

# chemistry *distillations*

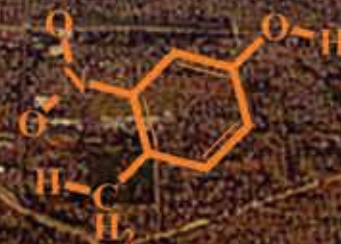
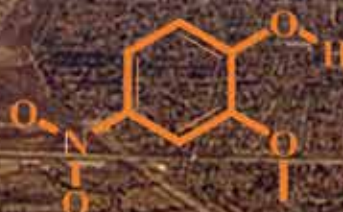
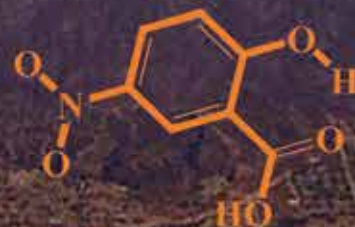
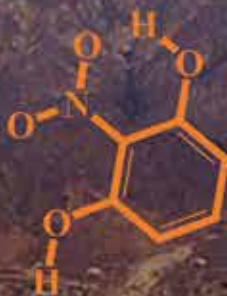
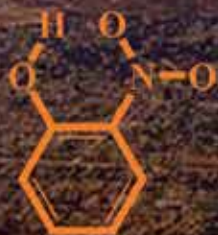
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$\text{NO}_x$   $\text{OH}$   $\text{NO}_x$   $\text{OH}$

*Breaking down*

## POLLUTION

- > brown carbon photolysis
- > reaction dynamics
- > atmospheric lifetimes



# Chemistry Faculty and Staff

## Current Faculty

**Chris Abelt**, *Chancellor Professor, organic*  
**Debbie Bebout**, *Professor, biochemistry*  
**Randy Coleman**, *Professor, biochemistry*  
**Elizabeth Harbron**, *Floyd D. Gottwald, Sr. Professor, organic*  
**Rob Hinkle**, *Chair, Professor, organic*  
**Nathan Kidwell**, *Assistant Professor, physical*  
**Lisa Landino**, *Professor, biochemistry*  
**Dana Lashley**, *Visiting Assistant Professor, organic*  
**Bill McNamara**, *Associate Professor, inorganic*  
**Tyler Meldrum**, *Assistant Professor, physical*  
**Jeff Molloy**, *Instructor and Director of Labs and Instruments, analytical*  
**Rachel O'Brien**, *Assistant Professor, analytical*  
**Bob Pike**, *Professor, inorganic*  
**J.C. Poutsma**, *Garrett-Robb-Guy Professor, analytical*  
**Jonathan Scheerer**, *Associate Professor, organic*  
**Beverly Sher**, *Senior Lecturer, organic*  
**Jordan Walk**, *Lecturer, organic*  
**Kristin Wustholz**, *Class of 1964 Distinguished Associate Professor, physical*  
**Doug Young**, *Associate Professor, bioorganic*

## Emeritus Faculty

**Gary DeFotis**, *Garrett-Robb-Guy Professor Emeritus*  
**Dick Kiefer**, *Professor Emeritus*  
**Steve Knudson**, *Professor Emeritus*  
**Dave Kranbuehl**, *Professor Emeritus*  
**Gary Rice**, *Professor Emeritus*  
**Bill Starnes**, *Floyd D. Gottwald, Sr. Prof. Emeritus*  
**Dave Thompson**, *Chancellor Professor Emeritus*

## Staff

**Janet Hopkins**, *Senior Lab Specialist*  
**Beverly Laws**, *Financial and Graduate Coordinator*  
**Susan Mulholland**, *Financial and Materials Manager*  
**DerHong Shieh**, *Senior Lab Specialist*  
**Claudia Smith**, *Admin. Coordinator*

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*For a digital version of this newsletter, please visit the W&M Chemistry website and click on Alumni & Friends  
(<http://www.wm.edu/as/chemistry/index.php>)*



Front Page: Research conducted in the Kidwell and O'Brien labs. Read about it on page 11.



## Chair's Letter



Since last year's newsletter, Chemistry has benefited from not only another incredible cadre of students, but also our extremely dedicated team of researchers, instructors, laboratory staff, and office personnel. Members of all of these groups are vital to our mission to offer the best academic education that we can while also offering a diverse array of research opportunities.

We were delighted that the college accepted our enthusiastic recommendation to promote Bill McNamara from Assistant to Associate Professor with tenure. Bill is currently on research leave and this will allow him to focus more intently on the scientific investigations and teaching enhancement projects for which he garnered a prestigious NSF CAREER Award ... and time to take a very slight breather from the exhaustive effort it took to earn his well-deserved promotion.

