

Leaders in Attracting, Developing, Promoting, Retaining, and Advocating for Women in the Chemical Sciences



Chair's Message



Happy 90th Anniversary, Women Chemists Committee!

I am writing to you as the 30th Chair of this committee. It began in August 1927 under the leadership of **Mrs. Glenola B. Rose**, who was tasked with the formation of a temporary committee to explore the possibility of a more formal structure around issues important to women chemists. Mrs. Rose formed the Women's Service Committee, "for the purpose of developing the mutual interests of the women chemists and the American Chemical Society," with **Emma Perry Carr**, Mt. Holyoke College; **Ruth O'Brien**, Department of Agriculture; **Mary E. Pennington**, Independent Consultant; and **Lois Woodford**, Chemical Foundation.

Five decades after the inception of this committee, the first female ACS President was elected: Professor **Anna Jane Harrison** of Mt. Holyoke College. The name of the committee was changed to the Women Chemists Committee in 1972 by the Chair at that time, **Helen Free**, who went on to become ACS President in 1993.

There isn't space to even begin to summarize the impactful contributions of the women and men who have served on this committee and in all of the ACS local section WCC committees. And when you add the ripple effects of those who have benefited from our service, it's truly extraordinary. One might ask, after 90 years, is the work of this committee complete? While we have much to celebrate, challenges still exist for women chemists. Our task forces on ACS National Awards and on Non-tenure track faculty have brought focused attention to inequities that remain and areas where the advocacy efforts can be used to the benefit of *all* who work in the chemical sciences. Here are some highlights of programming in the coming year:

At the spring ACS national meeting in San Francisco, we have an exciting lineup of programming and social events. On Sunday, April 2, we will celebrate the accomplishments of Professor **Judith Iriarte-Gross**, winner of the ACS Award for Encouraging Women into Careers in the Chemical Sciences, with the first half of a symposium that continues on Tuesday. On Monday, following our Women in the Chemical Enterprise Breakfast (a ticketed event), we will hear from several former WCC Chairs in a symposium on the influence of WCC in the advancement of women in the chemical sciences. In the afternoon, we are delighted to present our 2017 WCC Rising Stars Awardees in a half-day symposium and honor them at the WCC Open meeting and "Just Cocktails" reception, where we will also be celebrating our 90th Anniversary.

Finally, we will be hosting WCC/Eli Lilly Travel Awardees. With the generous support of Eli Lilly, this program is in its 28th year and has provided awards to more than 500 women. You are cordially invited to their poster session on Tuesday, April 4, followed by our WCC Luncheon (a ticketed event).

At the fall national meeting in DC, we will host WCC/Eli Lilly Travel Award and Merck Research Award winners. We are also co-sponsoring the Division of History in Chemistry symposium "Ladies in Waiting for Nobel Prizes: Overlooked Accomplishments of Women Scientists" and the theatrical production, "No Belles," featuring a few of the 16 women who have won a Nobel Prize and the work of many others who have not. And of course, we are taking the time to celebrate our accomplishments throughout the year. Please keep in touch and let us know how you are celebrating women chemists!

Laura Sremaniak
2017 Chair, Women Chemists Committee

Photo credit: Becky Kirkland/North Carolina State University

Inside this issue

WCC 90 th Anniversary	2
San Francisco Spring 2017 WCC Roadmap	3
Meeting Highlights—Fall 2016	4
2016 WCC Rising Stars	8
Additional Awards	11
Spring 2017 National Meeting	13
Perspectives	15
WCC Leadership	17

Women Chemists Committee 90th Anniversary

WCC 90th Anniversary

By Amy DeBaillie



The year 2017 marks the 90th Anniversary of the founding of WCC, a significant milestone in an exciting journey that began in 1927 when women made up 3.55% of the ACS membership. A number of events will commemorate

the 90th Anniversary at the Spring and Fall 2017 ACS National Meetings in San Francisco and Washington DC.

We will be kicking off the events with the WCC past chairs symposium titled “Celebrating 90 years of the WCC: Reflections of Past Chairs” in San Francisco on Monday, April 3rd. We are excited to have seven WCC past chairs participating in the symposium! We will continue the theme of reflection at the WCC Open Meeting and “Just Cocktails”, an informal networking reception held on April 3rd, by highlighting WCC accomplishments over the past 90 years.

The celebration will resume in August in Washington DC at the WCC “Just Cocktails” reception where the theme will be focused on highlighting the successes of WCC local sections.

Plan to join us in San Francisco and Washington DC as we celebrate the WCC’s 90th anniversary and the important roles that women play in the chemical sciences. Further updates on the celebration plans can be found throughout the year on our website and Facebook page.

Chairs, Women’s Service Committee

Glenola B. Rose	1927-1935
Lois W. Woodford	1936-1939
May L. Whitsitt	1940-1943
Cornelia T. Snell	1943-1947
Hoylande D. Young	1947-1948
Marjorie J. Vold	1949-1951
H. Marjorie Crawford	1951-1952
Gladys A. Emerson	1953-1957
Essie White Cohn	1958-1961
H. Gladys Swope	1962-1966
Florence H. Forziati	1967-1970
Helen M. Free	1970-1972

Chairs, Women Chemists Committee

Susan S. Collier	1973-1975
Nina M. Roscher	1976-1978
Wanda L. Brown	1979-1980
Maureen Chan	1981-1983
Marion H. Baker	1984-1985
Margaret A. Cavanaugh	1986-1988
Kathleen D. Trahanovsky	1989-1991
Mary E. Thompson	1992-1994
Christina Erwin Bodurow	1995-1997
Frankie K. Wood-Black	1998-2000
Valerie L. Barrett	2001-2002
Carolyn Ribes	2003-2005
Amber S. Hinkle	2006-2008
Dawn A. Brooks	2009
Janet L. Bryant	2010
Judith H. Cohen	2011-2013
Amber F. Charlebois	2014-2016
Laura S. Sremaniak	2017



