Newsletter for Senior Chemists

JULY 2018

A Special Welcome from the SCC Chair

Thomas Beattie gained his PhD in Physical Organic Chemistry at The University of Wisconsin. His career has been mainly spent working in early stage drug discovery, and he currently consults in the biopharmacy area. He has served on the Senior Chemists Committee (SCC) for several years, and is now the SCC chair. His work on the SCC has included planning the very successful series of Senior Chemists Breakfasts held at National Meetings, and finding speakers for that event. He lives in San Diego and is a member of the San Diego Local Section.

Welcome again to the Senior Chemists Committee (SCC) Newsletter! Much has transpired since my last message and SCC has been busy on many fronts.

In March, at the ACS National Meeting SCC Breakfast in New Orleans, Dr. Calvin Mackie, CEO of Channel Zero Group, LLC and an award-winning mentor, inventor, author, and entrepreneur in the New Orleans community, gave an inspirational talk. He discussed his efforts to engage communities and policymakers about science, technology, engineering, and math (STEM) opportunities and how to get involved in your own community. His initial work began with his son and his son's friends, and it has blossomed into working with more than 12,000 young people on STEM-related projects.

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Thomas R. Beattie and Calvin Mackie

We are working on another top-notch breakfast speaker for the upcoming Boston National ACS Meeting SCC breakfast scheduled for Tuesday, August 21 at 7:30 a.m. at the Sheraton Boston Hotel, Republic A/B room. Tickets are available via ACS Meeting Registration. Also, in Boston we are co-sponsoring with the ACS Polymer Chemistry Division a "History of Polymer Chemistry Symposium" with six speakers on Wednesday, August 22 at the Westin Boston Waterfront Hotel, Otis Room from 1:00-4:30 p.m., and a networking event with students, sponsored jointly with the Younger Chemists Committee, on Monday, August 20 from 2:00-4:00 p.m. at the Boston Convention & Exhibition Center, Exhibit Hall B1.

Immediately after the Council Meeting concludes at the Boston National Meeting, SCC will engage in two follow-up sessions to the Strategic Planning Session SCC held three years ago when we wrote our Mission and Vision Statements and created goals to accomplish. We will critique our progress and modify our upcoming plans as necessary.

At this time of year, ACS Local sections are planning their tributes to honor section members who have achieved 50-, 60- and 70- years of ACS membership and service. Based on the successful implementation of 70- year awards last year, in order to play catchup this year only, SCC and Membership Affairs will be honoring members for 72-, 73-, 74- years et cetera of service (current 71-year members received their 70-year awards last year). We want to make sure all eligible members are honored. Watch for your Local Section's announcement and join in the celebration if you can.

We are pleased that the number of section nominations for the two SCC sponsored ChemLuminary Awards has increased again this year. Our subcommittee has already selected the finalists. If you plan to attend the Boston National Meeting, please join us for the awards program on Tuesday, August 21 at the Boston Park Plaza, Grand Ballroom A/B at 9:00 p.m.

One important SCC project completed recently is the total revamping of our SCC website at ACS.org. It required a great deal of effort to complete, but the results have made it worthwhile. Website traffic already has increased. The revised website is easier to access, more extensive, and very importantly, will increase active interaction with you and all our senior chemist constituents.

Enjoy this current newsletter. Comments sent to seniorchemists@acs.org are always welcomed. If you enjoy this edition, we encourage you to contribute to an upcoming edition. And please try out our new website at www.acs.org/seniorchemists!

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THE SENIOR CHEMISTS COMMITTEE
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Share Your Expertise **Help The Next Generation**

The following four articles are a part of our on-going series about the many and varied activities of (mostly, but not all) retired senior chemists. We are always glad to hear from other seniors about some of the activities they do. Please send your article, or a suggestion for an article, to the Senior Chemists Committee INBOX ✉ (Editor)

Volunteering to Help People File Their Taxes *by Roger Bartholomew*

Roger Bartholomew, PhD, did his undergraduate work in chemistry at Imperial College, University of London, UK, and graduate work in physical chemistry, also at Imperial College. He followed this with a postdoctoral fellowship at the National Research Council of Canada, Ottawa. He and his wife moved to the United States at the end of 1963 to work at the Corning Glass Works (now Corning Inc.) Research labs. He spent 36 years with the company working on chemical strengthening of glass (now Gorilla Glass) and in the area of fiber optics. He is a founding member of the Senior Chemists Committee and has been a Councilor for the Corning Section for 43 years. In addition, he has been elected a Fellow of both the American Chemical Society and the American Ceramic Society.

