

SAS SPECTRUM eNEWS

SAS Distinguished Service Award Announcement

We are pleased to report that Debbie Peru, currently the NYSAS Regional Section Chair/Secretary, has been selected to receive the Society for Applied Spectroscopy Distinguished Service Award. Her exceptional contributions over many years to SAS made her extremely worthy recipient of this award. Congratulations! The award will be formally presented at the SAS Annual National Meeting during SciX 2019 in Palm Springs, California. The award will be presented at a special ceremony on Tuesday, 15 October at 7:00 P.M.

SAS University at Buffalo Student Section GSS

On 21 May 2019, the University at Buffalo (UB) Student Section of the Society for Applied Spectroscopy hosted and ran a poster competition during the Tuesday poster session at the 37th Graduate Student Symposium. This symposium is organized by graduate students for their peers, and serves as an excellent way for graduate students of all levels to practice and hone their scientific communication skills. Students from across the northeastern United States and Canada were in attendance, as well as notable keynote speakers, Dr. Julia Laskin, Dr. George Grobe III, and Dr. Andy Borovik, speaking on topics ranging from mass spectrometry innovation to how location matters for molecular interactions. The UB Student Section of SAS was excited to host and organize a poster



Left to right: Shukree Abdul-Rashed, University of Rochester, 2019 winner; Emily Sekera, UB GSS 2019 Chair; Danielle Cervasio, Stony Brook University, runner up; Chris Brais, UB SAS President; and Matt, Brock University, runner up.

competition to encourage a little healthy competition. We look forward to putting on another competition next year and encourage any graduate student reading this to think about attending GSS 2020!

New Member Profiles

	Why did you join SAS and what do you hope to gain from SAS?	What is your area of research?	What are your hobbies?
	Professor. Dr. Boris Mizaikoff, University of Ulm, Germany		
	This is less about gain, but giving back to the community of applied spectroscopists. Starting with my diploma thesis, it is now more than 25 years in this discipline—and we don't run out of new ideas! What a rewarding and vital research field, and being a member of the SAS, we will keep this field alive for decades to come!	The research interests of my team focus on optical chem/bio sensors, tailored (bio)molecular recognition interfaces, molecularly imprinted materials, system miniaturization and integration, and multifunctional (nano)analytical techniques with applications in environmental analysis, process monitoring, and biomedical diagnostics. A main focus is using mid-infrared transducers for these sensors and diagnostics.	I am an avid (= slow but passionate) Ultra-Distance Trail Runner (50k, 100k, and longer ...) with the motto "every step is one step closer to the finish line".



Sumana Kadamalakunte Narayana, University of Copenhagen, Denmark

I find the work published in Applied Spectroscopy is in line with my interests and I would like to read more of it. I hope to gain new insights into spectroscopic applications and create new networks with people in similar fields.

My primary area of research is biotechnology and the focus of my PhD is the application of spectroscopic and chemometric methods for process monitoring and characterization within biotechnology.

On the personal front, I am from India, currently living in Denmark and I enjoy activities like hiking and travelling to new places.



Yemin Liu, Senior Scientist at Abbvie, USA

My work is SAS related, and joining SAS offers me a good opportunity for networking and learning technical progress this community makes.

Analytical chemistry for the pharmaceutical industry.

Reading, travel, and cooking.



Tyler Blythe, CEO - KavaLytics

I joined SAS to share my research with other professionals who are working on the cutting edge of applied near infrared spectroscopy and of course, to continue my education in the field. As an ethnobotanist, I find NIR to be an interesting tool for potentially identifying plants and quantifying the quantities of useful compounds.

My current area of research is utilizing a handheld NIR device coupled with cloud-based machine learning and an intuitive app on a smartphone to rapidly quantify constituents in Kava roots.

My hobbies are traveling, learning languages, growing tropical plants, and I'm a life-long martial artist (30+ years.)



Herve Sanghapi, Assistant professor of physics at Alcorn State University, USA

I joined SAS in order to network and interact with other experts in the field of LIBS. More importantly, Alcorn State University being an HBCU (Historical Black Colleges and Universities) that serves minorities and underrepresented students, I will like to give students opportunities to be involved in undergraduate STEM research and establish a student section where they can benefit from the activity and travel grants, guest lecture resources, networking opportunities offered by SAS.

I am currently a tenure track Assistant Professor of Physics at Alcorn State University since August 2017. I lead the newly established Laser Spectroscopy and Material Characterization Research Group. My research is in atomic spectroscopy with a focus on laser-induced breakdown spectroscopy (LIBS) and its applications in environmental and health-related issues.

Painting and tennis are the two hobbies that help me to replenish my mind and body and get back to the classroom or the lab reloaded with fresh energy and enthusiasm.



Eric Martin, Founder of MONSTR SenseTechnologies, USA

I recently founded a spectroscopy company, MONSTR Sense Technologies, and I am looking to better connect to the spectroscopy community at large. The SAS community seems like a great place to meet spectroscopists in both industry and academic research.

My research focus is in developing ultrafast spectroscopic techniques for microscopy. I have primarily used these techniques to study semiconductor nanostructures.

