

The Schlieren

(A CHEMCLUB PUBLICATION)



**SPRING
2014**

WHAT'S ON THE COVER:

MARISSA MASEK HAS A BLAST!

Marissa Masek '14 is a Biology and Photographic and Imaging Technologies double major at RIT. Last semester, Marissa took the High Speed Photography class with Jason Faulring. She was assigned an independent project requiring her to capture anything using high speed techniques. She wanted to photograph explosives, so she contacted Dr. Scott Williams for ideas of what to film and for supervision.

The cover of this issue of the Schlieren features a frame from Marissa's high speed photography project. She first mixed solid iodide and ammonia together creating a slurry of nitrogen triiodide ammoniate, which is stable with excess ammonia. Once the slurry dries, the compound is very unstable. The slightest touch, such as a feather, is enough for the compound to break down into a gas giving the explosion shown.

Timing was the biggest challenge. The whole experiment took about 6 hours to perform. If something goes wrong, you can't go back to fix it because there is nothing left to detonate. Setting the delay time to trigger the flash was crucial to capturing the image. The entire event took less than 1/10 of a second. She used an audio trigger to set the flash off to capture the plume of red gas. She was able to do that because the NTIA makes a loud sound right when it is set off.

Marissa confessed that shooting explosive chemistry was a challenging photographic subject. Although you can predict what the result might look like, you can't see what you're photographing while it's happening. "Usually, I can adjust the lighting, my angle, or the focus to see what works best. In this case, it was an all or nothing situation," explains Marissa.

Marissa graduates this May and intends to pursue a career in scientific imaging.

WOW! LOOK AT OUR NEW LABS!

During the summer and fall of 2013, construction crews were busy renovating the general chemistry labs. The two former general chemistry labs on the second floor of Gosnell were original to their 1968 construction (see photo below).



Given that our labs never comprised of more than 24 students per section due to safety and instructional concerns, the scale of each lab was excessive. An SCMS committee to evaluate and design new general and analytical lab space in the existing labs included Dr. Jeremy Cody, Dr. Nathan Eddingsaas, Dr. Joe Lanzafame, Dr. Scott Williams, and Mr. David Lake. The two massive labs were split into three spacious and more appropriately sized laboratories where general chemistry and analytical chemistry are taught. The labs went live in February 2014 for general chemistry and will go live for analytical in the fall 2014. The three labs are identical in set up and feature fume hoods at the rear, a non-stationary instructor bench at the front and modular lab benches for students to work in smaller groups in a more dynamic fashion (see photo below).



INSIDE THIS ISSUE

- 2-3** A Big Welcome to Our New Faculty
- 3-5** News and Events
- 6** Grants and Publications
- 7** Where are they now?
- 8** Eisenhart Award
- 9** Mentoring Award

A BIG WELCOME TO OUR NEW FACULTY



Dr. Jeffrey Mills

B.S. 1998 Juniata College

Ph.D. 2004 University at Buffalo

Postdoctoral Research :
Case Western Reserve University (2004-2008)
and University at Buffalo (2008-2013)

This past fall Dr. Jeffrey Mills began working in our School of Chemistry and Materials Science as a lecturer and has been teaching Gen & Analytical Lab II, Instrumental Analysis Lab, Quantitative Analysis, and Analytical Methods Lab.

Dr. Mills pursued chemistry as both an undergraduate and graduate student. For him, it all started in high school where he was hooked from day one. Dr. Mills says, “Who couldn’t love a field with explosions and chemicals that smell bad? I also find the mathematics to be elegant and beautiful.”

Dr. Mills doesn’t know how to define his “area” of chemistry. He started his grad career in a physical chem lab that focused on making semiconductor thin films. After about a year, he switched to another p. chem lab that focused on biomolecular NMR. Both of his postdocs also focused on NMR and protein structure/function. All of those experiences put him somewhere at the intersection of analytical, physical, and biochemistry.

As for crazy chemistry stories, ask Dr. Mills about two former graduate students who are lucky to be alive given that one of them tried stopping a metal cart from getting pulled by the 800 MHz NMR during a liquid nitrogen fill.

When not teaching and conducting research, Dr. Mills enjoys photography, hanging out with his dog, and cooking (in fact, he’s trying to start a “Chemistry of Cooking” class). Dr. Mills has really been enjoying teaching and interacting with the students. “It’s exciting to watch the light bulb turn on and it’s even more exciting when they “get” a concept, get excited about it, and start thinking creatively. He wants students to know to: “Always pay attention to sig figs, errors, and units; not trust a result because it comes from a shiny, expensive instrument with a digital display; and to study chemistry because you love it”.



