Cooper, Optical Properties and Molecular Diversity of Dissolved Organic Matter in the Bering Strait and Chukchi Sea, *Deep Sea Research Part II: Topical Studies in Oceanography* (2017).
- Bischoff, A.; Barrat, J.-A.; Bauer, K.; Burkhardt, C.; Busemann, H.; Ebert, S.; Gonsior, M.; Hakenmüller, J.; Haloda, J.; Harries, D.; Heinlein, D.; Hiesinger, H.; Hochleitner, R.; Hoffmann, V.; Kaliwoda, M.; Laubenstein, M.; Maden, C.; Meier, M. M. M.; Morlok, A.; Pack, A.; Ruf, A.; Schmitt-Kopplin, P.; Schönbacher, M.; Steele, R. C. J.; Spurný, P.; Wimmer, K. The Stubenberg meteorite—An LL6 chondrite fragmental breccia recovered soon after precise prediction of the strewn field. *Meteoritics & Planetary Science* (2017).
- Coelho, C.; Parot, J.; Gonsior, M.; Nikolantonaki, M.; Schmitt-Kopplin, P.; Parlanti, E.; Gougeon, R. D. Asymmetrical flow field-flow fractionation of white wine chromophoric colloidal matter. *Analytical and Bioanalytical Chemistry* (2017), 1-10.
- Luek, J. L.; Schmitt-Kopplin, P.; Mouser, P. J.; Petty, W. T.; Richardson, S. D.; Gonsior, M. Halogenated Organic Compounds Identified in Hydraulic Fracturing Wastewaters Using Ultrahigh Resolution Mass Spectrometry. *Environ. Sci. Technol.* (2017).
- Roullier-Gall, C.; Hemmler, D.; Gonsior, M.; Li, Y.; Nikolantonaki, M.; Aron, A.; Coelho, C.; Gougeon, R. D.; Schmitt-Kopplin, P. Sulfites and the wine metabolome. *Food Chem.* **2017**, 237, 106-113.
- Ruf, A.; Kanawati, B.; Hertkorn, N.; Yin, Q.-Z.; Moritz, F.; Harir, M.; Lucio, M.; Michalke, B.; Wimpenny, J.; Shilobreeva, S.; Bronsky, B.; Saraykin, V.; Gabelica, Z.; Gougeon, R. D.; Quirico, E.; Ralew, S.; Jakubowski, T.; Haack, H.; Gonsior, M.; Jenniskens, P.; Hinman, N. W.; Schmitt-Kopplin, P. Previously unknown class of

metalorganic compounds revealed in meteorites. *Proceedings of the National Academy of Sciences* **2017**, *114* (11), 2819-2824.

Zhao, Z.; Gonsior, M.; Luek, J.; Timko, S.; Ianiri, H.; Hertkorn, N.; Schmitt-Kopplin, P.; Fang, X.; Zeng, Q.; Jiao, N.; Chen, F. Picocyanobacteria and deep-ocean fluorescent dissolved organic matter share similar optical properties. *Nature Communications* **2017**, *8*, 15284.

Luek, J. L.; Gonsior, M. Organic compounds in hydraulic fracturing fluids and wastewaters: A review. *Water Research* **2017**, *123*, 536-548.

Mangalgi, K. P.; Timko, S. A.; Gonsior, M.; Blaney, L. PARAFAC Modeling of Irradiation- and Oxidation-Induced Changes in Fluorescent Dissolved Organic Matter Extracted from Poultry Litter. *Environ. Sci. Technol.* **2017**, *51* (14), 8036-8047.

2018 J. Valle, **M. Gonsior**, M. Harir, A. Enrich-Prast, P. Schmitt-Kopplin, D. Bastviken, R. Conrad, N. Hertkorn, Extensive processing of sediment pore water dissolved organic matter during anoxic incubation as observed by high-field mass spectrometry (FTICR-MS), *Water Research*, 129 (2018) 252-263. UMCES contribution number: 5451.

Aiona, P. K.; Luek, J. L.; Timko, S. A.; Powers, L. C.; **Gonsior, M.**; Nizkorodov, S. A., Effect of Photolysis on Absorption and Fluorescence Spectra of Light-Absorbing Secondary Organic Aerosols. *ACS Earth and Space Chemistry* 2018, *2*, (3), 235-245. UMCES contribution number: 5462.

