FALL 2017 BAYLOR UNIVERSITY

ENV NOTES

IN THIS ISSUE:

MISSION WACO UNVEILS URBAN REAP PROJECT

Written by Brooke Hill in the Baylor Lariat

Thanks to Mission Waco's new Urban REAP (Renewable Energy and Agriculture Project), Waco is now able to turn food waste into soil and sunlight into energy. The project was kick-started when Green Mountain Energy Sun Club provided Mission Waco with a grant of $234,000 to fund it. Mission Waco executive director Jimmy Dorrell said he sent in the original proposal for the grant and was pleasantly surprised when they reached out to him and asked to make it into an even bigger project.

Dorrell has a master's degree in environmental studies as does his wife, so after their previous involvement in Baylor's Environmental studies program, he felt equipped to take on the challenge of putting this project together. He contacted Environmental Science senior lecturer Larry Lehr and lab coordinator Doug Nesmith, along with two engineering professors from Baylor and two urban architects from Ball State University to become consultants on how to best go about designing the project. With the help of Lehr and Nesmith, their students in the composting aspect, as well as students from the Baylor engineering department in the solar energy portion, the Urban REAP project opened on Aug. 21 to the public. The project includes an aquaponics greenhouse, solar energy array, rainwater catchment and purification system, composting system and a training center for kids.

"Everything in our environment is part of God's creation and we should do our best to maintain that creation and the best way to maintain it is to be sustainable," Nesmith said.

The greenhouse is located on the corner of North 15th Street and Colcord Avenue, next to Jubilee Food Market, which opened in November to help residents who lived more than two miles from the nearest grocery store and had no means to get there. The aquaponic greenhouse was

shipped in pieces from Canada, and Nesmith personally picked it up from Houston. After being assembled in Waco, it has produced radishes, tomatoes, Swiss chard, basil and Romaine lettuce, according to the Waco Tribune-Herald. Dorrell said that they've received interest from the Waco community since they began building the greenhouse, which took about six months.

"Even though we're still way behind in America, there's a subculture at least that's very much into this stuff," Dorrell said. Nesmith agreed that having the greenhouse around will have a positive impact on kids and adults alike in the community.

"It is a great learning opportunity to show what people can do with their own homes, or in businesses later on in life. Everybody in their own home can do a better job of reusing, recycling, using renewable energy, composting, which prevents putting a lot of waste material in the landfills and turning it into something we can use," Nesmith said.

The entire system of the greenhouse was designed to be sustainable, including paying the staffers. "The produce sold pays for the people who work there, so the whole system itself is sustainable, not just in the fact that we're recycling water, food waste, and energy, but it's sustainable in the fact that it pays for itself with the products it's producing," Nesmith explained.

Mission Waco explains that the cultural mandate, which is a part of Genesis, is God's challenge to take care of what he gave us on their website. "On some level it's worth it no matter what, but because from our Christian world view, when they do the research around western Christians we're doing a really lousy job in terms of taking care of God's Earth… practically and theologically I believe God gave us the privilege to take care of animals and nature and all the rest, and we've done a really lousy job because we're selfish," Dorrell said. "The more selfish we become, the less we care about the impact on others, and so for us this is a teaching opportunity. We're just being good stewards of God's Earth."

Mission Waco is asking the public to donate food waste and is making buckets available for the process.

Black Carbon in the Arctic

Photo by: Ostrander, Madeline. "Researchers Race to Understand Black Carbon's Impact on Thawing Tundra" *NewsDeeply*, 22 May 2016.

This past spring, Dr. Rebecca Sheesley and former Baylor doctoral student, Tate Barrett, were featured in an article on their research conducted in the Arctic. Dr. Sheesley and Dr. Barrett have been doing research in the remote town of Utqiagvik, Alaska. Here, they have been testing the air for traces of black carbon, more commonly known as soot. They then analyze this black carbon to detect the presence of radioactive carbon isotopes to determine whether the soot came from ancient carbon, such as fossil fuels, or newer sources, such as forest fires. To learn more, check out the article at www.newsdeeply.com/arctic/articles.