There are two organizations with programs designed to assist tax filing for individuals. AARP (formerly American Association of Retired Persons) runs a program called Tax Consulting for the Elderly (TCE) and United Way has a program called VITA (Volunteer Income Tax Assistance). Both programs are sponsored by the IRS through appropriate methods. So, what qualifications do you need to become a certified volunteer? You do have to be certified by the IRS, and how do you do that? There is an extensive training program, usually starting in late October, with testing at the end of the year. There are several levels of certification: Basic, Advanced, Health Savings Account, Military, and International, as well as a test to be a certified Quality Reviewer. All income tax completed by one preparer must be checked by a second qualified reviewer. A check of the form is imperative as it is easy to mistype a name, address, or even a social security number. Finally, preparers must pass an ethics test to make sure they are aware that they cannot receive any monetary or other reward (not even a donut!!). When I first started doing taxes more than fifteen years ago, we used a pen and paper, relying on the tax tables. However, nowadays preparers use an IRS supplied computer and program called Taxslayer. There is no need to be an MBA or CPA, a degree in chemistry provides all the background necessary for the job.

At VITA sites, free income tax assistance and e-filing is available to retired seniors and to families that made less than $54,000 during the tax year. So what are the qualifications for the various certifications?

Basic: Demonstrate knowledge of how to determine filing status, how to handle dependents as well as exemptions, determine eligibility and amount of earned income credit, as well as some credits such as education related ones, and retirement savings credits.

Advanced: Have knowledge of the Basic topics plus pensions, social security, self-employment (Schedule C), Sales of stocks and bonds (Schedule D), itemized deductions (Schedule A), child tax

credit, child care credit, and other related taxes. Also this certification includes knowledge of how to deal with the *Affordable Care Act* filing.
Military: This course covers material related to combat zones and rental issues relating to moving expenses. It is required that you have also passed the Advanced Course.
International: This test covers how to complete returns for taxpayers living outside the United States. Again, Advance Certification is a prerequisite. It includes Foreign Earned Income Exclusion and Foreign Tax Credit. Most other tax topics are "out of scope."

The IRS certification tests are taken online and require an 80% pass mark, not too demanding, but still challenging. The IRS provides material and online sites for study.

All this may seem a bit daunting especially if you are not accustomed to filing your own taxes. However, it is very rewarding to help people, plus it certainly keeps the mind active during the winter months when retired, not that you have to be retired to be part of either program. Some computer knowledge is necessary; nearly everyone these days has enough skill to run the TaxSlayer program. It helps to have the ability to deal with a variety of clients, while spending time discussing their situation and maybe pointing out ways to assist them in their financial lives. It is heart-breaking to see how little income many older seniors have, and how high the cost is for a paid tax preparer to complete a simple return. Once the return is completed, it is electronically filed that day by the local VITA office. The volunteer is not held responsible for the return, and is not involved in any disputes. The taxpayer who signs the return is notified of the fact that it is their signatures on the e-file document!

I spend about five to six hours in a day, two days a week, at the local Senior Center from the beginning of February to the end of Tax season in April, doing taxes for others. One of the perks is that as a volunteer, I can file my own taxes as well as "friends and family".

