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The Newsletter for Senior Chemists

March 2021

The New Norm, Lifetime Experiences, and Local Sections at Work



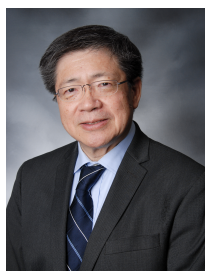
Resilience in Action by Arlene Garrison Chair, Senior Chemists Committee

Resilient is the only word I know that describes the Senior Chemists! In spite of the Pandemic, this group has pivoted and demonstrated incredible success in achieving 2020 goals. The Senior Chemists Committee (SCC) has remained engaged and connected, as have many local section senior chemist groups.

The SCC continues great work with ChemLuminary Awards and grants to local sections who are providing innovative programming for seniors. Student mentoring in partnership with the Younger Chemists Committee shifted to a virtual event, and is reaching undergraduates from all over the world. The traditional SCC Breakfast at ACS National Meetings has become a very popular virtual Coffee Social with world-wide attendance.

You have a treat with this outstanding issue of the SCC Newsletter. You will find great ideas for activities and information about current SCC initiatives. The committee members are deeply concerned about the impact of systemic racism and determined to have an impact on the lack of diversity in the chemistry profession. After considering a number of ideas, two working groups have initiated projects that use the special skills and attributes of senior chemists. We believe both these projects can reduce systemic racism and lead to a more diverse workforce.

Warren Ford is leading a group that is collaborating with the ACS Office of Philanthropy to increase the ACS Scholars endowment. Valerie Kuck is leading a group that is working National Chemistry Week on STEM activities that senior chemists can do with middle school students in underrepresented schools. If you are interested in helping with either project, send an email to seniorchemists@acs.org. We are optimistic that we will be able to meet in person soon. Enjoy this newsletter and stay safe!



**A Message from
ACS President H.N. Cheng
Updates to the ACS Strategic Plan - What
Role Will You Play in Shaping the Future of
Chemistry?**

The new year started as the previous year ended: under challenging circumstances. However, the COVID-19 vaccinations have begun to take place, and 2021 brings hope for better times ahead. I know this is important to our senior chemists. With that in mind, I am proud to share that the ACS Board voted in December 2020 to modify our existing Core Value of “Diversity, Inclusion and Respect” to include Equity. As revised, “Diversity, Equity, Inclusion, and Respect” (DEIR), better captures our belief in diversity in all its forms. We embrace and encourage an inclusive chemistry enterprise and strongly support an equal and equitable environment for the practice of chemistry. In order to meet the global challenges facing us today and advance chemistry, we need to be more inclusive and respectful of people of all ages, backgrounds, perspectives, experiences, and ideas. The Board also voted to adopt a new goal for the ACS Strategic Plan. “Goal 5: Embrace and Advance Inclusion in Chemistry” aims to promote diversity, equity, inclusion and respect; identify and dismantle barriers to success; and create a welcoming and supportive environment so that all ACS members, employees and volunteers can thrive. These updates ensure that we will work to promote equity in the chemistry enterprise.

I encourage you to take the time to review both the revised DEIR Core Value and the new [Goal 5 posted here](#). As members of ACS, I hope you share my commitment to work toward achieving the ACS vision: “Improving all people’s lives through the transforming power of chemistry.” And I ask you, what role would you play in shaping the future of chemistry? I also encourage you to learn more about me and my presidential priorities by reading the C&EN [interview here](#) that appeared in the January 4 issue of the magazine. As the article notes, I look forward to collaborating with all of you to benefit chemistry and enhance its growth. If you have ideas or thoughts that you’d like to share with me, please reach out to me anytime at h.cheng@acs.org.

THE NEW NORM - VACCINATION, STRESS, and ZOOM

What Was it Like to be in a COVID Vaccine Trial? by Hal Harris

I am a coronavirus vaccine guinea pig. I got my first injection on October 16, after having volunteered through a public solicitation back in July 2020. I did it because I want to do my small part to contribute to the development of a vaccine. As a retired chemistry professor, I am in a good position to assess the risks of being a trial participant, and I believe those risks to be quite small.

Both the Pfizer and BioNTech, and Moderna vaccines start with the genetic sequence of the “spike” protein (the cauliflower-like protrusions on the virus depictions we have all seen). Biochemists created a messenger RNA, which is essentially a plan that would instruct a human cell to make the spike protein.

That plan is wrapped in a small (nanoparticle) lipid package that can transport it to human cells. The active part of the vaccine is that messenger RNA in a package that will get it into human cells. Once inside a cell, the cell’s own machinery builds those spikes onto the cell’s surface, which makes it look like the coronavirus, but without the ability to infect anything. Then the body’s immune system sees those spike-covered entities as invaders, and it creates antibodies to attack them. If coronavirus infection occurs later, the body already has the antibodies to defend against it.

The vaccine that I received had already been tested on other volunteers. The first round of tests used a different set of volunteers to make sure that there were no side effects. In the second round, various dosages were administered to see how much of the antibodies the volunteers’ bodies produced. Volunteers of various races and ethnic groups, both genders, and all ages were involved. It would be very important that it be effective for older folks like me (I am 80) because they are more likely to have severe consequences to a coronavirus infection.

The injection of the vaccine was preceded by a lengthy questionnaire about my health history, a

nasal swab for a coronavirus test and the collection of blood samples. Three weeks later, I received a second injection, which was to be the protocol when the vaccine is distributed to the general population. I also agreed to continue in the project for two years, during which there will be additional blood tests every few months.

The injections themselves were painless, but my upper arm and shoulder were sore for about 24 hours, leading me to suspect that I got the vaccine. I had about the same reaction for both injections, but I was able to play tennis the following day, both times. Half of the participants get the vaccine and the other half get a placebo and no one knows who got what.

We guinea pigs just go about our business as usual, avoiding infection as well as we can. We report electronically at least every week and return for blood sampling every few months. Despite their best efforts, some of the more than 43,000 volunteers came down with coronavirus. When participants get sick, they are treated by their regular physician; the study does not give volunteers any special treatment. But after an infection is confirmed, it is determined whether the volunteer got the vaccine or the placebo. The early statistics indicate that one is 95% less likely to be infected if the volunteer has been given the actual vaccine, which is a result even better than most scientists expected.

