

## Successful Women in Chemistry Series—Continued

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Prof. Burrows credits two women with having a profound impact early in her career. The first is the late **Karen Wetterhahn** who inspired her to always be encouraging of others and to convey excitement for science. The second is the late **Margaret (Peggy) Etter** who always thought of the students first. Prof. Burrows learned from her that advisors should not try to clone themselves – they should identify unique strengths in students and foster those qualities. Prof. Burrows is no stranger to the challenges of work-life balance, having raised triplets while establishing and running a highly successful research group, doing a significant amount of service for her department and scientific community, and mentoring many junior scientists. She does, however, believe in prioritization of commitments and has even learned to say "no" once in a while!

Once again, WCC sends warm congratulations to both *Jillian* and *Cindy*, and look forward to their contributions to the ACS journals in the coming years! We are extremely pleased to see two highly accomplished women in these important roles.

### Professor Jennifer Schomaker By Amy Balija



Professor **Jennifer Schomaker**, a winner of the 2014 Rising Stars Award, always loved chemistry. As the sibling of seven younger brothers and sisters, Jennifer never received a chemistry set for Christmas due to the possibility of what parts would be ingested by fellow family members. Instead, she became a lab assistant her junior year in high school which allowed her access to the lab stockroom and the chance to experiment with chemicals. As she stated, "If I hadn't had that opportunity to discover and 'play' on my own, I probably would have ended up

a physician- the process of scientific exploration was key to stimulating my interest in chemistry." To fuel this drive for chemistry, *Jennifer's* high school chemistry teacher encouraged her to experiment, provided her with his old college textbooks, and helped arrange for her to attend college courses during her senior year.

Following high school, *Jennifer* went to Saginaw Valley State University and started working during her freshman year at Dow Chemical to help pay for college. At Dow, she began in the Organic Chemicals and Polymer Laboratory Group, examining biocatalytic methods for the synthesis of enantiomerically pure monomers, before transferring to the Agricultural Chemi-

cal Process Research Group to work on route selection and scale-up of two new herbicides. With the support of her husband and two young daughters and the advice from senior colleagues at Dow, Jennifer left industry to enroll in graduate school. She completed her M.S. degree with **Prof. Thomas J. Delia** at Central Michigan University developing selective cross-coupling reactions of pyrimidines and synthesizing molecules active against *Pneumocystis carinii* pneumonia. Afterwards, she attended Michigan State University for her Ph.D. and worked with **Professor Babak Borham** on the development of ylide-mediated ring expansions of epoxides and aziridines. Upon obtaining her Ph.D. in 2006, Jennifer was a NIH post-doctoral fellow for **Professor Robert G. Bergman** at University of California, Berkeley examining the reactivity of cobalt dinitrosoalkane complexes to functionalize alkene C-H bonds.

In 2009, she joined the faculty at University of Wisconsin-Madison where she performs research in methodology development such as new metal complexes exhibiting ligand-based reactivity and new catalysts for oxidative cyclization reactions. She loves working with talented people and watching her students become scientists. Throughout her career path, *Jennifer* has had the loving support of her family. She described how her family often traveled to the lab to bring dinner and help take care of the household chores. Furthermore, she credits her research advisors for patiently understanding her unique situation.

To the future women chemists, *Jennifer* gave this advice: "It's important to find mentors that believe in you and your abilities. Have the courage to speak up for what you need and to do your job well. If you fail, do not tell yourself you can't do it- pick yourself up and try again." Jennifer's life experiences have demonstrated that through hard-work and determination, anyone can be successful. Congratulations!

### Dr. Katherine Ayers By Samina Aza



**Dr. Katherine Ayers** is the Director of Research at Proton OnSite where develops R&D strategy in membrane-based electrochemical devices, and maintains multi-year technology roadmap. She joined Proton in 2007 and before that worked at Energizer Battery Company for 10 years, serving as Staff Technology Engineer. She is internationally recognized as a leader in research and advancement of electrochemistry.