Dr. Howard McLean

BS. 1977 Geology,
University of Wyoming

Ph.D., 1988 Analytical
chemistry, University of
Wyoming

Dr. Howard McLean is a new lecturer at RIT this year and has been teaching a host of general chemistry courses as well as a descriptive inorganic chemistry course. His research interests include investigations of endocrine disrupter chemicals in various media, meteoritics (study of meteorites, especially R chondrites), modeling of reservoirs and plumes, and phytoremediation and bioremediation strategies.

Hailing from East Cleveland, Ohio, Dr. McLean explains that his interest in chemistry stems from the fact that he loves its interface between the sciences. More explicitly, he likes the applications of organic and physical chemistry to geology. Dr. McLean declares that he loves geochemistry! He found that meteoritics was a great discipline within which to design undergraduate research projects. As a trained analytical chemist, Dr. McLean found it fun to work on environmental and remediation problems for colleagues in academia as well as the military.

Although new to RIT, Dr. McLean is not new to being at the front of the class. He has held positions at the University of Wyoming, Rose-Hulman Institute of Technology (RHIT), Bradley University, University of Tennessee, Chattanooga, and Auburn University. After many years in the classroom, Dr. McLean revealed that what he finds most challenging is “striving to avoid being a maverick in the classroom, or out-of-the-box scientist and rogue laboratory instructor.”

As a self-proclaimed “rock hound”, Dr. McLean loves to drive his two cylinder Cadillac and prospect for jewels from the skies (i.e., meteorites) in Wyoming, Montana, and Colorado when he has the time.

When asked what advice he’d give to current students studying chemistry (and wished someone had told him sooner), he responded, “Obtain a breadth of chemical science experience and pursue a co-op or internship as soon as possible... and with passion!”

NEWS AND EVENTS

Taylor Barrett Earns Goldwater

Taylor Mallory Barrett, a junior Chemistry major from Middletown Pennsylvania, is one of this year's newest RIT Goldwater Scholars. She will receive \$7500 for her senior year. 283 scholarships were awarded nationally from a field of 1,166 nominees from mathematics, science, and engineering. The Goldwater Scholarship is the premier award to undergraduates in these fields. The Goldwater Scholarship, honoring the late Senator Barry Goldwater, was designed to foster and encourage outstanding students to pursue careers in the fields of mathematics, the natural sciences, and engineering, and virtually all scholarship winners intend to obtain a Ph.D. Goldwater Scholars comprise an elite group.



Taylor has been conducting research, creating peptide scaffolds for targeted multi-modal imaging agents in the laboratory of Dr Hans Schmitthenner, since her freshman year. She has presented her work at the Rochester Academy of Sciences and the World Molecular Imaging Congress.

Taylor has won a number of

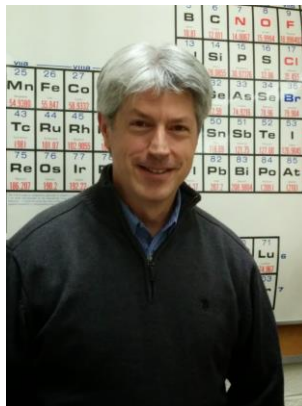
other awards including: an RIT Merit Scholarship, School of Chemistry and Materials Science Outstanding Sophomore Award, two RIT Summer Fellowships, and a World Molecular Imaging Congress Travel Grant. She is also in the RIT four-year Honors Program and is an RIT Chemistry Research Scholar. Taylor has also been secretary for the House of General Science, a Peer Advisor for RIT's YearOne Program, an Orientation Assistant and Operations Manager for New Student Orientation, and a Teaching Assistant for Quantitative Chemical Analysis and Chemical Separations. Taylor plans to earn her Ph.D. in Bioorganic Chemistry, and plans for a research career in biomedical imaging or drug targeting and teaching at the university level.

Chemistry Humor

Q: If H₂O is found inside a fire hydrant, what is found outside a fire hydrant? A: K₉P



A BIG WELCOME CONT..



Mr. William Ryan

B.S. 1993 Chemistry,
MCC/RIT

M.S. 1996 Chemistry,
RIT

MBA 2001 University
of Rochester

Mr. Bill Ryan is originally from Avon, NY and still lives there today! Mr. Ryan majored in chemistry as an undergraduate because he had always been interested in science and chemistry provided a wonderful lens through which to view the world.