We are also delighted that Randy Coleman was promoted from Associate Professor to Professor. This distinction was long, long overdue -- especially given the number of research students he mentors in his work on modeling pathways of neurodegenerative diseases and his exceptional and enduring mark on teaching methods used by many other members of the department. Literally thousands of students and myriad others have benefited from Randy's talents.

As highlighted in the Faculty News section, yet another member of Chemistry was designated a Henry Dreyfus Teacher-Scholar by the Camille and Henry Dreyfus Foundation. What makes this award even more gratifying for us is that Kristin Wustholz joins a list of eight other department members who have earned this award since 1994. W&M Chemistry faculty members have now earned three more of these teacher-scholar awards than faculty in any other department in the country.

The chemistry department is proud to now have a chapter of the National Organization of Black Chemists and Chemical Engineers (NOBBChE). Visiting faculty member, Dana Lashley, spearheaded the effort and is taking three of the 20 chapter members to the national NOBBChE conference in Orlando to present their research. The group will also interact with local schools and other groups at W&M to give demos and provide information about chemistry, science in general and associated careers.

None of us would be able to secure grant money or pursue our research at W&M if not for our talented students -- students who continue to excel in so many ways. Senior Chris Travis is a Beckman Scholar, a Goldwater Scholar, a Monroe Scholar and received a Blanton Award from the Virginia Section of the ACS. Ruth Ann Beaver (2020) was also an "honorable mention" for a Goldwater Scholarship. Nine of our 2018 chemistry graduates were Monroe Scholars, three were members of Phi Beta Kappa, ten completed honors projects, nearly three-quarters completed ACS-Certified degrees, and 59 undergraduate students stayed to conduct summer research in 2018. Sophomore Lauren Mazur also became our first Beckman Scholar for the new grant. Please visit the "news" portion of the Chemistry website to read stories highlighting our outstanding students.

In addition to supporting individual student honors projects through the Roy R. Charles Center, kind and generous alumni also enabled us to provide scholarships to extremely talented and needy students. Donors further allowed us to support six of our undergraduate summer researchers, two Master's students, and present cash awards to our top graduating students and teaching assistants. Besides funding student research, we were able to purchase additional Vernier LabQuest data interfaces, and provide much-needed upgrades to instruments such as the x-ray diffractometer and a workhorse fluorimeter.

*Cont'd on page 4*

## Chair's Letter Cont'd

As for other academic news, our Fall 2018 enrollment in first-year general chemistry courses has exceeded 500 students for the very first time. Though we have had several years in which enrollment was around 450, this substantial increase is both welcome and challenging since we have only four rooms that serve all the lower-division instructional laboratories. In both the spring and fall of 2018, we added night labs because of high enrollments.

With so many students and researchers, we also continue to appreciate W&M's support for Emeritus Professors Gary Rice and Dave Thompson. Gary has been teaching General Chemistry I & II both during the year and summers while Dave has been vital for us to contribute extensively to the list of courses supporting the College (COLL) Curriculum. You may recall from last year's newsletter that the old general education requirement (GER) courses were replaced with ones that are more integrative and reach across academic disciplines. Dave has been teaching *Great Ideas* (COLL 150) and *An Essential Unity* as well as *Bodies and Science* (both COLL 300s). The latter course covers not only the great discoveries of our time but also the lives of those who made those discoveries.

As we progress through the current academic year, we are extremely proud of our current and former students. For me, the best part of being a professor begins with seeing our students learn about chemistry. It's not only a joy to see students grow while they're here, but also to see how well they do as they become highly respected professionals.

We are glad that so many of you chose to attend William & Mary. Our students have helped us become what is widely considered the best undergraduate chemistry program in the country. We will continue to strive for excellence and adapt as W&M and the chemical disciplines evolve. Thank you for your interest, news, and support. Best wishes to all!

*Rob Hinkle*

## Faculty News



**Bill McNamara** earned tenure this past year and was promoted to Associate Professor. He also received a prestigious Faculty Early Career Development Program Award (CAREER) from the National Science Foundation. Bill's research focuses on synthesizing and evaluating inexpensive iron-based compounds as electrocatalysts for use in the photochemical production of hydrogen gas from water. Such catalysts are crucial to making solar fuel cells affordable and readily available.

**Randy Coleman** was honored with the Graves Award for Sustained Excellence in Teaching during Commencement 2018. In 47 years of teaching, Randy has been an outstanding teacher



and mentor to thousands of students at William & Mary. He has also been an innovator throughout his career as demonstrated by his work developing an online summer course in biochemistry - the first fully online Arts & Sciences course at W&M. He continues to mentor many research students in a Commonwealth Health Research Board funded collaboration with Dr. Frank Castora of Eastern Virginia Medical School.