Glasscock Family Visits Department

Rev. John D. (JD) Glasscock, visited The Department of Environmental Science and met with our students, faculty, and staff on 11 April 2017. Rev. Glasscock is the grandson of Gus (pictured left) and Lucille Glasscock, founding donors for our Department. The day began with a 9:00 AM welcome reception and lasted through dinner that evening. Dr. Larry Lehr and our office staff prepared a display of the Glasscock involvement in the early years of the Environmental Science and Environmental Studies programs at Baylor University. During the day, students, faculty and staff discussed the foundations that the Glasscock family helped establish for our Department and the advances that we have made over the decades. This was the first time JD had seen the department's new facilities in the BSB, and he had never met many of the newer faculty additions in Environmental Sciences. During conversations, it became apparent that many aspects of our Department's current activities overlap with the stewardship ethic of Rev. Glasscock and his family, and we discovered a common link with the Glasscock's business activities in Asia and our students' annual participation in exchange courses in Hong Kong. Perhaps the highlight of the day was the poster session of results from recent recipients of the C. Gus Glasscock, Jr. Endowed Fund of Excellence in Environmental Sciences. Students from several departments presented research findings from the areas of renewable energy, water quality, air quality, nanomaterial behavior, environmental health, and ecological responses to stressors. JD attended Prof. John Giesy's seminar late in the afternoon and joined a group for an enjoyable dinner that evening. At the conclusion of the visit, Rev. Glasscock offered these thoughts: "*It's difficult to summarize such an eventful visit in just a few sentences, but certainly the thoughtful reception given by the faculty and students is a standout memory. The advancements that have been made through the Baylor University Department of Environmental Sciences are truly impressive! Equally impressive was the exceptional heart of enthusiasm that Baylor students had for their respective environmental projects. My Grandfather, Gus Glasscock Jr., would be genuinely delighted to know that Baylor has made such great strides and it was my honor to represent him and reaffirm our shared commitment to environmental sciences.*" The Department of Environmental Science and the entire Baylor Family are fortunate to count the Glasscock Family among our ranks.

Gus Glasscock

Dr. Erica Bruce selected as a 'Rising Star' at Baylor

Congratulations to Dr. Bruce on being selected as one of 3 "Rising Star's" at Baylor University! Researchers delegated as "Rising Star's" participated in the first Baylor Research on the Hill event in Washington, D.C. to share more information about the University and its research initiatives with key policy- and decision-makers. As a result of receiving the "Rising Star" delegation, Dr. Bruce will receive focused proposal preparation support, special consideration for institutional seed funding in support of her research and opportunities for face-to-face networking with funding agency officials. *Sic 'Em Dr. Bruce!*

Spotlight: Dr. Erica Bruce

Dr. Erica Bruce recently received two patents associated with ongoing research in her laboratory. One aspect of Dr. Bruce's research involves the design and testing of oxygenating therapeutics for treating hypoxia induced medical conditions. These conditions are often exacerbated by environmental stressors thus changing the way the body responds to the potential therapeutic. (Patents Pictured Below)

Dr. Bruce was elected president of the Lone Star Society of Toxicology for the 2017-2018 year. She will host a regional toxicology meeting at Baylor University on October 12th and 13th that will bring approximately 100 toxicologist from the Lone Star state to Waco to present scientific research on the Baylor University campus. Dr. Bruce has served the Society of Toxicology at both the regional and national levels for many years. Sic 'Em Dr. Bruce!

U.S. Patent
No. 9,682,103 (Application No.: 15/346,580)
Title: Administration of a Poly-oxygenated Metal Hydroxide to Reduce the Proliferation of Carcinoma Cells.
Inventor: Erica D. Bruce, Christie M. Sayes, John W. Woodmansee, Jr.
Date: June 20, 2017

U.S. Patent
No. 9,649,335 (Application No.: 62/315,524)
Title: Intravenous Administration of an Oxygen-Enabled Fluid
Inventor: Erica D. Bruce, Christie M. Sayes, John W. Woodmansee, Jr.
Date: May 16, 2017

Bruce Lab Visits Local Elementary Schools

Dr. Bruce, with the help of Dr. Fan Zhang and PhD student Grace Aquino, presented and spoke with students in an after-school program at Indian Springs Middle School (left picture). This is a project that encourages young students to explore and become excited about jobs that are in the STEM pipeline. These students have an interest in medicine and medical research. In May, the Bruce Lab visited a 2nd grade class at Robinson Elementary School (center & right pictures) for Career Day. Here, they talked about what a Toxicologist's job is like and how "the dose makes the poison". They also gave the students a hands-on demonstration as well!

