Volume 23
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The SAS Spectrum

February 1996

In this Issue:

The Newsletter of the Society for Applied Spectroscopy, a supplement to ***Applied Spectroscopy, Vol 50, No 3***

Welcome to this inaugural version of the new format for the Society for Applied Spectroscopy's Newsletter. Obviously, a few things have changed. While it is difficult to change a tradition that has been successful for over 20 years as a result of the hard work of previous editors such as Jim Lindsay, Andy Rekus and John Dean, we (the editor and the Society's officers and National Office staff) hope that you find the changes to be positive. Your input and suggestions are welcomed and can be sent directly to the editor or to the National SAS Office.

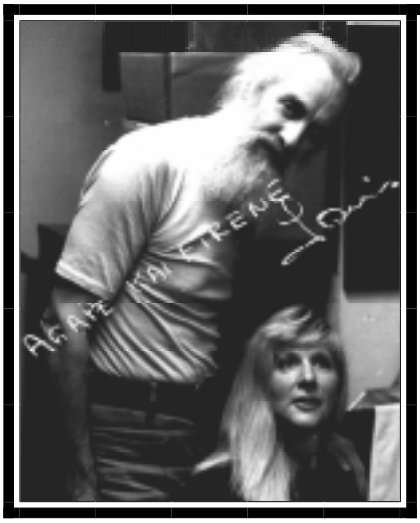
So what has changed? First and most obvious, the newsletter size has been increased to 8.5" x 11". This will allow for a better utilization of space and more important, will permit the use of larger font sizes. Those spectroscopists who are advancing in age (that includes the editor) and now require reading glasses will appreciate the bigger letters.

The newsletter is now distributed as a supplement to the Applied Spectroscopy Journal, thus saving considerably on mailing costs.

The focus of the newsletter will be expanded beyond the traditional areas of local SAS section activities, SAS Governing Board reports, FACSS and Pittsburgh Conference photographs, and coverage of miscellaneous SAS activities. The following new areas will be explored:

- **History of Spectroscopy** - Those who forget the past are destined to relive it ... or as Yogi Berra put it, "It's deja vu all over again." There is a treasure of knowledge in both the successes and the failures of spectroscopists over the last two centuries. In this issue, we will take a look at the classic investigation and subsequent debunking of N-rays by the renowned spectroscopist Dr. Robert Wood.
- **Spectroscopist Profile** - Rarely do we see the man or woman behind the scientific mask. In this section we will profile the lives, both public and private, of well-known spectroscopists and chemists. In this issue we celebrate the life of Louis E. Owen.
- **Education for Spectroscopists** - Here we will look at educational resources in spectroscopy and science. In this issue, we examine issues and resources for teaching children to use "the scientific method."
- **Book reviews, letters to the editor, and other contributed works** - In this section we will publish reviews of books that deal with issues of interest to SAS members but not appropriate for *Applied Spectroscopy*, in areas such as philosophy of science and scientific history. We also welcome letters to the editor. Submissions can be sent to the editor or the SAS National Office.
- **World Wide Web** - The newsletter is now available on the WWW at: http://esther.la.asu.edu/sas/epstein/sas.html

Finally, a logo and title, *The SAS Spectrum*, for the newsletter. Got a better title or logo design? Please send it! Nothing is done perfectly the first time ... it can always use improvement. And thanks! *The Editor*



Remembering Louis Owen

by Mike Epstein with contributions from Marvin Margoshes, Claude Veillon, Jim Winefordner, Ben Smith, Ted Rains, Roy Koirtyohann, Gary Hieftje, Mike Parsons, Don Anderson, and George Wittenberg

Few scientists are a legend after they pass from life. Even fewer are a legend in their own time. One of those very few was Louis Owen. While Louis' contributions to spectroscopy were many, they are not primarily why he is remembered. Most of us remember Louis for his most unconventional philosophy of life, emphasizing the simple beauty of nature and the goodness of his fellow man.

I knew Louis Owen for only a very few months during the winter of 1978-79, when I was a postdoc in the laboratory of Professor Jim Winefordner at the University of Florida. Louis and Mary (his future wife) lived in an old Ford Van parked in the lot of the chemistry building. Louis spent most of his time building equipment in Jim's electronics lab, a place that I was spending a great deal of time in as well. I don't recall a great deal from that time, except for two occurrences. The first was Louis walking excitedly through the laboratories distributing reams of paper to Jim's students. It seems that while searching the campus dumpsters, Louis had come across several boxes of discarded paper that had been "used only on one side." To this day I can still recall seeing his joy at saving a few trees. The other was a bit of philosophical advice that Louis gave me while we both labored over soldering irons in the electronics lab. "Who's in charge of your life?" Louis asked. "Think about that every time you make a career decision!"

