

## Curriculum Vitae: Dr. Andrew S. Wozniak

### Andrew S. Wozniak, Ph.D.

Assistant Professor  
School of Marine Science and Policy  
University of Delaware  
Lewes, DE 19958

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### EDUCATION

University of Virginia	Biology	B.A. 2000
University of Rhode Island	Biological Oceanography	M.S. 2004
	Dr. Charles T. Roman, advisor	
College of William and Mary	Marine Science/Chemical Oceanography	Ph.D. 2010
	Drs. James E. Bauer and Rebecca M. Dickhut, Co-advisors.	

### APPOINTMENTS

2017-present *Assistant Professor*, School of Marine Science and Policy, University of Delaware  
2016-2017 *Adjunct Assistant Professor*, Department of Chemistry and Biochemistry, Old Dominion University  
2012-2017 *Research Assistant Professor*, Department of Chemistry and Biochemistry, Old Dominion University  
2011-2013 *Visiting Assistant Research Scientist*, Physical Sciences Department, Virginia Institute of Marine Science, College of William and Mary  
2009-2012 *Post-doctoral Researcher*, Department of Chemistry and Biochemistry, Old Dominion University, Dr. Patrick G. Hatcher, advisor.

### AFFILIATIONS

***Affiliated Faculty Member***, University of Delaware Graduate Program in Water, Science, and Policy

***Affiliated Faculty Member***, University of Delaware, DENIN

### PEER-REVIEWED PUBLICATIONS

#### ***Since Faculty Appointment at University of Delaware***

1. Estes, E. R., D. Berti, N. R. Coffey, M. F. Hochella Jr., **A. S. Wozniak**, and G. W. Luther III. 2019. Abiotic synthesis of graphite in hydrothermal vents. *Nature Communications* 10(1), pp. 1-6. <https://doi.org/10.1038/s41467-019-13216-z>
2. **Wozniak, A.S.**, Prem, P. M., Obeid, W., Quigg, A., Xu, C., Zhang, S., Santschi, P. H., Schwehr, K. A., Hatcher, P. G. 2019. Rapid degradation of oil in mesocosm simulations of marine oil snow events. *Environmental Science and Technology* 53, (7), 3441-3450 <https://doi.org/10.1021/acs.est.8b06532>.
3. Xu, C., S. Zhang, M. Beaver, **A. S. Wozniak**, W. Obeid, Y. Lin, T. L. Wade, K. A. Schwehr, P. Lin, L. Sun, P. G. Hatcher, W.-C. Chin, M.-H. Chiu, A. H. Knap, K. Dean, A. Quigg, P. H. Santschi. 2018. Decreased sedimentation efficiency of petro- and non-petro- carbon caused by a dispersant for Macondo surrogate oil in a mesocosm simulating a coastal microbial community. *Marine Chemistry*, 206, 34-43. <https://doi.org/10.1016/j.marchem.2018.09.002>
4. Xu, C., S. Zhang, M. Beaver, P. Lin, L. Sun, S M. Doyle, J. B. Sylvan, **A. S. Wozniak**, P. G. Hatcher, K. Kaiser, G. Yan, K. A. Schwehr, Y. Lin, T. L. Wade, W.-C. Chin, M.-H. Chiu, A. Quigg, P. H. Santschi. 2018. The role of microbially-mediated exopolymer substances (EPS)

- in regulating Macondo oil transport in a mesocosm experiment. *Marine Chemistry*, 206, 52-61. <https://doi.org/10.1016/j.marchem.2018.09.005>
5. Bostick, K., A.R. Zimmerman, P. G. Hatcher, S. Mitra, **A. S. Wozniak**. 2018. Production and composition of pyrogenic dissolved organic matter. *Frontiers in Earth Science – Biogeosciences*, 6, 43. <https://doi.org/10.3389/feart.2018.00043>
  6. Hatcher, P.G., Obeid, W., **Wozniak, A.S.**, Xu, C., Zhang, S., Santschi, P.H., Quigg, A., 2018. Identifying oil/marine snow associations in mesocosm simulations of the Deep Water Horizon Oil Spill event using solid-state <sup>13</sup>C NMR spectroscopy. *Marine Pollution Bulletin*, 126, 159-165.
  7. Mitra, S., C. L. Osburn, and **A. S. Wozniak**. 2017. Organic matter in northern Gulf of Mexico rainwater isolated in 2013. *Aquatic Geochemistry*, 23(4), 217-231. DOI 10.1007/s10498-017-9319-5.

***Published While At-Rank Prior to Faculty Appointment at University of Delaware***

6. Waggoner, D. C., **A. S. Wozniak**, R. M. Cory, & P. G. Hatcher. 2017. The role of reactive oxygen species in the degradation of lignin derived dissolved organic matter. *Geochimica et Cosmochimica Acta*, 208, 171-184, <https://doi.org/10.1016/j.gca.2017.03.036>.
7. Jennings, M, **A. S. Wozniak**, U. Passow, D. A. Hansell. 2017. Distribution of transparent exopolymer particles (TEP) across an organic carbon gradient in the western North Atlantic Ocean. *Marine Chemistry*, 190, 1-12, <http://dx.doi.org/10.1016/j.marchem.2017.01.002>.
8. Willoughby, A. S., **A. S. Wozniak**, P. G. Hatcher. 2016. Detailed source-specific molecular composition of ambient aerosol organic matter using ultrahigh resolution mass spectrometry and <sup>1</sup>H NMR. *Atmosphere* 7, 79 doi:10.3390/atmos7060079.
9. Graves, J. E., **A. S. Wozniak**, R. M. Dickhut, M. A. Cochran, E. H. Macdonald, E. O. Bush, H. Arrizabalaga, and N. Goñi. 2015. Trans-Atlantic movements of juvenile Atlantic bluefin tuna inferred from analyses of organochlorine tracers. *Canadian Journal of Fisheries and Aquatic Sciences*, **72**: 1–9 (2015) dx.doi.org/10.1139/cjfas-2014-0305.
10. Gurganus, S. C., **A. S. Wozniak**, and P. G. Hatcher. 2015. Molecular characteristics of the water soluble organic matter in size resolved aerosols collected over the North Atlantic Ocean. *Marine Chemistry* 170, 37-48, [doi:10.1016/j.marchem.2015.01.007](https://doi.org/10.1016/j.marchem.2015.01.007).
11. **Wozniak, A. S.**, R. U. Shelley, S. M. McElhenie, A. S. Willoughby, W. M. Landing, P. G. Hatcher. 2015. Insights into potential Fe-binding aerosol water soluble organic ligands from the 2011 US GEOTRACES cruise. *Marine Chemistry*, 173, 162-172, doi:10.1016/j.marchem.2014.11.002.
12. Willoughby, A. S., **A. S. Wozniak**, and P. G. Hatcher. 2014. A molecular-level approach for characterizing water-insoluble components of ambient organic aerosol particulates using ultra-high resolution mass spectrometry. *Atmospheric Chemistry and Physics*, 14, 10299-10314, doi:10.5194/acpd-14-10393-2014.
13. **Wozniak, A.S.**, A. S. Willoughby, S. C. Gurganus, P. G. Hatcher. 2014. Distinguishing molecular characteristics of aerosol water soluble organic matter from the 2011 trans-North Atlantic US GEOTRACES cruise. *Atmospheric Chemistry and Physics*, 14, 8419-8434, doi:10.5194/acp-14-8419-2014.
14. Hauser, E. A., R. M. Dickhut, R. A. Falconer, and **A. S. Wozniak**. 2013. An improved method for quantification of volatile organic carbon air-sea fluxes. *Limnology & Oceanography: Methods*, 11, 287-297, DOI: 10.4319/lom.2013.11.287.

