SOCIETY FOR APPLIED SPECTROSCOPY

January 2026 Newsletter

Society Update and Call for Engagement
Contributed by John Wasylyk, SAS President

Welcome to the new year, SAS members! I hope everyone had time to rest, and that you didn't get stuck in airports, shovel too much snow, deal with flooded basements, or lose internet service (and miss those beloved streaming shows).

Over the past few weeks, I've had time to reflect on what makes SAS great and how we continue to add value for our members. The Society provides resources, networking opportunities, professional development, and advocacy. Here's where we stand, and what to expect in 2026.

Our resources, and our foundation include our two journals, which provide a wealth of timely and impactful information. They also include our newsletters, including a new quarterly, topic-focused newsletter that will review specific techniques and include references and links, spearheaded by Gloria Story.

Our social networking efforts are becoming more impactful, with announcements designed to expand our reach across the broader scientific community. Thank you to everyone who reposts highlighted articles.

Many SAS members also serve as educators, sharing their expertise through courses at conferences and other venues. Spectroscopy Academy is closer to becoming a reality, with Ellen Miseo leading the charge with MJH (*Spectroscopy Magazine*) to bring education to the next level and expand our sphere of influence. 2026 will also mark a revitalized Tour Speaker Series as a virtual, web-based program, another Ellen idea! Plans are underway and the series is being led by Dave Schiering with assistance from Londrea Garrett.

Sustainability remains near and dear to my heart. As an organization, SAS can advocate for applying spectroscopy in areas currently dominated by more energy-inefficient and waste-generating techniques, ultimately reducing the handling and use of hazardous chemicals.

Finally, our committees are kicking into action. Please consider joining one of the many committees to lend a hand, share your perspective, and help steer SAS into the future. There are many ways to get involved: membership, newsletter, awards, and more!

Thank you for being part of SAS,

John

Spectroscopy Society of Pittsburgh: February 2026 Meeting
Contributed by the Spectroscopy Society of Pittsburgh (SSP)

SSP Virtual Broadcasting Grants
SSP offers Virtual Broadcasting Grants to help institutions host a live broadcast of SSP's virtual monthly Technical Programs. The grant can cover up to $300 for dinner and soft drinks. Application: SACP-SSP Virtual Broadcasting Grant - Chemistry Outreach

February 2026 Meeting
The Spectroscopy Society of Pittsburgh (SSP) invites all SAS members to its February 2026 meeting.
Date: 2 February 2026
Time: 7:15 p.m. Eastern
Meeting information: Monthly Meeting - Chemistry Outreach
Speaker: Thomas K. Karikari, Assistant Professor of Psychiatry, University of Pittsburgh
Title: Using Biomarkers to Study Aging and Alzheimer's Disease

Speaker bio:
Dr. Thomas Karikari, Ph.D., serves as Director of the Biofluid Biomarker Laboratory at the University of Pittsburgh. He also oversees the Mass Spectrometry Program and the Single Molecule Array Biomarker Program within the Department of Psychiatry at the University of Pittsburgh, and he leads the Fluid Biomarker Core of the recently renewed National Institute on Aging Alzheimer's Program Project Grant.

Dr. Karikari is internationally recognized for his expertise in the discovery, method development, technical validation, and implementation of biofluid biomarkers for Alzheimer's disease and related neurodegenerative disorders. His research spans both fundamental and translational science, with an emphasis on clinical applications. He has contributed to several committees that develop recommendations on fluid biomarker discovery and clinical use.

The Karikari Laboratory investigates the biochemical and molecular underpinnings of neurodegenerative diseases affecting the human brain and biofluids. The laboratory uses advanced mass spectrometric and biochemical technologies to develop and validate clinical biomarkers. Notable achievements include development of the first commercially available plasma p-tau181 assay, along with immunoassay methods for plasma p-tau212, p-tau217, and p-tau231. Recently, the laboratory introduced an innovative plasma brain-derived tau marker, specifically targeting tau protein originating from the central nervous system. The laboratory has also established a streamlined, resource-efficient immunoprecipitation-mass spectrometry method for quantifying plasma amyloid beta peptides. These biomarkers have undergone rigorous validation across numerous research and clinical cohorts and are widely used in therapeutic trials, diagnostic processes, prognostic assessments, and research studies.