Cobb and Brooks Lead International Workshop at ICCE

The European Association for Chemical and Molecular Sciences (EuCheMS) and the American Chemical Society (ACS) joined forces to offer a one-day workshop to address Algal Toxins: Methods and Challenges. George Cobb, Triantafyllos Kaloudis, Dion Dionysiou, and Bryan Brooks organized this workshop as part of the International Conference on Chemicals and the Environment (ICCE) which was held on 18-22 Jun 2017. The workshop attracted highly regarded speakers from 14 different countries who presented advances in assessment, mitigation, and possible prevention of harmful algal blooms. The larger workshop audience participated in lively discussion with presenters. The workshop is part of an ongoing collaboration between the ACS Division of Environmental Chemistry and EuCheMS. The agreement encourages EuCheMS members to organize symposia or workshops at ACS meetings and for ACS to reciprocate. To augment scholarly exchange, Prof. Cobb and Prof. Dionysiou chaired other ICCE sessions in Oslo. Of course, being in Oslo in June was a welcome relief from the Texas heat, and the long days allowed plenty of time to learn more about the area after the conference concluded each day.

We hope to host a symposium comparing European and US coastal concerns at ICCE 2019 in Thessoloniki, Greece and following that up with a summer Environmental Chemistry course in collaboration with the University of Thessoloniki. Please plan to join us.

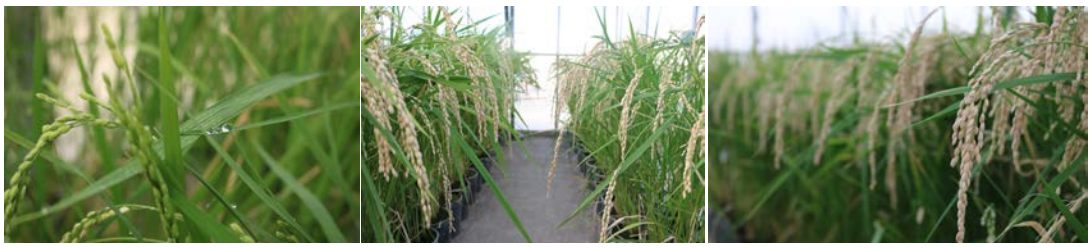
Greenhouse Project of Rice Plants

By Jing Liu

Arsenic decreases rice yield, and arsenic accumulation in rice grains poses serious human health concerns. To approximate real-world rice cultivation practices, a research team led by PhD student Jing Liu in Prof. Cobb's lab, is investigating whether copper oxide nanoparticles can reduce the adverse effects caused by arsenic to rice during the whole life cycle.

Growing rice plants required the help of many individuals; Dr. Robert Doyle (CRASR) shared the space in the greenhouse, about three blocks from the Baylor Science Building (BSB), and undergraduate research assistants, Madie Simms, Madison Stewart, and Jake Williams, were dedicated to taking good care of the plants. To control the constituents in each rice exposure group, the research team transported 15-40 gallons of aqueous nutrient solution to the greenhouse daily. Over the study interval this amounted to 10 tons (2640 gallons) of water transported from the BSB to the greenhouse.

After more than 4 months growth, the big rice harvest event fell on August 10th and 11th. And, beyond expectation, it was gloriously hot during the two days! "Oh my god! 138°F! It's unbelievable!" This is the amazingly identical response from every person who heard about the highest temperature. There was not enough space inside the greenhouse to conduct the counting and labeling activities of the harvest, so the heat and space constraints forced the research team to move growth pots outside to conduct the harvest. Thanks to Heather and Kristie for providing the tent! "Fortunately, the rice plants were grown in water and they could handle the heat better than a human." Jing explained, and slowly cooled down with an ice cube, but she was warmed inside by the help with tons of sweat from her generous friends (Brittany, Ben, Subin, Sujan, Madie, Mitchel, Jake, and Madison). Now, Jing is planning to throw a party on Moon festival, a traditional Chinese festival to celebrate harvest in early October, and show her great gratitude to those who helped her in the scorching weather.



