SAS SPECTRUM eNEWS

As the 2018 SAS President, I am looking forward to a great year as we will be celebrating our 60th anniversary as a Society. On November 4, 1958, in New York, at a meeting of the Federation of Spectroscopic Societies, the Society for Applied Spectroscopy was formed. The New York Society for Applied Spectroscopy generously donated its journal and name, *Applied Spectroscopy*, in volume 12 at that time, to the national Society for Applied Spectroscopy. This 60th anniversary year will be an exciting one to be a member of SAS, with many important planned initiatives and events throughout the year that members will be able to enjoy, culminating at SciX (October 21–26) in Atlanta, Georgia.

During this important year I want to focus on two key areas. The first is membership and the second is boosting SAS' digital presence.

Building a strong membership for our Society is vital for the longterm advancement of science. Our Society is dedicated to the advancement and dissemination of scientific knowledge—this does not only occur on the internet or scientific journals. The Society actively promotes and fosters interaction amongst our members to help them with both their scientific acumen and professional advancement. As a member, you get to also participate in many networking and academic endeavors at the very low cost of the Society's membership fee. To enhance our member benefits, we have started key initiatives such as the Certification program and our new crowdfunding site, Measure Venture.

I believe to continue be a strong and vibrant society we need to meet our members' expectation that our organization adapts rapidly to meet the digital world. To this end, we will be launching a new mobile friendly website and we are increasing our digital marketing efforts via social media.

I hope to get the chance to meet all of our members during my tenure. Please feel free to contact to me with suggestion, comments or feedback on how to enhance our Society.

Best regards,

Mike Carrabba
2018 SAS President

Spectroscopists Helping Spectroscopists (SHS)

We are rapidly approaching our first grant. Stay tuned for the latest developments.

For those of you that missed the article introducing SHS in the January newsletter, SHS is an all-volunteer collaboration between SAS and the Coblentz Society to help spectroscopists in Puerto Rico by mitigating the effects of the infrastructure failure post-Maria. The assistance provided will have a short-term effect, helping spectroscopists get back to work, and a long-term effect, retaining the technical talent necessary for a healthy economy.

Is the effort important? Education is directly affected. ACS-certification for Puerto Rican undergraduate chemists is at risk. Without access to modern instrumentation they cannot earn the experience needed for certification. Graduate students cannot complete their research. Our lives are affected as well. As an example, ask an emergency room physician about dispensing drugs. Many of the pharmaceuticals and medical supplies come from Puerto Rico. Emergency rooms have had to modify procedures and provide palliatives to accommodate scarce supplies.

Together with the Coblentz Society, we have gathered the following sponsors: Pike Technologies, *Applied Spectroscopy*, *Spectroscopy* magazine, Technology Partners Marketing, Laser Focus World, SPIE, and Wiley Global. Congratulate these organizations who are promoting our efforts through their mailing lists, and booth presence at Photonics West and Pittcon.

We are enlisting volunteers. We would like to thank Jose Cortes-Concepción and Mekhala Spenser. Both have contributed immensely to our effort in a very short time. Mekhala says,

> I am honoured to be involved with SHS. At times of crisis we as a human race should come together in support of each other. Students, academics and science are suffering because a hurricane hit and took everything including power. I have had help from many accomplished spectroscopists, researchers and industrial experts during my PhD. I could not have completed the project without such help. I would like to pay this forward, and if my networking and social skills can help bring people together for this noble cause, then it is the very least I can do.

Is your help still needed? Emphatically yes! The SAS is founded on "dissemination of information related to spectroscopy". Let your colleagues and friends know about our effort and its importance. Support us with your efforts, ideas and financial contributions. To stay up to date, you can keep in touch with us through:

Twitter: @HelpingSpectro

LinkedIn: https://www.linkedin.com/company/27199531/

Coblentz: http://www.coblentz.org/Membership/spectroscopists-helping-spectroscopists

Email: helping.spectroscopists@gmail.com

Contributed by Frederick Haibach
fhaibach@confluentscience.com

New York Society for Applied Spectroscopy Meeting at Rutgers University

Date:	Wednesday, March 21, 2018
Time:	5:30–8:30 PM Dinner and networking 5:30–6:45 Talk 6:45–7:45
Speaker:	John A. Reffner, PhD (areffner@cs.com 646.557.4894)
Talk topic	"The Unique Challenges of Forensic Science."
Location:	Rutgers University, Busch Campus Piscataway, New Jersey Ceramics Research Building, Room 201

Contributed by *Howard Mark*
hlmark@nearinfrared.com

Barbara Stull Graduate Student Award and SAS Undergraduate Student Award Nominations

Barbara Stull Graduate Student Award
This award is given to a graduate student(s) in honor of longtime SAS employee Barbara Stull in recognition of outstanding research in the area of spectroscopy. Any full-time graduate student doing research in the field of spectroscopy shall be eligible for the award. The recipient shall be selected by the Awards Committee. The award shall consist of a plaque or scroll and an expense-paid trip to SciX to accept the award. Nominations may come from any member of the society. Nomination material should include at least one letter of recommendation along with supporting documentation on research, a current CV, and short bio. Send your nomination to sasadmin@s-a-s.org. Submission deadline is March 1.