When asked why he chose to come to RIT and teach he responded, "to me, the only thing better than doing science is teaching it. I love sharing the excitement of the learning process with our students. There are so many fascinating connections and insights that can be explored while teaching and learning chemistry together."

Mr. Ryan currently teaches Instrumental Analysis Laboratory, Inorganic Prep, and General Chem recitation. He also had the pleasure of teaching chemistry for six enjoyable years at MCC -mostly to nursing majors.

Outside of the classroom, Mr. Ryan worked several years in industry as a principle chemist and project manager, developing RF-sensitive adhesives and coatings and earning some patents along the way. He explains that those were exciting times given that he had the opportunity to work with a great number of truly excellent chemists and business heads. It was during that time that he was sent to business school for what turned out to be invaluable training.

Now returning to his alma mater and teaching, Mr. Ryan says that he really likes the strong sense of community, and doing ESR spectroscopy research with Dr. Joe Hornak. He also mentions that he loves blowing things up in inorganic prep lab. "How much fun is that?" he adds. When asked what his favorite element is, Mr. Ryan answered, "Iron. Why? Iron man. Need I say more."

When not busy teaching classes, Mr. Ryan enjoys building boats, doing carpentry and hanging out with his wonderful son and daughter. His motto to students: Relax. Stay focused on what you need to do TODAY and tomorrow will be fine.

NEWS AND EVENTS

RIT and COS Student Delegate

Biochem major, **Kimbria Blake '14**, who was selected as the 2013-14 College of Science Student Delegate to represent the 2014 COS Graduating Class, was also selected by the President, Provost, and VP for student affairs to be the Institute's Student Convocation speaker at the Academic Convocation on Friday, May 23rd! Please join me in congratulating Kimbria for this distinct honor!



Kimbria Blake '14 Stephanie Beach '15

Daniel Pasto Undergraduate Research Fellowship

Each year, the School of Chemistry and Materials Science awards an undergraduate student applicant a fellowship to conduct full-time independent research at RIT. The student must have completed at least 90 credit hours of course work and have a GPA > 3.00.

This year, two students were awarded the Daniel Pasto Fellowship: **Kimbria Blake '14** and **Stephanie Beach '15**

Kimbria is conducting full-time research with Dr. Suzanne O'Handley this semester before graduation and Stephanie will conduct her full-time research this summer with Dr. Hans Schmitthenner.

American Chemical Society Scholars Award

Betsegaw Lemma '14 and **Jasmine Edwards '15** were the recipients of an American Chemical Society Scholars Award, Fall 2013. Pictured from left to right: Dr. Michael Coleman, Betsegaw Lemma, Jasmine Edwards, and Dr. Suzanne O'Handley.



Jasmine Edwards '16 (in photo above) is a research student in the O'Handley Group was recently accepted into the McNairs Program. Jasmine is also a Frederick Douglas Scholar and ACS Scholar. Go Jasmine!

Research Scholars 2013

Last spring, seven graduating seniors were awarded Research Scholar distinctions. Their name (mentor) and known whereabouts are as follows from left: Tri Nguyen (Dr. Michael Coleman) Ph.D. Program Duke University, Carly Augustyn (Dr. Jerry Takacs) Research Assistant iCardiac Technologies, Mike Madaio (Dr. Suzanne O'Handley) Infectious Disease Lab Technician, Joy Snyder (Dr. Lea Michel) PharmD program at SUNY Buffalo, Christian Larrabee (Dr. Jeremy Cody), Anthony Carestia (Dr. Tina Goudreau Collison) Ph.D. Program UNC Chapel Hill, Ken Gerien (Dr. Suzanne O'Handley) PhD Program Ohio State, Rachel Schmidt [not in photo] (Dr. Lea Vacca Michel) PhD in Physiology at Cornell University. Congrats to all!



The ASBMB Chili Cook-off

Lenny Breindel MS '14 won the SCMS trophy for his chili at the ASBMB spring barbecue

Juliana Shaw '15 was selected out of hundreds of applicants to present her research at the Harvard National Collegiate Research Conference in January 2014. Juliana works in Dr. Lea Michel's biochem research lab.

Laura Parisi '14 and her research advisor Dr. Matt Miri have been chosen to present their work entitled, "Plastic Produced With A Renewable Material: Eugenol" at Posters on the Hill in Washington, DC April 28-29, 2014! Only 60 of 600 applicants are chosen; it is quite an honor to be selected. Congrats Laura and Dr. Miri!