What about the upcoming changes to the tax code for the 2018 season? The main one for the average tax payer is that the standard deduction will approximately double (presently 12,700 for Married Filing Jointly (MFJ) to 24,000 for 2018 tax year) with an extra $1,300 per person over 65; however, the exemption of $4,050 per person will not be continued. The child tax credit will double to $2,000 for each child, but the refundable credit will be limited to $1,400 per child. The tax brackets will also change from the present brackets of 10%, 15%, 25%, 28%, 33%, and above to 10%, 12%, 22%, 24%, 32% and above for the 2018 tax year. One other major change which affects tax payers in high property tax states, as well as states with state income tax requirements, is that individuals (MFJ) are limited to a deduction of $10,000 for state and local taxes on the Federal form. Please check the IRS web site at www.irs.gov for any other changes to charitable contributions, medical expense deduction threshold, and the *Affordable Care Act*. One of the biggest effects will concern the large number of filers who previously itemized deductions; changes to the rules will make that unnecessary for those with fewer deductions.

So, check out your local AARP/TCE site, or a nearby VITA site and get started. You will find the experience rewarding and an interesting way to spend the winter months.

Health Benefits for Dog Owners *by Kelly Moran*

Dr. Kelly Moran, a member of the SCC Committee, did her undergraduate work at California State Hayward (now CSU East Bay) and her graduate work at UC Santa Barbara. She obtained a PhD in Inorganic/Analytical Chemistry. For most of her scientific career, she focused on NMR, specifically solid state NMR. After basic and applied research, she taught others in many different fields of enquiry, and eventually transitioned to NMR Sales. She and her husband John are very active as a Volunteers in Public Safety Support, and other Law Enforcement organizations. When she's at home, she enjoys their four cats and pulling weeds from the garden. She is a member of the Columbus Local Section, where she is currently Treasurer, and has been an ACS member for 31 years.

"The poor dog, in life the firmest friend. The first to welcome, the foremost to defend." - Lord Byron

Many of us agree that dogs are man's best friend. We learn that as children. We can feel it in their furry cuddles and their warm, wet tongue lapping our giggling cheeks. For decades, scientists have tried to measure that relationship, including any health benefits that dogs may give us. Numerous studies from 1980

to 2012 that attempted to measure the relationship of dog ownership and human cardiovascular disease (CVD) yielded mixed results. In 2013, the American Heart Association (AHA) issued a Scientific Statement that dog ownership is “probably associated with decreased CVD risk.”

Uppsala University PhD student Mwenya Mubanga recently tackled the subject again. Working with her colleagues under the direction of Professor Tove Fall, Ms. Mubanga published the largest epidemiologic study to date on the subject, based on Swedish human and dog population data.

Human data were extracted from The Swedish Register of Total Population records, and included gender, date and place of birth, marital status, the presence of children in the household, age-adjusted income, migrations, local population density, latitude, death, and other statistics. All Swedish citizens are covered by the public health care system and Sweden’s National Patient Register records detailed medical data on all hospital visits. Population and medical data were correlated using individuals’ unique 10-digit identification numbers.

Dog data were collected from two sources. Since 2001, all dogs in Sweden are required to be registered by their owners at the Swedish Board of Agriculture. The Swedish Kennel Club registers certain pedigreed dogs with complete information on owner’s identity.

The final human data set included more than 3.4 million individuals, 48% male, between the ages of 40 and 80 years, with a mean age of 57 years. Dog data were correlated with human data from 2001 to 2012 and showed 13.1% dog ownership at any time during the study. Dog owners were slightly younger (mean age 52 years *vs.* nonowners at 58) and tended to live in less populated areas.

In addition to all-cause mortality, there were four CVD causes of death considered in this study: acute myocardial infarction, heart failure, ischemic stroke, and hemorrhagic stroke.

After adjusting for age and gender, the results were expressed in terms of hazard ratios (HR) with 95% confidence intervals, relative to non-dog owners. In single person households, dog ownership was associated with lower risk of death from all causes, with an HR of 0.67, relative to people without dogs, during the 12-year study. That’s equivalent to 33% lower risk. For CVD death, the risk was even lower for single persons with dogs, with an HR of 0.64. In multiple person households, dog ownership was associated with lower risk of all cause mortality (HR of 0.89) and CVD death (HR of 0.85).

Single-person households, which clearly appear to benefit most from dog ownership, also had a reduced risk of incident CVD (HR of 0.92). Adjusting for education and socioeconomic index did not affect the results. Ownership of hunting dog breeds correlated with lower risk of CVD, as opposed to mixed breed dogs, which were associated with higher risk. Reasons for this difference were not suggested.