**Kristin Wustholz** has been named a Henry Dreyfus Teacher-Scholar. She was selected as one of eight professors in the nation to receive the prestigious award to support "scholarly research with undergraduates, as well as a compelling commitment to teaching." Kristin uses spectroscopic tools to identify materials that make up paints in colonial art. Recently her research helped to support the attribution of a Cézanne painting first identified by Muscarelle Museum of Art chief curator John Spike.



**J.C. Poutsma** received yet another grant from the National Science Foundation (NSF) to study intrinsic gas-phase properties of peptides. In collaboration with Old Dominion University and his students, J.C. will use thermochemistry, fragmentation mechanisms, H/D exchange and IRMPD spectroscopy in his research. Since arriving in 1999, J.C. has mentored 93 undergraduate research students and currently has two active NSF grants.

**Nathan Kidwell** and **Rachel O'Brien** are the recipients of a grant from the Jeffress Memorial Trust, which awards funds for high-impact and innovative interdisciplinary research. Rachel and Nathan will use the funds to analyze atmospheric brown carbon photolysis in the gas



and particle phases. This will allow the groups to better understand how sunlight breaks down atmospheric pollutants. Having two faculty members doing environmentally related research really helps us offer an array of projects that is extremely hard for other schools to match.

**Doug Young** is back to teaching after a productive sabbatical. Despite being on leave, he was instrumental in securing yet another Beckman Scholars' Program Grant for William & Mary. He is serving as co-PI with biology Prof. Margaret Saha (Biology) to manage this scholarship program, which provides funding for five research students over the next three years. The grant applications are by invitation only for this nationally competitive program, with only ten U.S. institutions receiving funding. Finally,



Doug was the undisputed winner of the college's annual Raft Debate!



Photo by Stephen Salpukas

**Beverly Sher** joined the Chemistry Department in February as a senior lecturer. Previously in the Biology Department, she teaches two freshman courses in the College Curriculum: *Atoms to Cells* (COLL 100) and *Emerging Diseases* (COLL 150). She also serves as the college's advisor to a vast number of pre-medical, pre-dental, pre-veterinary, and pre-pharmacy students.



**Randy Coleman** and **Beverly Sher** were selected to teach their respective COLL 150 courses for the new Promise Scholars' Program ([www.rbc.edu/promise-scholars-2](http://www.rbc.edu/promise-scholars-2)) at the Richard Bland College (RBC) of William & Mary. Each will be teaching their course at the RBC campus in Petersburg, Virginia, and advising a cohort of students to help them with the transition from a two-year program to a four-year institution. RBC and W&M share a governing board and students from RBC who meet specific credit hour and GPA requirements are guaranteed admission to W&M. This can provide a route to a bachelor's degree that is much more economical than spending all four years at W&M.

# Destinations of 2018 Graduates

## Chemistry Majors

<b><i>Saman Abdulkadir</i></b>	Not reported
<b><i>Annalise Ajmani</i></b>	Scribing and working, then medical school
<b><i>Elizabeth Amato</i></b>	Taking Patent Practitioner bar exam and planning to work as a patent examiner for USPTO
<b><i>Rachel Anderson</i></b>	Gap year, applying to physical therapy graduate school
<b><i>Brett Barden</i></b>	Graduate studies in chemistry at Ohio State University
<b><i>Lydia Boike</i></b>	Ph.D. studies in chemistry at University of California Berkeley
<b><i>Sarah Bredenkamp</i></b>	Ph.D. studies in organic chemistry at University of California Irvine
<b><i>Sophia Bunde</i></b>	Medical school at the University of Pittsburgh
<b><i>Anna Do</i></b>	Dental school at West Virginia University
<b><i>Margaret Duval</i></b>	Research assistant at a hospital, applying to medical school
<b><i>Tristan Elmore</i></b>	Working as an ER scribe, then medical school
<b><i>John Ford</i></b>	Not reported
<b><i>Wade Fritzeen</i></b>	Professional school
<b><i>Courtney Frost</i></b>	Not reported
<b><i>Alison Gerhard</i></b>	Graduate studies in chemistry at William & Mary
<b><i>Theresa Gozzo</i></b>	Ph.D. studies in analytical chemistry at University of Washington
<b><i>William Kim</i></b>	Working as a medical scribe and applying to medical school
<b><i>Tyler Larson</i></b>	Graduate studies in analytical chemistry at University of North Carolina Chapel Hill
<b><i>Joseph Lee</i></b>	Not reported
<b><i>McKenzie Mott</i></b>	Not reported
<b><i>Zachary Nimmo</i></b>	Medical school at the University of Pennsylvania
<b><i>Matthew Oplinger</i></b>	Medical school at Eastern Virginia Medical School
<b><i>Deborah Owusu</i></b>	Dental school at Virginia Commonwealth University
<b><i>Changen Pan</i></b>	Gap year, then medical school
<b><i>Wint Phyo</i></b>	Pharmacy school at Virginia Commonwealth University
<b><i>Mona Rasooly</i></b>	Dental school at the University of New England
<b><i>Chandan Reddy</i></b>	Not reported