15. Meskhidze, N., M. D. Petters, K. Tsigaridis, and 40 others (including **A. S. Wozniak**). 2013. Production mechanisms, number concentration, size distribution, chemical composition, and optical properties of sea spray aerosols. *Atmospheric Science Letters*, DOI: 10.1002/asl12.441.
16. Mitra, S., **A. S. Wozniak**, R. Miller, P. G. Hatcher, C. Buonassissi, M. Brown, 2013. Multiproxy probing of rainwater dissolved organic matter (DOM) composition in storms as a function of trajectory. *Marine Chemistry*, 154, 67-76, <https://doi.org/10.1016/j.marchem.2013.05.013>.
17. **Wozniak, A. S.**, R. L. Sleighter, H. Abdulla, A. S. Priest, P. L. Morton, R. U. Shelley, W. M. Landing, and P. G. Hatcher, 2013. Relationships among aerosol water soluble organic matter, iron and aluminum in European, North African, and Marine air masses from the 2010 US GEOTRACES cruise. *Marine Chemistry*, 154, 24-33, <https://doi.org/10.1016/j.marchem.2013.04.011>.

***Published During Graduate School or Post-Doctoral Appointment***

18. Sleighter, R. L., H. Chen, **A. S. Wozniak**, A. S. Priest, P. Caricasole, and P. G. Hatcher. 2012. Establishing a measure of reproducibility of ultrahigh resolution mass spectra for complex mixtures of natural organic matter. *Analytical Chemistry*, 84, 9184-9191, DOI: 10.1021/ac3018026.
19. **Wozniak, A. S.**, J. E. Bauer, R. M. Dickhut, A. P. McNichol, and L. Xu. 2012. Isotopic characterization of organic carbon and its components in eastern United States aerosol particulate matter, *Journal of Geophysical Research-Atmospheres*, VOL. 117, D13303, doi:10.1029/2011JD017153, 2012.
20. **Wozniak, A. S.**, J. E. Bauer, and R. M. Dickhut. 2012. Characteristics of water-soluble organic carbon associated with aerosol particles in the eastern United States, *Atmospheric Environment* 46, 181-188, <https://doi.org/10.1016/j.atmosenv.2011.10.001>.
21. **Wozniak, A. S.**, J. E. Bauer, and R. M. Dickhut. 2011. Fossil and contemporary aerosol particulate organic carbon in the eastern United States: Implications for deposition and inputs to watersheds. *Global Biogeochemical Cycles*, VOL. 25, GB2013, 14 PP., 2011doi:10.1029/2010GB003855.
22. Kroll J. H., N. M. Donahue, J. L. Jimenez, S. H. Kessler, M. R. Canagaratna, K. R. Wilson, K. E. Altieri, H. Bluhm, L. R. Mazzoleni, E. R. Mysak, J. D. Smith, **A. S. Wozniak**, C. E. Kolb, and D. R. Worsnop. 2011. Carbon oxidation state and the chemistry of atmospheric organic aerosol, *Nature Chemistry*, 133-139, doi:10.1038/NCHEM.948.
23. **Wozniak, A. S.**, J. E. Bauer, R. L. Sleighter, R. M. Dickhut, and P. G. Hatcher. 2008. Molecular characterization of aerosol-derived water soluble organic carbon using ultrahigh resolution electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry. *Atmospheric Chemistry and Physics*. 8, 5099-5111, <https://doi.org/10.5194/acp-8-5099-2008>.
24. **Wozniak, A. S.**, C. T. Roman, S. C. Wainright, R. A. McKinney, and M.-J. James-Pirri. 2006. Monitoring food web changes in tide-restored salt marshes: a carbon stable isotope approach. *Estuaries and Coasts* 29: 568-578, <https://doi.org/10.1007/BF02784283>.

**MANUSCRIPTS UNDER REVIEW AND IN PREPARATION**

1. **Wozniak, A. S.**, A. I. Goranov, S. Mitra, A. Zimmerman, K. W. Bostick, P. G. Hatcher. 2019. Char feedstock and production temperature impacts on pyrogenic dissolved organic matter molecular composition. *In preparation for Geochimica et Cosmochimica Acta*.
2. **Wozniak, A. S.**, A. I. Goranov, S. Mitra, A. Zimmerman, K. W. Bostick, P. G. Hatcher. 2019. Implications of Environmental Aging for the quantities and characteristics of Pyrogenic

## Curriculum Vitae: Dr. Andrew S. Wozniak

Dissolved Organic Matter Leached from Wildfire-Affected Atlantic White Cedar (*Chamaecyparis thyoides*). *In preparation for Organic Geochemistry*.

- Goranov, A.I., Wozniak, A.S., Bostick, K.W., Zimmerman, A.R., Mitra S., Hatcher, P.G. 2019. Photochemistry After Fire: A Study of Dissolved Pyrogenic Carbon from Chars Produced over a Thermal Gradient. *In preparation for Organic Geochemistry*.
- Bostick, K. A.R. Zimmerman, P. G. Hatcher, S. Mitra, **A. S. Wozniak**. Photodegradation and Photomineralization of Pyrogenic Dissolved Organic Carbon from a Logical Series of Chars. *In review for Environmental Science and Technology*.
- Mitra S., S. C. W. Phillips, **A.S. Wozniak**, A.R. Zimmerman, K.W. Bostick, P.G. Hatcher. 2019. PAH and OPAH distributions in laboratory-generated biochars and their aqueous leachates. *In prep for Environmental Science and Technology*.
- Bostick, K. W., A. R. Zimmerman, A. I. Goranov, S. Mitra, P. G. Hatcher, A. S. Wozniak. 2019. Biolability of fresh and photodegraded pyrogenic dissolved organic matter from laboratory-prepared chars. *In preparation for JGR Biogeosciences*.

