



*In Conjunction with the American Chemical Society
Student Affiliates at the University of Pittsburgh*



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ACS Editor Goodbye Letter 2017

Dear fellow graduates and chemistry enthusiasts:

The time has come for us to put down our chemistry textbooks and modeling sets and pick up our graduation caps and gowns for some of us or for all of us, a magnifying glass. As Greek philosopher Socrates once said, "The unexamined life is not worth living." With each closing chapter of our lives, I think we grow in character when we stop to reflect on what made this year special, what challenged us, and what we learned about ourselves as a result of others.

I do not know about you, but one of the many things that convinced me to become a Chemistry major was the incredible faculty in the department. From day one, it became obvious that these people had not only a passion for scientific knowledge and learning but also a desire to get to know students on an individual basis – not just on a name-by-name basis but one that was formed on understanding our aspirations and goals for the future. This is what makes the Chemistry Department unique. We all share a love for science, but also wish to seek out opportunities outside of the classroom to better the world around us. Whether this means helping prepare gift bags for veterans with Dr. Ward, participating in National Chemistry week at the Carnegie Science Center, serving as a mentor for high school students during Saturday Science, or joining George on a trip to St. Rosalia's School to work with elementary school students on chemistry experiments, the opportunities to participate in outreach here are abundant.

Although college is usually advertised as a time to find yourself by turning inwards, Pitt's chapter of the ACS challenged me to actively seek out opportunities around Oakland to give back in ways that did not rely on academics or my own individual performance. I know I can also speak for others when saying that the Chemistry Department as a whole (and more specifically Pitt's chapter of the ACS) were formative in my undergraduate career. Although I am not very qualified to give advice on a graduate's future, I want to encourage any young person that still has some time left at Pitt to take advantage of these wonderful opportunities! They are invaluable ... and far more impactful than the fleeting feeling of a "good" exam score in a Chemistry class.

When reflecting on these experiences, I was reminded of Paul Kalanithi's memoir *When Breath Becomes Air*. As this young neurosurgeon battled the diagnosis of terminal lung cancer in 2013 and came to terms with his illness, he emphasized that, "Human knowledge is never contained in one person. It grows from the relationships we create between each other and the world, and still it is never complete." May we be people who not only seek to uncover scientific truth and ask the question what should we do in this world, but also individuals who question the story we are a part of as a result of the humans around us.

We have been very well equipped during our time here in Pitt's Chemistry Department. All the best as you embark upon your next journey in life.--Juli Buchwald-*Newsletter Co-Editor*

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Congratulations *to our 2017 Spring Term Award Winners*



The Esther and Tobias Dunkelberger Memorial Scholarship.....Jonathan M. DeLiberty

The Organic Division Undergraduate Research Fellowship.....Molly Gallagher

The McKeever Summer Undergraduate Research Fellowship.....Brock M. Nelson

*The Teplitz Memorial Scholarship Ryan D. Gilbert
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*The Rita R. and David A. Rossi, Sr. Scholarship Caitlyn Choe
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*The Richard F. Zarilla Award.....Claire C. Chu
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The Silverman Prize.....Cindy H. Jiao

The American Institute of Chemists Award.....Merline M. Paul

The SACF College Award.....Andrew V. Friedman

*The Mary Louise Theodore Prize.....Julianna E. Buchwald
Ronald T. Debiec
Vivian J. Feng
Cara E. Maloney
Paige Moncure
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Katrina L. Sciarrone*

The Phillips Medal Viktor C. Polites



Green Chemistry



by: Andrew Warburton, Green Chemistry Contributor

Hello all! You're almost done with the semester! Just power through these last couple of weeks, study for a few finals, and then you're free to embrace the joys of summer.

It breaks my heart to say that this is the last Green Chemistry article of the semester. To my loyal readers who remind me of my grammatical and spelling errors, thank you! To those who are just seeing this for the first time, I hope you stay with us until next semester!

Instead of writing about current issues in the world – which many of you already know of since bad news gets more views than good news – I would like to outline a few exemplary feats that we as a species have accomplished to keep our world safer and cleaner.

One of the great accomplishments in nature was taking the Giant Panda off the endangered lists.¹ Although the giant panda is still considered vulnerable, its population is much healthier than before. Few conservation measures have been as intensive or high profile including increasing the number of panda reserves, protecting forests (such as reforestation and banning logging in panda habitats) and creating “corridors” so isolated wild panda populations can mix and strengthen the gene pool. Anti-poaching patrols, and moving humans out of reserves also helped preserve their numbers.

Another huge improvement is ocean rubbish cleanup. In 2012, there was more plastic in the ocean than there were fish. There was the famous island made from rubbish floating in the Pacific Ocean (dubbed the Garbage Patch) that weights 7 million tons, is twice the size of Texas, and is nine feet deep.² However, recent efforts from a 22-year-old entrepreneur have taken place and the garbage in Pacific Ocean is expected to be reduced by 40% this year.³

In terms of overseas news (did you notice the cheesy segue), India planted 50 million trees in 24 hours with the help of over 800,000 volunteers.⁴ China has banned all ivory trade in the country to shut down the world's largest ivory market.⁵ Canada signed an agreement to protect over 85% of the Great Bear Rainforest – the world's largest temperate forest spanning over 6.5 million hectares – from logging. An owl nature reserve starts talk of peace between Palestine, Israel, and Jordan after years of dispute and war.⁷ Back at home, a NASA study confirms that biofuels reduce jet engine pollution by as much as 50 to 70 percent, diminishing the airline carbon footprint in the near future.⁸

Wow. That was a lot of good news! So, where do we go from here? The optimistic readers will see this as a sign of relief, that we're finally doing something right and that all will be well. The pessimistic viewers will take it with a grain of salt and say that I didn't touch on rising ocean temperatures, rainforest deforestation, increased atmospheric CO₂ levels, etc. Both views are valid and should be weighed equally. I took the liberty of sharing these environmental success stories because it shows how we can make a difference to help our fragile environment. Although we haven't been dealt the greatest hand and we will all have to make sacrifices in our lives, the results will be astounding and worth it. I promise. With that, I want to end this article with my favorite quote to inspire each of you to go out and do something great.

“The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails” – William Arthur Ward