Jordan Armeili just won an ASBMB travel grant to present at the national meeting of the ASBMB in San Diego, CA this April. Congratulations Jordan!

NEWS AND EVENTS CONT...

ASM Fellowship and John-Wiley Jones Recipient 2014



Undergraduate biochemistry major **Tessa DiDonato** '14 was awarded an American Society for Microbiology Undergraduate Research Fellowship.

The competitive undergraduate fellowship is awarded to students who are interested in pursuing graduate careers in

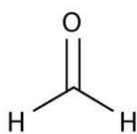
microbiology. Award recipients receive a stipend of up to \$4,000, a two-year student membership to the society and reimbursement for travel expenses to the 114th American Society for Microbiology General Meeting and the society's Capstone Institute in Boston.

DiDonato studies Diadenosine polyphosphatases/ mRNA decapping enzymes of the Nudix Hydrolase Superfamily, which could be novel antibiotic targets. She has conducted research since her freshman year under the guidance of her mentor Suzanne O'Handley, associate professor in School of Chemistry and Materials Sciences.

"I am extremely fascinated by infectious diseases and in understanding the molecular processes involved in the pathogens that cause these diseases," DiDonato says. "I plan on pursuing my Ph.D. and ultimately do research and teach at the university level."

In addition to winning this prestigious award, Tessa was also this year's 2014 recipient of the RIT John-Wiley Jones award. This award is given each year to an outstanding student who has demonstrated not only excellence in the classroom and in independent lab work but has also demonstrated meritorious efforts in the RIT community. In addition to her long hours in class and in lab, Tessa has served as an RA on campus giving much of her time and energy to her fellow student peers. Congratulations Tessa on all these recognitions. We are lucky to call you one of ours!

Chemistry Humor



Formaldehyde



Casualdehyde

In Memoriam: Dr. Vladimir Vukanovic

Retired RIT COS Distinguished Professor Emeritus, Dr. Vladimir Vukanovic, Ph.D. passed away on January 29, 2014, at age 90. He was an excellent scientist and highly respected.



Dr. Vukanovic was raised in Yugoslavia, received his Ph.D. in Physics from the University of Munster, West Germany, 1961, and became Full Professor at the Institute of Physical Chemistry, Belgrade University, 1975-79. Dr. Vukanovic joined RIT in 1980 in the Department of Chemistry as a visiting professor and in 1985 became the Distinguished Professor of Physical Sciences.

Dr. Vukanovic retired from RIT as Distinguished Professor Emeritus after about 10 years of service in the Department of Chemistry where he concentrated on research in plasma chemistry, teaching, and developing a laboratory for plasma science. His research resulted in collaborations with Columbia University, Laboratory for Laser Energetics (University of Rochester), and IBM- Endicott, NY.

He had a deep passion for a scientific approach to religion and was author of the book entitled "Science and Faith", Light and Life Publishing Co., Minneapolis, MN (1995), and articles, such as, "No Reason to Build Fences Between Science, Religion", Democrat & Chronicle, Sept. 14 (2005). His common phrase was "God is Love".

Dr. Vukanovic is survived by his loving wife of 36 years, Elisabeth (Zachariassen); children, John Zachariassen and Kristin Devon, son-in-law, Shawn Kearney; granddaughter, Lin; niece, Tatjana Vizner; and grand-nephews, Vladimir and Julius Vizner.

Praise for Dr. Suzanne O'Handley

Barbara Gordon, the executive Director of the American Society for Biochemistry and Molecular Biology sent a letter to our School commending our own Dr. Suzanne O'Handley for her "time and service to her department, school, the ASBMB, and the scientific community at large." Ms Gordon praised Dr. O'Handley's role as the ASBMB advisor and emphasized what an impact she has made in her mentorship of these students in their careers. Thanks Dr. O'Handley for all your hard work!

2013 Active Grants

Christina Goudreau Collison PI, **Jeremy Cody**, co-PI, and **Thomas Kim** co-PI, NSF-DUE “Collaborative Research: Transforming the Organic Chemistry Experience: Development, Implementation and Evaluation of Studio-Based Modules” (TUES Type 1, \$199,980), June 2013-June 2016.

Chris Collison, PI and **Jeremy Cody**, co-PI “Novel Squaraines for Enhanced Near Infra-Red Active Organic Photovoltaics” submitted (February 17, 2012) to NSF-Sustainability (\$329,268), September 1, 2012.

Thomas Kim, Michigan State University, CREATEforSTEM Research Fellowship, (\$40,000), 2012-2013.