### CURRENT, PENDING, AND PAST FUNDING

#### *Current (Obtained Since Faculty Appointment at UDel)*

- University of Delaware Research Foundation 2018 UDRF Award: “Probing the estuary’s skin: Environmental controls on the chemical composition of Delaware Bay’s surface microlayer.”; **A. S. Wozniak** (sole PI) \$35,000, June 1, 2018 to May 31, 2020.

#### *Past Funding At Rank (Prior to Faculty Appointment at University of Delaware)*

- NOAA/NMFS – Bluefin Tuna Research Program: Evaluation of natal origin and migratory pathways of Atlantic bluefin tuna (*Thunnus thynnus*) using chemical tracers, J. Logan (lead PI, Massachusetts Division of Fisheries), **A. S. Wozniak** (co-PI, ODU), A. Robertson, C. Butler (co-PIs, University of South Alabama), J. Rooker (co-PI, Texas A&M University), M. Staudinger (co-PI, University of Massachusetts), E. Hoffmayer, R. Allman (co-PIs, NOAA Southeast Fisheries Center); \$125,000 (**\$14,502 subcontract to ODU**), **September 1, 2016 to August 31, 2017**. *No cost extension to 8/31/18. Award transferred to U. of Delaware.*
- \*NSF EAR – Geobiol & Low Temp Geochem: Collaborative Research: Dissolved pyrogenic organic matter dynamics in the environment, A. Zimmerman (lead PI, U. Florida), S. Mitra (PI, E. Carolina U.), **A.S. Wozniak** (PI, ODU, **\$176,888 to ODU**, *NSF Geobiology and Low Temperature Geochemistry program, GG-1451452*), and P.G. Hatcher (co-PI, ODU), \$479,635, **June 1, 2015 to May 31, 2018**. \*Award transferred to co-PI, P. G. Hatcher upon faculty appointment to UDel, no cost extension until May 31, 2019.
- Old Dominion University – Program for Undergraduate Research and Scholarship: Environmental factors determining gas-phase organic matter composition and fluxes at air-water interfaces, **A. S. Wozniak** (sole PI) \$10,000, January 1, 2017 to December 31, 2017.
- NSF AGS: Role of organic matter in determining the solubility of atmospherically delivered iron, (**\$367,104**, *NSF Chemical Oceanography program, OCE-1234166*), **A. S. Wozniak** (PI ODU), P. G. Hatcher. **September, 2012 to August, 2015**.
- NOAA/NMFS Bluefin Tuna Competitive Research Grants (administered by Virginia Polytechnic Institute and State University): Use of Organochlorine Tracer Analysis to Determine the Magnitude and Temporal Variation of Mixing Rates of Eastern and Western School Size Bluefin Tuna in the Western Atlantic Recreational Fishery for School Bluefin Tuna, J. E. Graves (College of William & Mary, VIMS, PI), **A. S. Wozniak** (ODU, co-PI, **\$33,859.63 to ODU**). **2012 to 2013**.

## Curriculum Vitae: Dr. Andrew S. Wozniak

### PROPOSALS PENDING

1. NSF AGS: Collaborative Research: Investigation of the Diffusive Air-Sea Flux in Organic Carbon in a Temperate Estuary, **A. S. Wozniak** (lead PI), S. Mitra and G. E. Howard (East Carolina University); \$763,919 (\$486,983 to UDel), June 1, 2020 to May 31, 2023.
2. ACS PRF: The composition of organic sulfur in accumulating soils of a temperate salt marsh: Implications for sulfurization in salt marshes, **A. S. Wozniak** (sole PI); \$110,000, September 1, 2020 to August 31, 2022.

### PROPOSALS UNFUNDED (SUBMITTED SINCE FACULTY APPOINTMENT AT UDEL)

1. NSF AGS: Collaborative Research: Investigation of the Diffusive Air-Sea Flux in Organic Carbon in a Temperate Estuary and Coastal Ocean, **A. S. Wozniak** (lead PI), S. Mitra and G. E. Howard (East Carolina University); \$565,318 (\$296,646 to UDel), June 1, 2019 to May 31, 2022.
2. NSF EAR – Geobiol & Low Temp Geochem: EAGER: Collaborative Research: How do marine microbes and organic matter in hurricane rainwater impact coastal carbon cycling? S. Mitra and E. Field (East Carolina University) and **A. S. Wozniak** (\$76,509 to UDel), \$149,868, October 15, 2017 to October 14, 2019.
3. NSF MRI (limited submission to UDel) MRI: Acquisition of an ultrahigh resolution Orbitrap Fusion mass spectrometer for interdisciplinary studies characterizing natural and anthropogenic organic matter in the environment, **A.S. Wozniak** (lead PI), J. F. Biddle, S. Inamdar (\$1,376,048, 5 years)
4. NSF MRI (limited submission to UDel) MRI: Acquisition of an ultrahigh resolution Orbitrap Fusion mass spectrometer for interdisciplinary studies probing the interface of chemistry, biology, and the environment, **A.S. Wozniak** (lead PI), Y.-P. Chin, S. R. Shah Walter (\$1,428,686, 5 years)
5. DOE EPSCOR (limited submission to UDel): Fate of hydraulic fracturing substances in flowback and produced waters, Y.-P. Chin and **A. S. Wozniak** (\$618,180/ 3 years).

### INVITED TALKS AT UNIVERSITIES

*At-Rank (Prior to Faculty Appointment at UDel)*

1. **Wozniak, A. S.** 2017. *Organic matter sources, composition, impacts, and fate in marine and atmospheric environments.* University of Delaware School of Marine Science and Policy Spring Seminar Series, Lewes, DE.
2. **Wozniak, A. S.** 2017. *Identifying oil/marine snow associations and particle characteristics in mesocosm simulations of the Deep Water Horizon oil spill event.* Old Dominion University Chemistry Department Spring Seminar Series, Norfolk, VA.
3. **Wozniak, A. S.** 2017. *Identifying oil/marine snow associations and oil transformations in mesocosm simulations of the Deep Water Horizon oil spill event.* James Madison University Chemistry Department Spring Seminar Series, Harrisonburg, VA.
4. **Wozniak, A. S.** 2016. *Pyrogenic organic matter molecular characteristics: Implications for biogeochemical carbon cycling in the environment.* Stroud Water Research Center Seminar Series, Avondale, PA.
5. **Wozniak, A. S.,** 2016. *Aerosol organic matter and Fe characteristics over the North Atlantic Ocean: Implications for Fe-binding ligands and solubility,* Villanova University, Geography and the Environment Seminar Series, Villanova, PA.