One of the things that is not yet known is how long the protection persists. It will be important to follow the volunteers for at least two years to find out whether protection wears off after a few months or lasts for years, like some other vaccines do. My hope is that we will be able to abandon the masks long before the trial is over.

Hal Harris is a professor emeritus of chemistry at the University of Missouri-St. Louis. His research interests were in physical chemistry and chemical education. See <http://www.umsl.edu/chemistry/Faculty/hharris.html>.

Aging in Place by Herbert S. Golinkin, SCC Member



When I retired, like many retirees, I looked forward to doing what I never seemed to have the time for when I was working. That included hobbies, spending time with friends, and, among other things, some travel. I hardly gave any thought to staying in one place; and none to isolating myself from other people. Unlike an unripe piece of fruit, I had no intention of aging in place. But like many things in life, control was not left in my hands. Rather COVID-19 became the dictator.

So, what to do? I certainly did not entertain the idea of staring out the window all day.

I am certain that many of you found ways to spend your time that either I have not thought of or in which I have no interest. What became apparent to me is that I now had the time to learn. Learning is an endeavor that I have always enjoyed, but that I did not make time for. The means to learn became apparent when someone mentioned Zoom.

Zoom is an application for video conferencing allowing two-way audio and video communication. Zoom.com can be downloaded to your computer using the DOWNLOAD button on the website and entering your email address. You also can create an account - a necessity if you wish to host a meeting. There is no fee, as long as your activity is less than forty minutes.

Many groups such as churches, fraternal organizations, and societies (including the ACS both nationally and locally) are using Zoom to hold meetings or religious services. Many of these same groups are holding classes. The nice thing is that a large number do not even charge tuition (perhaps one of the very few benefits(?) of our current condition).

If Zoom is not your avenue of choice, there are other electronic venues. Other sources include games such as chess, mahjong, cards, and many other board games which you can learn and play against the computer, play with a group of friends, or even play with strangers from around the world. Simply go online and enter the game of your choice in the search box.

I am not advocating staying home or spending all your time on the computer, tablet, or cell phone. Definitely get out of the house (with your mask), enjoy the fresh air, and explore the places you have ignored. But when you are home, keep your mind active and interact with others. Don't allow senility or Dr. Al Z. Heimer to enter your life.

Perhaps by the time this article appears in your email inbox it will be obsolete due to the conquest of this pesky pandemic. I will have no regrets.

Let's Stay Connected - SCC Zoom Guides: Senior Chemists Committee members have enjoyed using Zoom to stay connected and have established some guides that may be of use to you during these times. These Zoom guides can be found at www.acs.org/seniorchemists and are designed for novices and avoid the use of computer jargon. The illustrations are screenshots taken when the guide was written and may change as Zoom is updated. Please send us a note at seniorchemists@acs.org with suggestions for additional guides that you think would be helpful.

Suggestions for Reducing COVID Stress by Arlene Garrison, SCC Chair

Yes- COVID stress is a real thing. Stress from all the changes in our lives can create anxiety, depression, and lead to health issues. Grief for the loss of favorite activities is also possible. How to cope? Here are some ideas I have gathered (and tested) from a variety of sources. For more ideas, check the links below.

- **Name it.** Take a minute to focus on your feelings. Boredom? Grief? Feeling alone? Depressed? By understanding what you are feeling you can find a path to a more relaxed mental state.
- **Move.** Get up at least every hour and move around for two minutes. If you are in an on-line meeting or otherwise unable to get up, stretch your arms and legs and hold them in the stretch for 5-10 seconds.
- **Drink water or eat fruits or vegetables.** Limiting yourself to healthy choices will help you know if you are really hungry or thirsty. Don't let yourself decide that you are only hungry for cookies!

- **Big Task.** Spend 3-5 minutes every day on a big task that you dread. You will be amazed at how quickly it is finished and how successful you feel each day.
- **Creativity.** Do something that engages your artistic side. Painting, sewing, needle arts, cooking, woodwork, or even some sort of mixed media blend. This stimulates a different part of your brain. No need to share the results - focus on being creative.
- **Reach out.** Send a quick note by text, email, or snail mail to someone who lives alone.
- **Limit news.** By limiting the time you watch or read news, you can lower stress and make the time to do the other things on the list. A special subset of this is to avoid doomscrolling.
- **Forgive yourself.** It's ok to not finish your list.

Remember the best way to take care of others is to take care of yourself. Stay safe!

Here are a few additional resources:

[What Is Doomscrolling? Why it Happens, How to Stop | Health.com](#)

[Managing Stress, Anxiety During Coronavirus Outbreak \(aarp.org\)](#)

[Steps for Staying Mentally Healthy During Coronavirus \(aarp.org\)](#)

[Six Stress Management Tips for Seniors \(umh.org\)](#)

LOCAL SECTION SENIOR CHEMISTS GETTING INVOLVED



Maryland Section ACS Honors Senior Chemists by Merle Eiss, SCC member

The ACS Maryland Section was formed in 1914 at the beginning of WWI. We celebrated our 100th Anniversary with a dinner at the Maryland Science Center on October 17, 2014. The Section members are primarily located in Baltimore and the surrounding area. Baltimore is favored by a natural harbor, leading from the Atlantic Ocean through the Chesapeake Bay, that accepts ships from around the world that bring in chemicals and other raw materials for manufacturing, spices from the orient, and other commodities. The city is also home to the Johns Hopkins University and hospital, the University of Maryland professional departments, and other educational, research and manufacturing organizations that employ many chemists.