## Chemistry Majors Cont'd

- Hee Jeong Roh** Not reported
- Simran Rohatgi** Developing science tests for K-12
- Megan Screen** Graduate studies in inorganic chemistry at University of California Irvine
- Somya Shankar** Clinical research coordinator at Emory University
- Daniel Speer** Graduate studies at University of California Davis
- Matthew Sturner** Not reported
- Nita Takanti** Ph.D. studies in chemistry at Purdue University
- Katherine Wahlbeck** Ph.D. studies in analytical Chemistry at University of Massachusetts Amherst
- Matthew Wang** Not reported
- Amelia Wheaton** Ph.D. studies in chemistry at University of Wisconsin Madison
- Ian Wilkinson** Graduate studies in nuclear engineering at Colorado School of Mines
- Shichuan Xi** Graduate studies at Northwestern University
- Paul Young** Scribing, then medical school
- Justin Yu** Ph.D. studies at University of Maryland College Park

## Masters in Chemistry

- Nicholas Angello** Ph.D. studies in chemistry at University of Illinois Urbana-Champaign
- Shelle Butler** Applying for jobs
- John Halonski** Applying for industry jobs
- Matthew McCarron** Continuing research in chemistry at William & Mary
- Nicholas Race** Working as an analyst in the metals group of Enthalpy Analytical
- Mary Rooney** Ph.D. studies in applied science at William & Mary
- Sara Sargent** Ph.D. studies in chemistry at Virginia Commonwealth University
- Zachary Smith** Applying for jobs



# Donations to the Chemistry Department 2017 – 2018

## THANK YOU!

We are extremely grateful to all the donors who contribute to the department. Your generous gifts greatly enhance our programs and research activities, including funding many equipment needs allowing us to provide state-of-the-art facilities and create valuable research opportunities for our students.

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*Jan M. Stouffer '80*  
*Doris Scheffel Symonds '78*  
*John H. Symonds*  
*Jean Kumiko Takeuchi M.A. '76*  
*Jenna A. Tan '16*  
*Renee Taylor*  
*The Pittsburgh Foundation*  
*Isabelle J. Thibau '11*  
*James Thoburn*  
*Mary E. Thoburn*  
*Bridget M. Thompson '17*  
*David W. Thompson*  
*Elizabeth T. Thompson '19*  
*Jock B. Thompson*  
*Karen Thompson*  
*Sandra Poteat Thompson '90, M.A. '91*  
*Mary V. Thur*  
*Stephanie N. Till '15*  
*Ashley Tiller*  
*Sally Tiller*  
*Brandon Timbrook '17*  
*Andrew A. Tran '11*  
*True North Foliar*  
*Colleen M. Truskey '17*  
*Noriko Tsutsui*  
*Quentin Ullrich '17*  
*Gale Updike*  
*Kenneth R. Updike '76*  
*Laura Powell Vachet '94*  
*Richard W. Vachet '93*  
*Christopher J. Vandebussche '01*  
*Diego A. Vicente '05*  
*Gonzalo C. Vicente '94*  
*Sarah Robinson Vicente '05*  
*Wendy Sauer Vicente '94*  
*John R. Walk '77*  
*Ellen Moore Walk*  
*Cynthia Watson*  
*Liz Weech*  
*Mary Kay R. Wenk*  
*Walter R. Wenk Jr. '66*  
*Kathleen A. Whalen '89*  
*Olivia C. White '18*  
*Joan W. Whitesell*  
*Charles A. Wilkes '76*  
*Erin Williams*  
*Russ Williams*  
*Catherine F. Wise '15*  
*Daniel Wise*  
*Natalie Z. Wong '14*  
*Erin Morris Wysong '12*  
*Thomas P. Wysong '12*  
*Ivana V. Yang '96*  
*John C. Yang '95, M.A. '96*  
*Jonah Yesowitz '19*  
*Douglas D. Young*  
*Stephen Young*  
*Ginny Youngblood '77*  
*Bizhan M. Zarnegar '66*  
*Phoebe A. Zarnegar*  
*Bignan Zhang*  
*Matthew B Zimmt*

### How to Give

The Chemistry Department has several funds listed on our Support webpage at [www.wm.edu/chemistry](http://www.wm.edu/chemistry). The Chemistry Fund (#2967) is an unrestricted fund that helps us to be flexible and apply funds to areas with greatest needs.