## Curriculum Vitae: Dr. Andrew S. Wozniak

6. **Wozniak, A. S.**, 2015. *Organic matter geochemistry in coastal, oceanic, and atmospheric environments*, University of Rhode Island, Graduate School of Oceanography, Narragansett, RI.
7. **Wozniak, A. S.**, 2015. *Seawater controls on aerosol organic matter molecular characteristics*, University of Rhode Island, Graduate School of Oceanography, Narragansett, RI.
8. **Wozniak, A. S.**, 2014. *Ultrahigh resolution mass spectrometry studies of organic aerosol molecular composition*, Drexel University Chemistry Department Seminar Series, Philadelphia, PA.

### *As a Graduate Student/Post-Doctoral Researcher*

9. **Wozniak, A. S.**, 2011. *Quantities and characteristics of atmospheric particulate organic matter in the eastern United States: Implications for fossil and contemporary organic carbon inputs to coastal watersheds and rivers*. University of South Florida Marine Science Seminar Series, St. Petersburg, FL.

### **PRESENTATIONS AT CONFERENCES, SYMPOSIA, WORKSHOPS**

#### *Since Faculty Appointment at UDel*

1. Coffey N. R.\*, A. S. Wozniak, J. I. Czarnecki, A. M. Ebling, 2020. *Spatiotemporal Variability in the Surface Microlayer of Delaware Bay*. Ocean Sciences Meeting, San Diego, CA.
2. Czarnecki J. I.\*, A. M. Ebling, N. R. Coffey\*, **A. S. Wozniak**, 2020. *The impact of storm origin, local scavenging, and changing land use on rainwater Nitrogen content at a coastal Mid-Atlantic United States site*. Ocean Sciences Meeting, San Diego, CA.
3. **Wozniak A. S.**, J. I. Czarnecki\*, A. M. Ebling, N. R. Coffey\*, C. Buck, 2020. *Aerosol organic matter composition during the US GEOTRACES Pacific Meridional Transect (GP-15)*. Ocean Sciences Meeting, San Diego, CA.
4. Coffey, N. R.\*, **A. S. Wozniak**, C. L. Ming\*\*, J. I. Czarnecki, A. M. Ebling, 2019. *Diel Cycling of Organic Matter Enrichments in the Surface Microlayer of the Broadkill River*. American Geophysical Union Fall Meeting, San Francisco, CA.
5. **Coffey, N. R.\***, A. S. Wozniak, 2019 *Controls on the Chemical Composition of Delaware Bay's Surface Microlayer*. University of Delaware College of Earth, Ocean and Environment Annual Graduate Student Symposium, Lewes, DE (**first place for poster presentations**).
6. Goranov, A. I., A. S. Wozniak, A. R. Zimmerman, K. W. Bostick, S. Mitra, and P. G. Hatcher. 2019. *Photochemistry after Fire: Application of Ultrahigh Resolution Mass Spectrometry and Two-Dimensional NMR for the Study of Pyrogenic Dissolved Organic Matter*. AGU Fall Meeting, San Francisco, CA.
7. Stahl, M., J. Wassik, J. Gehring, C. Horan, A. S. Wozniak. 2019. *Linking Watershed Characteristics to the Age and Composition of Labile Riverine Dissolved Organic Matter: Results from Six Rivers in Upstate New York*. AGU Fall Meeting, San Francisco, CA.
8. Estes, E. R., D. Berti, M. F. Hochella Jr., N. R. Coffey, A. S. Wozniak, and G. W. Luther III. 2019. *Abiotic Synthesis of Zerovalent Carbon in Hydrothermal Vents*. Goldschmidt Conference, Barcelona, Spain.
9. Wozniak, A. S., J. I. Czarnecki\*, J. R. Scudlark. 2019. *Assessing Changes to Rainwater Nitrogen Delivery in Sussex County, Delaware*. Atlantic Estuarine Research Society Spring Meeting, Virginia.

## Curriculum Vitae: Dr. Andrew S. Wozniak

10. Waggoner, D.C., M. Hughey, A. Yard, K.A. Schwehr, S. Doyle, C. Xu, C., **A.S. Wozniak**, T.L. Wade, A. Quigg, P.H. Santschi, P.G. Hatcher. 2019. *An investigation into the Effects of Biodegradation vs. Photodegradation During Mesocosm Experiments. Gulf of Mexico Oil Spill and Ecosystem Science Conference*. New Orleans, LA: Gulf of Mexico Research Institute.
11. Bostick, K.W., A.R. Zimmerman, S. Mitra, **A.S. Wozniak**, A.I. Goranov, P.G. Hatcher. 2018. *Photodegradation of laboratory-produced pyrogenic dissolved organic matter (pyDOM)*. AGU Fall Meeting. Washington, D.C.: American Geophysical Union.
12. Goranov, A.I., **Wozniak, A.S.**, Zimmerman, A.R., Bostick, K.W., Mitra S., Hatcher, P.G. 2018. *Photochemical Transformation over the Combustion Gradient of Biochar-Derived Dissolved Black Carbon*, presented at Gordon Research Conference: Organic Geochemistry, Holderness, NH.
13. Goranov, A.I., **Wozniak, A.S.**, Bostick, K.W., Zimmerman, A.R., Mitra S., Hatcher, P.G. 2018. *Photochemistry After Fire: A Study of Dissolved Pyrogenic Carbon from Chars Produced over a Thermal Gradient*, presented at American Geophysical Union Fall Meeting, Washington, D.C.
14. **Wozniak, A. S.**, J.M. Logan, A. Robertson, J. Rooker, R. Allman. 2018. *A multiple chemical tracer approach for evaluating natal origin and migratory pathways of Atlantic bluefin tuna (*Thunnus thynnus*)*. American Fisheries Society 148th Annual Meeting. Atlantic City, NJ: American Fisheries Society.
15. **Wozniak, A.S.**, W. Obeid, C. Xu, S. Zhang, P.H. Santschi, A. Quigg, P. Prem, P.G. Hatcher, 2018. *Rapid degradation of marine snow-associated oil during mesocosm simulations of the Deepwater Horizon Oil Spill event revealed by FTICR MS*. Gulf of Mexico Oil Spill & Ecosystem Science Conference, New Orleans, LA.
16. **Wozniak, A.S.**, A.S. Willoughby, S.D. Whitty, M. Jennings, P.K. Quinn, D.J. Coffman, P.G. Hatcher, 2018. *Evidence for biological and photochemical seawater influence on sea spray aerosol water soluble and water insoluble organic matter composition revealed by ultrahigh resolution mass spectrometry*. Ocean Sciences Meeting, Portland, OR.
17. Waggoner, D.C., **A.S. Wozniak**, C. Xu, S. Zhang, P. Prem, A. Quigg, P. H. Santschi, P. G. Hatcher. 2018. *Determining particle characteristics and oil/marine snow interactions in mesocosm simulations of the Deep Water Horizon oil spill event*. ADDOMEx All-Hands Meeting, February 2018.
18. Bostick, K.W., A.R. Zimmerman, Hatcher, P., Mitra, S., and **A.S. Wozniak**. *Investigating terrestrial to marine transfer of pyrogenic carbon*. The Whitney Laboratory for Marine Bioscience, North Florida Marine Science Symposium. St. Augustine, FL, Jan. 25-26, 2018.
19. Mitra, S., Webb, S.C., **Wozniak, A. S.**, Zimmerman, A., Bostick, K., Hatcher, P. *The Identification and Quantification of Oxygenated Polycyclic Aromatic Hydrocarbons in Dissolved Pyrogenic Carbon (Biochar Leachate)*. AGU Fall 2017 Meeting, New Orleans, LA.