To honor our Senior Chemists (or Retired Chemists as the section has also called them), the Maryland Section has a yearly luncheon at which we present ACS Certificates, and ask the seniors to tell us of their experiences in the world of chemistry. Some of our members have

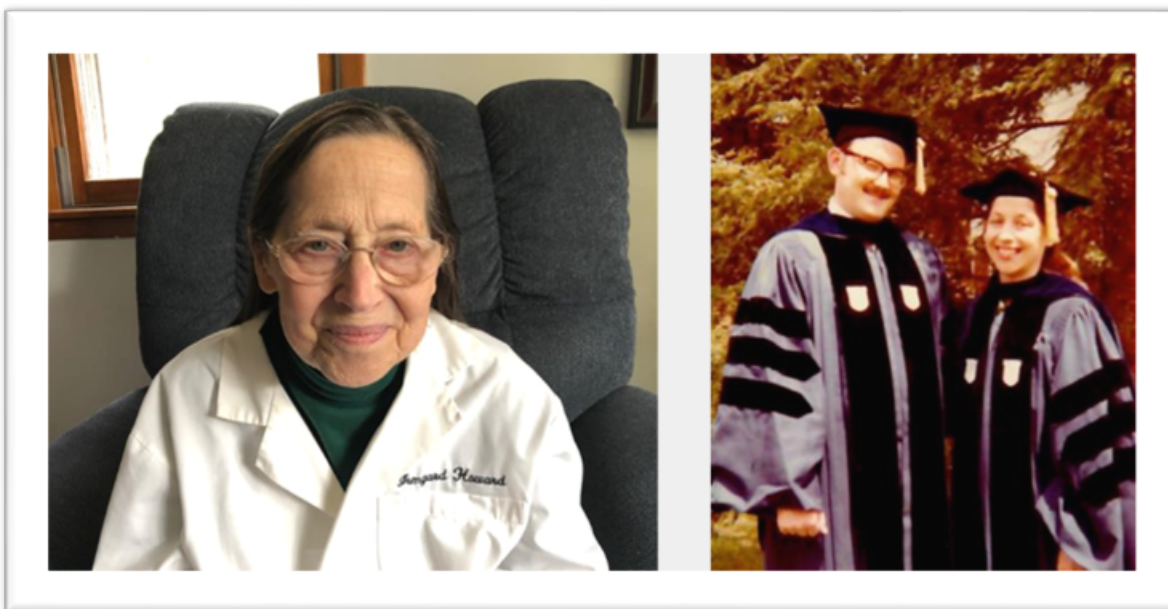
seniors to tell us of their experiences in the world of chemistry. Some of our members have travelled around the world on a multitude of projects for industry, government, and educational institutions. They have been involved in trade, international regulations, research, and training. We have had an excellent turnout at the lunches. We have honored our members who have been ACS members for 50, 60, and 70 years. Remarkably, in 2019, we celebrated one member with 80 years as an ACS member!

The keynote speakers at our lunches have included the Maryland Attorney General, a Maryland Congresswoman, and a columnist from the Baltimore Sun. Unfortunately, this year, for the first time in many years, the lunch was cancelled due to the COVID-19 Virus. Hopefully, we will be back on track and be able to honor our long-time members in 2021!

The Corning Section, Long-time Members, and COVID-19 by Roger F. Bartholomew, PhD, ASCF and Chair of Corning Section SCC

Every year the American Chemical Society recognizes members who have reached the 50-year membership milestone. Their names are published in *Chemical & Engineering News* (C&EN) early in the year, and each individual receives a certificate and pin from ACS. In normal years the Senior Chemist Committee of the Corning Section recognizes the Section's members, who have reached this goal, at a Section dinner meeting in the Fall. These members, and their families, are invited as guests of the Section. They are asked to give a talk, not to exceed five minutes, on their work experience and, if retired, their current pursuits. In addition to recognizing 50-year members the ACS and the Corning Section also recognize 60- and 70-year members. This year 280 members of the ACS reached the amazing milestone of 70-years membership. Unfortunately, the COVID-19 pandemic prevents honoring them at a monthly meeting. The Corning Section took the opportunity to honor them with a special Newsletter, which was compiled by Dr. Ruchi Tandon. One of the articles is below.

A Member of the American Chemical Society for More Than 50 Years Dr. Irmgard K. Howard, PhD, Emerita Professor of Chemistry, Houghton College, NY submitted by Ruchi Tandon, 2021 Chair Elect- Corning Section



From a young age, Irmgard (Keeler) Howard wanted to go into medicine, following the career path set by her father, Dr. Clyde E. Keeler, Harvard University's first biomedical geneticist. After completing a B.S. in zoology at Duke University, Irmgard continued graduate studies at Duke, studying biochemistry. While a graduate student, she also served as organist and choir director at

Blacknall Memorial Church in Durham, NC. In 1969 she married a fellow graduate student, David A. Howard. When she became pregnant with their first child, an advisor assumed she would be leaving the PhD program. On the contrary, Irmgard assured him, she would finish her dissertation at an accelerated pace. She went on to defend her dissertation while eight months pregnant. She returned to Duke a decade later to conduct postdoctoral research.

After defending her PhD dissertation in biochemistry, she joined her husband at Houghton College in Houghton, New York. Dr. Frederick Shannon, Professor of Chemistry at Houghton College, invited her to teach at Houghton and encouraged her to join the Corning Section of the American Chemical Society, which she did in 1970. She created new classes in nutrition, clinical chemistry, biochemistry, and an introductory class for non-science majors called Impact: Science on Society. Her research fields include clinical chemistry, immunochemistry, molecular genetics, chemophobia, the history of chemistry, and nutrition. After several years, she rose to the rank of full professor. She devised a curriculum and attained New York State approval for an academic major in Biochemistry at Houghton. She also oversaw the Senior Honors Research projects of dozens of Chemistry and Biochemistry majors. Many of her students have achieved recognition in the fields of chemistry, biochemistry, and medicine, including Deborah Birx, MD.

Dr. Howard's classrooms were unique learning environments in which she used not only traditional teaching methodology, but cooking and music, composing many songs to help students learn concepts to familiar melodies. Many of these songs were compiled into a collection called ChemSongs so that other chemistry teachers and students around the country could benefit as well.

In the 1980s, Dr. Howard's interest in communicating chemistry to the general public expanded as she became a lecturer for the American Chemical Society. She traveled to many ACS sections presenting "People Are Chemicals, Too!" to address science-phobia and the misuse of the term "chemical-free" in advertising.

During the same decade, Howard also took an active role in protests against New York State's plan to store "Low-Level" Radioactive Waste on farmland in Allegany County, across the Genesee River from Houghton College. In addition to contributing scientific arguments against the planned site, she took part on the front line of protests, created media, and wrote and performed songs to communicate the scientific case against contaminating virgin territory with radioactive waste.