253rd American Chemical Society National Meeting
April 2-6, 2017 • San Francisco, CA

Women Chemists Committee



EVENTS SCHEDULE

SUNDAY, APRIL 2, 2017

The Importance of Role Models & Mentors in Reaching Gender Equity in Chemical Sciences: A Symposium in Honor of Judith Iriarte-Gross

Cosponsored by CHED, CMA, PROF

1:30 pm–4:45 pm

Monterey II, Hotel Nikko San Francisco

ACS Diversity Reception

5:00 pm–7:00 pm

Yosemite A&B, Hilton Union Square

MONDAY, APRIL 3, 2017

WCC Women in the Chemical Enterprise Breakfast
(Ticketed Event)

Start-ups and Spin-offs

7:30 am–9:00 am

Imperial B, Hilton Union Square

With support from BASF and MPPG

Celebrating 90 years of the WCC: Reflections of Past Chairs

Cosponsored by PRES, PROF

9:15 am–12:00 pm

Monterey II, Hotel Nikko San Francisco

Women Chemists of Color Networking

10:00 am–12:00 pm

Yosemite A&B, Hilton Union Square

WCC Rising Star Award Symposium

Cosponsored by BIOL, ENFL, PRES

1:30 pm–3:50 pm

Monterey II, Hotel Nikko San Francisco

WCC Open Meeting and 'Just Cocktails' Reception

4:00 pm–5:00 pm

Nikko Ballroom II, Hotel Nikko San Francisco

With support from ecosVC

TUESDAY, APRIL 4, 2017

The Importance of Role Models & Mentors in Reaching Gender Equity in Chemical Sciences: A Symposium in Honor of Judith Iriarte-Gross

Cosponsored by CHED, CMA, PROF

8:30 am–11:15 pm

Monterey II, Hotel Nikko San Francisco

WCC/Eli Lilly Travel Award Poster Session

11:00 am–12:00 pm

Grand Ballroom A, Hilton Union Square

WCC Luncheon (Ticketed Event)

TUESDAY, APRIL 4, 2017

12:00 pm–1:30 pm

Grand Ballroom A, Hilton Union Square



Keynote Speaker

Barbara J. Finlayson-Pitts

"Smog, Science and Society: A Journey from the Aurora to Atmospheric Aerosols"

Courtesy of Barbara J. Finlayson-Pitts

Sponsored by the Francis P. Garvan-John M. Olin Medal Endowment, the 2017 Garvan-Olin Medal is presented by the American Chemical Society to Barbara J. Finlayson-Pitts

WCC Chair:

Laura Sremaniak, North Carolina State University

WCC Program Chairs:

Kim Woznack, California University of Pennsylvania
Renée Cole, University of Iowa

Meeting Highlights—Fall 2016

WCC Luncheon Address – Diversity and Me, My Life as a Woman in Chemistry

By Samina Azad



WCC Luncheon Key Note Speaker **Dr. Ann Weber**, currently an independent consultant with biotech and pharma, retired from Merck in 2015 as Vice President, Lead Optimization Chemistry.

Ann started her presentation with a definition of diversity and why diversity should be strategically embraced by businesses – this is a data driven approach as companies with more women in their executive committees have better financial success. There are many more organizations today with women on their boards than before but there is still significant progress to be made.

Ann grew up in Oshkosh, WI. She found her first female role model at home – her mom **Fran Weber**, who would try to fix her own dishwasher before calling a repairman. Ann found another mentor at school, her chemistry teacher who got her interested in chemistry. Early on, Ann came up with her purpose statement for her life, “To use my God-given talents to the best of my abilities to make the world a better place”.

She went to University of Notre Dame and then to Harvard University with advisor Dave Evans. When it was time to choose a career path, she had to decide between academia and industry. She was impressed by Merck’s mission statement – “to discover, develop and provide innovative products and services that save and improve lives around the world”. It resonated with her own mission in life, so Ann went to work for Merck.

At Merck, Ann started as a Process Chemist and worked on Discovery Chemistry. She was given an opportunity to work on a brand new project – Beta3 Adrenergic Receptor Agonists – informally called – the “obesity project”.

From 1990 to 2000 she and her team worked on making the new compound, but the project was unsuccessful and ended in 2000. During this time, Ann was raising her three children, Dave, Dan, and Timmy.

Ann highlighted an important change that occurred over time. In her younger days she was afraid of failure – she experienced lots of sleepless nights whenever challenged. Later on she learned how to deal with challenges without being afraid.

Ann joined a new research team initiated by a colleague in 1999, the DPP-4 Inhibitor Program. The team worked on the new compound and in 2001 it went to market as JANUVIA[®] in just 4 years! The project team worked rapidly without compromising any of the critical background work. The work of the Early Development Team led to another program, which developed a novel once weekly oral therapy for Type 2 Diabetes. This was approved in Japan in Sept 2015.

Although they did not get a drug out for obesity in the initial project, Ann looks at it as a “successful failure”. Ann was promoted from a Research Fellow to Associate Director and then Director while working on this project. She went from being a medicinal chemist to a drug discovery researcher as her role evolved. Ann acknowledged her manager at Merck for sponsorship and for creating some of these opportunities for her.

Ann shared her “lessons learned”:

- SEEK out mentors and sponsor
- Ask a lot of questions
- Don't be afraid to make mistakes
- If it is not working, try something else
- Figure out what’s important to you and go after it
- For everything else just say no or hire someone
- Mentoring and sponsoring are gifts ... give back!

Ann emphasized that life is about making choices and you can't have it all - you need to decide what is important to you and choose wisely.