Outside of programming FPGAs and optics, I like to rock climb. In Michigan my climbing is fairly confined to indoor gyms.



Ralbovsky, Nicole, Student at University at Albany, SUNY, USA

I joined SAS because of the community it provides. I believe SAS will provide me with the opportunity to connect with scientists who are interested in the same field as myself and to expand my connections as well as my personal knowledge. I hope

The research I am conducting under the advisement of Professor Igor Lednev at the University at Albany, SUNY focuses on combining Raman spectroscopy and chemometrics for the purpose of medical diagnostics. We

In my free time, I love to read (especially mysteries!) and do puzzles. I enjoy hiking in the Adirondack mountains in New

	that by being a member I may interact more with, as well as learn from, individuals in the field of spectroscopy. I hope to broaden my scope of knowledge and share my similar interests with other members.	are investigating the ability of the method to diagnose a wide range of diseases including Alzheimer's disease, muscular dystrophy, and Celiac disease.	York and I absolutely love traveling and experiencing new places and cultures.
	Cai-Li Song, Student at Imperial College London, UK		
	I joined SAS because it provides me an invaluable networking opportunity to get to know others in the relevant field and for others to know me as well; whilst the Society newsletter keeps me updated with what is going in my field and current scientific issues.	To put it briefly, my area of research is in vibrational spectroscopy and imaging, mainly infrared and Raman, in the study of biomedical samples	To be honest, most of my free time I just like to stay in and relax, maybe pick up a book or watch a tv, but occasionally, I do enjoy travelling, swimming, and doing other adventurous outdoor activities, like skydiving and bungee jumping. They are great fun!

Sixteenth Confocal Raman Imaging Symposium

WITec is pleased to announce the 16th Confocal Raman Imaging Symposium, from 23–29 September 2019 in Ulm, Germany. The annual international conference for chemical characterization and imaging is a well-established forum in the Raman community for sharing recent developments in Raman imaging. In its 16th year, the symposium will feature renowned speakers from various disciplines in industry and academia, insights into the latest Raman techniques and instrumentation, and the opportunity to present research results to the Raman community at the contributed oral and poster sessions. For detailed program information and registration please go to: www.raman-symposium.com.

Contributed by Sonja Breuninger
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Call for Abstracts: Second Frontiers in Photochemistry Conference

Registration is now open and abstracts are being considered for the Second Frontiers in Photochemistry Conference. The meeting will take place from 22–25 February 2020 at the beautiful beachside location of the Melia Nassau Hotel, Bahamas, and is chaired by Amanda Morris (Virginia Tech), Maria Abrahamsson (Chalmers University of Technology), and Jeffrey Rack (University of New Mexico).

Building on the success of the first meeting, this second series will focus on the frontiers (or cutting-edge) of research in the photochemical sciences. Topics to be discussed include biological and bio-inspired photochemistry, photocatalytic mechanisms, photoactive materials, new chromophore design, upconversion/singlet fission, ultra-fast processes, and photoswitches/photochromism.

You can view the most up-to-date speaker list and conference details at <https://www.fusion-conferences.com/conference/96>.

Contributed by Fusion Conferences
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Summary of New York (New Jersey) Regional SAS May Meeting

The May 2019 meeting of the New York (New Jersey) Regional Section of the Society for Applied Spectroscopy (NYSAS) was held on 28 May 2019 at the Horiba Optical Spectroscopy center in Piscataway, New Jersey. This special meeting featured two excellent guest speakers: Gary Sarkis, Director of Operations, S2S Newark Technology Center, representing Students 2 Science (S2S), a non-profit STEM organization, and Dr. David W. Schiering, Managing Partner of Czitek in Danbury, Connecticut.

During dinner, we asked Gary Sarkis to provide an overview of the S2S organization, its mission, and to highlight opportunities for our members to get involved with this wonderful organization. S2S aims to inspire, motivate, and educate our nation's future STEM leaders. Cross-sector collaborations between professional scientists in local businesses, institutions of higher education, district leadership, and workforce-readiness agencies are important pillars of success. S2S is recognized as a national model in solid STEM education and urban community development. They recently opened a second Technology Center in Newark, in formal partnership with the Newark Board of Education and the City of Newark, to bring hands-on STEM education district-wide in the city.

The main objective of S2S is to create innovative, hands-on STEM education experiences, complete with state-of-the-art laboratory experiences and access to professional scientists. Students perform age-appropriate, rigorous science experiments to resolve relevant, contemporary problems. The trajectory is designed to start STEM education early by building on basic skills learned at the elementary level and building on these skills through high school.