From 1998 to 2000, Dr. Howard participated in the Templeton Oxford Program on Science and Religion, with annual summer lectures and discussions at Oxford University, United Kingdom. Her husband, Dr. David Howard accompanied her on these trips, as he had done on some of her lecture tours in the States. As a result of this program, Irmgard published two papers in the Journal of Chemical Education: "S is for Entropy. U is for Energy. What was Clausius Thinking?" in 2001 and "H is for Enthalpy, Thanks to Heike Kamerlingh Onnes and Alfred W. Porter" in 2002.

Dr. Irmgard Howard was named Head of the Department of Chemistry at Houghton College after her three summers at Oxford. She retired in 2013, but returned to teach courses as an adjunct. Her membership in the ACS was a constant through the years, and she still enjoys celebrating Mole Day and collecting and comparing Periodic Tables from around the world. Her interest in music continues, too, and she still plays the organ in church on Sundays. Her son, Stephen, youngest of her four children, has also gone into chemistry. He has been a member of ACS since 2001.

Indiana Section Senior Chemists Virtual Mentorship Program Information provided by Christine Skaggs

In order to increase student involvement in ACS, the Indiana Section developed a virtual Senior Chemists Mentorship Program in partnership with local universities and colleges. Students filled out a questionnaire about their career objectives, and also filled out the ACS Individual Development

Plan (IDP) and provided a curriculum vitae (CV). Mentors also filled out a questionnaire about their desires involving mentoring (how many students, how often, etc.) and provided a CV.

Questions that were asked of the students included their goals, what they thought they needed to accomplish their goals, what kind of person they would prefer as a mentor, how a mentor could help them, how they could help their mentor, what kind of a commitment they would like, and if they were ready to establish a mentor/mentee relationship.

The committee of Senior Chemists met with the event organizers to discuss potential match options, and also to reach out to other potential mentors across the United States. The Section held a Zoom meeting to introduce the mentee and mentor, and then there was a follow up about four to six weeks after the initial meeting.

The event was very well received, and also increased interest in joining ACS by the students. The Indiana Section plans to continue this activity and possibly extend it to other non-local colleges and universities.

Christine Skaggs is a fifth year PhD candidate at Indiana University-Purdue University Indianapolis (IUPUI), working with Dr Nick Manicke and specializing in mass spectrometry. She is the current secretary of the Indiana local section, as well as chair or co-chair for the Mentorship Committee, the Diversity, Equity, Inclusion and Respect Committee, and the Younger Chemists Committee.



How to Bowl a Maiden Over Part 1 by Roger Bartholomew

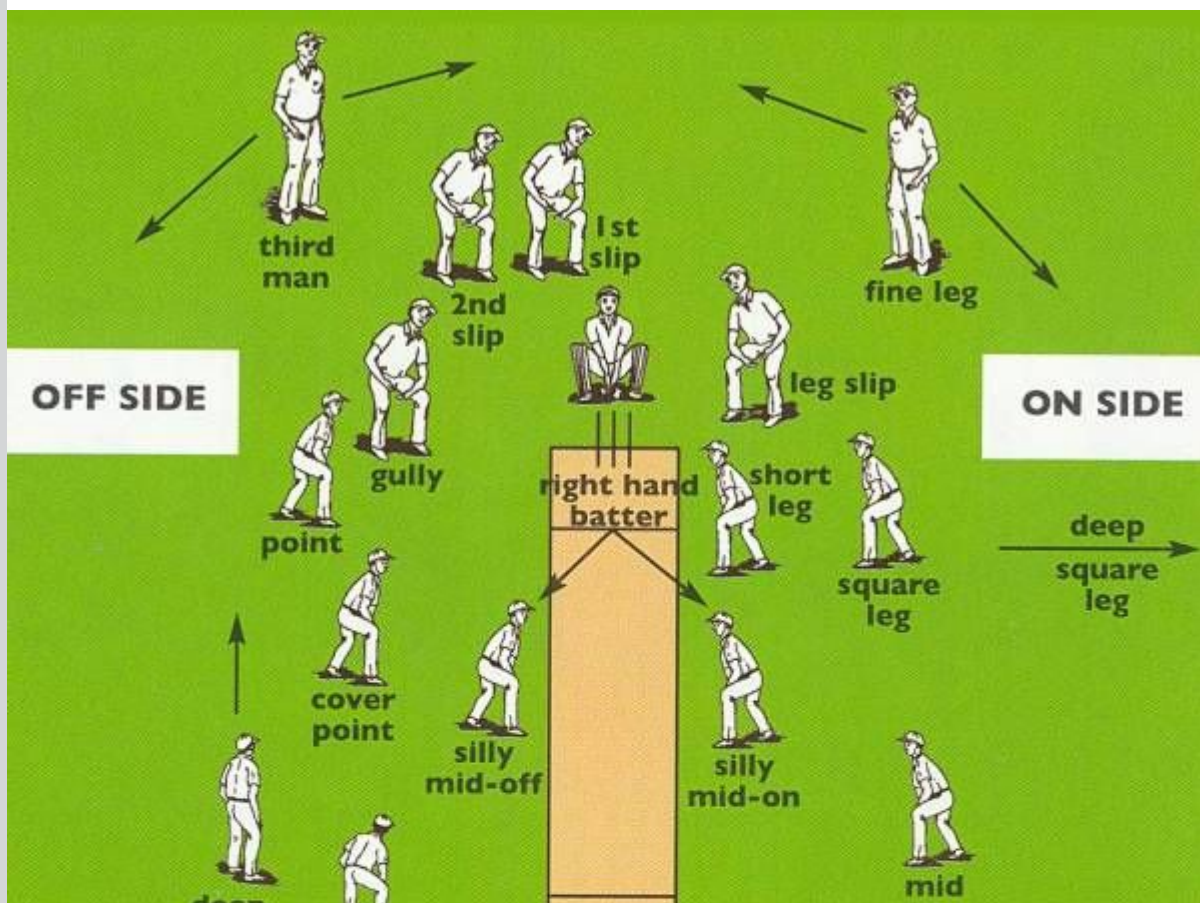
Bill Bryson wrote: "It is not true that the English invented cricket as a way of making all other human endeavours look interesting and lively . . . but it is an odd game."