Cobb Provides Keynote at Masaryk University

Invitations from Prof. Jana Klanova to lecture at the internationally respected Research Center for Toxic Compounds in the Environment (RECETOX) summer course are rare. So, of course Prof. George Cobb accepted the invitation to speak about environmental topics of emerging concern at Masaryk University. The 2017 course was held at the fully equipped and modern RECETOX facilities in Brno, Czech Republic. Participants included faculty from 5 countries, and approximately 30 students from numerous countries and various scientific backgrounds. This course included information about sampling techniques, analytical chemistry to quantify analytes, data analysis techniques, and harmful effects that organism may experience following chemical exposures. Prof. Cobb presented information about drinking water challenges, air quality issues in urban and rural areas, antibiotic resistance, climate change, crop protection, and veterinary pharmaceuticals. Students were most surprised and inquisitive about contaminants emanating from concentrated cattle feeding operations, a practice that is virtually unknown in Europe.

During the time at Masaryk University, Prof Cobb initiated dialogue to facilitate research and education collaborations. RECETOX has excellent facilities, complementary research interests to those of our faculty, and encourages student exchanges. These qualities make a partnership very attractive. Further planning will occur this fall during a follow-up trip that Prof. Bryan Brooks will make to RECETOX.

LONE STAR REGIONAL CHAPTER SOCIETY OF TOXICOLOGY – FALL MEETING

OCTOBER 12-13, 2017,

BAYLOR UNIVERSITY

"APPLIED TOXICOLOGY & RISK ASSESSMENT"

SOT | Society of Toxicology
Creating a Safer and Healthier World by Advancing the Science and Increasing the Impact of Toxicology

BAYLOR UNIVERSITY Homecoming est.1909

STOP BY AND SAY 'HI' AT THE ENV TAILGATE AREA BEFORE THE HOMECOMING GAME! SPACES 227 & 229 ON THE STADIUM SIDE OF THE BRAZOS RIVER.

WE WILL BE THERE 3 HOURS PRIOR TO KICK OFF!

IT'S A GREAT WAY TO STOP AND CATCH UP WITH OUR FRIENDS & ALUMNI!

ENV DEPARTMENT ADDITIONS

Environmental Science has some new additions: A Ford F250 and 2017 Carolina Skiff. The new additions will help professors with teaching classes, doing research, and much more! Pictured below is Dr. Cole Matson taking his ENV 3210 class out on the new boat!



Baylor in Peru

By Dr. Larry Lehr

ENV students Levi Lashley (Class of 2018), Lauren Medlin (2018) and Nora Simpson (2018) were accompanied by Dr. Larry Lehr and Dr. Clay Butler (Baylor English Dept.) for a summer course in Cusco, Peru. Dr. Butler was the Director of the Baylor in Peru experience in which students were able to take a range of Spanish, English, and ENV classes.

Rainfall in Peru varies from 3 in. to over 30 inches in. response to the influence of the cold Humboldt Current and altitudinal extremes ranging from sea level to 6,768 meters (Mt. Huascarán). Peru, with its population of 31.8 million, is a mega-biodiverse country that is highly vulnerable to climate change. The trip provided the opportunity to assess land use, agricultural productivity, water use, and water conservation projects designed to meet sustainability goals for the country.

According to the UN Development Programme's (UNDP) latest human development country report, the Peruvian Amazon became a net emitter of carbon dioxide rather than oxygen for the first time in 2012. Lashley is evaluating changes in pre-conquest weather patterns to current trends and will be assessing implications for agricultural, electrical generation from hydro-electric, and availability of water for urban use.

The group also had the opportunity to visit the ruins at Tipon, a 500-acre archeological site that was a pre-conquest Incan agricultural research facility. The UNESCO site is internationally recognized for the irrigation and hydrological technologies developed by the Inca and is highlighted by 13 integrated central terraces, waterworks, and canals.

One of the highlights of the trip was a three-day hike to Machu Picchu on trails reached 15,000 ft. Dr. Lehr, who has gained a few pounds over his last 27 years chose not to hike in, much to the unspoken relief of the other participants.