Meeting Highlights—Fall 2016 (Continued)

WCC Merck Research Award

By Amy Balijs

On Sunday, August 21, WCC in partnership with Merck held the inaugural [WCC Merck Research Award Symposium](#). This session featured the winners of the WCC Merck Research Award, 3rd- and 4th-year graduate students who have excelled in their research. The morning symposium featured technical talks on chemical biology, polymer synthesis, computational chemistry, and organometallic chemistry. To begin the session, **Sara Massey** from the University of Chicago discussed her research in analytical techniques to examine biological entities. **Virginia Bruce** then highlighted her progress in examining modified cationic protein peripheries. **Allegra Aron**, from the University of California, Berkeley, discussed her progress in imagining biological iron which was followed by **Lam-Kiu Fong**'s talk on computational methods to examine the melting of DNA strands on nanoparticles and **Alice Chang**'s preparation of novel block copolymers for novel nanostructures.



WCC Merck Research Award winners with representatives from WCC and Merck. (Photo Credit: A. Balijs)

Following the intermission, **Kate Holloway**, a computational scientist at Merck, gave an inspiring technical talk of how chemists work together to develop new drugs and products. The final three talks focused on synthetic topics with **Suzanne Batiste**'s work on preparing macromolecules from small peptide sequences, **Emma Baker**'s

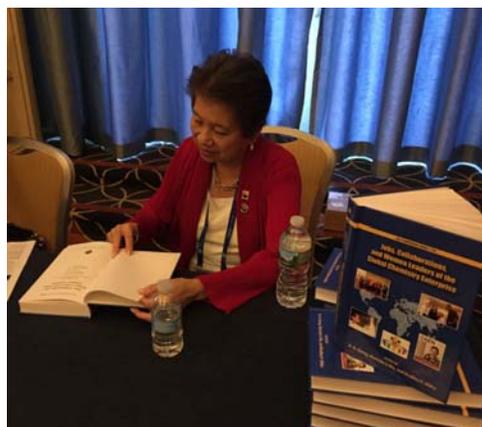
focus on nickel catalyzed C-N formation reactions, and **Melissa Lee**'s study of C-N reactions.

To celebrate their accomplishments, the winners were honored at a luncheon immediately following the symposium. Each graduate student was paired with a current female Merck employee to help mentor the student through their careers.

WCC “Just Cocktails”

By Kim Woznack

The WCC Open Meeting and “Just Cocktails” reception, occurred on Tuesday, August, 23, 2016. **Dr. Amber Charlebois**, 2016 WCC Chair, presented an overview of the Women Chemists Committee and a description of the Fall 2016 meeting programming. The recipients of WCC awards were acknowledged and celebrated. Organized by WCC, the “Just Cocktails” reception was held with support from ecosVC.



Dr. Marinda Li Wu signing the ACS Symposium book, *Jobs, Collaborations, and Women Leaders of the Global Chemistry Enterprise*. (Photo Credit: K. Woznack)

“Just Cocktails” also featured a book signing by **Dr. Marinda Li Wu**, for the ACS Symposium book, *Jobs, Collaborations, and Women Leaders of the Global Chemistry Enterprise*.

The book is available as an eBook directly through [ACS Publications](#), and also available in hardcopy distributed by [Oxford University Press, Inc.](#)

Meeting Highlights—Fall 2016 (Continued)

WCC/Eli Lilly Travel Award Poster Session

By Amy Balijs

On Tuesday, August 23, WCC hosted ten WCC/Eli Lilly Travel Award winners at a poster session preceding the WCC luncheon. Ranging from just finishing undergraduate to completing post-doctoral studies, each woman had a unique story to share. The award winners were **Brittney Anderson** (University of California, Davis), **Brittney Armstrong** (University of California, Davis), **Elizabeth Cleverdon** (Syracuse University), **Vedanjali Gogineni** (University of Mississippi), **Laura Hawk** (University of Minnesota), **Sarah Johnson** (Purdue University), **Kayleigh McGovern** (Syracuse University), **Molly Vergerame** (University of Rose Island), **Clorissa Washington** (University of South Carolina) and **Lizzie White** (Duke University). Their research focused on biochemistry, biotechnology, inorganic, and medicinal chemistry. The poster session was well attended with ACS governance members, Eli Lilly representatives, and other conference attendees. Following the hour long poster session, the [WCC/ Eli Lilly Travel Award winners](#) were honored at the WCC luncheon.



WCC/Eli Lilly travel award recipients with representatives from WCC and Eli Lilly. (Photo Credit: Linda Wang)

Overcoming Challenges Award

By Amy Balijs



Amber Charlebois (left) and Jherian Mitchell-Jones (right) - (Photo Credit: Linda Wang)

The 2016 Overcoming Challenges Award winner is **Jherian Mitchell-Jones** from College of Saint Benedict/St. John's University. Jherian grew up in a challenging environment, experiencing abuse, being surrounded by drug users, and being placed in foster care. These negative experiences impacted her education so that she was unable to read and write proficiently and she struggled in math classes. However, in 2010, she took charge of her life, dedicating herself to her studies and developing a healthy lifestyle. By the time she graduated high school, Jherian ranked third in her graduating class and had taken several advanced courses.

Jherian was then accepted into the College of Saint Benedict's NSF Future Chemistry Scholars S-STEM Program (FoCuS). Although only having completed her freshman year, Jherian is known for her maturity and dedication to succeed. Her advisor speaks to her desire to excel by being hired as a tutor to students and her preparedness to begin research.

To celebrate her accomplishments, Jherian was presented the Overcoming Challenges Award at the WCC Luncheon. **John Johnson**, Chair of the Committee on Chemists With Disabilities, gave a heartwarming introduction. Jherian was then presented with a plaque and a monetary gift. Congratulations, Jherian!