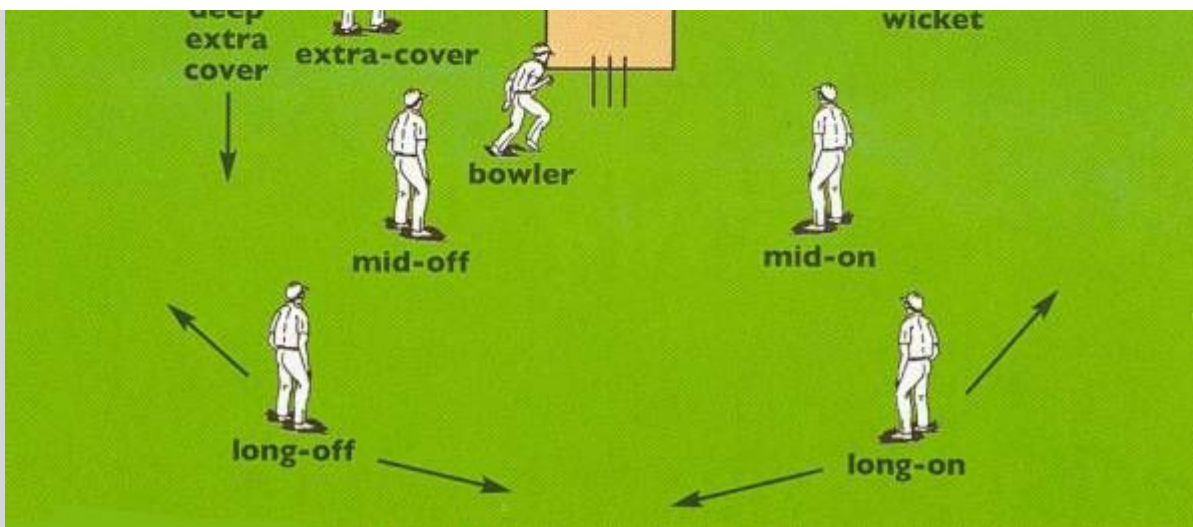
Cricket is a game that originated around the middle of the seventeenth century and has evolved over the years. The modern game is played on a pitch one chain (22 yards) long and approximately 12 feet wide, on a field which is approximately oval, with axes ca. 500 and 450

ft. The perimeter is called the boundary. At each end of the pitch are three wooden stumps (or wickets), 28 inches tall, each spaced about 4.5 inches apart, with two wooden bails on top. Four feet in front of the stumps is an area called the crease where the batsman stands. The teams consist of eleven a side, with a wicket keeper and a bowler, analogous to a pitcher and catcher and nine other fielders. None of the fielders wear gloves, but the batters can have some hand protection and an inning can last as long as there are two men still batting.

There are always 11 members of one team on the field and two batsmen from the other team. The batsmen occupy the crease at each end of the pitch. The fielders have unique names such as backward square leg, gully, third man and silly mid-off. The objective is to score more runs than the opponent. When the bowler bowls, the receiving batsman does not have to hit the ball and if he does, he does not need to run. One run is scored when he does run and both batsmen successfully reach the opposite crease. If the ball is fielded and thrown to either end of the pitch so it either hits the wicket or is caught and a fielder touches it to the wicket before the batsman get there, he is out. If the ball crosses the boundary along the ground the batsman is awarded 4 runs. However, if it clears the boundary on the fly that counts as 6 runs.

The ball is slightly bigger and heavier than a baseball. The bat is made of willow with a cane handle spliced on the top. The surface of the bat is flat, about 4 inches wide, and the total length is 38 inches. Two umpires officiate, one stationed behind the stumps at the bowler's end, the other about 20 feet to the side of the stumps at the batsman's end. Bowlers must send a delivery overhand with a straight arm, throwing or underarming a ball is illegal. A fast bowler can deliver a ball at 90 mph plus, comparable to a fastball in baseball. In cricket there are spin bowlers who bowl at around 50 -60 mph and the ball bounces and breaks left or right. An over is when a bowler sends down six deliveries. Another bowler then starts an over from the other end of the pitch, bowling to the other batsman. An over in which no runs are scored is called a maiden over, hence they bowl a maiden over! There are nine ways to get a batsman out, and these will be described in the next article along with more details of the game and the author.





LIFETIME EXPERIENCES - SENIOR CHEMISTS STORIES

An Hour with Escher by Ed Wasserman, ACS President in 1999 and a former SCC member

In the middle of the 20th century the images of M. C. Escher became widely known, particularly in the scientific community. A summary of his career and artistic approach is given in:

<https://www.theguardian.com/artanddesign/2015/jun/20/the-impossible-world-of-mc-escher>

My interaction with Escher began in 1969. The connection was through Professor Luitzen J. Oosterhoff of the University of Leiden. Oosterhoff was a theoretical organic chemist of considerable originality. Scientists such as Prof. Oosterhoff were major customers for Escher before he became widely recognized and appreciated.

I visited Escher in early March of 1971 at a home for artists in Laren, an attractive wooded suburb of Amsterdam. He greeted me with a paperback copy of *The Benefactor* by Susan Sontag. On its cover was a copy of his print *Hand with Reflecting Sphere*. An arm reaches into the frame, holding a clear globe where an image of Escher is reflected. Escher said that he did not know of Sontag. I indicated that she was a well-respected commentator on cultural trends. Sontag's interest in self-referential relationships makes the print with the globe an appropriate illustration for her novel.

Hand with Reflecting Sphere: Cover of *The Benefactor* by Susan Sontag

Escher had not given permission for his print to be used on the book. This was a frequent problem for his widely seen images. He had a number of books sent to him by authors and publishers which used one of his works but whose contents he could not understand.

We chatted about the relationship of some of his images to mathematical forms. Escher had no formal mathematical training. He visualized patterns which others could see as analogous to mathematical designs.

A recurrent technique in Escher's art is the use of one part of an image as the basis for an adjacent, sometimes similar, section. *Day and Night*, one of his best-known works, has its background of checkerboard fields morph into birds as our eyes go from bottom to top. The birds are interlaced, black flying to the left, white to the right.

Day and Night

I was particularly interested in purchasing *Day and Night*. Escher said that the copy I was taking was

the last he would sell. The few remaining were promised to a museum in the Hague.

