A Message From The Chair

Greetings to chemistry students, faculty, staff, alumni and other visitors.

We welcome all visitors to the Department. It would be great to see or hear from our alums!

As some of you have heard, Towson has gotten approval to construct a new science building on the "Bateman's" parking lot (between the 7800 York Road Building and Stephens Hall). Construction is scheduled to begin in the Summer of 2016 and be completed in the Summer of 2019. The members of the Department are excited about our future in brand new facilities, instead of living in a construction zone for four years!

After 2 years as Acting Chair and 7 years as Chair (plus 3 1/2 years around Y2K), I will finally step down from the position in the Summer of 2015. Dr. Ryan Casey, Professor of Environmental Chemistry, will take my place. We look forward to new initiatives under his leadership.

The faculty conduction periodic reviews of our Chemistry major, Forensic Chemistry major and Masters in Forensic Science curricula to keep them relevant and effective for our students. You alumni can help us in this effort by providing the following feedback:

How useful has our curriculum been to your career?

If you employ our recent graduates, how do they shape up?

Another question: If you are in a position to do so, are you interested in offering internship opportunities for our current students?

We look forward to receiving your input. Please reply directly to Dr. Richard Preisler, Department of Chemistry, Chairperson at rpreisler@towson.edu.

Wishing all of you and your families a sunny and relaxing summer!

Dr. Richard Preisler, Department of Chemistry, Chairperson

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Chemistry Program News

New Lecturers

The Department was pleased to welcome three new full-time Lecturers in Fall 2013:

Katherine (Kate) Bowdy received her B.S. in Natural Sciences and Mathematics from Washington and Lee University and her Ph.D. in Organic Chemistry from the University of New Orleans.

Danniebelle Haase received her B.S. in Chemistry and Management from the University of the West Indies and her Ph.D. in Organic Chemistry from the University of Florida.

Dimitra Kontokosta received her B.S. in Chemistry from UMBC and her Ph.D. in Organic Chemistry from the University of Illinois at Chicago. Kate, Danniebelle and Dimitra have their primary teaching responsibilities in Organic Chemistry, with some participation in General Chemistry and Biochemistry.

Faculty Awards

Ryan Casey received the FCSM Outstanding Faculty award. This award is given annually at the Fisher College Fall Forum. The award recognizes a college faculty who has excelled in teaching, research and service.

Summer Undergraduate Research

Mr. Richard Siejack was awarded a Ronald and Linda Raspet Research Fellowship for Summer 2013. He worked under the mentorship of Beth Kautzman on “Spectroscopic Measurements of Aerosol Pollutants.”

Ms. Sarah Krause and Mr. Jason Smith worked under the mentorship of Tim Brunker with the support of a ACS-PRF Grant. Their project is the “Investigation of the Stabilization of Boron-containing Cations by Azametallocene Donors.”
Undergraduate Awards

The Alan and Eileen Wingrove Chemistry Scholars for the Academic year 2013-2014 are:

Ms. Michele Kanary received the Freshman Award
Ms. Alyssa Allen received the Sophomore/Junior/Senior Award.

Publications

Sonali Raje and Elizabeth Bartleson, have a paper accepted in Primary Science, a British science education peer-reviewed journal titled: "Getting Third-graders to Put On Their Science Thinking Caps." http://www.ase.org.uk/journals-primary-science/.


Grants

John Sivey was awarded the a research grant from the Maryland Water Resources Research Center for $8650 to investigate “Bromide as a Precursor of Potent Brominating Agents During Drinking Water Chlorination.”

John Sivey has submitted a grant to the American Chemical Society, Petroleum Research Foundation, Undergraduate New Investigator Program for $55,000 to investigate “Kinetics of Electrophilic Aromatic Substitution by Aqueous BrCl, BrOCl, and Br2O: Catalysis of Alkylbenzene Bromination.”

John Sivey has submitted a proposal to the Cottrell College Science Award at the Research Corporation for $45,320 to investigate “Reactivity of Often-overlooked Brominating Agents BrCl, Br2O, and BrOCl in Aqueous Solutions of Free Bromine.”

Research Presentations

Ryan Casey gave a presentation at the Department of Geography and Environmental Engineering, Johns Hopkins University, Baltimore, MD., on Road Salt and Soils: Impacts on Metal Mobility and Hydraulic Conductivity.”