Meeting Highlights—Fall 2016 (Continued)

Increasing Successful Award Nominations from Underrepresented Groups

By Christine Chow

WCC, the ACS Board Committee on Grants & Awards, and the ACS Diversity & Inclusion Advisory Board organized a session focused on increasing award nominations from underrepresented groups. The panel discussion, moderated by **George Bodner** (Chair, Board Standing Committee on Grants & Awards) and **Amber Charlebois** (WCC Chair), included **Christina Bodurow** (Eli Lilly), **Amanda Bryant-Friedrich** (University of Toledo), **Cynthia Maryannoff** (Baruch S. Blumberg Institute) and **Les McQuire** (Novartis) as participants. An overview of the nomination and selection process was given, followed by discussions on implicit bias, how to prepare competitive nominations, reviewer criteria, and how to become award ready. Analysis of the national ACS technical awards between 1923 and 2015 revealed that women and members of underrepresented groups received very few (less than 5% of the total). Advances were made in 2017 (19% female winners), although caution should be taken when looking at numbers from a single year. Women comprise 29% of the ACS membership.

Some key recommendations for putting together successful nominations were made.

- Focus on specific outstanding accomplishments of the nominee and address the nomination criteria for the specific award.
- The components of the award package should be *focused and well integrated*, with the *entire* nomination package being tailored for the specific award.
- Focus on the *significance* and *impact* of the nominee's work (*i.e.*, first to accomplish the highlighted work, developed best method in the field, etc.).

Other recommendations were made to ensure that members of underrepresented groups are well positioned to be nominated and receive awards in the

future. Getting more people "award ready" will require active mentoring throughout the career and greater advocacy from leaders in the field, such as former awardees and ACS leadership. Members of the audience recommended establishing rubrics for each award so that the selection criteria are transparent.

Please consider nominating an underrepresented chemist for a national technical award this November!

Resources:

Charlebois, A. F. "[Becoming 'Award Ready'.](#)" *Chemical & Engineering News*, September 5, 2016.

Bodner, G. M.; Kuck, V. J. "[Help Diversify ACS National Awards.](#)" *Chemical & Engineering News*, February 22, 2016.

Jacobs, M. "[ACS's Work is not Done.](#)" *Chemical & Engineering News*, February 1, 2016.

Watch the Webinar, "Are You Award Ready?"

A [webinar](#) based on the ACS national meeting panel, "Increasing Successful Awards Nominations from Underrepresented Groups", held on September 20, 2016: Amanda Bryant-Friedrich and Les McQuire discussed ways to be "award ready" at greater length.

Women in the Chemical Enterprise Breakfast

By Ean Warren

At the Women in the Chemical Enterprise Breakfast during the ACS National Meeting in Philadelphia, **Hannah Murnen**, the VP of Business Development at Compact Membrane Systems, discussed diversity in the workplace with "It's about **all** the people": What are the problems, why is diversity important, why do we care and what can we do to address the problem? Hannah presented data about the issue, reasons for encouraging a diverse workforce, limitations in achieving diversity, and ways to counter bias. Organized by WCC, the Fall 2016 breakfast was held with support of BASF.

2016 WCC Rising Stars

The 2016 WCC Rising Stars were featured at the Spring 2016 ACS National Meeting. For articles about the other 2016 WCC Rising Stars, please see the [Fall 2016 WCC Newsletter](#).

Dr. Karelle Aiken—Georgia Southern University

By Kim Woznack



Dr. Karelle Aiken, 2016 WCC Rising Star, is currently an Associate Professor at Georgia Southern University in Statesboro, GA. She is recognized for her outstanding work at GSU with undergraduate students, graduate students, and new faculty members.

Karelle Aiken was born in Jamaica. As a young woman, she was part of speech-choirs in which she performed with family members. She admits that she was shy but that she really enjoyed the mentorship she received during those times. Karelle moved to the U.S. in 1996 to begin college. She earned her Bachelor's degree from Williams College and her Ph.D. in Organic Chemistry from the University of New Hampshire. The warm climate in Statesboro, and the strong student-centered atmosphere in the chemistry department at GSU impressed Karelle. She has been at GSU since 2007.

Karelle's research group's projects are diverse and range from organic synthesis and characterization to synthesis of organic-based semiconductors and sensors. She leads a highly successful and NSF-funded departmental summer research experience for undergraduates (REU) program. Karelle has published papers with her students, and they have presented their work at regional and national meetings of the American Chemical Society and National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE). Karelle was the founding member of the

Georgia Southern NOBCChE chapter. Dr. Karelle Aiken's dedication to mentoring student researchers has had a significant impact on the lives of so many.

For more information about Dr. Karelle Aiken, please see the following sites:

<http://cosm.georgiasouthern.edu/chemistry/karelle-aiken/>
<http://cosm.georgiasouthern.edu/blog/2015/10/28/american-chemical-society-rising-star-award/>

Dr. Amanda Hummon—University of Notre Dame

By Kim Woznack



Dr. Amanda Hummon, 2016 WCC Rising Star, is a Pittsburgh, PA native who completed her undergraduate work at Cornell University, followed by her Ph.D. at the University of Illinois, Urbana-Champaign. After postdoctoral appointments with the University of Illinois and the National Cancer Institute at the National Institutes of Health, she began her career as

a faculty member at Notre Dame. In addition to being recognized as a WCC Rising Star, Amanda has also been recognized with a NSF CAREER award and a Society for Analytical Chemists of Pittsburg starter grant.

The Hummon research group focuses on using analytical chemistry to explore the proteomics of cancer. They have developed and adapted mass spectrometry tools for studying cancer progression.

In addition to the crucial research that they do, the Hummon group also likes to have fun. This includes modeling important safety habits, like wearing the appropriate personal protective equipment (PPE), with each member adopting a muppet alter ego.