The Uppsala scientists also analyzed data from the Swedish Twin registry, which includes self-reported data from more than 30 thousand twins. Analysis of these data did not mirror the results of the national pool data. The authors attribute the discrepancy in part to the smaller sample size. There are other confounding issues in their study. Personal habits or disabilities that affect lifestyle and CVD risk might also affect the choice to own a dog, or breed of dog. Although dog registration is required by law, compliance is not 100%; therefore, some dog owners might not be identified as such.

That’s an impressive data study, but how or why does dog ownership affect our cardiovascular health? The authors point to other published studies that show dog owners are more physically active and walk more, even in inclement weather. Single dog owners walk their dogs more regularly than individuals in multiple-person households. Dogs also provide companionship and can improve mental well-being of people who are otherwise socially isolated.

As Groucho Marx said, “Outside of a dog, a book is man’s best friend. Inside of a dog it’s too dark to read.”

To read the original journal article, search online for Scientific Reports volume 7, article 15821.

A TALE OF THE MONARCHS *by Tom Beattie*

Dr. Thomas Beattie did his undergrad work at the University of Pennsylvania, and his graduate work at the University of Wisconsin, where he obtained a PhD in Physical Organic Chemistry. He did a post-doc at Massachusetts Institute of Technology (MIT). Most of his career was spent at Merck Research Labs, working on early stage drug discovery. Tom has been a member of ACS for 57 years and has worked in many volunteer positions. He is currently chair of the Senior Chemists Committee. Tom and his wife Mary Ann enjoy travel, and the article below describes a fascinating trip they took to observe overwintering Monarch butterflies.

Nature is extraordinary, as all scientists know. One special example is the Monarch butterfly migration. Most people know of their 2000 plus mile migrations from the United States to southern Mexico in late summer and early fall and the return flights the following March by a new generation. Since the Monarch life cycle involves ~4 generations per year, none of these travelers has been to their destinations, so it isn’t really clear how they know when and where to travel.

You can travel to Mexico to see the overwintering Monarchs in a few butterfly reserves named in 2008 as UNESCO World Heritage Sites, but the trip is long, expensive, and conditions can be difficult. For example, El Rosario Butterfly Reserve is 100 miles west of Mexico City on a Michoacan mountain at 10,000 feet and the final leg to reach it is by a one-hour hike over rough terrain or a 20 minute horse ride.

The population of Monarchs has dropped ~85% in the last two decades, primarily because of habitat loss. These butterflies rely on the milkweed plant for shelter and food, a place to lay eggs, and food for the newly hatched caterpillars, which eat milkweed exclusively. Milkweed (not a farmer’s friend) habitat has been decreasing from widespread herbicide use in the United States. In Mexico, illegal logging in and near the overwintering sites has reduced their total size.

Recently, I learned of a quirk about Monarchs that makes viewing their overwintering a much easier endeavor. The U.S. Monarchs are separated by the Continental Divide into two distinct populations – eastern and western. There probably is a small amount of intermingling, but basically the two groups migrate differently. The well-known migration down to Mexico is the route of the eastern Monarchs; the smaller population of western Monarchs migrate and overwinter along the southern California coast at a variety of sites ranging from San Diego to San Francisco.

Having just learned about this opportunity, we set out in mid-February to locate some wintering Monarchs. A bit of checking convinced us an auto trip to the San Luis Obispo, California area might be productive. Upon arrival in San Luis Obispo, we learned that an unusual early warm spell two weeks before had prompted many overwintering Monarchs to start their northern and eastern migration before we arrived. However, we were advised that one Eucalyptus grove in Pismo Beach still had Monarchs.

We arrived at the grove at mid-morning to find the sun starting to warm the grove and cause stirring within the trees. Monarchs began to flutter. From a volunteer who worked at the grove we learned the Monarch population there had been up to ~30,000 a few weeks prior and now was down to ~2,000. Shortly, it seemed as if all 2,000 were on the fly. What a sight! Butterflies everywhere – moving tree to tree, resting and mating on the ground near our feet, and fluttering all around.