One-time, regular or annual contributions can be made online or by mail. To contribute by mail, make your check payable to The College of William & Mary. Please be sure to note the fund and number to which you are designating your gift in your check's memo area and send it to:

The College of William & Mary  
P.O. Box 1693  
Williamsburg, VA 23187-1693

## Endowments

Students and faculty in the Chemistry Department benefit from the generosity of donors who have established permanent endowments that further our academic mission. Annual income from endowments is essential to supporting scholarships and student research, rewarding academic achievements, sustaining the Chemistry Seminar Program and helping us buy new equipment. The department's faculty and students are extremely grateful to be the recipients of such generosity through the following funds:

*Debra L. Allison Summer Research Endowment*  
*Scott H. Andrews Undergraduate Teaching Assistant Endowment*  
*Dr. Alfred R. Armstrong Scholarship Endowment*  
*Marga Larson Bales Scholarship Endowment*  
*Patricia Pound Barry Scholarship Endowment*  
*James T. & Evelyn A. Cranmer Memorial Summer Research Endowment*  
*Ferguson Endowment*  
*Charles E. Flynn '34 Memorial Endowment*  
*Robert L. Greene Summer Research Endowment*  
*William G. Guy Prize Endowment*  
*Hillger - Roberts - Kranbuehl Applied Chemistry Seminar Endowment*  
*Kranbuehl - Thompson Graduate Fellowship Endowment*  
*Gene J. & Frances E. Schiavelli Memorial Endowment*

## Alumni Panel

Several alumni volunteered to sit on a panel during Homecoming 2017 weekend to discuss their career paths with current chemistry majors. Their advice was very valuable and appreciated.



From left: Melissa Sampson '97, Becky Casaubon '97, Deana Miller '07, Ginny Youngblood '77, Jenine Maeyer '02 and Jonathan Maeyer '99

## Faculty Feature

**Nathan Kidwell** and **Rachel O'Brien** are the two newest chemistry faculty members at William & Mary. Both atmospheric chemists, Nathan specializes in physical chemistry and Rachel in analytical chemistry. Combined, they supervise the research of 20 students, many of whom are working on a joint project funded by the Jeffress Trust Awards Program in Interdisciplinary Research to investigate the removal rate of pollutants in the atmosphere.

Professor Kidwell utilizes laser-based methods to explore fundamental chemical mechanisms such as gas-to-particle conversion or aerosol



formation. A few of the greatest uncertainties impeding efforts to predictively model aerosol formation are the first few hydrogen

bonding and photolysis events involved in nucleation. To address this knowledge gap, the Kidwell group uses laser spectroscopy and imaging methods accompanied by high-level theory and reaction modeling to mimic solar processes in the atmosphere. With funding from the Jeffress Trust Awards Program, the Kidwell group is mapping the solar decomposition pathways and atmospheric lifetimes of the major light-absorbing molecules found in “brown carbon” aerosols.

Furthermore, the Kidwell group recently received funding from the American Chemical Society – Petroleum Research Fund to develop a molecular-scale understanding of energy-related chemistry. The aims of this project are to characterize chemical reactions involving radicals and ambient molecules in combustion environments to facilitate optimization of next-generation engine technologies. This new knowledge will aid in modeling the combustion of traditional fuels and proposed new biofuels to improve performance in energy-efficient engine designs.

Beginning his third year at William & Mary, Professor Kidwell is continuously impressed with students' dedication and creativity in the research laboratory and in the classroom. “The most gratifying experiences as a Professor have come when students have that ‘aha!’ moment – either if it is figuring out a problem or making a new discovery.”

Professor O'Brien's group characterizes the composition of aerosol particles, small liquid or solid particles suspended in the air. Aerosols are a major worldwide health concern and also have large impacts on the climate. For the Jeffress



Grant, the O'Brien group has started tackling photodissociation of brown carbon in clouds and aerosols to provide better estimates for their lifetime in the atmosphere. Professor O'Brien's group also analyzes organics in aerosols collected in major urban regions around the world. This international collaboration will help develop a better understanding of aerosol exposure in polluted cities.

Humans spend ~90% of their time indoors, so students in Professor O'Brien's group are also focused closer to home, studying material on indoor surfaces. This project, funded by the Alfred P. Sloan Foundation, involves the development of an indoor surface chemical extractor.

The balance between teaching and research at William & Mary was a major attraction for Professor O'Brien. Finishing her first semester teaching *Advanced Analytical Chemistry*, Prof. O'Brien noted “Every time I raised the bar in the classroom, the students worked hard to meet it. I am so impressed by their work ethic and their passion for learning.”