Kate Kautzman gave a presentation at Johns Hopkins University, Baltimore, MD., on “SOA Formation from the Photooxidation of Naphthalene: Implications For Oxidation of Intermediate Volatility Organic Compounds (IVOCs).”

Tim Brunker, Shuhua Ma, Clare Muhor and John Sivey and their research students and collaborators presented their research at the American Chemical Society’s 245th National Meeting in New Orleans in April.

Kim Brunker gave the following platform presentation:

Clare Muhor gave the following poster presentation:
Muhor, C. M., Ma, S. and Oluyadi, A., "Titaneocencatazyed Hydroboration of Unsaturated Heteroatomic Substrates.”

John Sivey gave the following platform presentation:

William Nagle, Tim Brunker’s undergraduate research student, gave a poster presentation titled “Investigation of the Relationship Between Tetradentate Aminosulfoxide Ligand Structure and Geometric Isomerism in Their Ru(II) Dichloride Complexes.”

Tim Brunker gave a seminar at Mt. St. Mary’s University, Emmitsburg, MD, titled “Synthesis and Reactivity of Azaferrocenes and Their Borane Adducts: Generation of Highly Electrophilic Boron-containing Cations.”


Ryan Casey gave an invited seminar at Johns Hopkins University, Department of Geography and Environmental Engineering on “Attenuation of the Potential Impacts of Copper Roof Runoff by Storm water Best Management Practices.”
Research Presentations (cont)  

M. Schulze, R.E. Casey, D.R. Ownby, and S.M. Lev gave a poster presentation at the American Public Works Association Washington State Chapter, Chesapeake-Potomac regional SETAC Meeting, titled “Evaluating the Impact of Soil Type, Ageing, and Zn Form on Toxicity to Eisenia fetida Using ZnCl2, ZnO Bulk Powder, and ZnO Nanoparticles.”

Undergraduate Grants  
The following Chemistry students received research and travel grants from the University Undergraduate Research Committee:

Research  
Mark Burton (mentor: John Sivey)  
Maimouna Cisse (mentor: Richard Preisler)  
Navdeep Kaur (mentor: Shannon Stitzel)  
William Nagle (mentor: Tim Brunker)  
Amber Truitt (mentor: Ana-Maria Soto)  
Daniel Victor (mentor: John Sivey)

Travel  
Mark Burton (mentor: John Sivey)  
William Nagle (mentor: Tim Brunker)  
Daniel Victor (mentor: John Sivey)

The following Chemistry students received research grants from the FCSM Undergraduate Research Committee:

Mark Burton (mentor: John Sivey)  
Daniel Victor (mentor: John Sivey)

Department Seminars  
Howard Fairbrother, Ph.D., from the Johns Hopkins University Department of Chemistry presented “Carbon Nanotubes in Aqueous Environments: Possible Implications and Potential Applications.”

Michael R. Krout, Ph.D., from the Bucknell University Department of Chemistry presented “Strategies for the Synthesis of Complex Natural Molecules: Inspiring Creativity and Controlling Selectivity.”

Keith P. Reber, Ph.D., from University of California, San Diego Department of Chemistry presented “Adventures in Organic Synthesis: Developing an Undergraduate-Based Research Program.”

Yalan Xing, Ph.D., from Harvard University Department of Chemistry and Chemical Biology presented “Transition Metal Catalyzed Hydrative Functionalization of Alkyne and Applications.”

Campus and Community Outreach  
Liina Ladon, representing the FCSM as an Alumni Board member, distributed Norwegian fir seedlings to all graduates after Commencement exercises in May. Once planted, the graduate and their family can watch the tree grow as their career grows and remember their roots.

Kelly Elkins, Danniebelle Haase and Kate Bowdy presented Halloween-themed “Creepy Chemistry” at the Maryland Science Center, October 26, 2013. Families participated in hands-on activities such as investigating the fluorescent properties of highlighters and preparing fake blood and slime.

Professional Development  
Tim Brunker reviewed a manuscript for the Journal of the American Chemical Society.


Ryan Casey served on a review panel for the National Science Foundation (NSF).