2016 WCC Rising Stars (Continued)

For more information on Dr. Amanda Hummon and her research group at the University of Notre Dame, please see the following sites:

<http://chemistry.nd.edu/people/amanda-b-hummon/>
http://www3.nd.edu/~abhlab/Hummon_Lab/Welcome/Welcome.html

Dr. Rongjuan Cong—Dow Chemical

By Alexia Fiontello



Dr. Rongjuan Cong credits her successes to her hard work and the mentoring and coaching that she has received throughout her career. As a first generation immigrant, she earned her bachelor's degree in chemistry in China. She later moved to Japan and studied to become a Japanese translator

in Canada. Her love of mathematics and models led her to completing her PhD in Chemical Engineering from McMaster University in Ontario. She started her career at Dow Chemical in Analytical Sciences and has worked on solving business problems for the plastics, polyethylene, and materials science product development groups.

When asked about the keys to her success, Cong emphasized that teamwork, having good mentors and coaches, and a passion for her work has helped throughout her career. Her love of what she does was clearly demonstrated during the WCC Rising Star Symposium.

Some advice Cong offers to women starting their careers is to be open-minded, find mentors and be willing to be coached. She has experienced firsthand the positive impact of good mentoring and coaching that helped her expand her knowledge and develop a new expertise in polyethylene technology area.

Outside of work Cong enjoys gardening and harvesting from the 12 different fruit trees she has in her yard. Her favorite fruit is the pineapple.

For Cong, the scientific challenges she faces are the most exciting part of her job. The thrill of solving problems and watching her teams work diligently and work well together is what brings her career satisfaction.

Dr. Elise Fox—Savannah River National Lab

By Ean Warren



Dr. Elise Fox has been an engineer with Savannah River National Laboratory since 2006. Her research has focused on chemical characterization of materials and grid integration of renewable energy technologies. Her projects involve energy production, either developing new materials for more efficient energy production, or

understanding how materials behave during production. Her work has resulted in more than 25 peer-reviewed journal articles, four book chapters, 29 published conference proceedings, two patents, and 15 successfully-funded proposals.

Her career started at College of Charleston with a bachelor's degree in chemistry. She went on to get her M.S. and Ph.D. at Pennsylvania State University with Dr. Chunshan Song, studying the role of metals and oxygen on ceria-supported copper-palladium bimetallic catalysts.

Elise has been active in ACS affairs since moving to Aiken. She has been a member of the Younger Chemists Committee and Committee on Environmental Improvement, and active in the Division on Energy & Fuels and the former Division on Petroleum Chemistry. She works

2016 WCC Rising Stars (Continued)

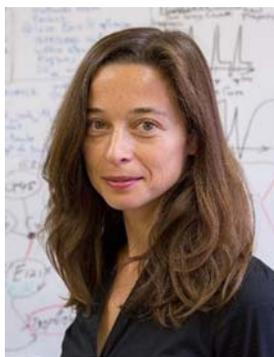
with Savannah River Local Section and has been Chair and Alternate-Councilor, as well as Chemists Celebrate Earth Day and National Chemistry Week coordinator.

She has received numerous awards and recognition for her work. While at College of Charleston, she was a Life Scholar. She was a Robert M. Graham Fellow at Penn State in 2001 and 2002 and travelled to Nagoya Japan as an NSF Travel Fellow. In graduate school, she received a Frank and Lucy Rusinko Fellowship in Fuel Science. She received travel awards in 2005 and 2008, one from the North American Catalysis Society, another from World University Network, and one from ACS Leadership Institute. She was awarded an Electrochemical Society Bernard S. Baker Student Award for Fuel Cell Research, a WCC Lectureship Award, and an ACS Salute to Excellence from the Savannah River Local Section. In 2013, she was a visiting lecturer to the Joint Center for Energy Research, Dalian University of Technology, Dalian, China.

Elise is Mom to 8 year old budding scientist twins, Colin and Hannah. She agrees with Ruth Bader Ginsburg when she said that the most important decision you will ever make is who you choose to spend your life with. Having a supportive husband who isn't afraid to step in and take care of the children and who thinks that her work is just as important as his, has enabled her to push for stretch projects both at work and in her volunteer activities. Elise credits ACS for providing career development and leadership opportunities that she would not have had otherwise. Her advice to young chemists is "to volunteer early and often. You never know what may come from it. Also, don't box yourself in. Don't be afraid to take a chance and try something new professionally."

Dr. Anastassia Alexandrova—University of California, Los Angeles

By Jodi Wesemann



Dr. Anastassia Alexandrova, is an Associate Professor of Chemistry & Biochemistry at UCLA, where her research focuses on multiscale modeling of materials. She earned her bachelor's and master's degrees from Saratov University, conducted predoctoral work at the Russian Academy of Sciences, earned her Ph.D. at

Utah State University, and held two postdoctoral positions at Yale University. The second was an American Cancer Society Fellowship.

Anastassia has been recognized for her research and educational contributions. She has received a NSF CAREER Award, the Glenn T. Seaborg Award and Professor of the Year at UCLA, Alfred P. Sloan Research Fellowship, a DARPA Young Faculty Award, and an ACS YCC Leadership Development Award.

Anastassia has a highly visible cutting-edge international research program that makes tight connections between theory and experiment, and an ability to bring all this excitement into the undergraduate classroom. Her research on multi-scale modeling and design of new materials, includes artificial metalloenzymes, clusters, alloys, and heterogeneous catalytic interfaces, using electronic structure insights. A course she developed, "Computation Methods for Chemists", involves a final research project that has twice resulted in publications.

For more information about Dr. Anastassia Alexandrova, please see the following sites:

<http://www.chemistry.ucla.edu/directory/alexandrova-anastassia-n>

<http://www.chem.ucla.edu/~ana/members.html>

Additional Awards

Claire Buysse—2016 Priscilla Carney Jones Scholarship Recipient

By Jodi Wesemann



A senior chemistry major at the College of Saint Benedict and Saint John's University (CSB/SJU) in central Minnesota, **Claire Buysse** is the 2016 recipient of the Priscilla Carney Jones Scholarship. The scholarship is a one-time award based on both merit and financial need.