Paul Craig, co-PI, NIH AREA Award, NIGMS 2R15GM078077-02, Algorithmic assignment of probable function to proteins of previously unknown function (MPI: Herbert Bernstein (Dowling College), \$217,000 to RIT; \$437,000 total, 2011-2014.

Paul Craig, co-PI, NIH AREA Award Supplement, NIGMS3R15GM078077-02S1, Diversity Supplement for Algorithmic assignment of probable function to proteins of previously unknown function (MPI: Herbert Bernstein (Dowling College), \$107,653, 2011 – 2014.

Paul Craig, co-PI, NSF MSP 1050590, Boundary Crossing Teams in Support of Math and Science Excellence in Our School Systems (Sophia Maggelakis, PI) \$282,211, 2011-2013.

Lea Michel, Dreyfus Foundation: Special Grant Program in the Chemical Sciences: Quiet Chemistry: Working with Deaf Students in a Chemistry Research Laboratory, 2012 *funded*, (\$31,600).

Lea Michel, co-PI NIH R15 (AREA): Phase Boundaries and Liquid Structure of Concentrated Eye Lens Protein Mixtures (PI: George Thurston; Co-PI: Michel Kotlarchyk, and David Ross), funded June 2013.

Scott Williams, Governor's Office of Development Seed Fund (South Dakota, 2013-2014): Enhancing the GPHF Minilab with multiple, one-step visual detection for Artemether-class antimalarial medications. The project is part of a RIT-RGH alliance industry-university technology transfer enterprise.

Scott Williams, National Science Foundation-Process for Innovation in Printed Devices and Materials, funded 2012-2014

J. Myers (PI), **G. A. Takacs** (co-PI) and D. Johnson (co-PI), “Rochester Regional Clean Energy Education Partnership”, NYS Energy Research and Development Authority, External Funding: \$684,961, (Co-investigators are members of the Clean Energy team: Drs. **Alla Bailey**, **Matt Miri**, **KSV Santhanam** and **Roman Press**), March 1, 2009- Dec. 31, 2013.

2013 Publications (*student authors)

Craig PA, **Michel LV**, Bateman RC, A Survey of Educational Uses of Molecular Visualization Freeware, *Biochemistry and Molecular Biology Education*, (2013) 41: 193-205.

John G. D’Angelo, **Jeremy A. Cody**, Christian Larrabee*, Danica J. Ostrander*, Kyle W. Rugg*, Donna Mamangun*, “Ritter Reactions of Alcohols Mediated by the Conducting Polymer, Poly-(3,4 ethylenedioxy thiophene)”, *Syn. Comm.*, (2013), 43, 3224-3232.

A. Naujokas*, D. G. Abreu*, **G. A. Takacs**, T. Debies, M. Mehan and A. Entenberg, “Fluoride Ions at the Cu-fluoropolymer Interface”, *Surface and Interface Analysis* 45(6), 1056-1062 (2013).

Susan Spencer*, Cortney Bougher*, Patrick Heaphy*, Victor Murcia*, Cameron Gallivan*, Amber Monfette, John Andersen, **Jeremy Cody**, Brad Conrad, **Chris Collison**, “The effect of controllable thin film crystal growth on the aggregation of a novel high panchromaticity squaraine viable for organic solar cells”, *Solar Energy Materials & Solar Cells*, (2013), 112, 202-208.

Rodrigo, Sanjeewa K.; Powell, Israel V*.; **Coleman, Michael G.**; Krause, Jeanette A.; Guan, Hairong, “Efficient and regioselective nickel-catalyzed [2 + 2 + 2] cyclootrimerization of ynones and related alkynes.” *Organic & Biomolecular Chemistry* (2013), 11(44), 7653-7657.

Michel LV, *Snyder J, *Schmidt R, *Milillo J, *Grimaldi K, *Kalmeta B, Khan N, Sharma S, Wright LK, Pichichero ME “Dual orientation of the outer membrane lipoprotein P6 of nontypeable *Haemophilus influenzae*” *J. Bacteriology* (2013), 195: 3252-3259.

Craig PA, **Michel LV**, Bateman RC A Survey of Educational “Uses of Molecular Visualization Freeware”, *Biochemistry and Molecular Biology Education*, (2013) 41: 193-205.

Smith, T. W; Zhao, M; Yang, F; **Smith, D**; Cebe, P; “Imidazole Polymers Derived from Ionic Liquid 4-Vinylimidazolium Monomers: Their Synthesis and Thermal and Dielectric Properties”; *Macromolecules*, 2013, 46(3), 1133-1143.