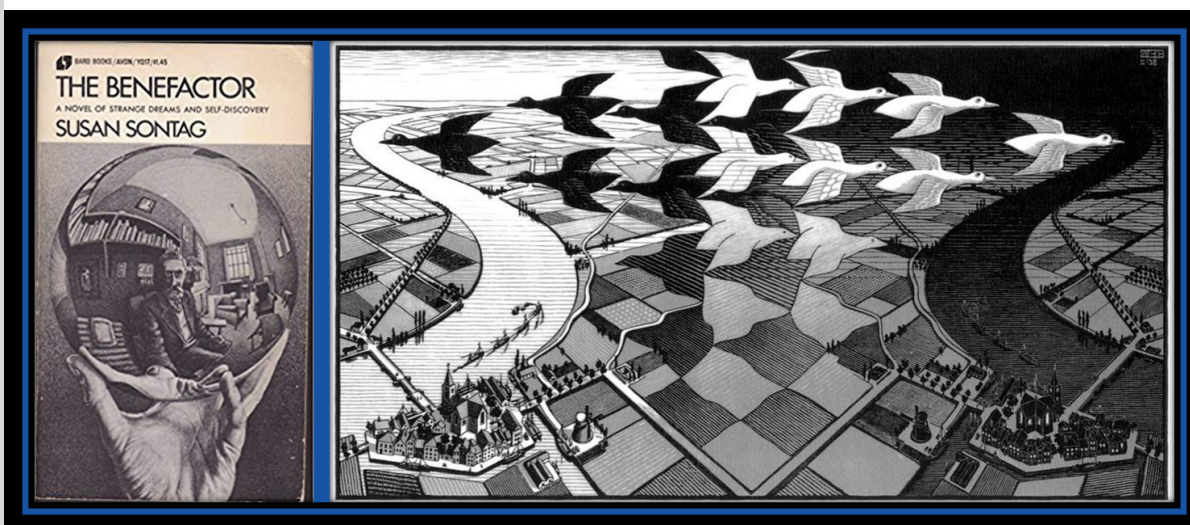
As the hour with Escher went on, he became noticeably weaker. It was time to leave. That summer I sent Escher a short 16mm film made at Bell Laboratories. The film, "A Pair of

Paradoxes", includes a visual illusion known as the Penrose Steps, which is a frequent theme in Escher's work. Escher acknowledged receiving the film, but said he would not be able to see it until the fall or winter when another movie on his work would be shown. It is unclear whether he ever viewed it. (The film is available at <https://techchannel.att.com/play-video.cfm/2011/10/10/at&t-archives-a-pair-of-paradoxes>)

Back home in the states, I suggested that Escher be included in Bell Laboratories' Distinguished Speaker Series. The speakers were to be of interest to a broad variety of scientists. Carl Sagan and Dennis Gabor, the inventor of holography, were two of the series' participants. The cost of Escher's overseas travel in those pre-deregulation days was an initial barrier to extending an invitation.

In time approval was obtained and in January 1972, I invited Escher to come to Bell Labs in Murray Hill, NJ. In his return letter, he said "I regret awfully that it is impossible for me to accept: my health is ... much too weak to make such a strenuous journey." He died two months later, on March 27, 1972.

In memory of Zelda R. Wasserman, 1935-2020: an avid Escher fan.



Why Volunteer to Support Local Boy Scouts of America Councils? by Dr. James L. Chao, SCC Member

A major goal of the Senior Chemists Committee is community outreach. I wondered, "How might senior chemists, through the Boy Scouts, help youngsters during their teenage years?"

- Boy Scouts of America (BSA) offers a wide variety of science and engineering merit badges; Chemistry is one of the oldest. Merit Badge Counselors are needed to work one-on-one with Scouts, and to run one-day "merit badge colleges."
- Senior Chemists are uniquely qualified to inspire young boys and girls about the role of science in making career decisions and in creating informed American citizens.
- BSA prioritizes STEM education in their programs. They have created "STEM pavilions" at summer camps to offer hands-on activities in Science and Engineering.
- BSA has opened their programs (including camps) to girls, and Eagle Scout Rank was awarded for the first time to a female Scout this year.

When I became a Boy Scout, I appreciated the chance to enjoy the outdoors by camping, hiking, and seeing wildlife in its natural habitat. Scouting taught me teamwork, leadership, and resourcefulness; I only later recognized this as beneficial in reaching my life goals, in preparing me for a successful career.

I became an Eagle Scout, and took pride in knowing how many American Presidents and other important leaders in the United States have also done so. BSA allowed me to explore or hike throughout the U.S., including at the national Philmont Scout Ranch in New Mexico, a number of Civil War military parks, and trails and waterways in the Midwest during summer and winter.

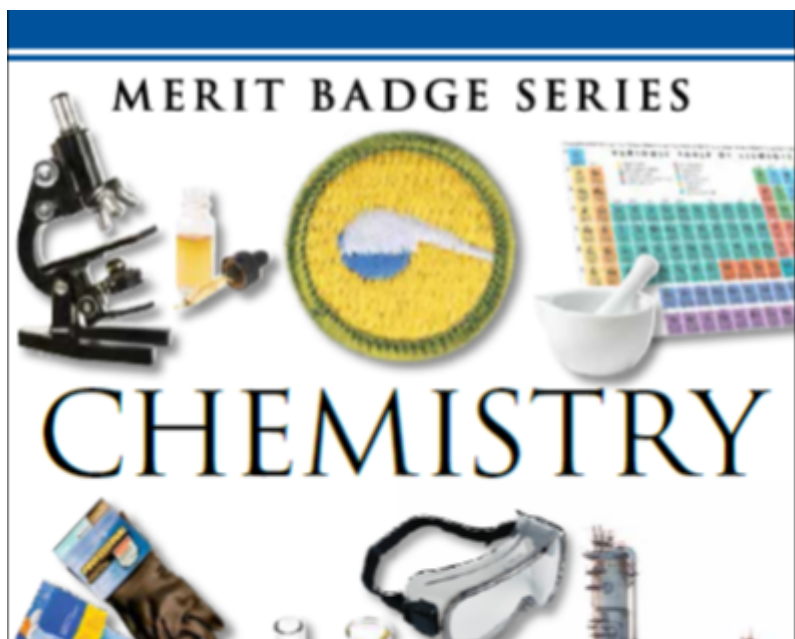
Although national, the BSA is operationally divided by geography into financially independent local councils. I believe that these are the best place for a volunteer senior chemist to start. You can begin by becoming a merit badge counselor or working as a technology mentor, encouraging local troops to appreciate the natural sciences.