NEPHIP Summer Internship

By Kaitlyn Kelley

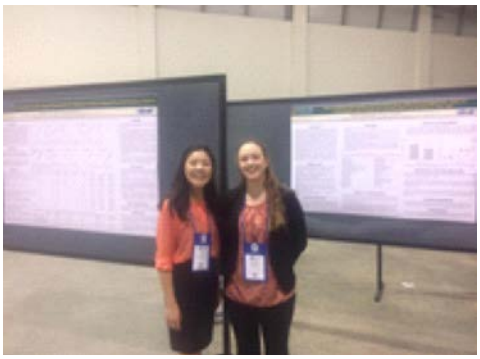
Over the summer, I completed the National Environmental Public Health Internship Program (NEPHIP) through the National Environmental Health Association and funded by the Centers for Disease Control and Prevention. My NEPHIP internship was with the Kittitas County Public Health Department located in Ellensburg, WA. The focus of my internship was on the air quality in Kittias County. Kittias County is being considered as a potential non-attainment area for fine particulate matter by the US Environmental Protection Agency (EPA). Before my arrival, the county entered the EPA's PM Advance Program and developed a 5-year Path Forward Plan to prevent non-attainment status. The goal of my internship was to begin the implementation of this plan using the outlined control measures. For my internship, I focused on two of the PM 2.5 control measures –education outreach through booths at community events and the development of curriculum about air quality and PM 2.5 to be used in local schools. In addition to my work on local air quality, I was also able to work with other programs in the environmental health division including food safety; drinking water; camps and park permitting; solid waste; onsite sewage; pool and spas; and water banking. I assisted on inspections for all of these programs and helped with the expansion of their water mitigation and metering program.

Spring 2017 Honor's Convocation

The department selected Victoria Harms, Susan Stradley and Willow Howard to attend the 2016 Honor's Convocation. In recognition of their high academic achievement in the department. Congratulations!

Baylor at TEHA

Environmental Health Science undergraduate Dan Dinh and recent alum Shannon McClenahan presented their research at the National Environmental Health Association meeting in Grand Rapids, Michigan!



Recent Awards

- Congratulations to Bekah Burket for winning the People's Choice award for top presentation at the North American Chemical Residue Workshop in Naples, Florida
- Congratulations to Elias Oziolor for winning 1st place at the SETAC Conference for Best Graduate Student Platform Presentation
- Congratulations to Matt Garbarino for winning a platform presentation award at the SETAC meeting in Charlestown, South Carolina

Congratulation Recent Graduates!

Spring 2017

Matt Garbarino, M.S.
Jennifer Gueldner, M.S. in BMS

Graham Bates, B.A.
Hannah Capshaw, B.A.
Katherine Cross-Powers, B.Sc.
Victoria Harms, B.Sc.
Abbey Jones, B.A.
Mark McComb, B.Sc.
Jessica Purtell, B.Sc.
Kayle Schmidt, B.Sc.
Karyn Simpson, B.A.
Andrew Vasquez, B.A.
Jacob Williams, B.A.
Miranda Beard, B.A.
Kaylee Conner, B.Sc.
Madison Doyle, B.Sc.
Brianna Jones, B.A.
Shannon McClenahan, B.Sc.
Lydia McWilliams, B.A.
Eugenie Schieve, B.A.
Matthew Siegle, B.Sc.
Peyton Thomas, B.Sc.
Katherine White, B.Sc.

Summer 2017

Lauren Kristofco, Ph.D. in ENV Science
Elias Oziolor, Ph.D. in BMS

Christopher Davis, B.A.
Travis Gregory, B.A.
Jennifer Fuentes, B.A.
Derek Lentz, B.Sc.

For the latest in ENV news, seminar announcements and more, join our Facebook group: **Baylor Environmental Science**

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Catching up with BU SETAC

BU SETAC had a busy 2016-2017 school year! We completed several river and creek clean ups as well as our favorite event: the Girl Scouts STEMFest, where we taught the scouts about aquatic toxicology and air quality. This upcoming year, we are plan on participating in the Waco Cultural Arts Festival ScienceFest, as well as, cleaning up the Waco Creek, and building another trash monster to raise awareness about pollution. We also hosted a table during "Late Night", to talk to interested students about joining (pictured left). For further information or interest in joining the club, please email: Claire_Moffett@baylor.edu

BU SETAC graduate students participated in a public outreach opportunity at the Mayborn Museum

Baylor University SETAC graduate students participated a public outreach opportunity with the Mayborn Museum in April 2017, where they shared information on their research projects and science activities occurring at Baylor and in the community. Portal to the Public is a program for science professionals which is facilitated by the Mayborn Museum on Baylor University's Campus. The workshop consists of two sessions of professional development and an opportunity for participants to share their current research at the museum before a live audience. The goal of the workshop is to (1) equip scientists with the skills to communicate their knowledge with the community and (2) facilitate opportunities for the community to interact with local scientists regarding their cutting-edge research.