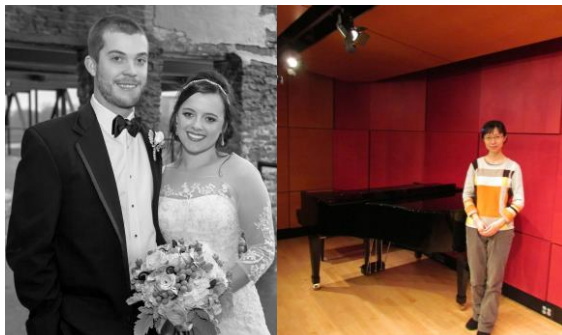
C. L. Augustyn*, **T. D. Allston**, R. K. Hailstone, and **K. J. Reed**, “One-Vessel Synthesis of Iron Oxide Nanoparticles Prepared in Non-Polar Solvent”, *RSC Adv.*, 2014, 4 (10), 5228 – 5235.

2013 Proceedings

A. Morgan*, M. Mehan, T. Debies and **G. A. Takacs**, “Vacuum UV Photo-oxidation and Reaction with Oxygen Atoms with Poly(ethylene 2,6-naphthalate)”, *Proceedings 9th European Technical Symposium on Polyimides & High Performance Functional Polymers (STEPI 9)*, D. Jones, J. Roziere and M. Abadie (Eds.), 183-192 (2013).

Where are they now?

Tim Liwosz '09 was awarded a year-long fellowship through the U. at Buffalo chemistry department and will be funded through May 2014. He plans to defend his thesis sometime in May. **Kacie Mulhern '08** and Tim got married December 21st, 2013 in Rochester! Kacie got a tenure-track position at D'Youville College in Buffalo. She loves it so far and Tim's beginning to look for teaching positions in the Buffalo area.



Tim and Kacie wed

Jing Jing poses next to her piano

Jing Jing Pan'07 reports that she loves living in Port Orchard, WA. It is a small and quiet town. She takes a ferry to and from her work at the Bremerton navy shipyard. Jing Jing says her work as a chemist is the best. She works on pure water analysis, detrimental analysis, oil analysis, plating analysis and more. She told us that she has also learned a lot about quality control and nuclear quality control. Since her move to WA, she has taught some people sign language and they can understand her voice. She plays pingpong with her bosses often and she continues to enjoy playing the piano.

Joel Walker '09 writes, "It's hard for me to believe I'm half-way through my third year in graduate school and that it's been so long since I was taking classes at RIT!" Joel works for Dr. Jose Madalengoitia at the University of Vermont. The bulk of his research is exploring methods to make highly electron deficient carbodiimides for use in the 1,3-diaza Claisen rearrangement. Joel writes, "It's generally pretty exciting except, of course, when it's frustrating."

Sarah Frisco: says, "I'm writing to you from China this time, after spending the last couple months traveling around in New Zealand. I suppose living in Beijing still counts as traveling, but it's a lot less hectic in comparison. I'm here to take Mandarin language classes and just enjoy being back in this city I love and have missed since the last time I had to leave. As much as I am enjoying this trip, it is a little strange to be away from chemistry for this long. Hopefully this feeling is a good sign for graduate school ahead."

Bob Martin joined Jochen Autschbach's group at U. at Buffalo and is working on computational chemistry with respect to NMR calculations. He's also doing well and has the makings of a paper (AKA has tons of data he hasn't written up yet!) He's one Inorganic class away from finishing up his courses.

Andrew Morgan, told us he accepted a full-time position at Carestream Health in Rochester, NY. Congrats Andrew!

Sam Ziebel, is in the Ph.D. program at U. at Buffalo and has joined Sherry Chemler's group. Sam reported to Dr. Tan that he's really enjoying what he does in the lab...and has already finished up all his first year courses.

Brett Granger '09 defended his PhD thesis last July 2013. He wrote, "It went off without a hitch, and now I'm doing a post-doc at AstraZeneca in Boston. I'm glad grad school is over and that dissertation writing is a once in a lifetime experience :) It was crazy times." Brett is really enjoying getting a feel for the industrial side of things. He even had the opportunity to go over to their site in the UK for a conference!

Sidney Coombs joined Frank Bright's group at U. at Buffalo in the Ph.D. program. She finished all her first-year classes. According to Frank, she is doing really well and will probably be ready to submit her first paper by the end of the summer of her first year! Congrats Sidney!