## News of Our Alumni

Please continue to keep us up to date by sending us an email to [chemistry@wm.edu](mailto:chemistry@wm.edu), contacting your favorite professor or filling out the form on our website at [www.wm.edu/chemistry/sendnews](http://www.wm.edu/chemistry/sendnews). You can also send us a note to the address on the back of the newsletter or join the “William and Mary Chemistry Alumni” Facebook interest group.

### Class of 1977

Margaret Schott attended our Homecoming Open House in 2017. She wrote in our guest book: “I assisted my boss, Sir Fraser Stoddart in his winning of the Nobel Prize in Chemistry in 2016! (Northwestern University).”

### Class of 1987

**Phil Protz** and his spouse Judy thanked us for holding the Homecoming Open House every year and “especially for professors current & semi-retired who come out to welcome us home!”

### Class of 1992

**Christopher Almond** attended the 2017 Homecoming Open House and wrote in our guest book that he loves the Greenhouse. He is a faculty member in medicine at Stanford.

### Class of 1993

**Melissa (Bunin) Rooney** sent us an update on her career and life: “After graduating from W&M in 1993, I received my Ph.D. in Chemistry from the University of North Carolina (under electrochemist R. Mark Wightman) and married Michael Rooney (University of Richmond, 1993) in 1998, then did a 3-year postdoctoral fellowship at Monash University in Melbourne, Australia (under electrochemist Alan Bond). After my daughter (now 16YO) was born in 2002, my husband and I returned to Durham, NC, as dual Aussie-US citizens. Since then, we have had two

boys (now 14YO and 7YO), and I have authored three children’s books. The first two books were the result of a conversation with my Ph.D. advisor. After several attempts of trying to get me back in his lab, he made me an offer he thought I couldn’t refuse, forcing me to finally tell him (and myself) that I did not want to return to academic research \*or\* push pharmaceuticals through the FDA. When he asked me emphatically what I was going to do with my Ph.D., I told him meekly that I always wanted to write children’s books (I double-majored in English and Chemistry at W&M). He insisted that I do so incorporating my Chemistry degree and gave me a deadline. Later that year, I self-published \*Eddie the Electron\*, and eight years later \*Eddie\* was acquired and re-published by Amberjack Publishing (headquartered in Idaho). Two years after that, Amberjack published the sequel, \*Eddie the Electron Moves Out\* (dedicated to W&M professor, department Chair emeritus, and all-around-great-person Gary Rice). My third children’s book, \*The Fate of the Frog\* is being released in hardback this summer. This book is written in anapestic tetrameter, in homage to Dr. Seuss, and addresses Sustainability and the Importance of Water Resources (for more information, see [www.melissarooneywriting.com](http://www.melissarooneywriting.com)). My more reliable source of income comes from doing contract scientific editing for \*American Journal Experts\*, here in Durham, while my husband is Senior Director of Analytics at a pharmaceutical company. I take literary editing jobs from time to time, and I love doing hands-on readings of my books (incorporating related STEM activities) at schools, museums, libraries, book fairs, and science festivals (anywhere I can) and sharing the importance and the \*magic\* of science (which I only recently rediscovered, myself) with young people. My English-Chem experience at W&M and particularly the influence of Gary Rice (who kept Chemistry \*fun\* and \*engaging\* and convinced me to major in the subject) has molded my life

in ways I could never have anticipated when I excitedly moved into my college dorm room. Thank you.”

#### Class of 1995

**Michael Amendola** attended the 2017 Homecoming reception and said that he was “just happy to be here!”

#### Class of 1997

**Chris Adams** is currently working at Squire Patton Boggs as an Intellectual Property of counsel. He focuses on patent prosecution and litigation.

**Becky Casaubon** came to our Homecoming Open House in 2017 and was impressed by the beautiful new building.

#### Class of 2007

**Deana (Hadley) Miller** is a pediatric hospitalist in Wilmington, NC. She and her husband have a daughter, Helen, who was born in 2016.

#### Class of 2008

**Ian Webb** started as an Assistant Professor at Indiana University Purdue University Indianapolis (IUPUI), Department of Chemistry and Chemical Biology, in August 2018.

#### Class of 2009

**William Gabler** wrote “I (finally) finished my PhD in Fiber and Polymer Science at North Carolina State University and I will be working as a support specialist for Shimadzu Scientific Instruments.”

#### Class of 2012

**Ting Zhang** received his Ph.D. from Ohio State last spring. He has accepted an offer as an analytical

scientist at Pharmaforce, a pharmaceutical company in Columbus, OH, doing method development - primarily HPLC stuff.



