SAS SPECTRUM eNEWS

Ninth International Conference on Advanced Vibrational Spectroscopy (ICAVS)

The Ninth International Conference on Advanced Vibrational Spectroscopy (ICAVS) was held in beautiful Victoria, British Columbia, Canada, from June 11–16, 2017. In addition, from June 7–10, there was a 2D-COS satellite meeting at the University of Victoria, led by Isao Noda. The weather in Victoria was very kind, making the surrounding mountains and ocean even more delightful. If you love scenery, spectroscopy and seafood Victoria was certainly the place to be in early June. The opening night reception was held at a very special location, the Royal BC Museum, with excellent food and drinks scattered throughout the museum. The talks, posters, and the exhibition were all held conveniently in the Victoria Conference Center, in the heart of Victoria, a stone's throw from the ocean. SAS was well represented in the exhibition by our Editor-in-Chief and BC local, Michael Blades, who took on the majority of booth duty. He was supported dutifully amongst others by Rena Dukor, Ian Lewis, Gloria Story, and yours truly. There were far too many excellent talks to pick any single talk in this short review, however the presentations illustrating the continued advances in AFM Raman, nano-IR, and applications of vibrational spectroscopy in the clinical environment were particular highlights for me. The ICAVS abstracts can be found at: https://goo.gl/NumhGP.

Other highlights enjoyed by many were the excellent excursions including whale watching and the spectacular Butchart Gardens. A special highlight for me was when Peter Griffiths beat me soundly at darts twice during the fun pub night in the Sticky Wicket Pub. ICAVS remains a must-do conference and is highly recommended.

Contributed by Andrew Whitley Ph.D.
andrew.whitley@horiba.com

SAS Election 2017

The 2017 SAS Election of Officers and Governing Board Delegates will take place from July 25 to August 22, 2017. If you have an email on file with the Society, you will be receiving instructions, a username, and password for voting from our election provider Elections Online. Be sure to check your spam folder if you do not see the election email. Full candidate profiles can be found online here: https://goo.gl/8Fk3d5

Following is a summary of the profiles for all of the candidates.

Presidential Candidates

David W. Hahn. David W. Hahn received his BS and PhD degrees in Mechanical Engineering from Louisiana State University in Baton Rouge. Following graduation, he was a National Research Council Research Associate at the US Food and Drug Administration (1992-1994) and then joined Sandia National Laboratories (1994-1998). David joined the University of Florida (Gainesville, Florida) in 1998, and was promoted to Professor in 2007. Since June 2011, he has served as Department Chair of the Department of Mechanical and Aerospace Engineering. His research and teaching interests are in the general areas of renewable energy, spectroscopy, and optical-based biosensing. He has published over 100 journal papers, book chapters, and has nine US patents. He currently serves on the Editorial Board of *Applied Spectroscopy* and formerly served on the Editorial Board of *Spectrochimica Acta Part B*.

Robert Lascola. Robert Lascola is a Fellow Scientist in the Office of Science & Technology at Savannah River National Laboratory (SRNL) in Aiken, South Carolina. He received degrees in chemistry from the Universities of Virginia (BS), Colorado (MS), and Wisconsin (PhD); his thesis work at Wisconsin, with John C. Wright, concerned the nonlinear optical properties of neutral and anionic fullerenes.

At SRNL, Rob has developed spectroscopic methods for process control and material accountability for nuclear processing and associated laboratory studies at the Savannah River Site. This work utilizes UV-Vis and Raman spectroscopies and chemometric data analysis to cover, essentially, both ends of the periodic table (ranging from actinide analysis of dissolved spent nuclear fuel to gas-phase hydrogen isotope analysis). He has authored or co-authored over 50 articles and DOE technical reports.

Rob has been a member of SAS since 1998. He has held a number of leadership positions, including two terms on the SAS Governing Board (2010-11, 2012-13), Interim Secretary (2013), and Chair of the Awards Committee (2013). Since 2014, he has been the Coordinator of the Regional, Technical, and Student Sections Committee.