Claire's love of chemistry and her plans to pursue a doctoral degree in atmospheric chemistry have grown through a series of academic and research experiences. In high school, she took college-level courses from a female teacher, role model, and family friend. In college, she has been inspired by other students with the same sense of determination and ambition in chemistry. At CSB/SJU, she works as a tutor and teaching assistant for the Chemistry Department. She is an active member of the Chem Club and is currently serving as President.

Research experiences helped Claire discover a passion for the Earth sciences. Along with pursuing research opportunities during the academic year at CSB/SJU, she has participated in the North Dakota State University Research on the Prairies Summer Research Experiences for Undergraduate Program, the Joint Institute for the Study of the Atmosphere and Ocean Summer Research Internship Program at University of Washington–Seattle, and the NASA Student Airborne Research Program. She developed her own research project based on the data collected aboard a NASA DC-8 research aircraft and will present her research on secondary organic aerosols at the Spring 2017 ACS National Meeting in San Francisco.

The Priscilla Carney Jones Scholarship was established by Paul R. Jones, in memory of his wife, to provide scholarships for female undergraduate majors in chemistry or related disciplines who are beginning their junior or senior years of study. Priscilla Carney Jones wished to have this scholarship established because of the difficulties she faced as a female chemist early in her career.

Dr. Serena Debeer—2016 Inorganic Chemistry Lecturship Award

By Ana de Bettencourt-Dias

The WCC congratulates **Dr. Serena DeBeer**, the 2016 Inorganic Chemistry Lectureship Award recipient. Serena received her BS in Chemistry at Southwestern University in 1995 and her PhD in Chemistry from Stanford University in 2002, where she worked with Edward I. Solomon and Keith O. Hodgson. She then worked as beam line and staff scientist at the Stanford Linear Accelerator until 2009 and then moved to Cornell University for her first faculty position. In 2011, she accepted the position of Professor and Research Group Leader at the Max Planck Institute for Chemical Energy Conversion in Mülheim, Germany. Serena received her award for her contributions to the development and application of advanced X-ray spectroscopy coupled to computational methods to understand key mechanisms in biological, homogeneous and heterogeneous catalysis. Her award address will be at the ACS National Meeting in San Francisco, CA, on April 3, 2017.

Additional Awards (Continued)

2016 ChemLuminary Award—Best Overall WCC Local Section Award

By Jaime Curtis-Fisk

Congratulations to the Chicago Local Section on receiving the 2016 WCC ChemLuminary award! This award is given to a local section by the Women Chemists Committee to recognize outstanding efforts in promoting women in the chemical sciences. This award serves as a recognition of outstanding accomplishment and highlights successful programming and initiatives that serve as an example for other sections. The East Central Illinois and Pittsburgh Local Sections were also finalists for the award, having both demonstrated significant accomplishment and impact to their community.

The Chicago Section WCC's year included a Non-traditional Chemistry Career Forum to attract women to chemical science careers outside of the box. The students learned about what working chemists can do with their chemistry degrees. The Committee cosponsored an AAUW \$tart \$mart workshop that provided women with the knowledge and skills for negotiating salaries and benefits in order to receive fair and realistic compensation as they approach the job market. Another activity was a mentoring event at which Chicago Section women mentors talked about their careers and experiences in graduate school and post-doc positions. The Chicago Section WCC held a Mix & Mingle jointly with Iota Sigma Pi, which featured a Jeopardy-style game show with chemistry-based questions. Several women served as liaisons to 38 Chicago-area colleges and universities, publicizing activities of the Chicago Section WCC. At ChemDay 2015, the Chicago Section WCC had a table with 12 posters & activities, including a Periodic Table jigsaw puzzle that students finished during the event. Tom Lehrer's song of the Elements played non-stop while students used WCC-inspired & decorative ink-stamps saying "GIRLS = GREAT CHEMISTS", "I WANT TO BE A CHEMIST", and "GIRLS + CHEMISTRY = FUN".

Careers in chemistry and their educational requirements were discussed with students.

Each year, the East Central Illinois WCC organizes a day camp at the University of Illinois at Urbana-Champaign. Since its inception in 2008, "Bonding with Chemistry: A Day for Girls" has invited middle school girls from the area and around the state to participate in a full day of chemistry related activities led by graduate students at the university. There are often campers who have enjoyed themselves so much they return for multiple years, which encourages the graduate student volunteers and organizers to keep the experience exciting and new. Students rotate among stations, each with a unique theme related to natural phenomena and chemical principles. A favorite event has been t-shirt chromatography in which campers tie-dye shirts while learning the principles of liquid chromatography. Participants receive take-home items, projects, and a lab notebook of all the day's activities. All of these activities and additional outreach is at no cost to the students in an effort to serve the entire community. In 2015, 90 girls attended the camp, with nearly 50 graduate student volunteers, and two central organizers. Overall, this day camp has now reached hundreds of middle school girls (some of whom are now well into college!) and graduate students.

The Greater Pittsburgh Area WCC takes an inclusive view of the events and programs implemented to have the most extensive impact on attracting, developing, promoting, and advocating for women in the chemical sciences. The following is only few of the 2015 sponsored events: A Careers in Chemistry Symposium; a Culture, Cosmetics, and Chemistry Workshop (geared towards 7-10th grade students and also provided for Girl Scouts); and a STEM-ulate Success Science Showcase (poster session for high school students to learn the art of scientific presentations and undergraduates to learn evaluative skills by serving as judges).

Spring 2017 National Meeting - San Francisco

Start-ups and Spin-offs

By Ean Warren

Women in Chemical Enterprise Breakfast

April 3, 2017, 7:30 am–9:00 am

Imperial B, Hilton Union Square

With support from BASF and MPPG

(Ticketed Event)

For over 20 years, WCC has organized the Women in the Chemical Enterprise Breakfast, a program designed to initiate discussion on topics relevant to women in the chemical sciences. We will have two guests in San Francisco: **Dr. Molly Morse** and **Dr. Xiaoxi Wei**.