The last time I heard from Louis was a year after I returned to NBS from Florida. I sent him several pictures that I had taken in Jim's lab, and he thanked me in a short postcard message that I still have on my wall. Louis described the abundant snow pack on the mountains in Montana, the country that he and Mary loved so dearly. He closed with "Agape Kai Eirene ... Love and Peace. I hope he has found both.

Mike Epstein, NIST, Gaithersburg, MD

Now for reminiscences from others:

"Louis died some time ago. He was a wonderful, kind person with an extraordinary intellect. I remember him well from several Pittcon meetings where he gave amusing talks with many photographs of the great outdoors and pretty young women. He would cause great turmoil when Fred Brech was speaking by doing some outlandish things such as coming on stage and playing the piano (often in Pittsburgh and in Cleveland, the talks were given in theaters) to the delight of the attendees. He would also stop each year in Gainesville for about 4 or 5 weeks each year prior to the great increase in gas prices. I guess we were the only stop in

the southeast. He and a young lady would stay in his motor home and he would spend many hours talking to my group and building equipment in my shop. He had an unusual background and was extremely beneficial to young scientists. He and his female friend would cause the University of Florida police great worry because they would stay in the Chemistry Department parking lot for weeks at a time. They thought he was a weirdo. It was always amusing to walk by the vehicle and smell bread being made or see the vehicle rocking. Louis was one of a kind. We certainly all miss him." **...**

Jim Winefordner, Department of Chemistry, University of Florida, Gainesville FL

"As a new graduate student, I was not quite sure what to make of him. My first impression was that he was some kind of hip spectroscopist, certainly a unique occupation in my book. In fact, that was a pretty accurate description. He built special circuits and custom electronic instruments for the group and always had good advice about how to proceed with any spectroscopic or electronic measurement. He carried with him a wealth of knowledge about the practical secrets of spectroscopy. Louis was the first person I had come upon who lived within the philosophy of extracting as little as possible from the planet and, curiously, this attitude did not seem at all incongruous with his being a scientist. Although he lived very simply, he was not at all primitive in his lifestyle and I think Louis believed in the capability of scientific advancement to improve rather than degrade our relationship with the earth. A popular bumper sticker these days says "Live simply so that others may simply live." The first time I saw it, I thought of Louis."

Ben Smith, Department of Chemistry, University of Florida, Gainesville FL

"I think it was 1966 when I first met Louis E. Owen. I was in the second year of an NRC postdoc at NBS. Lou was a handsome young man then (as we all were), clean-cut and energetic. He owned (i.e., was) a small company in Portsmouth, Ohio called Tomorrow Enterprises, which manufactured arc power supplies, plasma jet sources, gas manifolds, ignitors, etc. He had a Navy contract to develop an ultrasonic nebulizer, but he didn't have lab facilities, so he was borrowing lab space at NBS. He was a pilot, and had a small plane, but he got frustrated trying to commute to Gaithersburg from Ohio in it, because he often hit bad weather crossing the mountains. So, he usually came in his Volkswagen bus. He had to replace the valves in it about every 20,000 miles, because he drove it wide open on the commute. He maintained that Volkswagen implied that you could drive them wide open all day, so that's what he did.

Before this, he was a honcho with the old Atomic Energy Commission, and went to work in a suit (he was strictly a jump suit man when I met him). He told me that about the time he quit AEC, he stood up in a meeting and told them that they could increase productivity tenfold, and people there still wouldn't be working forty hours a week!

We often went out for lunch and he introduced me to a most delightful place. Downtown Germantown (now an overpopulated metropolis ...Ed.) consisted of a feed mill and a general store and we often dined at the general store. It was one of those old stores that sold

Publications by Louis Owen included the following topics:

Dimensioning biological samples for spectrochemical analysis
Efficiency of installing corner sinks in labs
How to build an inexpensive fume hood
Electrode monitoring with projection systems
A shutter and motor drive for a littrow-echelle spectrograph
A porous cup electrode drilling jib
Spectrochemical analysis of lithium
A stable plasma jet for excitation of solutions

[Special thanks to Ben Smith for this research]

everything. In the back was a meat counter, and in the front was a short order grill with a counter and a few stools. You could pick out and buy a steak at the meat counter, then bring it up to the front where they'd cook it to order for you and you could eat it there at the counter along with any fixin's you'd like.