Secretary Candidates

Ian R. Lewis. Ian R. Lewis obtained his degree in Chemistry and Chemical Technology at the University of Bradford (UK) in 1989, his Ph.D. in 1992 under Professors Anthony Johnson and Howell Edwards, and was appointed an Honorary Visiting Researcher in 1992. He was a postdoc with Professor Peter Griffiths in Idaho while also consulting on Raman spectroscopy to industry. In 1996, he joined Kaiser Optical Systems, and is currently Director of Marketing. With SAS, he started as student member in 1992 and was President in 2014. Other roles at SAS include president of the Detroit SAS section, chair of several SAS National committees, Exec committee member, GB delegate, liaison between FACSS & SAS, and a tour speaker. He was made a Fellow of SAS in 2011. From 2004 through 2008, he served on the Board of Managers of the Coblentz Society, and from March 2009 to March 2011 as President. He was the Governing Board Chair of FACSS (2012-2013) and currently serves on the FACSS Exec Committee and GB. He has organized the successful Raman program at FACSS/SciX for 16 years. He has 77 publications, seven book chapters, co-authored a USP monograph on Raman, and is co-editor of the *Handbook of Raman Spectroscopy*.

Gloria Story. Gloria Story received her A.S. in Science Technology from the University of Cincinnati–Blue Ash (1981) and worked towards a B.S. in Chemistry from UC and the University of Utah. She is a Senior Scientist with the Corporate Analytical Organization of the Procter and Gamble Company with over 33 years of service in vibrational spectroscopy. With over 20 years of membership in the Society for Applied Spectroscopy, Gloria is currently serving as secretary, as past president of the Cincinnati section, and as a volunteer on the membership committee. She has been an active member of the Coblentz Society for over 25 years, currently serving as a liaison for PittCon. An ACS member since 1994, she is currently serving as coordinator for membership, Education Grants, undergraduate travel awards, and museum NCW programming.

Gloria Story has authored 28 research publications (16 peer-reviewed) and presented over 15 invited oral presentations.

Lynn X. Zhang. Dr. Lynn X. Zhang earned her B.S. degree in Chemical Engineering at the Shenyang University of Chemical Technology in China. After graduating from college, Lynn continued her educational experience in chemistry. In 2011, she obtained a Master's degree in chemistry focusing on plasma temperature studies at Murray State University in KY. Lynn obtained her Ph.D. in Analytical Chemistry from Clemson University in SC. She is currently working at EAG Inc., using her knowledge and skills for industrial applications. Lynn's engineering background has provided a different point of view for her years of research in spectroscopy. Lynn has been a member of the Society for Applied Spectroscopy for 6 years. During the time, she has served the society in any way she can. She was the original founder/president of the Clemson University Student Chapter of Society for Applied Spectroscopy. She is currently serving as a web editor of the SAS website committee and the Chair for the SAS publicity committee.

Governing Board Delegates

Ishan Barman. Dr. Ishan Barman is an Assistant Professor in the Department of Mechanical Engineering at the Johns Hopkins University and has a joint appointment in the Department of Oncology at the Johns Hopkins School of Medicine. He received his B. Tech. and his MS degrees in Mechanical Engineering from the Indian Institute of Technology (IIT) (2005) and Massachusetts Institute of Technology (MIT) (2007). He initiated his doctoral studies at MIT with Professor Michael Feld as a Lester Wolfe Fellow. Following receipt of his PhD degree (2011), he completed a brief postdoctoral stint at the Laser Biomedical Research Center before joining the faculty at Johns Hopkins University. His research group is engaged in developing and employing novel spectroscopic methods that leverage the endogenous molecular contrast to offer objective insights into disease states. Another interest area of his group is in the engineering of nanostructured probes for ultra-sensitive detection of specific molecular species using surface-enhanced Raman spectroscopy (SERS). Working extensively with medical researchers and partners in the industry, these efforts have been described in more than 50 publications. His group's work has been prominently featured in leading scientific (Technology Review, Physics Today, Physics World) and popular media (Wall St. Journal, CNN Newsroom).

Laura Bush. Since November 2010, Laura Bush has been the editorial director of *Spectroscopy* and *LCGC*, two peer-reviewed publications that serve spectroscopists and analytical chemists working in a range of fields, such as environmental analysis, medical research, pharmaceuticals, and food safety. Previously, Laura spent five years as the editor in chief of *BioPharm International*, and three years as managing editor of *Pharmaceutical Technology*.