Molly is the CEO and co-founder of Mango Materials, a San Francisco Bay Area-based start-up company that uses methane gas to feed bacteria that manufacture a biopolymer. Molly received her Ph.D. in Civil & Environmental Engineering—with an emphasis on anaerobic biodegradation of biocomposites for the building industry—from Stanford University, and her B.S. in Civil and Environmental Engineering from Cornell University. Molly has contributed to multiple patents, publications and presentations. Along with other Mango Materials team members, she is currently working to up-scale the technology of using methane gas to produce environmentally friendly materials.

Xiaoxi is an entrepreneur and chemistry professional in the area of supramolecular assembly. She has developed synthetic transmembrane nanopores with distinguished selectivity and hyper-effective ice prevention materials via biomimetic nanoscience. Xiaoxi founded X-Therma in 2014 and is the inventor of X-Therma's core technology to develop a state-of-the-art biopreservation/antifreeze formulation that incorporates a first-in-class hyper-effective and non-toxic proprietary antifreeze polymer. X-Therma will first enable safer transport and long-term biobanking for advanced stem cell therapies, IVF, organ transplants, and other regenerative medicines before scaling to other large markets.

Random Business Card Exchange is a new activity designed to encourage networking after the Women in the Chemical Enterprise breakfast. Mentors dropped a business card in a bag and mentees picked one up. There were three bags from which to choose a card, one each for business, academia, and government and other non-profits. The idea is to encourage one-on-one relationships to discuss work and experiences. We hope this project will be another way to connect students and early career chemists with more experienced scientists.

Join us in San Francisco for what will be an enlightening discussion on start-ups and spin-offs!

Encouraging Women into Careers in the Chemical Sciences

By Jodi Wesemann

The Importance of Role Models & Mentors in Reaching Gender Equity in Chemical Sciences: A Symposium in Honor of Judith Iriarte-Gross

Sunday, April 2, 1:30 pm–4:45 pm

Tuesday, April 4, 8:30 am–11:15 am

Monterey II, Hotel Nikko San Francisco

Co-sponsored by CHED, CMA, PROF

Judith Iriarte-Gross is the [2017 recipient](#) of the ACS Award for Encouraging Women into Careers in the Chemical Sciences. This award recognizes significant accomplishments by individuals who have stimulated or fostered the interest of women in chemistry, promoting their professional developments as chemists or chemical engineers.

A professor of chemistry and director of the Women in STEM Center, Middle Tennessee State University, Judith is being honored for her continued persistence and tireless efforts to level the playing field for women in chemistry and to inspire young women to major in chemistry. This symposium includes presentations from

Spring 2017 National Meeting (Continued)

those who she mentored and those who mentored her, along with Judith's award address.

The ACS Award for Encouraging Women into Careers in the Chemical Sciences is sponsored by The Camille & Henry Dreyfus Foundation, Inc.

Honoring 2017 WCC Rising Stars

By Maureen Kane

WCC Rising Star Award Symposium

Monday, April 3, 1:30 pm–3:50 pm

Monterey II, Hotel Nikko San Francisco

Cosponsored by BIOL, ENFL, PRES

The Rising Star Award was established in 2011 to help promote retention of women in science. It recognizes exceptional early- to midcareer women chemists across all areas of chemistry on a national level.

The 2017 recipients will highlight their work at this award symposium:

- **Rebecca Abergel, Ph.D.** - Staff Scientist in the Chemical Sciences Division; Lawrence Berkeley National Laboratory
- **Yimon Aye, Ph.D.** - Assistant Professor of Chemistry & Chemical Biology; Cornell University
- **Erin S. Baker, Ph.D.** - Senior Research Scientist IV in the Biological Sciences; Division, Earth & Biological Sciences Directorate, Pacific Northwest National Laboratory
- **Erin E. Carlson, Ph.D.** - Associate Professor of Chemistry; University of Minnesota - Twin Cities
- **Beata A. Kilos, Ph.D.** - Associate Research Scientist in Core R&D, Inorganic Materials and Heterogeneous Catalysis; The Dow Chemical Company (Midland, MI)
- **Ah-Hyung (Alissa) Park, Ph.D.** - Associate Professor of Earth and Environmental Engineering & Chemical Engineering; Columbia University

Selection as a Rising Star is a distinct honor of professional accomplishment within this leading organization of chemists.

Celebrating and Networking

By Kim Woznack

WCC Open Meeting and "Just Cocktails" Reception

Monday, April 3, 4:00 pm–5:00 pm

Nikko Ballroom II, Hotel Nikko San Francisco

If you are interested in celebrating the 90th anniversary of WCC, honoring the 2017 WCC Rising Stars, and learning more about the WCC mission, programs and resources, please join us at the next WCC Open Meeting and "Just Cocktails" reception. This free, informal event allows people to network with the members of the WCC as well as other ACS members. Tell your friends and colleagues and we look forward to seeing you at the next "Just Cocktails" event.

ACS Keynote Speaker—Dr. Shannon Lucid

By Attila E. Pavlath

Space Chemistry: How it Helps Space Exploration

Monday, April 3, 8:00 am–11:55 am

2000, Moscone Center

The keynote speaker of this symposium will be **Dr. Shannon Lucid**. Shannon is an ACS member and one of the first woman astronauts. She held the record for spending the most time, six months, on the International Space Station carrying out various experiments. She will give a summary of her work, discussing the importance of space chemistry research and give her view about the future. She stated that she had a dream to be both a chemist and an astronaut.

"Space: the final frontier." As the famous Star Trek quote hints, space is becoming more and more important. This is the reason why a group of domestic and

Spring 2017 National Meeting (Continued)

international ACS members petitioned last year the formation of a Division of Space Chemistry.