Clare Muhoro travelled with her research students Bao Ha and Leili Zamini to Kenya in June 2013. They conducted fieldwork in the Ruiru region to assess surface water quality. The team also met with officials and staff at the US embassy in Nairobi, the UNEP headquarters and the Regional Center for Mapping Resources for Development. The research was conducted in collaboration with a group from Kenyatta University, and was funded by Towson University School for Emerging Technology.

Clare Muhoro led a group of 5 US professors from University of Oregon, UNC Charlotte, Purdue and University of Arizona to visit three universities in Kenya to explore research collaborations in June 2013. The group also conducted workshops on grant writing and manuscript preparation for faculty and graduate students.

Clare Muhoro is currently serving as an American Association for the Advancement of Science fellow in Diplomacy, Security and Development at the United States Agency for International Development in Washington, DC through August, 2014.

John Sivey served as an expert opinion contributor for Consumers Digest Magazine in an article which analyzed a new bathroom cleaning product.

John Sivey served as a lead reviewer for the following panel: U.S. Agency for International Development, Middle East Regional Cooperation Program, Water and Environment Panel, Washington, DC.
**Professional Development (cont)**

John Sivey was accepted into the Towson Academy of Scholars, one of three junior scholars selected from a large and competitive pool. He will receive a $1,000 research grant and will give a research presentation next Spring.

John Sivey reviewed a manuscript for the following journals: *Water Research, The International Journal of Chemical Kinetics,* and *Environmental Science and Pollution Research.*

**Forensic Programs News**

**Presentations**


Hondrogiannis E., Andersen D., Miziolek A. The Evaluation of a New Technology for Gunshot Residue Analysis in the Field.

Hondrogiannis E., Ehrlinger E., Miziolek A. Spectroscopy Methods for Identifying the Country of Origin.

**Outreach**

This past summer Forensic Science undergraduate and graduate students took part in a crime scene search for missing body remains from two individuals in Tennessee. This was the fourth such search forensic students have participated in, one in Vermont and two in Baltimore County. The previous searches have resulted in positive findings.

In July members of the forensic science program conducted a 3-day forensic education training program for high school teachers. The training program, organized by Mark Profili, with assistance from Kelly Elkins and MSFS students, was supported by the American Academy of Forensic Sciences (AAFS), with participants coming from across the country to attend. The program consisted of 6 separate hands-on modules that were taught by Towson faculty in the forensic and anthropology programs.

Kelly Elkins represented TU MSFS Program at the 2014 Career and Grad School Workshop and Fair, Loyola University in October.

**Publications**

Kelly Elkins has a paper in press in *Biochemistry and Molecular Biology Education* titled "Curriculum and Course Materials for a Forensic DNA Biology Course,"


**Conferences**


Kelly Elkins attended AAFS Criminalistics Section Business meeting Feb. 20, 2013. Also represented Council of Forensic Science Educators (COFSE).

Kelly Elkins served as Past-President of the Council of Forensic Science Educators (COFSE) at their annual business meeting at the AAFS meeting in Washington D.C. on Feb. 21, 2013.
**Forensic Programs Grants**

Kelly Elkins submitted a proposal to Department of Homeland Security titled “Literature Search on Purification and Production Methods and Chemical Attribution Signatures for Ricin Toxin.”

Kelly Elkins submitted a Lucas grant proposal to Forensic Sciences Foundation (FSF) titled “Detection and Quantitation of the Presence of Trace Human DNA in the Air by Real-time PCR and Forensic DNA Typing.”

Kelly Elkins was awarded a $6000 grant from FDRC for “Development of an Assay to Identify Hallucinogenic-drug Containing Plant Species in a Mixture with Human Saliva,” Towson University grant.


**Professional Development**


Kelly Elkins was one of three members of Final Draft Review Panel for CRC Book *Forensic Science: An Introduction to Scientific and Investigative Techniques, Fourth Edition* by Stuart James; Jon J. Nordby; Suzanne Bell.

Kelly Elkins served as Past-President of the Council of Forensic Science Educators (COFSE) at their annual AAFS Meeting.

Kelly Elkins beta tested ACS online General Chemistry First-Term exam, Dec. 2012 (optional for CHEM 131).

Kelly Elkins was member of Planning Committee and Organized Forensic Chemistry session for ACS Rocky Mountain Regional Meeting, Oct. 2012

Kelly Elkins served as outgoing President of the Council of Forensic Science Educators.