### At Rank (Prior to Faculty Appointment at UDel)

20. **Wozniak, A.S.**, Obeid, W., Prem, P., Xu, C., Zhang, S., Santschi, P.H., Quigg, A., Hatcher, P.G., 2017. *Identifying oil/marine snow associations and oil transformations in mesocosm simulations of the Deep Water Horizon Oil Spill event*. Gulf of Mexico Oil Spill & Ecosystem Science Conference, New Orleans, LA.
21. Xu, C., Zhang, S. Schwehr, K. A., Lin, P., Sun, L., Hatcher, P. G., **Wozniak, A. S.**, Wade, T., Quigg, A. *Effects of water-accomodated fraction of Macondo oil and Corexit on sinking*

## Curriculum Vitae: Dr. Andrew S. Wozniak

- marine snow formation and oil transport in three mesocosm experiments.* Gulf of Mexico Oil Spill & Ecosystem Science Conference, New Orleans, LA.
22. **Wozniak, A. S.**, P. Prem. 2017. *A career as a scientific researcher.* Corporate Landing Middle School Career Day, Virginia Beach, VA.
  23. **Wozniak, A. S.**, P. G. Hatcher, S. Mitra, K. Bostick, A. R. Zimmerman, 2016. *The molecular characteristics of pyrogenic organic materials and their aqueous leachates.* American Geophysical Union Fall Meeting, San Francisco, CA.
  24. Bostick, K.W., A.R. Zimmerman, P. G. Hatcher, S. Mitra, and **A.S. Wozniak**. 2016. *Production and composition of dissolved black carbon from various biochars and environmentally-aged charcoals.* American Geophysical Union Fall Meeting 2016. San Francisco, CA.
  25. Hatcher, P.G., Obeid, W., **Wozniak, A.S.**, Xu, C., Zhang, S., Santschi, P.H., Quigg, A., 2016. *Identifying oil/marine snow associations in mesocosm simulations of the Deep Water Horizon Oil Spill event using solid-state <sup>13</sup>C NMR spectroscopy.* ACS 72<sup>nd</sup> Annual Southwest Regional Meeting, Galveston, TX.
  26. Bostick, K., Zimmerman, A.R. Hatcher, P., Mitra, S. and **A.S., Wozniak**. 2016. *Production, composition and stability of dissolved black carbon.* Geological Society of America Southeastern Section - 65th Annual Meeting.
  27. **Wozniak, A. S.**, P. G. Hatcher, S. Mitra, K. W. Bostick, and A. R. Zimmerman. 2016. *The organic matter molecular characteristics of pyrogenic solids and their aqueous leachable fractions,* Ocean Sciences Meeting, New Orleans, LA.
  28. Webb, S.C., Mitra, S. Zimmerman, A., **Wozniak, A.**, Hatcher, P. *The Identification and Quantification of Oxygenated Polycyclic Aromatic Hydrocarbons in Dissolved Black Carbon from Biochar,* SE GSA, March 2016.
  29. **Wozniak, A. S.**, A. S. Willoughby, S. D. McElhenie, P. K. Quinn, D. J. Coffman, P. G. Hatcher, 2015. *Evidence for biological and photochemical seawater influence on sea spray aerosol water soluble and water insoluble organic matter composition revealed by ultrahigh resolution mass spectrometry,* The International Chemical Congress of Pacific Basin Societies 2015, Honolulu, HI.
  30. **Wozniak, A.S.**, A. S. Willoughby, S. D. McElhenie, P. G. Hatcher, P. K. Quinn, D. J. Coffman, 2015. *An ultrahigh resolution mass spectrometry study of sea spray aerosol water soluble and water insoluble organic matter composition,* American Chemical Society, National Meeting and Exposition, Denver, CO.
  31. **Wozniak, A.S.**, 2015. *An ultrahigh resolution mass spectrometry study of sea spray aerosol water soluble and water insoluble organic matter composition,* Data Meeting of the Western Atlantic Climate Study 2, Beaufort, NC.
  32. McElhenie, S. D., **A. S. Wozniak**, R. U. Shelley, W. M. Landing, and P. G. Hatcher, 2014. *Source-specific characteristics of aerosol organic matter over the North Atlantic Ocean: Implications for the identity of iron binding ligands,* Ocean Sciences Meeting, Honolulu, HI.
  33. **Wozniak, A. S.**, R. U. Shelley, S. D. McElhenie, W. M. Landing, and P. G. Hatcher, 2014. *Aerosol water soluble organic matter molecular characteristics and iron solubility from the 2010-11 US GEOTRACES cruises in the North Atlantic Ocean,* Ocean Sciences Meeting, Honolulu, HI.
  34. **Wozniak, A. S.**, S. C. Gurganus, S. D. McElhenie, R. L. Sleighter, and P. G. Hatcher, 2013. *Molecular characteristics of aerosol water soluble organic matter from the 2010-11 US*



## Curriculum Vitae: Dr. Andrew S. Wozniak

*GEOTRACES cruises in the North Atlantic Ocean*. American Geophysical Union Fall Meeting, San Francisco, CA.