I have volunteered locally in North Carolina as a merit badge counselor for Composite Materials, participating in a Merit Badge College Day at North Carolina State University. The event involved over a hundred Scouts on a Saturday. They did some projects beforehand, and completed the necessary requirements before day's end. Bagged lunches were provided. Use of the classrooms and chemistry laboratories made for a well-organized one-day affair. I believe that senior chemists would find it enjoyable teaching Scouts about chemistry and interacting with them during Q & A sessions.

You can learn more about volunteering, and how to contact your local council, by going to the BSA website. <https://www.scouting.org/>. Over a dozen science and technology badges, together with their requirements, are among the more than 125 badges listed. Further published information about each badge is available for purchase in the "Shop" <https://www.scoutshop.org/>. More information about the role of the Merit Badge Counselor is available at <https://www.scouting.org>. Your local council will be happy to hear from you.

My recommendation to help the BSA is not limited to senior chemists -- and there is a special need for women chemists to inspire girls in the Boy Scouts!

I am optimistic that the efforts of the late Supreme Court Justice, Ruth Bader Ginsburg, to seek gender equality have paved the way for us to all teach our young teenagers to make the world a better place.





The Transition of a Chemistry Professor by Bal Barot, Ph.D., Professor of Chemistry, Lake Michigan College, Benton Harbor, MI

My name is Bal. It is a symbol, just like an element's symbol. My parents gave me a long name: Bhalchandra chimanlal. When I took US Citizenship three decades ago, I legally changed my name to Bal, so I am now Bal Barot.

I teach chemistry at Lake Michigan College since 1993. My books, 89 of them, are based on my observations after I took a class in creative writing, followed by a Writer's workshop at Arizona State University. After teaching Organic Chemistry to graduate students in India, in 2010-11 as a Fulbright Scholar, I decided to write books, mostly fiction and few nonfiction, like Bhagavad Gita for the 21st Century. One of these days, I would like to see some of them in print copies. But right now, being busy in academics, all my books are e-books and available on Amazon.

The book I am working on right now is my 90th book. It is about Pat or better Patrick Smith who wants a surgical process to become Patricia. Being raised in an orthodox religious family and small community in New York, at age 18, Pat decides to leave home for San Francisco and become a productive and accomplished citizen. Pat hitchhikes and meets all kinds of people on the road to San Francisco, representing different shades of American society. I'd planned to publish this book as an e-book on Amazon on August 15, 2020.

Why do I write books and how do I write? Well, I get up early before 5 AM and regularly attend YMCA for exercise and swimming. This started when my now surgeon son was a captain of the swimming team at high school and I had to drop him at 5 AM. But the roots of swimming had to do with the chemistry too. As a postdoc at Southern Illinois University, after PhD at OSU, I synthesized organo-sulfur compounds in 1984-86. I used to smell like a skunk and my wife demanded that I replace sulfur on my body by chlorine of the swimming pool.

When I teach, I write in the evening. The days, I am not teaching, I spend approximately eight hours in writing. Now due to pandemic, I walk at the track, missing my routine of YMCA and socialization. But soon there will be a vaccine and life will return to normal. Hope is a powerful incentive to be happy in life.

I write books related to all kinds of topics. But yes, they are about American life from an immigrant's perspective or life in India from a western perspective. Some books involve three generations and others had to do with some incident. I get encouraged when readers from all over the world show their appreciation by buying them. I feel blessed because I learned the English alphabet in India as a freshman in high school. My earlier books had poor grammar, but once I started using grammar software, I feel confident as a writer.

Dr Barot's books can be found at: www.amazon.com/author/balbarot

People with Unique Abilities

Article supplied by Amie Norton, Chemists with Disabilities Committee

Alyssa Paparella grew up in a small rural community where education was not a priority. She attended Sarah Lawrence College where she became interested in scientific research. Unfortunately, Alyssa struggles with fine motor skills in her hand. This makes lab work difficult for her. Alyssa's first lab experience was provided through a NSF research Experience for Undergraduates at the University of Delaware. She looked at scientific opportunities ranging from chemistry to biochemistry to metagenomics.

In addition to her undergraduate work, Alyssa strove to give back to the disability community by working with a nonprofit organization that provided educational programming for people with Down Syndrome.

After graduation from Sarah Lawrence, Alyssa participated in a NIH Post-baccalaureate Research Program at UC Davis (NIH_PREP). She worked in a lab to understand microtubule motor choice for nuclear migration in *C. elegans*. Alyssa became intrigued with the chemistry of microtubule and the underlying physics allowing for movement of the nucleus. As part of her year in PREP, Alyssa applied for and was awarded the National Science Foundation's Graduate Research Fellowship. She has started a PhD program at Baylor College of Medicine where she hopes to continue to pursue research questions to allow her to explore her interest across disciplines.

In her free time, Alyssa desires to make STEM a more accessible and inclusive space. She came across a statistic from a 2009 NSF release that stated only 1.02% of PhD degrees earned in STEM are by people with a disability. After seeing that statistic and being inspired by the ACS Committee for Chemists with Disabilities, Alyssa wanted to make an impact. She recently founded DisabledInSTEM, which provides resources for students navigating the process, while also highlighting stories of people currently in the field.

SENIOR CHEMISTS SPRING 2021 EVENTS



Carolyn Ribes



Amanda Patrick



Michelle Kidder

ACS Networking with Chemistry Professionals, Students, and Ice Cream Virtual Event Sponsored by the ACS Senior Chemists and Younger Chemists Committees

This event will be on March 21, 2021 from 2:00-3:30 p.m., EDT to allow undergraduates, graduates, and younger professionals an opportunity to meet with chemistry professionals about their career experiences. Guest panelists are Carolyn Ribes, ACS Director-at-Large and Dow Technical Leader; Amanda Patrick from Mississippi State University; and Michelle Kidder, Research Staff Scientist and

Scientific Lead at ORNL. Join us for this engaging event. [Registration for the event is free](#) – the first 25 registrants will receive a treat!