Laura is currently serving a two-year term (2016–2017) as a member-at-large of the Society for Applied Spectroscopy's Governing Board and a three-year term (2017–2019) on the SAS Publications Committee. In her role at *BioPharm International*, she also moderated numerous conferences, conference keynotes, and roundtables. In addition, she served as a member of the advisory boards for the Interphex conference and the Biotechnology Industry Organization (BIO) international convention. Before moving into technical publishing, Ms. Bush worked in the pharmaceutical industry as a project manager for the Asia Pacific Latin America region of Pharmacia Corporation, which is now part of Pfizer.

Rina Dukor. Rina Dukor is the President of BioTools, a company she co-founded with Professor Laurence Nafie in 2000. Ms. Dukor received a Ph.D. in physical chemistry from the University of Illinois, Chicago (UIC) in 1991. Her thesis explored a revolutionary new technology of Vibrational Circular Dichroism (VCD), as applied to understanding details of the structure of proteins. Upon graduation, Rina joined Amoco (currently AbbVie) where she established a spectroscopy laboratory focused on proteins and nucleic acids. While in industry, she pioneered the introduction of aqueous infrared spectroscopy to the biopharmaceutical industry through the development of instrumentation, sampling techniques, and software for protein secondary structure determination. Her methodology, commercialized as PROTA, has been used by over 100 of the leading biopharmaceutical companies. She has pioneered the development of reflection infrared micro-spectroscopy for cancer diagnostics. Dr. Dukor has co-authored over 60 peer-reviewed papers, several review chapters, and is a holder of four patents. Rina's service to the Society dates back to her graduate days when she was asked to serve as Parliamentarian. For the past 25 plus years, Rina served on numerous Committees, the Governing Board, and the Executive Committee as the President.

Jay Kitt. Jay Kitt graduated with a Bachelor of Science from the University of Utah in 2011. As an undergraduate, he began pursuing research with Joel Harris working on the use of confocal Raman microscopy of liquid/solid interfaces within porous chromatographic silica particles. After graduating, Jay continued research in the Harris lab, completing his Ph.D. in Analytical Chemistry. In 2012, he was awarded a research fellowship in the National Science Foundation's Nanobiosensors, Nanomaterials, and Microfluidics IGERT program. Jay's dissertation work was recognized by the University of Utah chemistry department with the 2016 Cheves T. Walling Graduate Research Award for the outstanding thesis in chemistry. He is currently pursuing postdoctoral work in collaboration between the Shelley Minteer and Joel Harris research groups, investigating the interactions between electron transport chain proteins in supported phospholipid bilayers at electrode interfaces using surface enhanced Raman and Fourier Transform Infrared spectroscopies. Jay has been a member of the Society for Applied Spectroscopy since starting as an undergraduate researcher in 2011. He currently serves on the society's Regional, Student, and Technical Affairs Committee and as a reviewer for the society's journal *Applied Spectroscopy*. Jay's passion for spectroscopy is apparent in his work, and he hopes that he can continue to contribute to the spectroscopic community by serving as a representative of the SAS.

Isao Noda. Isao Noda was born in Tokyo, Japan. He came to the United States in 1969 and graduated from Columbia University in 1974 with B.S. degree in chemical engineering. He received his M.S. in bioengineering (1976), as well as M.Phil. (1978), and Ph.D. (1979) in chemical engineering from Columbia. In 1997, he received D.Sc. degree in chemistry from the University of Tokyo. After retiring from the Procter and Gamble Company in 2012, he became an Affiliated Professor at the Department of Materials Science and Engineering, University of Delaware and also holds the position of Chief Science Officer and Senior Vice President of Innovation at Danimer Scientific in Bainbridge, Georgia. He has been appointed to the position of Honorary Guest Professor of the Department of Chemistry at Peking University in China. His research interest is in the broad area of polymer science and spectroscopy. He is known for the development of a novel class of bio-based biodegradable plastics Nodax™ and also a versatile analytical technique called two-dimensional infrared (2D IR) correlation spectroscopy. He became a Fellow in 2011 and Honorary Member in 2013 of the Society for Applied Spectroscopy and a Fellow of the Optical Society of America in 2012. He has about ninety patents granted in the US and the EU, published over three hundred (376) articles in peer-reviewed journals, and coauthored three books.