Mark Profili attended the annual meeting of the Mid-Atlantic chapter of the American Academy of Forensic Sciences in Roanoke, VA in May. Also attending were three students from the Masters in Forensic Science program.

**Professional Development (cont)**

Mark Profili is currently conducting a peer review of NIJ Forensic DNA Unit Efficiency Improvement Program proposal from NY MEO entitled DNA Assay Development and Validation for Pigment-Related Features to Assist in the Identification of Missing Persons and Human Remains.

**Undergraduate and Graduate Funding**

The following forensic students received research grants from the Graduate Student Association:

Kelly Elkins’ students: Brittany Abbott ($275), Brittany Gibbs ($500), Jessica Siler ($423), and Monia Bailey ($400)

Ellen Hondrogiannis’ students: Stephanie Wexler ($500) and Zoë Khron ($450)

**Forensic Programs Service**

Kelly Elkins was a grant reviewer for the National Institute of Justice (NIJ) Panel 7 (CSI) on 4 proposals.

Kelly Elkins was elected as an Alternate Councilor of the Maryland Section of the American Chemical Society for 2014.

Kelly Elkins served as Past-President (elected) Council of Forensic Science Educators (COFSE) 2013.

Kelly Elkins was a reviewer for the a number of publications: *Journal of Inorganic Biochemistry, Ecotoxicology and Environmental Safety, Journal of Inorganic Biochemistry, Journal of Chemical Education, Journal of Inorganic Biochemistry, Biofertilizers and Biopesticides, Journal of Forensic Investigation.)*


Kelly Elkins was appointed as a field reviewer for the Fulbright-Hays Doctoral Dissertation Research Abroad Fellowship and the Minority Science and Engineering Improvement Program by the U.S. Department of Education Office of Postsecondary Education.

Ellen Hondrogiannis reviewed a manuscript for Environmental Geochemistry and Health.
Other News

Forensic Science Student Organization (FSSO)

Those interested in joining FSSO should go to our facebook page ([http://www.facebook.com/groups/FSSOTU/](http://www.facebook.com/groups/FSSOTU/)) and join our group on the involved@TU page. Look out for meeting dates/times on posters throughout Smith Hall 5th Floor.

SAACS Corner

Those interested in joining SAACS should go to our facebook page ([http://www.facebook.com/groups/towsonsaacs/](http://www.facebook.com/groups/towsonsaacs/)) and join our group on the involved@TU page. Look out for meeting dates/times on posters throughout Smith Hall 5th Floor.

The Towson University SAACS Club is an official branch of the Student Affiliates of the American Chemical Society. Student members come from a variety of departments - you don't have to be a chemistry major to join.

Homecoming 2014

Save the date! On November 1, 2014 the Chemistry Department will host their 3rd Reunion on Homecoming Day. Please join us on Space #3 at Lot 21 by the Auburn House. We will provide burgers, hot dogs, salad, chips and some beverages. You are welcome to bring your own food, as well and beverages. The University policy for alcohol is as follows: one bottle of wine or one six-pack of beer per person. Please RSVP to chemalums@towson.edu by October 15, 2014 so that we have a head count for the catering! We will have 5 game tickets to give away on a first come first serve basis. Additional tickets may be bought from the Alumni Association in the Auburn pavilion across the street from Lot 21. Please come join us for fun and festivities and watch our Towson Tigers beat Elon Phoenix. The time has not yet been determined. Usually the game is either 1pm or 7pm, so look for the tailgating time to be four hours before the game. We will post the time on Facebook when it becomes known or you may go to the University homepage. For further information see the Homecoming webpage:

[2014 TU Tailgating Information.pdf](https://example.com/2014TUTailgatingInformation.pdf)

Your News!

We want to start this section of the newsletter. Please send us your news to: chemalums@towson.edu

A Facebook site is here. Let us hear from you! Please send your information to: chemalums@towson.edu

We welcome all visitors to the Department. It would be great to see or hear from our alums!

Editor: Dr. Ellen Hordrogiannis, Assistant Professor, Forensic Analytical Chemistry

Assoc. Editor: Ms. Liina Ladon

Production Managers: Dr. Hordrogiannis and Ms. Liina Ladon

Production Assistant: Ms. Valerie Smith