SAS Spectrum eNews

COVID-19 Update

Given the current COVID-19 outbreak, we hope that all our members are staying healthy and safe. The SAS Executive Committee and Governing Board know these are trying times, as many members are facing multiple and unforeseen changes in life, and for some, this may include job loss. SAS continues to work for our members, and we hope our resources, including the Journal, membership directory for networking, education and training programs, job link, etc., will provide some assistance. Do not hesitate to reach out to Bonnie Saylor, SAS Executive Director at exdir@s-a-s.org for assistance with these resources. More information regarding the added support that SAS is providing in response to COVID-19 will follow in the coming weeks.

Editor's Note: Sparking a Love for Science

Towards the end of January, I had the pleasure of demonstrating some key chemistry concepts to the two classes of eighth grade science students at my children's charter school (a K–8 program here in Florida). As many folks in education today can note, keeping the attention of young minds today is quite the task in balancing accurate science, relevancy, and pace of information flow. The youth of today find themselves disengaged as to "why chemistry is relevant in the real world" (a quote from a current student conveyed to me by the middle school science teacher). With students sucked into a realm of technical dopamine hits, many teachers, who, like me, grew up in an analog world, find it hard to compete with cliché science videos filed with "…lies, damned lies, and statistics." Similarly, the prevalence of what I best describe as "chemophobia" is on the rise in this generation given their parent's naivety about chemistry—just take the Food Babe's philosophy of "don't eat anything you cannot pronounce." It is an arduous task for any science teacher to disrupt the flawed thinking and replace it with critical thinking skills and curiosity to accept validated knowledge. If any readers have any suggestions of keeping student attention for prolonged periods, our readership would be happy to hear from you!

Now that does not mean all hope is lost in sparking a love for science with these kids. Many of them have not had the opportunity to talk to a person who not only pursued science in school, but actually execute science as a career (trust me, I get asked a lot of questions during field trips about science stuff by other parents!). It is our duty as scientists to enrich these young minds as best as we are fully capable. For some, that could be pursuit of an academic career (college or secondary level), for others, it is volunteering for regular STEM club activities such as robotics, and yet for others, it is coming in periodically to give a guest lecture or demonstration about science. The latter option, given my erratic travel schedule, often works best for volunteering for the charter school's eighth grade science fair (sadly missed last year as it overlapped with SciX 2019!), and giving a guest lecture in the spring semester on chemistry and how it touches everything we know.

Personally, I dabble with spectroscopy when I demonstrate chemistry to secondary students, but mostly focus on the basics that really connect chemistry to their real life, such as showing them what vitamin C looks like or how a colorimetric test works to detect drugs or protein-based materials. An advocate for take your work to school, unfortunately most public schools frown upon particularly big explosions or messy demonstrations. I usually wrap up my demonstrations with a burn test to demonstrate how different elements produce different colors and effects when they are burned with a low-intensity fire. At

Luisa Profeta showing eighth grade science students how

the end of my demonstrations this year, both classes seemed underwhelmed at best. *different elements contribute to the color of the flame during a burn test.*

That evening I was serving a spaghetti dinner to students and families as part of our annual PTO fundraiser and one female student, who I vaguely recognized got wide eyed and exclaimed to her mother, "Mom, it's the lady who came to talk to us today about the elements and showed us cool stuff." The mom then thanked me for coming to the class and explained the daughter had be talking about the demonstration most of the afternoon after school. In the end even one new lover of science makes the time and efforts worth it.

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Announcement of SAS Early Career (EC) Membership

The Society for Applied Spectroscopy is excited to announce a new membership category targeted towards early-career spectroscopists: The Early Career (EC) Membership. Criteria for this membership category involves any person working professionally, including those in a post-doctorate position, and within five (5) years of graduating with a bachelor's, master's, or doctoral degree. Benefits will include discounted membership, access to a community of like-minded spectroscopists, early career specific training and certifications, eligibility for SAS awards, and many more! Further, we are excited to promote additional opportunities for science communication in the form of an Early Career Spectroscopist blog hosted on the SAS website, as well as a dedicated section within the SAS Spectrum Newsletter tailored toward Early Career members. Early Career blog and newsletter content will include, but is not limited to, short segments on challenges facing spectroscopists at the beginning of their careers, spectroscopy tips, and new science being done by burgeoning spectroscopists. We welcome content submissions from all!

In order to kick-start the first EC newsletter section, I will share a bit about myself. Currently, I am a fifth-year graduate student studying novel time-of-flight mass spectrometry (TOFMS) techniques using constant momentum acceleration with TOFMS. I became involved with the SAS while attending SciX 2018 in Atlanta, Georgia. Since then, I have maintained contact with several of the SAS members that I had met over the course of the conference with several of these relationships having developed into friendships, both personally and professionally. As I am in my fifth year, I am getting close to graduation and entering the professional world post-graduate school. Accordingly, I consider the SAS an invaluable tool to my success in developing as a scientist—a spectroscopist notwithstanding. I am looking forward to utilizing the SAS early-career community to draw upon the wisdom, tips, and advice of other spectroscopists that are beginning, or have just begun their careers as I transition into the professional world!

Contributed by Christopher Brais
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Travel Grants and Scholarships from the Coblentz Society

The Coblentz Society, a technical section of SAS, is committed to fostering the understanding and application of vibrational spectroscopy and the professional development of scientists practicing in this area. In 2019, the Coblentz Society Governing Board voted in favor to provide new financial assistance to our younger to mid-career membership who often find themselves battling management that are unsupportive of regular technical conference attendance for continued education and enrichment. Likewise, we realize the struggle of balancing family with careers once children enter the equation, especially if both partners are spectroscopists. The society thus created of three awards designed to assist young career professionals. The awards are as follows:

Travel Grant: To assist in defraying the cost of travel to one of the conferences in which the Coblentz Society is an active participant. These include Pittcon, SciX, EAS, ICAVS, and ISMS. The travel grants will be awarded based on participation in the scientific community as well as presentations of research. Applicants will be asked to give details about their plans of attending the chosen conference. Award money is available for each conference, but applicants must submit their applications prior to the noted deadlines for each conference. Dr. Fay Nicolson was the first recipient of the award for SciX 2019, pictured here.

Childcare Award: Designed to assist parents, especially when both parents are involved in the scientific community, this award is designed to help defray childcare costs either provided through a conference or provided at the applicant's home to allow parents to attend one of the designated conferences. Examples of potential uses of the money include, but are not limited to: (a) Purchasing

childcare time at Camp Pittcon for children, (b) flying a relative into town for childcare purposes while away at SciX, or (c) hiring a live-in-nanny at home for the duration of EAS. This award is not intended to supplement or defray normal childcare costs (e.g., daycare or before/after school programs).

Scholarship Assistance for the Infrared and Raman Interpretation Course: This scholarship is meant to defray part of the tuition costs of this course. This course is a Coblentz affiliated activity and has been presented yearly for over 50 years. The aim of the course is to provide a rigorous foundation for interpretation of vibrational spectra.

Applications for these awards can be obtained from Mary Carrabba at mary.carrabba@coblentz.org. We encourage those who are interested to apply soon since applications for IR and Raman Interpretation Course need to be reviewed by 31 May, and SciX or EAS Travel Grant and Childcare Award applications need to be reviewed by 15 September each year.

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Fay Nicolson, 2019 SciX Coblentz Early Career Travel Grant Awardee.

Do you have something spectroscopy-related you want to discuss in the newsletter? Or something that will help our membership such as career tips or application tips? Please let us know by emailing luisaprofeta@gmail.com.