For more information, visit www.baylor.edu/mayborn.

You can also follow us on Twitter: @Setac_Baylor

Fall 2017 Environmental Science Seminar Schedule

~Every Wednesday at 4 PM in BSB A.108~

Date	Speaker Name	Affiliation	Title/Topic
30-Aug	John Kurhanewicz (john.kurhanewicz@ucsf.edu)	Professor of Radiology and Biomedical Imaging University of California-SF	Magnetic resonance imaging (MRI) of patients with prostate cancer
5-Sep	William Wallace (wwallaceiv@gmail.com)	Postdoctoral Research Associate of Environmental Engineering, Rice University	Chemical composition of aerosols
13-Sep	Robert L. Cook (rlcook@lsu.edu)	Associate Professor of Chemistry, Louisiana State University	Interactions of inorganic and organic compounds with humic materials
27-Sep	David Prevatt (dprev@ce.ufl.edu)	Associate Professor of Civil & Coastal Engineering, University of Florida	Sustainable infrastructure and the environment
4-Oct	Carey Pope (carey.pope@okstate.edu)	Regents Professor and Sitlington Chair in Toxicology Oklahoma State University	Toxicity of insecticides, cholinergic signaling, organophosphates
11-Oct	Mary Ann Ottinger (maotting@Central.UH.EDU)	Associate Vice Chancellor for Research, University of Houston	Behavioral endocrinology and environmental toxicology
18-Oct	Chad Furl, Ph.D. (cfurl@edwardsaquifer.org)	Chief Science Officer Edwards Aquifer Authority	Research projects in the Habitat Conservation Program
25-Oct	Jimmy Flynn (jhflynn@uh.edu)	Research Assistant Professor, University of Houston	BVOC oxidation and SOA formation
1-Nov	Virender Sharma (vsharma@sph.tamhsc.edu)	Professor of Environmental and Occupational Health, Texas A&M Health Science Center	Inactivation of virus, bacteria, and toxins in water and air
8-Nov	Sara Brenner (sbrenner@sunypoly.edu)	Associate Professor of Nanobioscience, SUNY Polytechnic Institute	Occupational and environmental health effects of exposure to nanomaterials
29-Nov	Brian Gregory (bdgregor@sas.upenn.edu)	Associate Professor of Biology, University of Pennsylvania	High-throughput sequencing to study RNA-protein interactions, globally

Recent Publications

Brooks BW, Lazorchak JM, Howard MDA, Johnson M-VV, Morton SL, Perkins DAK, Reavie ED, Scott GI, Smith SA, Steevens JA. 2017. In Some Places, in Some Cases and at Some Times, Harmful Algal Blooms are the Greatest Threat to Inland Water Quality. *Environmental Toxicology and Chemistry* 36:1125-1127.

Kristofco LA, **Brooks BW**. 2017. Global scanning of antihistamines in the environment: Analysis of occurrence and hazards in aquatic systems. *Science of the Total Environment* 592:477-487.

Grover JP, Roelke DL, **Brooks BW**. 2017. Population persistence in flowing-water habitats: Conditions where flow-based management of harmful algal blooms works, and where it does not. *Ecological Engineering* 99:172-181.

Haddad SP, Du B, Scott WC, Saari GN, Breed C, Kelly M, Broach L, Chambliss CK, **Brooks BW**. 2017. Ontogenetic dietary shifts and bioaccumulation of diphenhydramine in *Mugil cephalus* from an urban estuary. *Marine Environmental Research* 127:155-162.

Gueldner J, Zhang F, Zechmann B, **Bruce ED**. 2017. Evaluating a novel oxygenating therapeutic for its potential use in the advancement of wound healing. *Toxicology in Vitro* 43:62-68.