Ka Yi '09 reports that after graduating from U. at Buffalo with her PhD in fluorescence and sensing in 2012, she earned a position at a medical device company at Roswell, GA called OPTI Medical Systems. They are a subsidiary of IDEXX Laboratories. Their facility in Roswell, GA focuses on utilizing various sensing techniques and polymers to develop medical devices for point-of-care purposes. Their facilities comprise not only R&D but also in-house production and QC. Ka Yi reports, "I am so happy to find a job doing things I am interested in and utilizing everything I have learned from undergrad. and grad. school. I definitely have to give all the credit to Dr. Langner for his mentoring and encouragement for everything I have accomplished so far. He was the one who truly saw the potential in me and always pushed me to go further and try harder. That was what got me in into graduate school."

Robert Pasquarelli defended his Ph.D. thesis last July, 2013. Robert wrote, "I have been in Hamburg, Germany at TUHH since December. I am here for about 2.5 more years. My project is thermal stability of photonic crystals. I didn't know any Germany when I started here. I took a few intensive courses and picked up the basic vocabulary and grammar. To make a decision to leave everything behind, go to a foreign country, and commit for 3 years was an interesting choice, but I had nothing tying me down so I could be spontaneous and adventurous. I sold my stuff in CO, drove back home to Pittsburgh, and visited my parents for couple weeks before I moved here last December. I get more vacation than I know what to do with so hopefully next year I will plan a bunch of trips."

Anthony Carestia '13 wanted to let us know how he's doing down in warm sunny North Carolina (PhD program at UNC Chapel Hill). One thing that he didn't factor in when he decided to attend UNC is that he'd have to wear pants all the time even when it's 80 degrees out and super humid and the teaching labs don't have AC! "I'm taking advanced organic and an organic/inorganic mechanisms class. I have to say that taking all the advanced classes at RIT really helped me out. I feel like it's given me an edge over most of the other people here," reports Anthony.

Where are they now? cont...

Ryan Walvoord '06 reports that he almost ready to defend his PhD thesis at UPenn. His 7th publication just got accepted, and he'll have at least one more solid 1st author one before he's done. He applied to Dr. Chris Chang's group at Berkeley, and, after an on-site interview and waiting a very nerve-wracking month, got accepted into the group. He couldn't be more excited. He'll be working on synthesis and application of chemical probes for monitoring biologically relevant species, either metals, or reactive oxygen/sulfur metabolites used in cell signaling.

Jessica Smith '07 will be defending her thesis on May 27th at the University of Rochester. Jessica has been working with Dr. Rudi Fasan.

Laura Herder BS '09, MS '11 recently passed her Doctoral Candidacy Examination at the University of Notre Dame. The chair of the College of Science at Notre Dame wrote to inform us that she did so in a "very convincing fashion". Laura is now one step closer to completing her doctorate!

MORE NEWS AND EVENTS

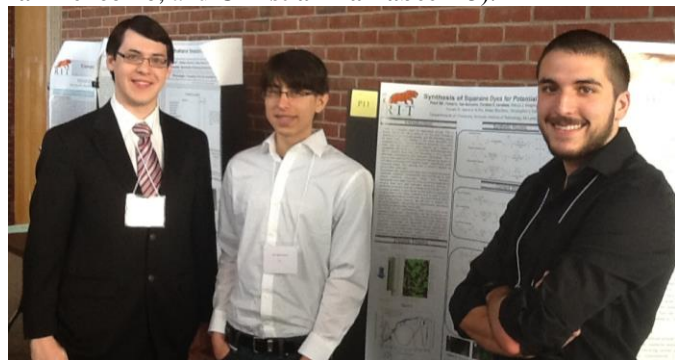
Dr. Lea Michel's group (shown below) presenting at the ASBMB meeting in Boston, MA, April 20-24, 2013

From left: **Juliana Shaw, Rachel Schmidt, Bethany Novick, Joy Snyder, John Bettinger**



ACS Undergraduate Symposium 2013

RIT was well represented at last year's Local ACS Section Undergraduate Symposium hosted by SUNY Brockport. This year, the ACS event will be hosted by RIT! Below, members of the Cody Research group present (from left: **Paul Fanara, Ian Bencomo, and Christian Larrabee '13**).



Eisenhart Award 2013



by Susan Gawlowicz

Love of learning makes chemistry professor at home in the classroom

Christina Goudreau Collison jokes that she has never left school. "I've never had a job in the real world," says Goudreau, associate professor of chemistry in the College of Science. "I went to college and then I went to graduate school and then I came here. I always say maybe I'll get a real job when I retire."