Ting Zhang with his research advisor, Professor Heather Allen.

#### Class of 2014

**Alex Thomson** received his M.Sc. in chemistry from Uppsala University in June 2017.

#### Class of 2015

**Alexander Hoffman** writes that he is pursuing a Ph.D. in Chemical Engineering at the University of Florida. He says that his notes from Prof. Bagdassarian’s and Prof. Wustholz’s physical chemistry classes are invaluable.

**Taylor Lain** is now a first-year student at the William & Mary Law School.

#### Class of 2016

**Zach Hasan** wrote in the guest book at Homecoming 2017 that he “had acid-base problems on my last Med School exam!”

**Robi Rahman** admired the new part of the Integrated Science Center when he came to the Homecoming Open House in 2017 and is jealous that current students get to take classes in this building.

#### Class of 2017

**Jeffrey Gehring** is in clinical research in hepatology at Indiana’s Medical School.

# Homecoming Open House 2017

Another Homecoming Reception and another great turn-out of alumni! We took lots of pictures but somehow missed Michael Amendola '95, Laith Dahiyat '97, Kaustuv Chakrabati '97 and Shawn Mulvaney '97 with family.



Alyssa Pence '17 with guest and Rob Hinkle



Becky Casaubon '97 and friend



Brent Justus '97 with spouse Jada



Bill McNamara, Sonic Cheon '17 and Josh Tubb '17



Melissa Sampson '97, Margaret Schott '77, Bill McNamara and Doug Young



Chris Abelt, Alex Zestos '07 and fiancé



Elizabeth Harbron and Ben Zhang '17



Dick Kiefer, Daniel Sheehy '77 with spouse Leona and Randy Coleman



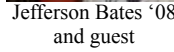
Eugene Aquino '88 with nephew



Dick Kiefer and Alex Thomson '14



Jacob Robins '16, Jill Williamson '16 and Kristin Wustholz



Phil Protz '87



Chris Boggs '97 and family



Leslie Sombers '97 and Debbie Bebout



Kevin Roche '82 and spouse



Jonathan '99 and Jenine '02 Maeyer and family



Robi Rahman '16



Lisa Landino and Sarah Vicente '05



Margaret Schott '77, Dick Kiefer and Christopher Almond '92



Randy Coleman, Heather Creswick '92 and family



Sara Sargent '17 and Dick Kiefer



Bob Pike, Peter Graham '00 and guest



Josh Tubb '17, Nick Cipolla '17 (NSCI) and Bill McNamara



Doug Young and Jeffrey Gehring '17



Zach Hasan '16 and Lisa Landino



Blair Williams '01 with spouse Melissa



Debbie Bebout, Katie Kaku '97 and Becky Casaubon '97



Sonic Cheon '17 and Christina Howard '17



Kristin Wustholz and Gerardo Ayala '16



Diego '05 and Sarah '05 Vicente, Elizabeth Harbron, Carey Bagdassarian and their children