35. Graves, J. E., **A. S. Wozniak**, H. Arrizabalaga, and N. Goñi, 2013. *Trans-Atlantic movements of juvenile Atlantic bluefin tuna inferred from analyses of organochlorine tracers*. ICCAT, SCRS/2013/092.
36. Graves, J. E., **A. S. Wozniak**, 2013. *Trans-Atlantic movements of juvenile Atlantic bluefin tuna inferred from analyses of organochlorine tracers*. The Tuna Conference, Lake Arrowhead, CA.
37. **Wozniak, A. S.**, R. U. Shelley, S. C. Gurganus, A. S. Willoughby, R. L. Sleighter, H. A. N. Abdulla, W. M. Landing, P. G. Hatcher, 2013. *Exploring the relationships between organic matter molecular characteristics and trace metal solubilities of combustion- and dust-influenced marine aerosols*. American Society of Limnology and Oceanography Aquatic Sciences Meeting, New Orleans, LA.
38. Gurganus, S. C., **A. S. Wozniak**, R. U. Shelley, A. S. Willoughby, R. L. Sleighter, H. A. N. Abdulla, W. M. Landing, and P. G. Hatcher, 2013. *Trace metal and organic matter characteristics of aerosols from primarily marine air mass sources*. American Society of Limnology and Oceanography Aquatic Sciences Meeting, New Orleans, LA.
39. Willoughby, A. S., **A. S. Wozniak**, H. A. N. Abdulla, and P. G. Hatcher, 2013. *Chemical characterization of chromophoric organic matter in ambient aerosols using UV-vis, NMR and ESI-FTICR-MS*. American Society of Limnology and Oceanography Aquatic Sciences Meeting, New Orleans, LA.
40. Mitra, S., **A. S. Wozniak**, R. Miller, P. G. Hatcher, and E. R. M. Druffel, 2013. *Marine-to-land atmospheric transport of organic matter in coastal areas*. American Society of Limnology and Oceanography Aquatic Sciences Meeting, New Orleans, LA.
41. **Wozniak, A. S.**, R. U. Shelley, R. L. Sleighter, H. A. Abdulla, P. M. Morton, W. M. Landing, and P. G. Hatcher, 2012. *Aerosol organic matter-trace metal relationships revealed by <sup>1</sup>H NMR spectroscopy*. Marine Aerosol Workshop, Raleigh, NC.
42. Priest, A. S., **A. S. Wozniak**, and P. G. Hatcher, 2011. *Characterization of water-insoluble aerosol organic matter by ultra-high resolution mass spectrometry*. American Geophysical Union Fall Meeting, San Francisco, CA.
43. **Wozniak, A. S.**, R. L. Sleighter, P. M. Morton, R. L. Shelley, W. M. Landing, and P. G. Hatcher, 2011. *Aerosol organic matter-trace metal relationships revealed by ultra-high resolution mass spectrometry*. American Geophysical Union Fall Meeting, San Francisco, CA.
44. **Wozniak, A. S.**, 2010. *Deposition and characterization of aerosol organic matter in the eastern United States*, Dissertations in Chemical Oceanography (DISCO) XXII Symposium, Honolulu, HI.
45. **Wozniak, A. S.**, J. E. Bauer, R. M. Dickhut, P. G. Hatcher, R. L. Sleighter, E. E. Keesee, 2010. *Deposition and characterization of aerosol organic carbon to coastal watersheds of the eastern United States*, Ocean Sciences Conference, Portland, OR.
46. Hatcher, P. G., R. L. Sleighter, A. S. Willoughby, P. A. Mazzer, A. S. **Wozniak**, J. E. Bauer, 2009. *Molecular characterization of atmospheric particulates using Fourier transform ion cyclotron resonance mass spectrometry*. Goldschmidt Conference, Davos, Switzerland.
47. **Wozniak, A. S.**, J. E. Bauer, R. M. Dickhut, 2009. *Seasonal characterization of aerosols in the York River watershed: Fossil fuel versus natural sources*. Virginia Council of Graduate Schools Research Forum, Richmond, VA.

## Curriculum Vitae: Dr. Andrew S. Wozniak

48. **Wozniak, A. S.**, J. E. Bauer, E. E. Keesee, A. P. McNichol, L. Xu, and R. M. Dickhut, 2008. *Detailed carbon isotopic characterization of aerosol-derived organic carbon deposited to two temperate watersheds*. American Geophysical Union Fall Meeting, San Francisco, CA.
49. **Wozniak, A. S.**, J. E. Bauer, R. M. Dickhut, P. G. Hatcher, E. E. Keesee, and R. L. Sleighter, 2008. *Isotopic and molecular characterization of total and water-soluble aerosol organic matter: implications for carbon fluxes and budgets in watersheds and rivers*. Ocean Sciences Meeting, Orlando, FL.
50. **Wozniak, A. S.**, J. E. Bauer, R. M. Dickhut, and E. E. Keesee, 2007. *Deposition and reactivity of aerosol-derived organic carbon in temperate watersheds*. American Society of Limnology and Oceanography Aquatic Sciences Meeting, Santa Fe, NM.
51. **Wozniak, A. S.**, R. M. Dickhut, J. E. Bauer, and E. E. Keesee, 2006. *Atmospheric fossil sources of river and estuarine organic carbon transported to the coastal ocean*. Ocean Sciences Meeting, Honolulu, HI.
52. **Wozniak, A. S.**, R. Blake, L. E. Gerald, and L. Haas, 2005. *Hydrodynamic influence on nutrient limitation and species composition of the York River, VA spring bloom*. Estuarine Research Federation, Norfolk, VA.
53. **Wozniak, A. S.**, C. T. Roman, M.-J. James-Pirri, S. C. Wainright, and R. A. McKinney, 2004. *Detecting changes in organic matter flow on tide-restored salt marshes: A stable isotope approach*. New England Estuarine Research Society Meeting, Block Island, RI.
54. **Wozniak, A. S.**, M.-J. James-Pirri, C. T. Roman, S. C. Wainright, and R. A. McKinney, 2003. *Monitoring the success of a salt marsh restoration by evaluating trophic relationships: A multiple stable isotope approach*. Estuarine Research Federation, Seattle, WA.