COVID has introduced new ways of living and working, and many of those changes will remain in the “New Norm.” Are you ready for the post-COVID world? Join ACS CEO Tom Connelly and ACS Director of Meeting Operations Robin Preston, as well as Frankie Wood-Black, Instructor of Northern Oklahoma College and Principle of Sophic Pursuits, Inc. as they provide insight on what ACS and society at large will look like as we move forward during these uncertain times. The event will take place on Tuesday, March 30 from 1:00-2:00 p.m., EDT. During this interactive broadcast, discover how COVID-19 will change and perhaps improve the ways we communicate, learn, and meet beyond the end of the pandemic. You will learn: ways seniors can prepare to adjust and thrive with the changes to society due to COVID; the impact of COVID-19 in 2021 on seniors (e.g., travel and volunteer work); and what skills will seniors need for a post COVID-19 world. This webinar is co-produced by the ACS Senior Chemists Committee, the ACS Office of Philanthropy, and ACS Webinars. [Register here](#) and plan to join us!



Thomas Connelly, Jr.



Robin Preston



Frankie Wood-Black

Planning for the ACS Spring 2021 Virtual Meeting April 5-16, 2021

The following symposia are co-sponsored by the Senior Chemists Committee

Division of Professional Relations (PROF)

The Senior Chemist Committee will be a cosponsor of a PROF symposium entitled “Planning for Retirement”. Gerry Meyer, Ron Archer and Sid White will be co-organizers. This symposium will include 6 presentations we would like to see again with updates and some that we missed and some new ones. This symposium is scheduled for the morning 9:00 AM-12:00 PM Pacific Time (AM Session Pacific Time) on Thursday April 8, 2021.

Division of Small Chemical Businesses (SCHB)

According to Joe Sabol SCHB Program Chair, the Senior Chemist Committee will be a cosponsor of all SCHB symposia at the ACS Spring 2021 Virtual Meeting which includes the following:

- Climate Public Policy (Joe Sabol) Tuesday April 6, 2021 5:00-8:00 PM Pacific Time
- Starting a Company: Insights from Entrepreneurs and Investors (Jim Skinner) Wednesday April 7, 2021 1:00-3:00 PM Pacific Time
- Chemical Business Poster Sessions (George Ruger) day and time TBD

Division of Industrial & Engineering Chemistry (I&EC)

The Senior Chemist Committee will be a sponsor of a I&EC and/or SCHB symposium entitled “Lessons

Learned from Starting a Chemical Related Business” according to Anna Ivashko I&EC Program Chair. The Division of Small Chemical Businesses will be a Cooperative Cosponsor. This symposium is scheduled for the afternoon session 1:00 PM-4:00 PM Pacific Time (PM session Pacific Time) on Wednesday April 7, 2021.

MAKING A DIFFERENCE

Senior Chemists Committee Campaign for ACS Scholars Endowment

Right after the tragic death of George Floyd the Senior Chemists Committee met to discuss how we might respond. A webinar ACS Senior Chemists to Address Systemic Racism (<https://register.gotowebinar.com/recording/5402310053734352646>) was held July 9, 2020 with more than 300 virtual attendees. The webinar panelists described from their own experiences the extent of systemic racism in American society and particularly in chemistry workplaces. Following the webinar, the SCC decided that one way we could help is to raise funds for the ACS Scholars Program Endowment.

The ACS Scholars Program was established in 1994 to increase the diversity of the chemistry profession by awarding college scholarships to chemistry majors from underrepresented minority groups. The program is rooted in the Society’s core belief that the inclusion of diverse people, experiences and ideas leads to superior solutions to the world’s challenges and advances chemistry as a global, multidisciplinary science. Since inception the program has awarded more than \$1.2 million to more than 3000 students of whom 45% pursued or are pursuing advanced degrees. In addition to providing renewable scholarships, the program pairs these aspiring chemists with dedicated mentors who provide advice and coaching and help them build a valuable network of professional contacts.

The campaign for ACS Scholars started in December by appealing to present and past members and associates of SCC. Contributions have been received from twenty-eight of the 49 SCC current and former committee members. Please contribute when you receive the announcement, or better yet contribute now to the ACS Scholars Endowment on line (<https://www.donate.acs.org/>) or by mail to the ACS Office of Philanthropy, and mention the SCC campaign. Securities and parts of estates as well as cash are welcome.

SCC Working Group on ACS Scholars Campaign: Lol Barton, Warren Ford, Arlene Garrison, Adriane Ludwick, and Anne O’Brien

Free Resources to Help You Stick to a Popular New Year’s Resolution

If you’ve been putting off the task of creating or updating your will, the new year is a good time to check this off your list. It’s simpler than you might suspect, so make this one of your 2021 resolutions! By visiting the wills and living trusts page on the ACS legacy planning website, you can access a free planning kit. You can also learn how you can include ACS in your estate plans in as little as one sentence. This type of donation to ACS helps ensure that we carry out our mission for years to come. For more information, please contact Mary Bet Dobson, CAP® at 202-872-4094 or PlannedGifts@acs.org.

HELP! by Lynn Hartshorn, SCC Newsletter Editor

In order to publish our popular Newsletter for Senior Chemists, we need articles from our readers. Many of our articles are by SCC Committee members, and we need more from our readers!

What can you write about? Some suggestions are: chemistry or other sciences (not research level articles, but articles of more general interest), history of science, travel (when we can travel again), how you have adapted to the Covid-19 pandemic (or possibly have not), book reviews, volunteer activities (including virtual volunteer activities), virtual ACS Section activities, book reviews (especially of science related books) and many others. You can also ask colleagues or friends to write articles. If you have an idea, please contact me at: lghartshorn@stthomas.edu, or seniorchemists@ACS.org

SENIOR CHEMISTS COMMITTEE

Chair-Dr. Arlene A. Garrison*, Dr. Lawrence Barton*, Dr. John R. Berg, Dr. James L. Chao*, Ms. Susan R. Fahrenholtz*, Dr. Warren T. Ford*, Dr. John C. Freeman, Dr. Herbert S. Golinkin, Dr. Lynn G. Hartshorn*, Mr. Norman W. Henry III, Ms. Valerie Kuck*, Dr. Milton Levenberg, Dr. Adriane G. Ludwick, Dr. E. Gerald Meyer*, Dr. Anne T. O'Brien*, Ms. Jane V. Thomas, Dr. Sidney S. White, Jr.*, and Dr. Robert Yokley

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