Sophie Padilla '19



Chris Adams '97 and Chris Boggs '97



Elizabeth Harbron and Deana Miller '07 and family

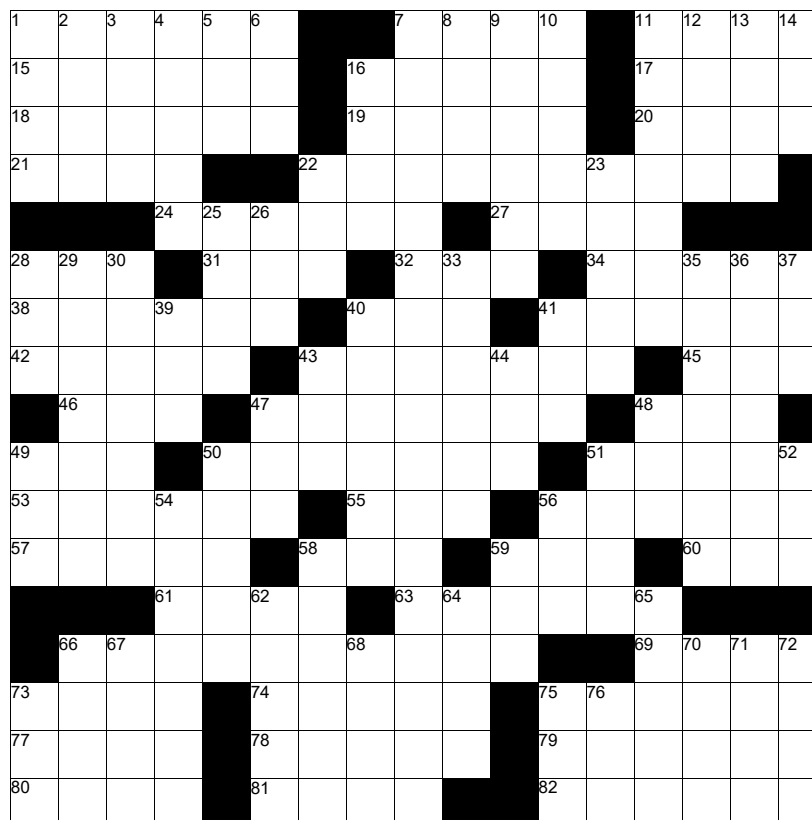


# Chemistry Puzzle by Robert Pike

On Second Thought... Robert D. Pike

## ACROSS

1. Response
7. Nickname for Francisco
11. A "Friend"
15. Rough
16. Make butter
17. Nevada city and county
18. Fluids that govern personality?
19. Fragrant flowering shrub
20. Blood vessel
21. Tied
22. Nuclear reactions in a beaker?
24. A cool treat in Italy
27. Oolong and Darjeeling
28. Hoover or Aswan
31. Title in Spain
32. Eavesdrop
34. Allowable
38. Ear infection
40. Ha ha
41. Affix
42. Barrel component
43. Homo species
45. Famous VA family
46. Fit \_\_\_ fiddle
47. Occult science?
48. Take at gunpoint
49. Phone i.d. card
50. They support the team
51. Made out
53. Tough glossy paint
55. Taxing grp.
56. Fix an electrical device
57. Benefit
58. C&EN publishing Org.
59. Industrial tub
60. Movie-making techn.
61. Military color
63. Faked
66. Fire substance?
69. "The Thin Man" dog
73. A soft cheese
74. Word group with a specific meaning
75. Heavenly substance?
77. Cal. \_\_\_\_, San Luis Obispo univ.
78. 50's Comedian Bruce



© Literate Software Systems

79. Pilfers
80. Backs of boats
81. To be (Latin)
82. Get ready to ride, with "up"

## DOWN

1. Hurt
2. New (Fr. abbrev.)
3. Identical
4. Possible 1 across outcome
5. Magnetic techn. used with radicals
6. \_\_\_ ipsa loquitur
7. Ultimate goal in 47 across?
8. \_\_\_ Lang Syne
9. Wily
10. At an opportune moment, with "right"
11. Consider again
12. Margarine
13. Scrape a knee
14. Boy child
16. Coagulate
22. It's called "tin", but is made of steel
23. Ionic compounds
25. Ms. Falco of "The Sopranos"
26. Spanish article
28. Windows precursor
29. Reaches a certain status
30. Vapors that influence health?
33. Tool for pulling
35. Heat substance?
36. Lettuce that might sink a ship
37. Popeye's middle name
39. Federally-owned power corp.
40. An alpha hydroxy acid
41. It doesn't matter which one
43. \_\_\_-mo
44. From gamma to radiowaves (abbrev.)
47. 90s ISP
48. Uncooked
49. Irish, Coral, or Yellow
50. Old-school
51. Celebrate
52. The Roman gods
54. Pieces with segues
56. Old garment
58. Remains with
59. Delivery vehicle
62. Quick of mind or body
64. Japanese toy maker
65. Checked the C-14 content
66. Faculty memb.
67. Sword handle
68. Misdeeds
70. Sport fish
71. William, who had his own overture
72. British slang for 75 down
73. Plastic additive of concern
75. Balaam's talking conveyance
76. Airport info.



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Department of Chemistry

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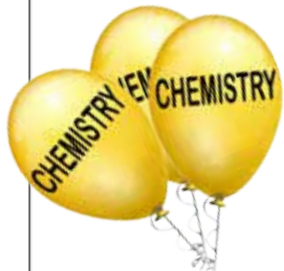
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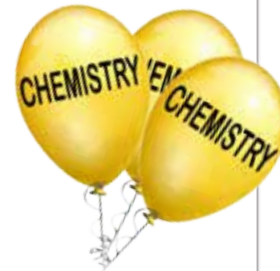
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## INTEGRATED SCIENCE CENTER HOMECOMING OPEN HOUSE

The Chemistry Department would like to invite you to an ISC Homecoming Open House with all the departments and programs housed in the Integrated Science Center: Chemistry, Biology, Psychology, and Neuroscience. The Open House will take place on



Saturday, October 20, 2018, 10 am – 12 pm  
in the first floor Atrium of the new ISC 3.



You can email us at [chemistry@wm.edu](mailto:chemistry@wm.edu) if you want to let us know that you are coming. Even if you're unable to come, we would still like to hear from you!