Dr. Karikari brings extensive experience in establishing and managing clinical chemistry laboratories, developing and implementing standard operating procedures, and standardizing pre-analytical protocols for the collection, measurement, and analysis of biospecimens, including cerebrospinal fluid (CSF) and blood. He has created pre-analytical procedures designed to simplify blood collection and processing, making them more applicable for community-based studies and resource-limited settings. The Karikari Laboratory excels in managing large-scale projects involving sample handling, biomarker measurements, and the processing and interpretation of results from thousands of samples.

Spectroscopy and Sustainability: A Perfect Match at Pittcon 2026
Contributed by SAS

Pittcon 2026 heads to San Antonio, Texas, 9-11 March 2026. This year's conference builds on Pittcon 2025's emphasis on eco-friendly practices in the analytical sciences and remains a premier event for analytical research, scientific instrumentation, and applied spectroscopy.

On the opening morning of conference sessions, one session to highlight is “Spectroscopy and Sustainability: A Perfect Match,” sponsored by the Society for Applied Spectroscopy. This session is sponsored by the Society for Applied Spectroscopy, which builds on the American Chemical Society’s Green Chemistry Initiative, and covers advances in spectroscopy and its acceptance in an ever-widening range of applications. Applications span biomedical research and pharmaceutical development; hyperspectral imaging on unmanned aerial vehicles (UAVs) for crop monitoring; monitoring and control of simple to complex synthesis of toxic and hazardous materials; identifying chemical, biological, radiological, nuclear, and explosive (CBRNE) materials; and extraterrestrial studies.

Planned talks include:

Lyufei Chen on A-TEEM® Spectroscopy, which streamlines complex analytical workflows through rapid, small-volume measurements and data-rich molecular fingerprints. Its low-impact design supports protein characterization, formulation monitoring, and broader chemical analysis.

- Rohith Reddy on photothermal mid-infrared spectroscopic imaging (MIRSI), which provides microscopy-level spatial resolution for label-free, quantitative tissue characterization. Combined with machine learning, MIRSI can reveal subtle biochemical and structural signatures that traditional methods often miss, improving diagnosis of conditions such as lupus nephritis, ovarian cancer, osteosclerosis, and bone marrow fibrosis.
- Carson Roberts on hyperspectral and LiDAR data from UAV crop surveys, including challenges such as intensity striping driven by bidirectional reflectance distribution function (BRDF) effects in hyperspectral datasets and extraneous points in LiDAR.
- Luisa Profeta on portable spectroscopy for CBRNE applications and how these tools-while not always designed with “sustainability” in mind-can inform future development and help educate users about opportunities for sustainability gains.
- Hannah Schorr on a modular, automated system for preparing and analyzing solvent standards at the lab scale, featuring automated moisture analysis and rapid near-infrared (NIR) model development. This approach reduces manual labor, enables unattended operation, and eliminates toxic reagents to support safer, more efficient analyses
- Michael George will cover non-invasive spectroscopy-based techniques applied to flow, photo-, and electrochemistry. in addition to new PAT approaches that exploit autonomous flow reactors and self-optimisation with the aim of improving sensitivity, specificity, dynamic range and the speed of data acquisition, to be coupled with AI innovations.
- John Wasylyk will focus on the impact of spectroscopy on sustainability and its alignment with the Twelve Principles of Green Chemistry, and how it can be used as a framework for designing chemical processes and products that minimize environmental impact. Examples presented will range from terrestrial to non-terrestrial applications. This session promises an engaging look at the ways spectroscopy can contribute to greener analytical chemistry at Pittcon 2026.

Newsletter Editor Update

Contributed by John Wasylyk, SAS President

We wish to Thank Konnor Jones for all his hard work and dedication in serving as Editor of the SAS Newsletter for three years! Taking charge as the new Editor will be Ayush Agarwal who served as a member of the Newsletter Committee. Elizabeth Donahue will continue as a member of the Newsletter Committee. We wish them the best in keeping the positive momentum going in our monthly Newsletter.