(See www.spacechemistry.org)

The process is underway and the formation of this new Division is expected to be approved by ACS Council at the Fall Meeting in Washington DC. Since nothing can be done by this future Division until it is officially approved, last year **Dr. Donna Nelson**, then ACS President recognizing the importance of chemistry in space exploration, recruited the Younger Chemists Committee to sponsor a Space Chemistry Symposium at the Spring ACS meeting in San Francisco. The proponents of Division acquired 15 experts in this area both domestic and international to deliver lectures on Monday, April 3.

Perspectives

Views expressed in this section are those of the authors and not necessarily those of ACS or WCC.

Barbie Takes on STEM

By Hawthorne R. Ripley & Rebecca A. Horwitz

A small label on the front of Mattel's Barbie STEM kit box reads, "You Can Be Anything." Toys have the power to influence how children perceive their potential and form goals, and STEM kits, specifically, could even inspire or encourage future career paths. For this reason, the new Mattel product raises questions about the progress made in the representation of women in STEM fields, and whether this toy is actually constructive in the hands of young girls. The classic blonde doll comes equipped with a lab coat and safety goggles, but her hair is loose and she's wearing a mini skirt and high heels. She also comes with ready-made supplies to put together a motorized closet rack, jewelry holder, and a washing machine using "engineering," and to design colorful dresses with "chromatography." The question arises: is

this truly a step forward, and is Mattel's "professional women" initiative really sending a message of equality?

At the Packer Collegiate Institute, a small private school in New York City, many girls in the community feel that women in STEM fields are underrepresented. We started the Women in STEM club earlier this year, with the objective of strategizing on how to tackle the unique challenges girls interested in STEM professions face. The Mattel STEM kit has sparked discussion in our club, and many members agree that this toy is not progress.

As young women who have grown up interested in STEM, we want future generations of girls to be given the same sort of science kits as boys and believe that Mattel's portrayal of the female scientist is both diminishing and discouraging. Some of our club members said that, on the positive side, Mattel's Barbie design might attract little girls with interest in dolls to STEM fields, but most believed that blunt stereotyping discounted any possible positive value; the "STEM projects" in the kit are essentially household duties, expressing a 1950's ideology of a woman's full potential. It is unsettling that one of the most influential toy companies continues to cling to these ideals. To us, it seems like a strategy to reroute any female interest in technical subjects back into housework and fashion, sending a message of "stay in your lane" as opposed to "you can be anything." Why does Mattel choose to perpetuate the narrative that girls are only interested in "girly" things? Being in the business of appealing to children, how can they so greatly underestimate the broad scope of what is fun for girls?

It is important to acknowledge that Mattel's attempt to integrate a STEM kit into their inventory of "girls' toys" is indeed a step in the right direction. However, beyond this first step, the product quickly went off the rails. Mattel needs to do more than stereotype if it truly wants to inspire future-generation female scientists, engineers, and mathematicians.

Perspectives (Continued)

Another company we see as having a more appropriate representation of STEM for young girls, without cutting out gendered marketing entirely, is GoldieBlox. Their products include aspects of problem solving and engineering, while still being marketed to young girls using animals and fairy tales. Or, you could buy your daughter the same chemistry set or Tinker Toys you buy your son. However, writing off the STEM Barbie is not an option, as the toy will, whether we like it or not, have an enormous impact. According to Mattel, an estimated 3 Barbies are sold a second, which is about 95 million sold a year. Because of this prevalence, improving the toy is hugely important.

Mattel needs to offer their large audience of potential STEM professional tools to pique their curiosity, instead of enforcing old stereotypes. Mattel should focus primarily on changing the experiments included to reflect

modern standards of professional women. Members in our club suggested that including more realistic scientific tools would be helpful. In addition, many said replacing the simple readymade pieces with slightly more complex and varied parts would enhance the engineering aspect of the STEM toy. The small greenhouse that Barbie builds is also, to Mattel's credit, worth keeping.

Mattel's promotional video accompanying the Barbie STEM kit shows few scenes of Barbie working in a lab or in an office, but does end with the image of her relaxing in a hammock, after a "hard day's" work, which is telling of the environment in which Mattel seems to think women belong. Although relaxation is a goal for many working people, this is hardly an inspiring image of a successful STEM professional; certainly, Mattel can and must do better. As one member said, "We've come a long way, but I don't think we should settle."



Members of the Women in STEM club at the Parker Collegiate Institute, New York City.

Networking

Social Media

Social media plays a large role in every day communication. Keep up-to-date on the latest ACS WCC news by liking our Facebook page, following us on Twitter, and checking our website. Make sure to like our posts, share the information and re-tweet our tweets! Facebook has started to limit organic shares of posts unless you pay to boost your post. Please like and share the ACS WCC information to help spread the word!

[WCC Facebook](#)

[WCC LinkedIn](#)

[WCC ACS Network](#)

[Just Cocktails ACS Network](#)



WCC Leadership

Chair: *Laura Sremaniak*

Awards and Recognition: *Amy Nicely and Christine Chow*

Communications & Technology: *Michelle Rogers*

Professional Development: *Mary Jane Shultz*

Programs & Events: *Amy DeBaillie*

Program Chair: *Kim Woznack and Renée Cole*

Newsletter Editor: *Nahid Mohajeri*

Webmasters: *Samina Azad and Bevin Parks*

Awards Task Force: *Christine Chow and Ana de Bettencourt-Dias*

90th Anniversary Task Force: *Amy DeBaillie*

Non-Tenure Track Faculty Task Force: *Laura Sremaniak*

Thank you for reading the WCC semiannual newsletter. We hope that you find the articles inspirational and informative! If you have an article or an announcement that may be useful to our readership, please feel free to send it to acsnationalwcc@gmail.com. We welcome all suggestions.