Jiang C, Castellon BT, **Matson CW**, Aiken GR, Hsu-Kim H. 2017. Relative Contributions of Copper Oxide Nanoparticles and Dissolved Copper to Cu Uptake Kinetics of Gulf Killifish (*Fundulus grandis*) Embryos. *Environmental Science & Technology* 51:1395-1404.

Oziolor EM, Carey AN, **Matson CW**. 2017. A non-destructive BFCOD assay for in vivo measurement of cytochrome P450 3A (CYP3A) enzyme activity in fish embryos and larvae. *Ecotoxicology* 26:809-819.

Oziolor EM, Howard W, **Lavado R**, **Matson CW**. 2017. Induced pesticide tolerance results from detoxification pathway priming. *Environmental Pollution* 224:615-621.

Lujan H, **Sayes CM**. 2017. Cytotoxicological pathways induced after nanoparticle exposure: studies of oxidative stress at the 'nano-bio' interface. *Toxicology Research* 6:580-594.

Sayes CM, Aquino GV, Hickey AJ. 2017. Nanomaterial Drug Products: Manufacturing and Analytical Perspectives. *AAPS Journal* 19:18-25.

Sayes CM, Lujan H. 2017. Characterizing the Nano-Bio Interface Using Microscopic Techniques: Imaging the Cell System is Just as Important as Imaging the Nanoparticle System. *Current protocols in chemical biology* 9:213-231.

Sharma VK, Yang X, Cizmas L, McDonald TJ, Luque R, **Sayes CM**, Yuan B, Dionysiou DD. 2017. Impact of metal ions, metal oxides, and nanoparticles on the formation of disinfection byproducts during chlorination. *Chemical Engineering Journal* 317:777-792.

Recent Publications Continued…

Sinha PR, Kondo Y, Koike M, Ogren JA, Jefferson A, Barrett TE, **Sheesley RJ**, Ohata S, Moteki N, Coe H, Liu D, Irwin M, Tunved P, Quinn PK, Zhao Y. 2017. Evaluation of ground-based black carbon measurements by filter-based photometers at two Arctic sites. *Journal of Geophysical Research-Atmospheres* 122:3544-3572.

Gunsch MJ, Kirpes RM, Kolesar KR, Barrett TE, China S, **Sheesley RJ**, Laskin A, Wiedensohler A, Tuch T, Pratt KA. 2017. Contributions of transported Prudhoe Bay oil field emissions to the aerosol population in Utqiagvik, Alaska. *Atmospheric Chemistry and Physics* 17:10879-10892.

Clark AE, Yoon S, **Sheesley RJ**, **Usenko S**. 2016. Spatial and Temporal Distribution of Current-Use Pesticides in Atmospheric Particulate Matter in Houston, Texas. *Bulletin of Environmental Contamination and Toxicology* 97:786-792.

Crain DC, Winfield ZC, Mansouri F, **Usenko S**, Trumble SJ. 2017. Determining Potential Pregnancy Occurrences using Whale Earplugs. *Integrative and Comparative Biology* 57:E35.

Norman SA, Winfield ZC, Rickman BH**, Usenko S**, Klope M, Berta S, Dubpernell S, Garrett H, Adams MJ, Lambourn D, Huggins JL, Lysiak N, Clark AE, Sanders R, Trumble SJ. 2017. Persistent Organic Pollutant and Hormone Levels in Harbor Porpoise with B Cell Lymphoma. *Archives of Environmental Contamination and Toxicology* 72:596-605.

HIGHLIGHTS FOR NEXT ISSUE:

- ENV IN HONG KONG
- HURRICANE HARVEY SAMPLING CAMPAIGN
- INCREASED GRANT ACTIVITY
- PROFESSIONAL SOCIETY LEADERSHIP

For the latest in ENV news, seminar announcements and more, join our Facebook group:

Baylor Environmental Science

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AS A REMINDER: The Environmental Science Department produces a newsletter each semester. If you are an Environmental Science student, working on a project, serving an internship, studying abroad, graduating or have some exciting news and want to share an article or picture, send an email to:
Heather Guenat at Heather_Guenat@Baylor.edu