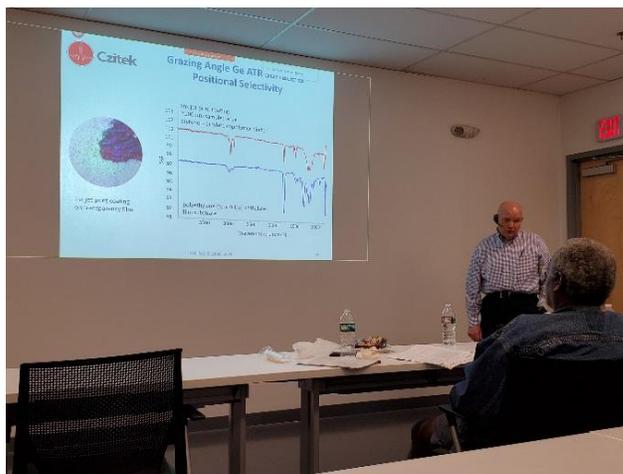
The New York Regional Section is connecting with S2S as a way to offer members new opportunities to share their scientific experience with these young minds and to encourage our local students to pursue careers in spectroscopy and related sciences.

A technical presentation on FT-IR microspectroscopy was delivered by Dr. David Schiering, founder and partner of Czitek, a small business dedicated to the development and marketing of vibrational spectroscopy products. Formerly with Smiths Detection, SensIR Technologies, Thermo Electron Corporation, and PerkinElmer, David has more than thirty years of experience in developing instrumentation for chemical measurements.

Dr. David Schiering, Co-Founder and Partner of Czitek Inc.

Dr. David Schiering has authored numerous publications on various aspects of vibrational spectroscopy and holds a Ph.D. in analytical chemistry from Miami University, where he is also an adjunct Assistant Professor of Chemistry. In 2011, he was made an Honorary Member of the Coblenz Society and in 2018 received a Society of Applied Spectroscopy Fellows award.

The presentation covered the history of modern ATR FT-IR sampling interfaces. Czitek is a unique manufacturer of micro ATR sampling interfaces. Their niche is combining spectroscopy with imaging in a miniaturized sampling unit that can be interfaced with any type of mid-infrared instrument. The coupling of imaging with spectroscopy provides a powerful combination for the microscopic characterization of materials and the chemical identification of microscopic specimens. The origins of coupling microscopes with infrared spectrometers date to 1949. Continuous instrumental and methods innovation has propelled the IR microscopy field, increasing performance and driving new applications, many of which are in the area of forensics for both crime and industrial problem solving. David also discussed the new, grazing angle FT-IR microscope for use in studies of thin films and contaminants.



Dr. David Schiering, Co-Founder and Partner of Czitek Inc.

Twelve 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.

Contributed by Debbie Peru
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Interview with Xiaoyun "Shawn" Chen, 2019 Clara Craver Awardee

Managing Editor John Chasse of LCGC North America and Spectroscopy recently interviewed me. I have selected part of the interview here. Please visit this link: <https://bit.ly/2WNidXZ> for the full interview.

(1) How broad is the range of projects that you work on? Are the projects very similar to each other, or diverse? Extremely broad. Let me start with types of projects. Currently I have several projects dealing with silicone, a few dealing with catalysts ranging from zeolites to MOF, one related to radical polymerization, one related to polyurethane foaming, several related to ethylene polymerization, and several related to customer applications such as paper coating, airbag coating, etc. In terms of commercialization stages of these projects, they may range from early stage concept-shaping, to process development, and to customer applications. There is never a dull moment as far as projects are concerned. The only common theme among these projects is that they all can benefit from the use of optical spectroscopy.

(2) What do you think are the aspects of working in industry that scientists in academia don't understand or appreciate?

I am not sure whether it is true that academic scientists don't understand or appreciate industrial scientists. Everyone has his or her own focus and perspective. Even within my own group, I don't think I always understand or appreciate the importance of another fellow spectroscopist's work. For example, I have fellow spectroscopists who spend all their time in QC labs or QC method development, and colleagues who devote themselves to process analytical, and other spectroscopists whose focus was on the data management side such as library, data communication, and chemometrics. I think we also need to put ourselves into others' shoes to really appreciate each other more. Along the same line, maybe it is really the diverse type of work we do in industry that may be something not fully understood or appreciated by outsiders. We also face very different types of pressure in industry. While we usually do not get stressed out by funding or teaching, there are many other things that you have to keep abreast of to do your job well, such as the latest technology

development, a robust project pipeline, a roadmap to ensure that we have the most relevant capabilities matching the company's direction, and last but not the least the ever-changing customer and market need.

(3) You have introduced and implemented in situ spectroscopy to more than 10 Dow sites globally. What are the challenges in working with sites around the world? Did they vary from locale to locale? Every site is different in its focus, functions, product lines, and capabilities. As a result, the researchers I interact with can be very different for sites focused on technical service, on manufacturing or on R&D. However, I enjoy interacting with all of them and I don't really think there are too many challenges. Rather, I view each visit as a new opportunity to learn from folks at that site and I adapt my own style to maximize the value of my visit. You have to be prepared to use different "languages" when you talk about spectroscopy with chemists, scale-up engineers, QC lab analyst, process design engineers, and your fellow spectroscopists. There are also different cultures and traditions, especially for sites outside North America. My visits to EU, Japan, South Korea, Turkey, and China (my country of origin, but also where I experienced reverse culture shock) were especially memorable due to the different styles of those sites. I'm also proud to say that my work once in a while also influences external customers and there have been R&D scientists in other companies working with Dow who adopted the methods we developed.

Contributed by Shawn Chen and John Chasse

**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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