Because of the steadily declining population of Monarchs, I am not sure how much longer these overwintering sites in Mexico and California will be available for viewing. Next year, we hope to use what we learned and try again to see more groves and more Monarchs and witness an extraordinary part of nature.

Chemistry is for the Birds-Part 7

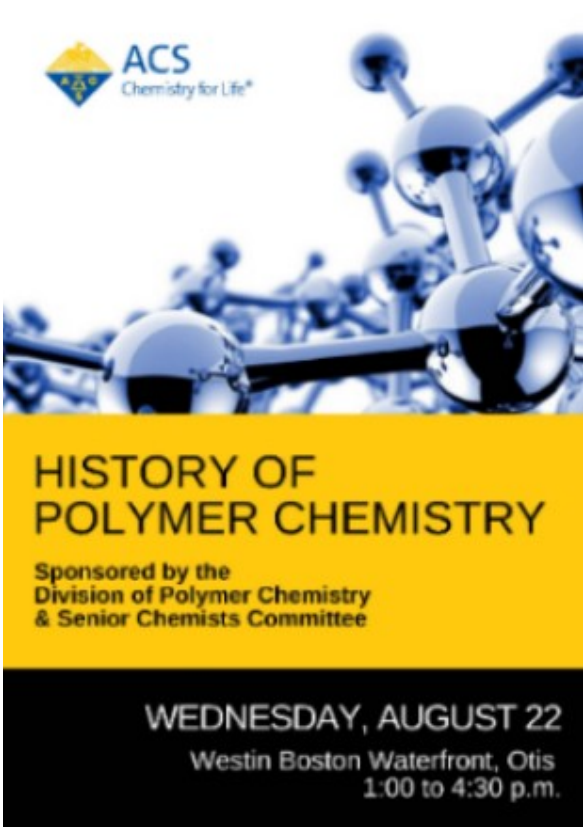
The seventh in a series of articles about birds by Dwight Chasar

Dwight has been birding for 35 years. A serious birder, he goes out nearly every day and has birded in more than 15 countries. He's most involved in North American life birds, nearly but not yet 700 species, and also keeps lists of birds he sees each year in all the Ohio counties and the extra-limital nesting birds in his area. He's a volunteer for the Cuyahoga Valley National Park; he organizes spring and fall bird censuses for the park each year.

When one thinks of birds, two visions immediately come to mind—bird flight and bird coloration. I will address the latter topic in this and subsequent articles related to the title. Compared to many other vertebrates, birds tend to exist in many more color variations—reds, yellows, oranges, blues, black, greens, and combinations and variations thereof. There can be any number of reasons for this but camouflage and mate attraction are considered to be near the top of the list. The female, who generally incubates the eggs, needs to be as inconspicuous as possible to potential predators and thus female birds are generally less colorful than males. More and more research suggests that males attract a mate by displays of external colored body parts, such as wing epaulets, throats, crests, air sacs, general overall color intensity, etc. How are the colors of feathers, feet, legs, skin, eyes, beaks, mouths, and even egg color produced?

There are two basic ways that color is generated in birds: pigmentation and physical interaction of feathers with light. Many times, the combination of the two is at work. In the physical effect, color is produced by light interacting physically with the nanometer scale variation in the structure of feathers or other tissue. The microstructure of feathers is like tiny compartments, similar to honeycombs, often consisting of keratin. The compartments can be empty except for air or may contain variable concentrations of materials like pigments, e.g., melanin. When light impinges on these structures, it is scattered depending on the refractive indices of air and the feather structural material. There can be coherent scattering where the phases of light waves are non-random. Other words used to describe this effect are Rayleigh scattering, Tyndall scattering and interference. The typical color results are blues and iridescence. So the blue of Eastern Bluebird, Blue Jay, Indigo Bunting, and Blue Grosbeak are not the result of isolable chemical pigments but a physical effect of light scattering. The iridescence observed for a Ruby-throated Hummingbird’s throat or the purple head feathers of the Common Grackle depend on how the feather structure is oriented toward light. In the latter example, melanin still comes into play as well. Photos of these birds can be found on a Google Images search of the bird names.