Luek, J. L.; Harir, M.; Schmitt-Kopplin, P.; Mouser, P. J.; **Gonsior, M.**, Temporal dynamics of halogenated organic compounds in Marcellus Shale flowback. *Water Research* 2018, *136*, 200-206. UMCES contribution number: 5475

Powers, L. C.; Luek, J. L.; Schmitt-Kopplin, P.; Campbell, B. J.; Magen, C.; Cooper, L. W.; **Gonsior, M.**, Seasonal changes in dissolved organic matter composition in Delaware Bay, USA in March and August 2014. *Org Geochem* 2018, *122*, 87-97. UMCES contribution number: 5509.

Gonsior, M.; Hertkorn, N.; Hinman, N.; Dvorski, S. E. M.; Harir, M.; Cooper, W. J.; Schmitt-Kopplin, P., Yellowstone Hot Springs are Organic Chemodiversity Hot Spots. *Scientific Reports* 2018, *8*, (1), 14155. UMCES contribution number: 5518.

Murphy, K.; Timko, S. A.; **Gonsior, M.**; Powers, L.; Wünsch, U.; Stedmon, C. A., Photochemistry illuminates ubiquitous organic matter fluorescence spectra. *Environ. Sci. Technol.* 2018. UMCES contribution number: 5521.

Luek, J. L.; Harir, M.; Schmitt-Kopplin, P.; Mouser, P.; **Gonsior, M.**, Organic sulfur fingerprint indicates continued injection fluid signature 10 months after hydraulic fracturing. *Environmental Science: Processes & Impacts* 2018. UMCES contribution number: 5531.

Powers, L.; **Gonsior, M.**, Non-targeted Screening of Disinfection By-products in Desalination Plants using Mass Spectrometry: A Review. *Current Opinion in Environmental Science & Health* 2018. UMCES contribution number: 5543.

2019 Ziegler, G.; Gonsior, M.; Fisher, D. J.; Schmitt-Kopplin, P.; Tamburri, M. N., Formation of Brominated Organic Compounds and Molecular Transformations in Dissolved Organic Matter (DOM) after Ballast Water Treatment with Sodium Dichloroisocyanurate Dihydrate (DICD). *Environ. Sci. Technol.* 2019, 53, (14), 8006-8016.

Zhao, Z.; Gonsior, M.; Schmitt-Kopplin, P.; Zhan, Y.; Zhang, R.; Jiao, N.; Chen, F., Microbial transformation of virus-induced dissolved organic matter from picocyanobacteria: coupling of bacterial diversity and DOM chemodiversity. *The Isme Journal* 2019.

Mitchelmore, C. L.; He, K.; Gonsior, M.; Hain, E.; Heyes, A.; Clark, C.; Younger, R.; Schmitt-Kopplin, P.; Feerick, A.; Conway, A.; Blaney, L., Occurrence and distribution of UV-filters and other anthropogenic contaminants in coastal surface water, sediment, and coral tissue from Hawaii. *Sci Total Environ* 2019, 670, 398-410.

Andersson, A.; Harir, M.; Gonsior, M.; Hertkorn, N.; Schmitt-Kopplin, P.; Kylin, H.; Karlsson, S.; Ashiq, M. J.; Lavonen, E.; Nilsson, K.; Pettersson, Å.; Stavklint, H.; Bastviken, D., Waterworks-specific composition of drinking water disinfection by-products. *Environmental Science: Water Research & Technology* 2019, 5, (5), 861-872.

Hemmler, D.; Gonsior, M.; Powers, L. C.; Marshall, J. W.; Rychlik, M.; Taylor, A. J.; Schmitt-Kopplin, P., Simulated Sunlight Selectively Modifies Maillard Reaction Products in a Wide Array of Chemical Reactions. *Chemistry* 2019.

Gonsior, M.; Powers, L. C.; Williams, E.; Place, A.; Chen, F.; Ruf, A.; Hertkorn, N.; Schmitt-Kopplin, P., The chemodiversity of algal dissolved organic matter from lysed *Microcystis aeruginosa* cells and its ability to form disinfection by-products during chlorination. *Water Research* 2019, 155, 300-309.

Luek, J. L.; Harir, M.; Schmitt-Kopplin, P.; Mouser, P. J.; Gonsior, M., Organic sulfur fingerprint indicates continued injection fluid signature 10 months after hydraulic fracturing. *Environmental Science: Processes & Impacts* 2019, 21, (2), 206-213.