Undergraduate Award in Applied Spectroscopy
These awards are given to up to five junior or senior undergraduate students in recognition of outstanding research in the area of spectroscopy. Any full-time undergraduate student doing research in the field of spectroscopy shall be eligible for the award. The student's research adviser must be an SAS member in good standing to be eligible for the award. The recipient shall be selected by the Awards Committee. Nomination material should include at least one letter of recommendation along with supporting documentation on research, a current CV, and short bio. The Society will provide each awardee with a one-year membership and a certificate. Send your nomination to sasadmin@s-a-s.org. Submission deadline is March 1.

William J. Poehlman Award Nominations
This award is granted to the Regional Section of the Society that has contributed the most toward accomplishing the goals and ideals of the Society during the preceding year. It consists of a certificate and an honorarium of $750.00. Regional Sections must provide a nomination packet that includes information on section activities and a letter outlining why the feel they are deserving of the award. The recipient shall be selected by the Section Affairs Committee. Send your nomination material to sasadmin@s-a-s.org. Submission deadline is March 1.

The Bruce R. Kowalski Award in Chemometrics, Administered by the Society for Applied Spectroscopy
To nominate a young researcher for the award, submit a nomination letter describing the early career researcher or scientist's achievements in chemometric research and if applicable, the degree sought. Nominees will be notified of their nomination, and each nominee must submit relevant university level transcripts, a curriculum vitae, a description of his/her professional goals, and at least one letter of recommendation in addition to the nomination letter. Send all nominations to the Society for Applied Spectroscopy via email to sasadmin@s-a-s.org. The deadline for nominations is March 1.

Spectroscopists Learn About Efforts to Advance Materials Testing for Art Conservation at the Metropolitan Museum of Art

The December meeting of the New York–New Jersey chapter of the Society for Applied Spectroscopy (NYSAS), held at the Metropolitan Museum of Art (The Met) in New York, drew an audience of students and professionals to hear talks on material testing by Eric Breitung, PhD, a senior research scientist, and Catherine Stephens, PhD, an associate research scientist, both from The Met.

Exposure to common materials used in contact with or near works of art can cause degradation. To assess such materials, The Met is evaluating and implementing advanced analytical materials testing methods and protocols. For decades, museums, libraries, and archives have used the fairly rudimentary and difficult-to-reproduce Oddy test to evaluate materials. For this test, the material in question is placed in a jar with a small amount of water and metal coupons made of pure copper, silver, and lead. The jar is sealed and aged at 60 °C for 28 days. Materials that cause the metals to tarnish or corrode are considered unusable near cultural heritage objects. Not only does the Oddy test suffer from irreproducibility, but it has another fundamental drawback: It was designed with the intent of protecting metals. Given that historical cultural heritage objects contain organic materials such as velum and paper, it is unclear whether the metal-based Oddy test is appropriate for those classes of materials.

Because of these concerns, the Preventive Conservation Science Laboratory in The Met's Scientific Research Department is exploring the use of gas chromatography–mass spectrometry (GC-MS) methods to evaluate materials, and ion chromatography (IC) and UV-Vis reflective spectroscopy to evaluate a paper-coupon version of the Oddy test. These methods provide an opportunity to move The Met and the art conservation science community from a labor intensive, subjective, and irreproducible test to automatable and quantifiable tests that provide options for understanding how best to modify or clean commercially available materials and address the issue of the sensitivity of organic materials compared to metal materials.

The presentations provided an overview of the Preventive Conservation Science Laboratory, which is responsible for advising art conservators, designers, curators, and building engineers on how best to provide a safe environment for The Met's collections, and provided an in-depth look at materials testing at The Met. The spectroscopy experts in the audience offered suggestions on possible materials and other tests, and the audience–speaker interactions were valuable. Following the talk, a tour of the labs was given, showing the many instruments used for analyzing art and determining how to preserve it better.

The Met's Department of Scientific Research hosts research fellows, interns, and volunteers. In fact, the Met's version of the Oddy test was developed by volunteer Joseph Bamberger in 1999. If you are interested in working with scientists at The Met, you can find upcoming opportunities at the following links or by contacting Eric Breitung at eric.breitung@metmuseum.org.

Contributed by Kathryn Lee and Eric Breitung
kathrynalee@hotmail.com
Eric.Breitung@metmuseum.org

**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 xchen4@dow.com.**