In subsequent articles the structures of the chemical pigments responsible for the multitude of colors in other birds will be discussed.



An Inspirational Chemist *by Dr. Gerald Meyer*

Gerald Meyer is a member of SCC. During a ceremony earlier this year that took place on Heritage Day at the Chemical History Institute (formerly the Chemical Heritage Foundation) in Philadelphia, he was awarded a gold medal by the American Institute of Chemists (AIC). There he gave an address about Dr. J.C. Warner who was department head at Carnegie Tech, now Carnegie Mellon University. Gerry Meyer did his undergraduate work there, graduated in 1940 and received an MS in 1942. He describes Dr. Warner in the first person article below as "the most influential person (outside of family) in my life".

John Christian Warner was born in 1897 on a farm in Goshen, Indiana. His father died when he was ten. Warner, his brother and his mother had to work and maintain the family farm. It was a difficult job, and barely sustained the family. John went to Goshen High School and excelled in Chemistry and Mathematics. His guidance counselor highly recommended that John go to college, but he was financially unable to do so. However, a businessman who was acquainted with the family offered to pay John's first year at Indiana University. With that start and by working throughout his academic career, John Warner received a BS in 1919 and a PhD in 1923. He worked at an Indiana chemical plant for three years, was married in 1925, and in 1926 was appointed Instructor at the Carnegie Institute of Technology. His salary was $2,600 for the academic year.

When I arrived at Carnegie Tech in the late 1930s, Warner was Professor and Department Head. I graduated in 1940 and received an MS in 1942 (prior to joining the US Navy). During my time, I observed and learned to appreciate Dr. Warner's ability to see the core of a problem and to skillfully effect a solution.

Warner became Graduate Dean and in 1960 was appointed President. In this position Warner had many significant impacts:

a. rearranged the structure of the university to cluster like disciplines together irrespective of college,
b. changed Andrew Carnegie's original governance which placed Carnegie Tech under the trustees of the Carnegie Institution so that the University had its own separate board,
c. established the Scaife School of Computer Science (the nation's first),
d. recruited outstanding faculty, and
e. laid the ground-work for merging Carnegie Tech with the Mellon Institute to form Carnegie Mellon University.

I remember a gathering of alums at an ACS meeting soon after the merger that created Carnegie Mellon University, where many of my colleagues were complaining about the loss of Carnegie Tech. Warner said that he wanted to grow the university to national prominence, which required money. The money choices were Pennsylvania or Mellon and Mellon had a lot more money than Pennsylvania. "Jake" Warner took leave to work in the Manhattan Project and stayed on the University Board many years after his retirement. He was president of the American Chemical Society, was awarded some 10 honorary university degrees, sat on corporate boards, was instrumental in leading the revitalization of Pittsburgh, was elected to the National Academy of Science, and received the AIC Gold Medal. He died at the age of 91. The man was truly an inspiration.

Early Graduate Studies in Restricted Diffusion MRI (Magnetic Resonance Imaging) leads to recognition by the editors of "Magnetic Resonance in Medicine Highlights" *by John Tanner, PhD*

Dr. John Tanner's work in restricted self-diffusion by pulsed gradient NMR had a huge influence on the use of magnetic resonance in medicine, as he describes in the last paragraph of his article below. John and his wife now live in Idaho Falls, Idaho. Their main activity in retirement is advocating for treatment of the mentally ill. He also enjoys his mini orchard and outdoor athletic activities.

I majored in chemistry at Oberlin College. My masters research at Indiana University was making precision measurements of solution specific heats. Here I got valuable experience repairing and using delicate home-made equipment. I published the results about 30 years later.

My PhD research in the Chemistry Department of the University of Wisconsin consisted of developing NMR pulsed magnetic field gradient technology and demonstrating its use for measuring self-diffusion restricted by barriers of colloidal dimensions. This was in collaboration with my thesis professor, Edward O. Stejskal. The methodology, after later elaboration of theory and improvement of instrumentation by others, became a major research and application field, which however, I was not able to participate in.