### TEACHING

#### Courses Taught at University of Delaware

<u>Course</u>	<u>Semester</u>	<u># Students</u>
MAST 382 Introduction to Ocean Studies	Spring 2018	35 (UG)
	Spring 2019	40 (UG)
	Spring 2020	
MAST 467/667 Marine Organic Geochemistry	Fall 2018	9(G), 2(UG)
MAST 647 Current Methods in Chemical Oceanography	Fall 2019	5(G)

#### Oceanography

#### Additional Classroom Instruction

- *Recitation Instructor* for Chemistry 123N at Old Dominion University (Fall semester 2016).
- *Teaching Assistant* for VIMS core courses in chemical, physical, and geological oceanography (MS501, Fall 2008).
- *Guest Lecturer* “Stable Isotope Biogeochemistry” for MS501 Chemical Oceanography at VIMS, Fall 2008
- *Teaching Assistant* for VIMS NSF Research Experience for Undergraduates program (summer 2009).
- *Guest Lecturer* “Organic Matter Chemistry in the Ocean I and II” for University of Delaware MAST 646 Chemical Oceanography, April 14 and 16, 2018

### STUDENTS MENTORED

## Curriculum Vitae: Dr. Andrew S. Wozniak

### Graduate Students Mentored

- Nicole Coffey, SMSP, M.S. expected 2020
- Jessica Czarnecki, SMSP, M.S. expected 2020

### Undergraduate Students Mentored

- Cissy Ming, Penn State University, NSF REU Program, Summer 2019
- Hannah Babbitz, UDEL, Fall 2018
- Catherine Czajka, UDEL, Winter 2019/2020

### Graduate Committee Service

#### *UDeL:*

- Emily Watson, SMSP, M.S. 2019
- Taylor Deemer, SMSP, M.S. 2019
- Danhui Xin, CEE, Ph.D. expected 2021
- Kelly Slabicki, Water Science and Policy, M.S., expected 2020
- Michael Taylor, Chemistry, Ph.D., expected 2023
- Sean Fettrow, Plant and Soil Sciences, Ph.D., expected 2023

#### *External to UDeL:*

- Rachel Wheatley, East Carolina University, Department of Geological Sciences, M.S. expected 2020
- Stephanie Whitty, Old Dominion University, Department of Chemistry and Biochemistry, Ph.D. expected 2020
- Alex Goranov, Old Dominion University, Department of Chemistry and Biochemistry, Ph.D. expected 2022

### Student Mentoring Activities At Rank (Prior to Appointment at UDeL)

#### *Graduate Students whose research I have Funded/Mentored*

- Emily Hauser, VIMS, College of William & Mary, M.S., 2011
- Emily Brault, VIMS, College of William & Mary, M.S., 2012
- Sarah Gurganus, ODU, Chemistry, M.S., 2013
- Amanda Willoughby, ODU, Chemistry, Ph.D., 2015
- Stephanie Whitty, ODU, Chemistry, Ph.D., expected 2020

#### *Undergraduate Students whose research I have Funded/Mentored*

- William Wall, ODU Freshman Chemistry 138, Spring 2013
- Jennifer Strout, ODU Freshman Chemistry 138, Spring 2014
- Logan Fall, Haley McTyre, ODU Freshman Chemistry 138, Spring 2015
- Lorenza West, Laura Fish, ODU Freshman Chemistry 138, Spring 2016
- Cole Jackson, Chris Devries, ODU Freshman Chemistry 138, Spring 2017
- Priscilla Prem, ODU, B.A. Chemistry, 2017
- Kaleb Waddell, ODU, B.A. Chemistry, 2018

**PROFESSIONAL SERVICE**

- *Member* of professional research societies:
  1. Estuarine Research Federation (2002-2004)
  2. New England Estuarine Research Society (2003-2004)
  3. American Geophysical Union (2005-present)
  4. American Society of Limnology and Oceanography (2005-present)
  5. American Chemistry Society (2013-present)
  6. European Geophysical Union (2014-present)
  7. Atlantic Estuarine Research Society (2018-present)
- *Student poster presentation judge*: ASLO 2013, AGU 2013, Ocean Sciences 2014, 2016, 2018.
- *Reviewer* for National Estuarine Research Reserve Fellowship Program (2008), NSF AGS, OCE, EAR, OPP programs (2012-present).
  - **Since Faculty Appointment:**
    - i. **5 proposal reviews (NSF Chemical Oceanography, ACS Petroleum Research Fund, Maine Sea Grant)**
- *Reviewer* for *Marine Chemistry, Analytical Chemistry, JGR-Atmospheres, JGR-Biogeosciences, Atmospheric Environment, Atmospheric Chemistry and Physics, Organic Geochemistry, Environmental Science and Pollution Research, Environmental Science & Technology, Nature Communications, Environmental Pollution, Frontiers in Marine Science, Water Research, Aquatic Sciences, PLOS One, Aquatic Geochemistry* (2011 to present)
  - **Since Faculty Appointment:**
    - i. **17 manuscript reviews (Atmospheric Environment, Aquatic Geochemistry, Aquatic Sciences, Biogeochemistry, Water Research, Environmental Science & Technology, Environmental Science and Pollution Research, Marine Chemistry, PLOS One)**
- *Chemical Oceanography Question Writer* for the 2015 National Ocean Science Bowl.
- *Invited Participant in the NSF/NOAA Dissertations in Chemical Oceanography (DISCO) XXII Symposium*, October, 2010.
- *Workshop participant*, United States GEOTRACES Arctic Cruise Implementation Plan, NSF, Washington, DC, June 2012.
- *Workshop participant*, Marine Aerosol Workshop, sponsored by NSF, NOAA, NASA, DOE, and ONR, Raleigh, NC, June 2012.
- *Workshop participant*, International Commission for the Conservation of Atlantic Tunas Bluefin Tuna Meeting on Biological Parameters, May 7-13, 2013, Tenerife, Spain.
- *Workshop participant*, ADDOMEx All-Hands Meeting, November 13, 2016, Galveston, TX.
- *Workshop participant*, MOSSFA Workshop at the GOMOSESES conference, February 6, 2017, New Orleans, LA.
- *Workshop participant*, ADDOMEx All-Hands Meeting, February 10, 2017, New Orleans, LA.
- *Workshop participant*, ADDOMEx All-Hands Meeting, March 20-21, 2017, Galveston, TX.

## Curriculum Vitae: Dr. Andrew S. Wozniak

- Town Hall participant, Surface Ocean Lower Atmosphere Study (SOLAS) Town Hall: Expanding involvement and setting priorities, February, 2018, Portland, OR.
- *Workshop participant*, Early Career Geoscience Faculty: Teaching, Research, and Managing Your Career, July 22-26, 2018, University of Maryland, College Park, MD.
- *Workshop participant* for workshop titled “Ocean-Atmosphere Interactions: Scoping directions for U.S. research” to be held in Sterling, VA October 1-3, 2019.
- *Session Chair* for Ocean Sciences Meeting session titled “The Biogeochemistry of the Upper Ocean and Air-Sea Exchange Processes,” to be held in San Diego, CA, February, 2020.