Retirement is a ways off for Goudreau, who joined RIT in 2003 as a lecturer, months before finishing her Ph.D. in organic chemistry from the University of Rochester. The following year, she accepted a tenure-track position and was granted tenure in 2009. During the spring of 2013, Goudreau received an Eisenhart Award for Outstanding Teaching for her talent in the classroom and laboratory.

Goudreau, a native of Manchester, N.H., caught the teaching bug early as an undergraduate at Colby College in Waterville, Maine. She enrolled in an organic chemistry class to satisfy her pre-medical school requirements, and didn't expect to like it. "I took organic chemistry and realized I was enjoying it," she says. "I was surprised because all I had heard was how it was a weed-out class. But the teacher I had was goofy and energetic and fun."

"Not every student is going to love organic chemistry," she says. "If I can get them to appreciate it; I'm fine with it. When someone makes a connection, it's exciting. I know I didn't do it for them, but I was on the journey with them."

Goudreau is exploring novel ways for her students to make those connections in the organic chemistry lab. She is collaborating with RIT colleagues Jeremy Cody, professor of chemistry; Tom Kim, professor of biochemistry; and Scott Franklin, professor of physics, and professors at Monroe Community College to revamp organic chemistry labs. Goudreau wrote a module beta tested at MCC requiring students to think about their experiments differently through group and individual activities.

The results from the first module, published in the Journal of Chemical Education in 2012, resonated with other educators, who sent positive emails and requests for additional modules.

Provost's Award for Excellence in Faculty Mentoring 2013



Last spring, our own Dr. Chris Collison was recognized for his mentorship efforts. The award was presented to him at a spring banquet with the faculty he mentored in attendance.

This award recognizes an RIT faculty member who has demonstrated an outstanding commitment to faculty mentoring by

actively helping non-tenured, tenure-track faculty in developing their career(s) at RIT by offering advice, feedback and guidance that reflects a deep understanding of their department, college and university.

The faculty member receiving this award embodies the spirit of RIT's values, honor code and diversity statement, actively engages in research and/or related scholarly activities, possesses a publication record that meets College standards, and receives consistently satisfactory/acceptable teaching evaluations. He or she also connects protégés to relevant internal and external networks, preserves their intellectual independence, and consistently maintains confidentiality.

Outreach in Chemistry- NYS STEP

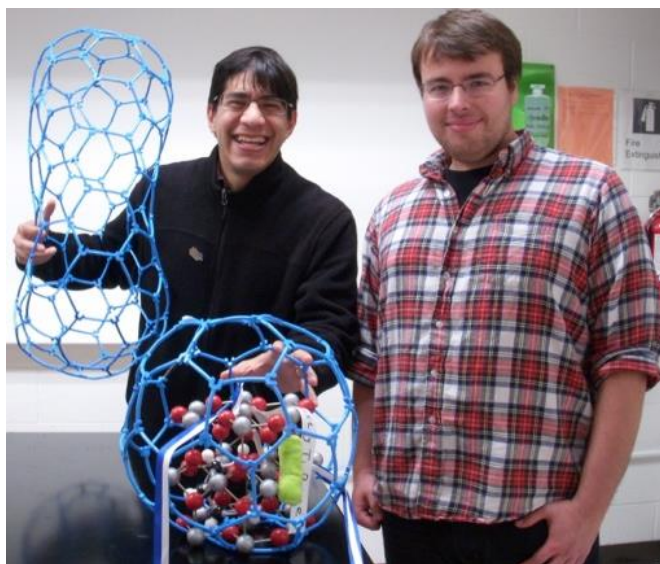
Dr. Michael Coleman reported on a special outreach project that he worked on with the Brothers of Alpha Chi Sigma Fraternity, Inc. The work resulted in a presentation:

Felton, Anthony*; Luft, MacKenzie*; Starks, Tremel*; White, Nyaiya*, **Brothers of Alpha Chi Sigma**; Coleman, Michael G., "Corrosion: An Environmentally Destructive Process", NYS STEP Science Poster Competition, 3/28/14 – 3/30/14, Albany Marriott, Albany NY.

MORE NEWS AND EVENTS



ASBMB student affiliates: Amazing Maize Maze, Fall 2013.



Dr. John-David Rocha and Ryan Capasse at ASBMB Halloween Party passing the now enormous trophy to the O'Handley group who won for "best costume".

Class of 2013