2. Book chapter

2019 Gonsior, M., Chapter 13 - FT-ICR MS and Orbitrap mass spectrometry approaches in environmental chemistry. In *Fundamentals and Applications of Fourier Transform Mass Spectrometry*, Kanawati, B.; Schmitt-Kopplin, P., Eds. Elsevier: 2019; pp 407-423.

3. Technical Reports

DNR Baseline study of Western Maryland Streams, first report.

C. Contracts and Grants

Contracts

- a) Maryland DNR, fracking baseline study of Western Maryland streams

Grants

1. Currently Funded

- a) NSF Chemical Oceanography (\$365,540) (2015-2019)
- b) NSF Chemical Oceanography (\$312,563) (2019-2022)
- c) NSF Environmental Engineering Grant (\$232,967) (2016-2019)
- d) NSF Environmental Chemical Sciences (\$499,424) (2017-2020)
- e) Sub-award NSF Ecosystems (\$79,934) (2019-2022)
- f) PCPC (\$346,670) (2019-2020)

2. Submitted

- a) DoD (\$463,907), Assessment of fate, ecotoxicity and remediation of fluorine-free surfactant formulations (F3) in media-based stormwater control measures (SCMs)

D. Invited Seminars and Presentations

- 2019 Invited seminar at Syracuse University
- 2018 Invited talk at ACS annual meeting in New Orleans.” Chemodiversity of Dissolved Organic Matter in Anaerobic Sediments”.
Invited seminar at South Carolina University, Columbia.
- 2017 Invited talk at the ASLO Ocean Sciences Meeting 2017, Hawaii
- 2016 Invited talk at the FluoroFest symposium in Beijing at Peking University organized by Horiba Jobin Yvon.
Invited to give an oral presentation at an Alexander von Humboldt foundation funded workshop in Rio de Janeiro, Brazil.
- 2015 Invited seminar at FIU, Florida: Ultrahigh Resolution Mass Spectrometry (FT-MS) - Excitation Emission Matrix fluorescence (EEM). What do we know about the molecular composition of marine CDOM.
Invited Seminar at Xiamen University, China. Title: Ultrahigh Resolution Mass Spectrometry (FT-MS) and Excitation Emission Matrix fluorescence (EEM) of Natural Organic Matter.
IWA 2015 Specialty Conference on Natural Organic Matter (NOM6), Malmoe, Sweden. 1) Keynote: A Retrospective of Natural Organic Matter Research for Water Applications.
- 2014 Invited seminar at University of Barcelona, Spain.
Invited seminar at University of Burgundy, France.
- 2013 Invited seminar at Chemistry Department in College Park, UMC.
Invited seminar at IMET, UMCES.
Invited seminar at AL, UMCES
Invited seminar at Smithsonian Environmental Research Center, SERC.
- 2012 Seminar at Horn Point Laboratory, UMCES.
UMCES Convocation, May 2012.

2011 Mid-term seminar, Linköping University, Sweden.
 Uppsala University, Sweden.
 Interview at Chesapeake Biological Laboratory, Center for Environmental
 Science, University of Maryland, USA.

E. Symposia Organized/Chaired for Professional Meetings

Member of the organization committee of the IWA meeting: "Natural Organic Matter Research - From Source to Tap and Beyond" in Irvine, California, USA 27-29 July 2011.

Organized symposium with the title "*Disinfection By-Products: What have we learned about Dissolved Organic Matter Precursors?*", 252nd American Chemical Society National Meeting & Exposition in Philadelphia, August 21-25, 2016.

F. Active Memberships in Professional Societies

American Society of Limnology and Oceanography (L&O)
 American Chemical Society (ACS)
 American Geophysical Union (AGU)

IV. Teaching and Training

2012-present: Member of the Graduate Faculty, MEES program at University of Maryland, College Park.

