Editor's Note

As of this writing, the Pittsburg Conference (Pittcon) has commenced. Unfortunately I had to miss attending this year. I did call into the Monday SAS marketing meeting and Executive Committee meetings. It is exciting to hear what is happening with several ongoing initiatives. For example, the Executive Committee is planning to give a boost to the SAS Certification program by including corresponding training programs. These may be a great benefit for junior members in SAS who would like to learn from the experts. There was also a lot of discussion on mentoring, how SAS can help its members, and last, but not least, how SAS members can help the society. I truly believe that there are many things that we as members can do to help SAS to grow further and below is a list from my perspective:

> (1) Be more active and vocal about their spectroscopy-related work. Spectroscopists are often very hard-working scientists not afraid to tackle the most challenging problems. However, we often move on so quickly to the next challenge without giving sufficient attention on how to highlight our achievements. Many local SAS sections may have carried out great accomplishments, but few outside those local sections may be aware of them. Please do contact SAS and share your accomplishments so that the rest of the community can learn from each other.
>
> (2) Help us identify potential members, encourage them, and guide them. In today's disconnected world, people use a Google search to find answers or use Wikipedia. Nothing, however, can replace the in-person mentoring (at least I'm not aware of any such AI-enabled mentoring yet). It is our members' responsibility to help the newcomers and new practitioners of spectroscopy to learn and to adapt. This can be a win-win situation for both the mentees and the mentors, and also SAS.
>
> (3) Be more proactive and willing to volunteer. SAS will benefit a lot from having more diverse volunteers with different backgrounds. I have been volunteering my time for several years now, but I haven't seen too many new faces in the last several years. I think new members with a more diverse background willing to volunteer their time is vital to SAS's sustained success and growth. Please contact me or Bonnie Saylor (SAS Executive Director, exdir@s-a-s.org) if you are interested in joining the Society.

Contributed by Xiaoyun (Shawn) Chen
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Announcement for the New England SAS National Tour Speaker Dinner Meeting and Annual Student Research Presentations

When: Thursday, April 26, 2018

Where: Saint Anselm College
100 Saint Anselm Drive
Manchester, NH 03102

Speaker: Dr. Peter Griffiths, Professor of Chemistry Emeritus
University of Idaho
Former Editor-in-Chief of Applied Spectroscopy
Griffiths Consulting LLC
Ogden, Utah

Title: Fifty Years of GC/FT-IR
1968-2018: Will it ever catch up to GC/MS?

The 63rd Annual May Conference will be held on Wednesday, May 22, 2019 at John Carroll University, Dolan Science Center, Cleveland, Ohio. The conference typically has 180+ attendees, 30 or more vendors, and is a joint meeting that includes participation/sponsorship from a number of societies including SAS, MSNO, ACS, AVS/Ohio, and SPE. There are 30+ oral presentations from a mix of invited speakers, vendors, and students. The cost for students to attend is minimal and students are encouraged to present both papers and posters. There are monetary awards for the best papers and posters and two MSNO awards that include a trip to the national conference. The conference includes the joint SAS/ACS Yeager Award and presentation. Topics are varied and include microscopy, surface science, and spectroscopy. We also recognize the John Bell Award winners from the NEO Science and Engineering fair at the reception. The keynote speaker is Chris Yuan, Associate Professor, CWRU, on "Electric Vehicles for Transportation: Facts, Prospects, Mysteries, and Folklore". Additional information can be found at http://www.msneo.org/2019-sasmsnoacsavs-may-conference.html

Submitted by Coleen A. McFarland,
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Raman and Surface-Enhanced Raman Spectroscopy (SERS): In Situ Nano-Sensors and Nanomedicine

The February 2019 meeting of the New York/New Jersey Regional Section of the Society for Applied Spectroscopy (NYSAS) was held on February 21, 2019 at the Horiba Optical Spectroscopy center in Piscataway, New Jersey. The guest speaker was Dr. Vinay Bhardwaj, a Research Scientist at the Piscataway Global Technology Center of Colgate-Palmolive, and an Adjunct Professor of Biomedical Engineering at The College of New Jersey.

Dr. Vinay Bhardwaj received his PhD in Biomedical Engineering from Florida International University (FIU) in Miami, Florida. His PhD research was sponsored by the US Department of Defense on the topic, "SERS-Linked Immuno Sensor Assay (SLISA) for Environmental Surveillance". He did his post-doctoral training in SERS and his photo-nanomedicine studies at the Department of Biomedical Engineering in Rutgers, New Jersey, and at the Department of Chemistry and Forensics at the Western Carolina University, North Carolina. Dr. Bhardwaj has published more than a dozen peer-reviewed articles in SERS and nanomedicine, two book chapters, and a Nova Science Publishers, Inc. book about SERS, currently in press. He has been an invited speaker on multiple occasions, and a guest editor of peer-reviewed journals.

Raman spectroscopy is a powerful molecular fingerprinting technique that is rising rapidly in industrial use, and research publications over the last decade span diverse fields including: national defense and security, forensics, and healthcare. The primary focus of Vinay's presentation was to highlight several recent advancements in the use of SERS technologies in the medical field and efforts to commercialize them. The applications discussed focused on optical nanosensors for in situ detection and nanomedicine for targeted administration of drug therapies in cancer and brain disease.

Dr. Bhardwaj described SLISA and swab-sampling methods for using SERS technology in the field. SLISA is a SERS-linked immuno sensor assay. SLISA uses nanoparticles (gold or silver) that are cross-linked with antigens that are specific for molecules of interest. This approach enhances the specificity of SERS, similar to ELISA testing, but avoids the lengthy washing steps involved in an ELISA test. The use of SLISA with a handheld Raman spectrometer make it a good choice for applications in which fast reaction times are needed, e.g., point-of-care, in situ, and on-site sensing and monitoring applications. SWAB uses a cotton matrix to enhance the surface area for the nanoparticles to come in contact with molecules of interest. This is an ideal sampling media for collection of fluid evidence found in forensic and crime scene investigations.

SERS technology has the potential for becoming a core technology requiring personal sensors that are portable, rapid, accurate, inexpensive, safe, and easy to use. In medicine, SERS is a label-free approach for in-vivo detection of certain cancers and can be used to speed the drug discovery process to find new potent antibiotics and anti-cancer drugs.

Another area discussed was the use of magnetic nanoparticles tagged with drug molecules to enhance delivery to target organs.

Fifteen people attended the meeting at Horiba. If you missed the meeting and would like to hear a replay of the presentation, send an email to debperu@outlook.com and we will send you a link to the webinar.

For more information about the NYSAS organization and a schedule of meetings please go to our website www.nysas.org.

Contributed by Debbie Peru

CERM 2019
50th ACS Central Regional Meeting 2019
(100th Anniversary of the Midland ACS Section)
June 4–8, 2019 Midland, Michigan
https://acscerm2019.org/meeting-program/

There will be three analytical sessions featuring multiple interesting talks related to spectroscopy. For example, Professor Zhan Chen from University of Michigan will present "Structure–Function Correlations of Polymer Surfaces and Interfaces Probed by Nonlinear Optical Spectroscopy", and Ian R. Lewis from Kaiser Optical Systems, Inc. will present "Utility of Raman Spectroscopy in Continuous Processing of Liquids and Solids".

Contributed by Xiaoyun (Shawn) Chen
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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.

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