I had a postdoctoral appointment measuring NMR relaxation times at cryogenic temperatures, and another postdoctoral appointment demonstrating the measurement of self-diffusion in neat liquid polymers by pulsed gradient NMR.

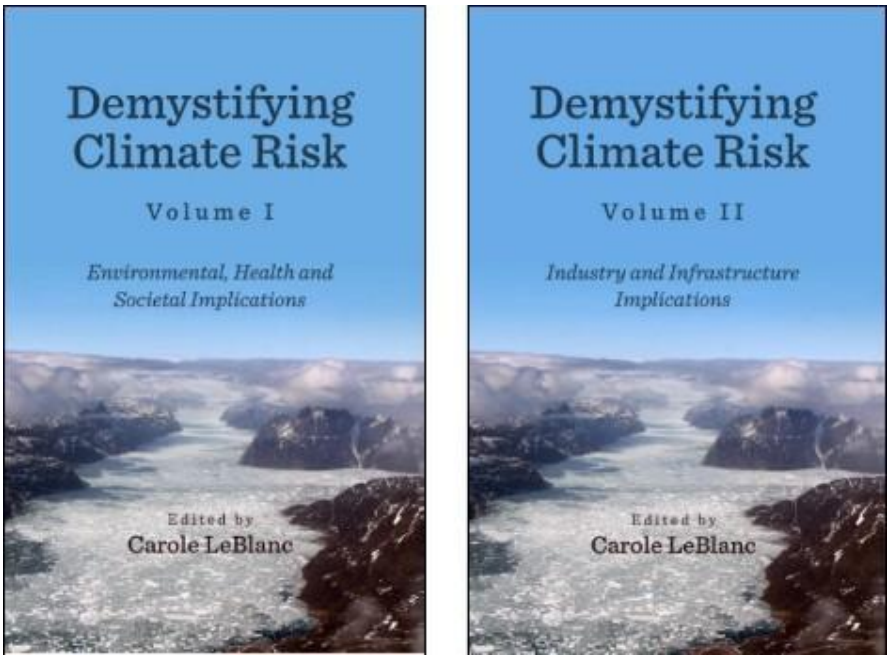
The tight job market of the late 1960s and early 1970s, as well as being in my late 30s, made it fortunate that I was able to find any kind of technical/scientific job, after much effort. This first permanent job was developing pyrotechnic formulations for the Navy. Afterward, for the rest of my professional life, I was a criticality safety analyst for the Idaho National Laboratory nuclear facility.

Twenty years after my retirement I was awarded honorary membership in the International Society for Magnetic Resonance in Medicine (ISMRM) at the society's annual meeting in Singapore in May of 2016 in recognition of my part in originating the technology of measuring restricted self-diffusion by pulsed gradient NMR, which had since then grown into a large field. In February of 2017, I gave the introductory talk at a conference in Cardiff University on the history of this subject. I was then interviewed about my scientific life for

the news magazine “Magnetic Resonance in Medicine Highlights”. The interviewer was Professor Derek Jones, Director of the Cardiff University Brain Research Imaging Centre in Cardiff, Wales, UK. This interview can also be found on my Facebook page and appears in “Magnetic Resonance in Medicine Highlights”, April 2017, Volume 2.

Looking Back at Successful Work in Climate Change *by Carole LeBlanc*

Dr. Carole LeBlanc is the former Director of Engineering and Research for the United States (US) Department of Transportation Pipeline and Hazardous Materials Safety Administration. From 2007-2012, she was the Special Expert on Emerging Contaminants for the US Department of Defense (DoD), where she was awarded a Defense Special Act Award for her part in the formation of DoD’s toxic and hazardous chemicals reduction plan, mandated by Presidential Executive Order 13423. In 1999, she was part of a Massachusetts state team that received the prestigious Ford Foundation and John F. Kennedy School of Government Harvard University’s Innovations in American Government Award. Dr. LeBlanc studied biology and chemistry at Boston College as an undergraduate and was the first American woman to graduate from the doctoral program in Sustainable Development and Management at Erasmus University, the Netherlands. Today, she is an Adjunct Professor at the University of New England in Biddeford, Maine. She has been a member of the American Chemical Society throughout her entire career.