2013-present Mentor of REU students

2015-present Advising undergraduate intern from Saint Mary's College

A. University of Maryland Courses Taught

Course No.	Title	Institution	Semester	Enrollment	Credit Hrs.	Co-Instructors	No. of Lectures
MEES 608W	Environmental Forensics	UMCES	Fall 2013	5	2	Andrew Heyes, Carys Mitchelmore, Chris Rowe, Johan Schijf	*4 sessions
MEES 698C	Chemical Oceanography	UMCES	Fall 2014	9	3	Laura Lapham, Lee Cooper, Andrew Heyes, Hali Kilbourne, Johan Schijf	** 5 sessions
MEE 708Q	Analytical techniques in Environmental Chemistry	UMCES	Spring 2016	5	3	Laura Lapham	** 15 sessions
MEES 640	Interconnected Earth Systems: Land, Ocean, and Estuary	UMCES	Fall 2016	9	4	Mark Castro Victoria Coles	*** 11 sessions
MEES	Interconnected	UMCES	Fall 2018	12	3	Mark Castro	***

640	Earth Systems: Land, Ocean, and Estuary					Victoria Coles	11 sessions
MEES 640	Interconnected Earth Systems: Land, Ocean, and Estuary	UMCES	Fall 2019	8	3	Mark Castro, Keith Eshleman, Victoria Coles, Cindy Palinkas	*** 11 sessions

* Organized course and responsible for grades, **Organized course together with Laura Lapham and responsible for grades. *** Organized course together with Mark and Victoria and responsible for grades.

B. Courses taught Outside the University System of Maryland

- None

C. Graduate Students Supervised as Major Advisor

1. Degree Completed

2018 Jenna Luek, (PhD), Research Project: *“Characterization of organic compounds in hydraulic fracturing fluids”*.

2. Students Currently Supervised

- Alec Armstrong (PhD), Research project: *“Effects of wetland surface connectivity on stream DOM in the Choptank River watershed”*.
- Katie Martin (PhD), *“Tracking septic system performance by using innovative mass spectrometric approaches and traditional nutrient measurements”*.
- Leanne Powers (Post-Doc), *“Disinfection by-products in desalination plants”*.
- Alexandra Gibbs, (MS), *“Micropollutants degradation in restored ecosystems”*
- Madeline Lahm (MS), *“Fluorophores derived from Picocyanobacteria”*

3. Current Graduate Student Committee Memberships

Anna Andersson	PhD.	Linkoping University, TEMA, Sweden
Hadley McIntosh	PhD	UMCES-CBL
Alterra Sanchez	PhD	UMCP
Taylor Armstrong	PhD	IMET
Ernest Williams	PhD	IMET
Mengqi Sun	PhD	IMET

4. Research Internship Supervised

Sandra Pittelli (undergraduate)	REU student 2013
Anastasia Maydanov (undergraduate)	REU student 2014
Hope Ianiri (undergraduate)	REU student 2015
Sydney Riemer (undergraduate)	REU student 2017
Shirley Ma	REU student 2018
Jessalyn Davis	REU student 2019

Kaitlyn Thompson (Undergraduate) Saint Mary's College Fall 2015-Fall 2016. Kaitlyn's final undergraduate year project title is "*Hydrosulfurization of Sediment Dissolved Organic Matter*" and her project is incorporating the funded ACS doctoral new investigator grant "*Hydrosulfurization of Dissolved Organic Matter in Sediments: Linking Sulfate Reduction and Dissolved Organic Sulfur Formation*", Grant Number: CBL2014-052DNI.

Carolyn Winston (high school intern) "*Photochemistry and microbial degradation of cyanobacteria DOM*".

V. Outreach and Service

A. Popular Articles

B. Public Service

1. State/Regional Service

Maintain in dialog with Calvert County about septic systems

High school intern in 2016

AP Environmental Chemistry and Biology lessons in spring 2017 in St. Mary's schools

2. Service Outside Region

NSF reviewer in 2017, 2018 and 2019

NSF Chemical Oceanographer reviewer and panelist in 2016

Featured scientist in the feature length documentary "*A Plastic Ocean*".

Reviewer for numerous scientific journals (ES&T, Nature Communications, Nature Geosciences, Science of the Total Environment, Marine Chemistry, Organic Geochemistry, etc.)

Investigate the impact of disinfection by-products.

Investigate the impact of hydraulic fracturing.

Hosting a Fulbright Fellow in 2017/18

C. University System of Maryland

Member of the Marine- Estuarine- Environmental Sciences Graduate Program (MEES)

D. UMCES and CBL

Chair of the lab safety committee.

Engaged in assisting students outside of my committee work.

supporting research visits at CBL from overseas PhD students (China, Germany and France)