Rohith Reddy. Dr. Rohith Reddy, a Ph.D. in bioengineering from the University of Illinois at Urbana Champaign is currently working as a research fellow at Harvard Medical School, Massachusetts General Hospital. His research interests include the development of medical imaging devices, design of instrumentation, creation of new imaging techniques and formulation of robust data analysis tools for infrared spectroscopic imaging. His graduate research was focused on creating and enhancing mid-infrared spectroscopic imaging techniques for biomedical applications. His work presents important advances in using Fourier transform infrared (FT-IR) imaging for tissue type identification and cancer detection in prostate and breast tissue. His recent work has led to the development of an inexpensive clinical device for in vivo esophageal cancer detection. Previously, Rohith Reddy obtained his B.Tech and M.Tech. in Electrical Engineering from Indian Institute of Technology (IIT) Madras. In his doctoral and post-doctoral work, he has published 14 peer reviewed papers, two book chapters, filed five patents, and given over 35 conference presentations.

Alexander Scheeline. Alexander Scheeline is Professor of Chemistry Emeritus in the Department of Chemistry, University of Illinois at Urbana-Champaign, President of SpectroClick Inc., a firm developing hand-held instrumentation, and Vice President of Anchor Science LLC, a materials development partnership. Dr. Scheeline comes from Hollidaysburg, Pennsylvania. He received his Bachelor of Science in Chemistry from Michigan State University in 1974, doing research in chemical kinetics under the direction of S. R. Crouch. His 1978 Ph.D. in chemistry was awarded by the University of Wisconsin-Madison for research on spark discharges under the direction of J.P. Walters. He was then a National Research Council post-doctoral fellow at the National Institute for Standards and Technology, working with J.R. DeVoe and J.C. Travis on laser diagnostics of sparks. He was on the chemistry faculty at the University of Iowa before moving to Illinois in 1981, continuing research in atomic emission spectroscopy and optical instrumentation, as well as working extensively on oscillatory chemical reactions, sensors for reactive oxygen species, chemical pedagogy, and ultrasonically levitated drops as microreactors. His group trained 15 Ph.D. students, six post-doctoral fellows, seven Masters students, and 61 undergraduates. He served briefly as a Program Officer at the National Science Foundation, and was active in operations and governance of FACSS and SAS. With the Analytical Sciences Digital Library, he was founding editor of JASDL, the Library's open access journal. Co-winner of two W. F. Meggers awards, he is a Fellow and Honorary Member of the Society for Applied Spectroscopy. He currently focuses his work at SpectroClick.

John Wasylyk. My career began in 1989 at Bristol-Myers Squibb Company where I have continued to manage laboratories focused on a wide range of analytical techniques. The techniques span the range from traditional separation technologies to vibration-based spectroscopies. Throughout my career, I have been both a hands-on scientist, and a manager, which has given me an appreciation of how to solve problem directly and indirectly. Collaboration with scientists outside of my research and development department, with members of various pilot plants, and with internal and external manufacturing departments have given me a broad appreciation of dealing with a wide range of scientists with varying opinions and expertise. This has enabled me to listen, understand, rationalize, and reach key decisions in the best interest of one common goal. My first role in the Society of Applied Spectroscopy was serving as an At-large Delegate to the Governing Board from 2010 to 2012. During this time, I also became active in the SciX Conference as a session chair. After serving for two years as Parliamentarian for the Society, I took on the role as Pharmaceutical Section Chair for SciX in 2013, and I have continued as Section Chair through 2017. During this time, I sat in on the Long-Range Planning Committee for SAS in 2015 and became the Marketing Chair for FACSS for the years 2014-2016 and 2017-2019. In 2016, I was asked to step-in and serve as Publication Committee Chair for SAS.

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.

Telephone: 301-694-8122
FAX: 301-694-6860