I left NBS in 1967 for the University of Houston. He took over my lab space at NBS for a time, happily using up the many standard solutions I'd made up. He visited my lab at least once while I was in Houston. It was great for my graduate students to be exposed to his unique approach and perspective on research. I saw Lou a few times at the Pittsburgh Conferences which were held then in Cleveland. He usually had a single booth at the exhibit (legend has it that Lou would never have his own electricity, but would secretly run an extension cord to outlets at nearby booths ... Ed.), and he occasionally gave a talk as well. His talks were extremely popular, packing the conference room. The reason was that he always showed lots of slides of beautiful (female) technicians in the laboratory, and beautiful slides of the scenery in Montana. I think at some time he had a small ranch in Montana, and that he dated Ray Woodruff's daughter.

The last time I saw Lou was around 1972, when I visited Mike Parsons in Phoenix, Arizona. Lou frequently wintered there and made a big impression on Mike's graduate students. By then Lou looked a lot like someone from Woodstock (the first one), and he lived in a camper or motorhome in the parking lot with an extension cord running into Mike's lab. I lost contact with Lou after that. I heard he was ranching in Montana and wintering in warm places. I also heard that he died a few years ago.

Lou was a brilliant man. I don't think there was a spectroscopic or electronic device he couldn't build or improve upon. His perspective on life and science and research was unconventional, but honest, realistic, and probably more accurate than most people exposed to it were afraid to admit. He drifted over the years further from the mainstream to pursue a life of ever increasing freedom and, I sincerely hope, happiness.

Claude Veillon, US Department of Agriculture, Beltsville MD

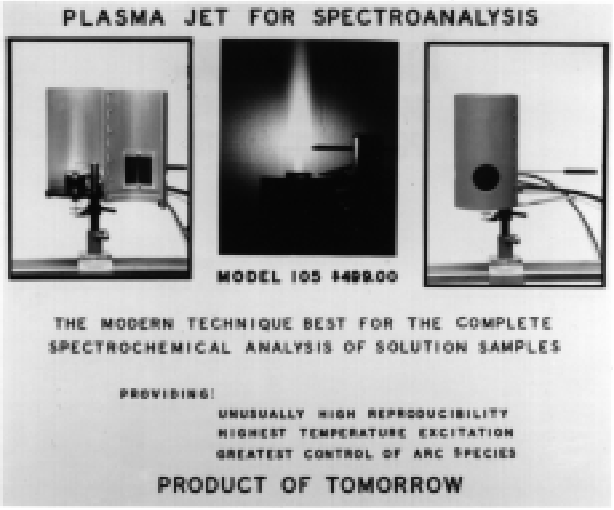
My time with Lou began in the early '70s, after his prominent career as an arc/spark spectroscopist and during his itinerant days. He would drop by Bloomington unexpectedly and simply show up in my office. He would stay for anywhere from two days to three weeks. Inevitably, some university official would track him to our office and we would have to explain and justify why he should be allowed to plug his van power system into the nearest available university outlet. He and his traveling companion, usually a woman 20 or so years his junior, would use the athletic-facility showers and bathrooms and would wash their dishes in the lab sinks. This latter activity shocked a number of my students, who regularly used the same sinks as hazardous-waste-disposal vehicles in those days and, late at night, as emergency latrines. When Lou left, he would probably leave behind a number of useful items and many invaluable ideas and suggestions. In return, he would acquire a number of things he needed in his travels or in his building projects involving scientific equipment - in short, some of our pieces would turn up missing. This was Lou's "trade rat" nature in those days. All in all, my students and I found Lou's visits refreshing, rejuvenating, and valuable learning experiences.

Gary Hieftje, Department of Chemistry, Indiana University, Bloomington IN

Lou Owen and I got interested in what each other was doing when I was working on the dc plasma jet at NBS. Lou had been at the Portsmouth, Ohio facility of the Atomic Energy Commission, and then set up his own (one-man) company, Tomorrow Enterprises, to make arc and spark power supplies. His motto

was "Tomorrow's products today". I needed a better power supply for my first plasma jet source than the antique ARL dc arc source with a maximum output of 15 amps that I found at NBS. Lou built a power supply for me with much more capability in a box small enough to fit on a bench top or in an electronics rack. I think he sold quite a few of these power supplies.