Long before the 2015 Paris Agreement on Climate Change, many professionals in diverse fields were working to solve the problems of anthropogenic climate change. The 1987 Montreal protocol, the world’s most successful treaty for atmospheric protection, is now in support of some of the Paris Agreement’s key emission reduction goals. It was time to bring some of the leaders who implemented the Montreal Protocol to share their knowledge and wisdom with the next generation before their expertise was lost. To that end, Dr. LeBlanc hosted the First International Technical Workshop on Climate Risk in Maine in October 2016, and the second Annual International Workshop on Climate risk in October 2017 in Kennebunk, Maine. A highlight of the event included international speaker and Nobel Prize recipient Donald Wuebbles, PhD.

The purpose of bringing these communities together was to leverage the many successes to date to inspire future innovations through lessons learned, ensure that new or updated regulations are timely communicated and economically executed, and identify opportunities for related sustainable development.

Carole has published two volumes which are distillations of the 2016 Workshop on Climate Risk, entitled “Demystifying Climate Risk”. The first book covers environmental, health and societal impacts, while the second book focuses on infrastructure and industry.

Efforts to publish the results of the 2017 workshop are now underway.

ACS PERU CHAPTER

by Milagro Abril del Rocio Surichaqui
Fiorella Olivera Venturo

The Peruvian chapter of the ACS was created in 2015 by Dr. Mario Ceroni Galloso with the support of the CME Section New York Group. Since its creation ACS CHAPTER PERU is committed to the popularization of chemistry in our country and to highlight its importance in our society. To date we have 37 members who reside in our country and we have around 40 volunteers from all over the country. The first chemistry festival was held in 2014 at the Plaza San Miguel Shopping Center under the coordination of Dr. Patricia Morales Bueno of the Pontifical Catholic University of Peru (Lima). Three OPEN DAY CHEMISTRY have been held at the Universidad Peruana Cayetano Heredia (Lima) and two in the city of Cusco (UNSACC). We continually make small chemistry festivals in schools and cultural centers. The biggest one was our participation in "Peru with science" which was held by Concytec, the government organism for science, for the science week in Peru where important science groups could show their advances and dissemination in science. Our first Assembly of the year with our members and volunteers took place on the 15th of January where the MSc. Fiorella Olivera Venturo assumed the presidency for the 2018 period, as well as establishing the objectives and activities to be carried out during the year. Finally for this year, we have planned to hold more Chemistry Festivals and ACS BOOST in different cities of the country. In addition to having already confirmed a course of electrochemistry and metal organic frameworks for July.

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Interested in making a charitable gift to American Chemical Society programs AND receiving income for life?

The concept is simple. With a charitable gift annuity, you, as an ACS member, can make a donation using cash, marketable securities or other assets, and ACS, in turn, pays you a fixed amount for life. With this type of gift, you can feel secure knowing that you can count on receiving stable payments for your lifetime.

Effective July 1, 2018, charitable gift annuity rates will increase. By making a gift on or after July 1, the gift annuity rates will be an estimated 30 to 50 basis points higher than current rates based on the member's age at the time of the gift.

Now is the time to contact Mary Bet Dobson, CAP® at 202-872-6210 or PlannedGifts@acs.org to receive a free, no-obligation illustration showing you the benefits of a charitable gift annuity so that you may begin planning your gift!

For more information about charitable gift annuities, visit this site.

EDITOR'S NOTE by Lynn Hartshorn

We hope you have enjoyed reading this issue of the Newsletter and welcome your comments. We also need articles from our readers! Please submit them to seniorchemists@acs.org in the form of a Doc or DocX. The maximum length is 500 words, but shorter articles are fine. They will be edited. Photos and images are very welcome, usually submitted separately in JPEG or PDF formats.

If you have an idea, but are not sure if it would be suitable as an article, please email the editor Dr. Lynn Hartshorn and our staff liaison, Ms. Semora Smith, with your idea. Their email addresses are at the top of the newsletter. Thanks!