

SAS SPECTRUM eNEWS



The Ideal Raman Spectrometer
for Materials Research

[Learn More](#)



SAS Sponsors Three Symposia at Pittcon 2014



SAS is proud to continue the tradition of sponsoring symposia at Pittcon 2014. The symposium on March 3rd is arranged by Scott Tanner of DVS Sciences, Inc. titled *Mass Cytometry: An In-Depth View of Cell Heterogeneity and Signaling* and includes a number of talks about fundamentals and discoveries using ICP-MS coupled with flow cytometry. The symposium arranged by Max Diem of Northeastern University is on March 5th and is titled, *Applications of Vibrational Spectroscopy in Medical Diagnostics*. The talks in this symposium cover the utility of vibrational spectroscopy on single cells and biological tissues. The third symposium, Women in Spectroscopy, is on the morning of March 6th. Organized by Ellen Miseo, the goal of the session is to inform and discuss career choices for women in Spectroscopy. Further details on the times and individual talks can be found on the [SAS website](#).

SAS Student Ambassador Program Openings – Deadline February 21, 2014

The Student Ambassador program was established to encourage and enable young spectroscopists in furthering our mission,

... to advance and disseminate knowledge and information concerning the art and science of spectroscopy, and other allied sciences, to advance the professional standing and growth of the Society and its members, to coordinate cooperative endeavors of its individual members and sections, and to promote and maintain a close bond among its members.

The Student Ambassador program provides funding to travel to area-specific conferences for student members to speak with fellow students about the benefits of membership in the society. For details and an application, please visit the [SAS website](#).



Fast Micro-FT-IR & Imaging
[See the Video](#)

Thermo
SCIENTIFIC

Announcement of Tour Speakers

We are excited to announce the 2014 Tour Speaker program is getting ready to come to an SAS section near you. This annual program brings top-notch speakers in the field to your regional section. Contact your section officers for information on what is in store for your section this year.

Longtime SAS Staff Member to Leave SAS

Just like so many businesses today, SAS has been facing financial challenges. In order to proactively maintain the financial stability of the Society, we have had to make the difficult decision to decrease the office staff. Effective March 1, 2014, longtime SAS employee Victor Hutcherson will be leaving us. Victor served the Society for almost 18 years. He was a tireless and dedicated worker who was always willing to do anything asked of him. We will miss Victor very much and wish him nothing but the best in his future endeavors.

7th International Conference on Advanced Vibrational Spectroscopy (ICAVS-7)

The 7th International Conference on Advanced Vibrational Spectroscopy (ICAVS-7) was held in Kobe, Japan from August 25-30. Yukihiro Ozaki was the General Chairman and Takeshi Hasegawa was the Program Chair. Getting to Kobe was relatively easy as many international flights land at Kansai International Airport near Osaka. A 30-minute high-speed catamaran ride took you across the Osaka Bay from the airport to Kobe which was followed a ten-minute trip to the Kobe Convention Center on the Portliner rapid transit train.

I was always amazed that it seems as if every year since the mid 1960s, major advances have been made in one or more fields of vibrational spectroscopy, whether it is new types of spectrometers, new sampling techniques or new software algorithms. This trend continues to the present day, with the hottest items being tip-enhanced Raman spectroscopy (TERS) and mid-infrared nanospectroscopy. The recent advances in Raman spectroscopy were highlighted by the two plenary talks with which led off the conference. The first was given by Hiro-o Hamaguchi of the National Chiao Tung University, Taiwan and covered a number of different aspects of Raman spectroscopy. The second was on tip-enhanced Raman scattering (TERS) by Satoshi Kawata of Osaka University who showed that not only is a resolution of 10-nm technically feasible by SERS, but that we are almost there.

The plenary and invited talks were generally of high quality and covered many of the "hot" subjects in vibrational spectroscopy. The plenary papers included talks on the following topics:

- Diagnosis of Tumors During Tissue Conserving Surgery by Ioan Nottingher (University of Nottingham, UK);
- Spectroscopic Characterization of Electrospun Fiber by John Rabolt (University of Delaware, USA);
- Terahertz Spectroscopy of Molecular Crystals, Proteins and Aqueous Solutions by Keisuke Tominaga (Kobe University, Japan);
- Fast Time-Resolved Spectroscopy by Koichi Iwata (Gakushuin University, Japan);
- Summary of the Important Developments in Vibrational Spectroscopy Over the Past 50 years by myself;
- Local Modes in Vibrational Spectroscopy by Per Jensen (University of Wuppertal, Germany);
- The Properties of New Materials Studied by Resonance Raman Spectroscopy by Keith Gordon (University of Otago, New Zealand);
- Surface-Enhanced Raman Spectroscopy Using Core-Shell Structures by Zhong-Qun Tian (Xiamen University, China);

- Infrared Nanospectroscopy (Curt Marcott and colleagues at Anasys Instruments, Santa Barbara, CA, USA);
- Chemometrics for Process Analytical Technology by Katherine Bakeev (B&W Tek, Newark, DE, USA);
- Applications of Near Infrared Spectroscopy by Heinz Siesler (University of Duisberg-Essen, Germany). This talk was sponsored by the FACSS organization.