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*Kathy* started college at UC San Diego as a math major with the intent to become a teacher but she loved her honors chemistry class. She changed major twice, first to physics and then to chemistry. She got a summer fellowship at Lawrence Livermore National Lab where she was really interested in the chemistry projects. She spent two summers synthesizing dark purple crystals of vanadium organometallic compounds. The provost of her college, *Dr. Tom Bond*, advised her to seriously consider graduate school.

*Kathy* got a small fellowship at UCSD to do additional undergraduate research for a quarter but wasn't really interested in the projects. Tom suggested that she considers working with *Prof. Mike Sailor*. At Mike's lab she learned electrochemistry and materials science. Mike was a postdoc for *Prof. Nate Lewis* and this is how she ended up in Nate's group in Cal Tech for graduate school. *Kathy* has been working on electrochemical devices ever since. Coincidentally, *Kathy* came in contact with Proton, her current employer. She loved the company when she interviewed with them and took the leap of faith to move 1000 miles with her family and have had amazing opportunities ever since.

*Kathy* has been fortunate to have very helpful mentors starting from college. Two of her most influential mentors were Tom Bond and her boss at Proton (until about a month ago) CEO *Dr. Rob Friedland*. In undergraduate school, Dr. Bond took her under his wing and got her into high level classes. He also helped *Kathy* realize that there are more than one career options available after college. Rob has been the most supportive boss she has ever had by putting confidence in her to be able to handle new projects and roles.

*Kathy* admits that she often struggles with work life balance. Although she is home for dinner every night, she does a lot of work at home later in the evening. She also travels a lot for work. She tries to talk to her daughters every day after school and spends a lot of time with family during vacations. *Kathy's* family recently went to Europe as a follow on to a business trip and walked all over Germany and Paris.

*Kathy's* advice for women in chemistry is to always be open to new opportunities and not let fear get in the way of doing what you want. She was often nervous about new things but she did them anyway and usually it more than payed off. Always be friendly and open with people because you never know what might lead to a new opportunity. This is how she got the job at Proton. Take time for yourself and recharge with your friends and family.

### **Ms. Katherine Kemmann** **By Samina Azad**

**Katie Kemmann** is an Analytical Chemist with Sherwin-Williams (SW). She joined SW twelve years ago, starting as an intern and then taking a full-time role. *Katie* received M.Sc. in Chemistry from Cleveland State University. Her current responsibilities include instrumental maintenance, method development, supporting key R&D projects and manufacturing, with a heavy focus in failure analysis.



*Katie* was introduced to the coatings industry through internships while she was in college. After a couple of internships, she knew she would like working in this industry and sought a full time position with the Analytical Sciences group at Sherwin-Williams. She has been in the same group for twelve years now.

*Katie's* position is not specific to one type or class of coatings, so she had to learn the chemistries of many resin, pigment, and additive systems along the way. Because new technologies are always being developed, the learning process never ceases. Developing and maintaining a solid foundation of coatings chemistry is a challenge. The learning habits she developed at college allow her to pick new things up quickly. The techniques she uses in her role were not taught in school. She learned most of these on the job, and sometimes under stressful circumstances.

*Katie* is knowledgeable in a variety of instrumental techniques. Her favorite technique is spectroscopy and she also enjoys thermal analysis and elemental analysis. She gathered experience and skills in these techniques in a unique combination that allows her to support research and development in coatings. It is very rewarding to be able to learn new things constantly and tackle increasingly difficult technical scenarios. *Katie's* management team looks to her as a key problem solver.

*Katie* had mentors at each of her internship positions. Mentors played an important role specifically by helping her understand the job opportunities for chemists. Mentors shared their career experiences with *Katie* and guided her in the job search process. Because of this, she was able to find a role that she enjoys. Once she was hired full time, many colleagues volunteered their time and energy to teach *Katie* the role. Although they were not official mentors, she still looks to them for advice and guidance. *Katie's* colleagues wanted her to learn from their best practices. Through all the training and coaching, *Katie* has become a dependable and trustworthy

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