### UNIVERSITY SERVICE

#### *School of Marine Science and Policy*

- SMSP Seminar Series co-Director (Fall 2019-Spring 2020)
- SMSP Administrative Assistant II Search Committee Member (Spring 2019)
- University of Delaware SMSP Safety Committee (2018-present)
- Presentation to REU Students, “*Aerosol organic matter and Fe characteristics over the North Atlantic Ocean: Implications for Fe-binding ligands and solubility*,” Lewes, DE, July, 2018, June 2019.
- *Participant* – luncheon with Congressional staffers of Delaware Senator Chris Coons to discuss marine and science-related priorities.

#### *College of Earth Ocean and Environment*

- Presentation to Dean’s Advisory Council, “Wozniak Laboratory: Organic Geochemistry in Watersheds, Marine, and Atmospheric Environments,” Lewes, DE, May, 2018.
- Poster Judge, CEOE Graduate Student Symposium, Lewes, DE, May 5, 2018.

#### *University of Delaware*

- *Search Committee Member* Environmental Remediation Assistant and Associate/Full Professor Searches as part of the Interdisciplinary Coastal Water Security Cluster Hire (Fall 2019-Spring 2020).

#### *At Rank (Prior to Faculty Appointment at UDel)*

- Old Dominion University Search Committee Member NMR Specialist, (2015)
- College of William & Mary, VIMS, *Student Representative* to the VIMS Educational Policy Committee (2005-07), Library Advisory Committee (2007-09), and Physical Sciences Dept. (2008-09)

### OUTREACH

- *Volunteer* for VIMS Marine Science Day and for the National Ocean Science Bowl as a Team Challenge and Buzzer Question reviewer (2009) and as a Virginia Blue Crab Bowl Official (2005-2017; Moderator, Science Judge, Grader).
- *Volunteer* presenter for the STEM Career Conference at Corporate Landing Middle School Virginia Beach, VA (2014, 2017) and Steamboat High School, Steamboat Springs, CO (2015).
- *Volunteer* for National Ocean Science Bowl as a Moderator for the 2018 Chesapeake Bay Bowl.
- *Volunteer* for Delaware Sea Grant Coast Day (2017-2019)

## Curriculum Vitae: Dr. Andrew S. Wozniak

- 2017: Assisted in presentation of GIS tools available to the state of Delaware.
- 2018-19: Presented “*What’s in the Rain?*” exhibit demonstrating pH changes with increased carbon dioxide and presenting rainwater research conducted in our laboratory.
- *Organizer*, University of Delaware Float, Theme: “Catch the Glow of Christmas” for the Lewes Christmas Parade, 2019.

### HONORS AND AWARDS

- *Invited Participant in the NSF/NOAA Dissertations in Chemical Oceanography (DISCO) XXII Symposium*, October, 2010.
- *VIMS Sun Trust Fellowship Award* from the VIMS foundation, 2008.
- *Student Research Grant* from the School of Marine Science, 2008.
- *NOSAMS Student Internship Award* from the National Ocean Sciences Accelerator Mass Spectrometry facility at Woods Hole Oceanographic Institution, 2006-2008.
- *Graduate Fellowship Award* from the Hudson River Foundation, 2006-2007.
- *Student Research Award* from the New England Chapter of the Society of Wetland Scientists, 2003.

### LABORATORY AND FIELD RESEARCH EXPERIENCE

- *Analytical Experience* with geochemical analytical techniques: elemental (C, N) analysis, total organic carbon analysis (using a Shimadzu TOC V), chemo-thermal oxidation-375 method for black carbon analysis, vacuum line extraction for preparation of samples for  $\Delta^{14}\text{C}$  of particulate and dissolved organic carbon by accelerator mass spectrometry (AMS), silica column chromatography extraction techniques, GC-MS, GCxGC MS, isotope ratio MS ( $\delta^{15}\text{N}$ ,  $\delta^{13}\text{C}$ ,  $\delta^{34}\text{S}$ ), Electrospray Ionization Fourier Transform Ion Cyclotron Resonance (ESI FT-ICR) MS, excitation-emission fluorescence spectroscopy, UV-vis spectroscopy, Nuclear Magnetic Resonance Spectroscopy, HPLC, FTIR spectroscopy.
- *Laboratory Capabilities*
  - CHN analysis, total organic carbon analysis, GC-FID, GC-MS
- *Field Sample Collection* in a variety of environments including research cruises, small boat sampling in rivers and estuaries, salt marshes, and aerosol sample collection.
  - Salt Marsh Nekton and Vegetation Sampling: Sachuest Point, RI, Hatches Harbor, MA, Herring River, MA, Prime Hook, DE (2003-2004)
  - Salt Marsh Sediment Elevation Table Installation and Monitoring (2002-2004) Fire Island, NY, Jamaica Bay, NY, Wells, ME
  - Aerosol Collections: Millbrook, NY (2006-2008), Harcum, VA (2006-2008), Duck, NC (2017), Norfolk, VA (2010-2012).
  - Rainwater Collections: Lewes, DE (2018-ongoing)
  - Surface Microlayer Sampling: Chesapeake Bay, Delaware Bay
  - Seawater Sampling: Chesapeake Bay, Delaware Bay, York River, Hudson River

### CRUISE AND SMALL BOAT EXPERIENCE

- R/V Endeavor, July 1-8, 2003, Gulf of Maine.
- R/V Hugh Sharp, July/August, 2018, Chesapeake Bay.
- R/V Joanne Daiber, 2018-2019.

## Curriculum Vitae: Dr. Andrew S. Wozniak

### RECENT COLLABORATORS

Jesse Kroll (MIT), Ann McNichol (Woods Hole Oceanographic Institute), Li Xu (Woods Hole Oceanographic Institute), James Bauer (Ohio State University), Ken Mopper (Old Dominion University), Rachel Sleighter (Old Dominion University), Murray Johnston (University of Delaware), Rebecca Dickhut (VIMS)\*, Bill Landing (Florida State University), Peter Morton (Florida State University), Rachel Shelley (Florida State University), Siddartha Mitra (East Carolina University), Emily Hauser (Princeton University), Andy Zimmerman (University of Florida), Haritz Arrizabalaga (Azti Tecnalia), John Graves (VIMS), Michael S. Long (Harvard University), Patricia K. Quinn (NOAA), Timothy S. Bates (University of Washington), John Logan (Massachusetts Division of Wildlife), Meredith Jennings (University of Miami), Christopher Osburn (North Carolina State University), Uta Passow (University of California, Santa Barbara), Peter Santschi (Texas A&M University), Chen Xu (Texas A&M University), Antonietta Quigg (Texas A&M University), Amanda Frossard (University of Georgia), Mason Stahl (Union College), Gregory Howard (East Carolina University).

\*deceased