The conference covered all aspects of Raman and near-, mid-, and far-infrared spectroscopy with the heaviest emphasis being placed on Raman and mid-infrared spectroscopy. Three classes of oral presentations were given: plenary papers (typically 45 minutes in length), invited papers (25 or 20 minutes), and contributed papers (15 minutes). In my view, 15 minutes is too short for an oral presentation as there is rarely time for questions and many speakers exceed their allotted time, which meant that the schedule was rarely adhered to. Since there were usually three parallel sessions, this frequently meant that one missed the start (and sometimes all) of a subsequent paper in a different session. Because the sessions usually finished late and the afternoon refreshment break was quite short, the post-break session often started very shortly after the pre-break session finished. Thus several times I found myself sitting through as many as 16 talks from 1:30 to 6:30 p.m. without a break. Since there were three parallel sessions for invited and contributed papers, it was often easy to miss papers in different rooms, with this situation exacerbated because talks in the afternoon sessions were scheduled at slightly different times. The technical part of the conference was stimulating and enjoyable and Professor Hasegawa is to be congratulated on finding a way of accommodating so much material over the week of the conference.

From the previous paragraph, it is easy to say that many of the contributed papers should have been given as posters but even here there was an (unavoidable) issue. Posters were able to be viewed from 9:00 a.m. on Monday to 1:30 p.m. on Tuesday (Session A) and from 3:30 p.m. on Tuesday to 10 a.m. on Friday (Session B) but only about seven hours were scheduled specifically for posters. Since there were 163 posters in Session A and 173 in Session B in rooms on four different floors, if one was to attend all the oral presentations, there was not enough time to view over 330 posters, especially as that time included the lunch breaks on Monday, Tuesday, Wednesday, and Thursday! Clearly it was necessary for attendees to read the program and check off those dozen or so posters on subjects closest to one's interest each day and neglect all the others. This negated one of the advantages of poster sessions in that one didn't have the time to wander through the rooms and serendipitously encounter posters on topics that he hadn't checked off before the start of the session.

The organizers had an innovative way of funding the lunches for the conference participants. Fourteen instrument companies gave seminars of between 30 and 60 minutes in length and everyone who attended these seminars received a complimentary lunch box. The only drawback to this arrangement is that it further reduced the amount of time available for viewing the posters. In addition to their lunchtime workshop, Shimadzu also sponsored an excellent evening reception.

The social events were also tremendously enjoyable. On Wednesday afternoon, participants were given the choice of three tours, to Kobe, Osaka, or Kyoto vibrational spectroscopy. Like many North American spectroscopists, I chose the tour of Kyoto, which was the capital of Japan for over 1000 years. We visited two of the well over 1500 large and small temples in Kyoto, including the Golden Pavilion at Kinkaku-ji (see below). ICAVS-7 gave the participants a chance to learn about the latest results in vibrational spectroscopy along with wonderful social activities. Most important, it provided the opportunity to reconnect with old friends and to make new ones. [ICAVS-8](#) is scheduled to be held in Vienna from July 12-15, 2015. Professor Ozaki certainly gave the next general chair, Bernhard Lendl, something to live up to.

Peter R. Griffiths
Professor Emeritus, University of Idaho.

Acknowledgments: I would like to gratefully acknowledge partial support of my travel expenses to Kobe by the Society for Applied Spectroscopy. The photographs of the banquet were taken by Rodolfo Romanach and Gabor Keresztury.



The Golden Pavilion at Kinkaku-ji.

We had a very enthusiastic tour guide who gave us many interesting facts. For example, all Shinto temples have a bright red or orange *torii* gate like the one shown below.



Typical gate to a Shinto temple.

The afternoon was ended with an excellent traditional Japanese meal. While on the subject of meals, the traditional conference banquet was held on Thursday evening. The festivities were initiated with a ceremonial opening of wooden sake vats, as shown below.



Left: hammering open the sake vats.

Right, from left to right: Katherine Bakeev, Rina Dukor, Shigeo Minami, me, and Takeshi Hasegawa sampling the contents.



STS-UV
Microspectrometers



© 2013 Society for Applied Spectroscopy
Telephone: 301-694-8122 | FAX: 301-694-6860



Find us on
Facebook

Linked in