Lou also developed a much improved version of the plasma jet. My design was commercialized by Spex, and his by Spectrametrics, a company that was later taken over by Beckman. His design is, I think, still in use today with little change. I did not patent the first plasma jet. The research was done with funds from the US Navy, and their patent office took too long to file an application and missed the deadline. I don't think Lou patented his improvement, and he could have made some money if he had. Of course, neither type of the plasma jet has been able to compete with Fassel's inductively-coupled plasma RF torch.



During this time, Lou got a contract with another government agency, perhaps the Air Force, to develop either a new power supply or a new plasma jet. He needed facilities he didn't have in Ohio, so he asked if he could use space and equipment in the Spectrochemical Analysis Section at NBS. We had extra space, and time was available on the equipment he needed. I looked at it as a chance to keep an eye on Lou and learn from what he was doing., so I arranged for him to come in as an unpaid guest. Lou would show up about once a month and stay for a week. As I recall, he either camped in his van or stayed at an inexpensive motel in Germantown, a few miles north of NBS. He was not at all secretive about his work, so I did learn from him.

Only one minor problem came up. One of the women chemists in our Section went to a talk Lou gave at PittCon. At the start of his talk, Lou asked those in the room who were really interested to come up to the front and stand by the podium for a chat on the subject. Lou sometimes told me that his first tenet in giving a talk was to keep the listeners awake and interested. That seemed like a sound principle to me, and when I heard of this tactic I thought it was a good one. The chemist, however, thought it was unprofessional and, since a number of people knew that Lou was working as a guest at NBS (or perhaps he mentioned it in his talk), she thought it looked bad for the Bureau. She complained to Bourdon Scribner who told me of her complaint in a neutral way. I decided to let it end there, and I never told Lou about it. (Based on the reminiscences of others, perhaps there was something else about Lou's presentation that she thought offensive! ..Ed.)

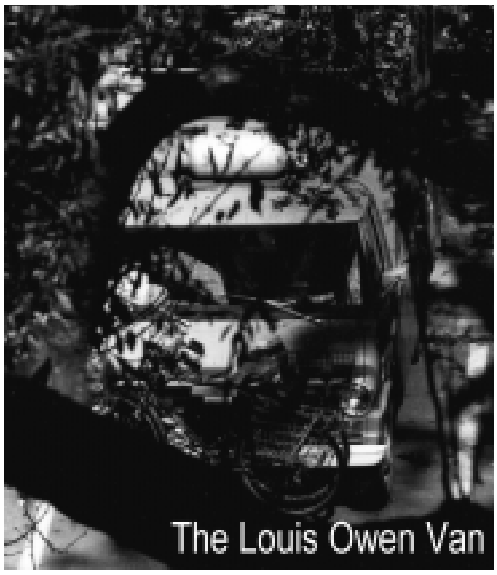
I didn't pry into Lou's personal life, so I can't tell you much about it. Some years later, I heard that he had taken up with a woman, closed down his business, and they had both gone off to travel in his van.

At NBS, Lou had to work normal hours, but I gathered that it was not his work pattern at home. He once told me that his system was to quit a late-night work session when he caught himself making a second mistake.

Marvin Margoshes, TechTransfer Services, Tarrytown, NY

For at least five winters, Lou and Mary would come down to Arizona State University

(ASU) for the winter, visiting and assisting members of Mike Parson's research group. Mike got some sort of "Visiting Scientist" faculty status for Louis, but the ASU cops weren't crazy about Lou and Mary parking their Ford Parcel Van (Gypsy wagon, the truth be known) in the faculty parking lot adjacent to the Chemistry Building. I volunteered space in front of my duplex apartment (George's Museum of Natural and Unnatural Oddities) in the Tempe Ghetto (dirt road, dead ending at the railroad tracks, low rent - Tobacco Road). I would look out my bedroom window in the morning to see smoke coming from the little wood stove as Louis made their morning tea. Later, I would see the Van in the throes of violent, rhythmic rocking, often for up to thirty minutes! One morning I had a lady keeping company with me who noticed the activity and commented "Gee, I wonder what they're up to?" Actually, her tone indicated that she had a pretty good idea of what was going on and found it rather appealing. Having an early lab to get to, I offered the explanation that Lou and Mary utilized a lot of whole grains in their diet and used a Corona hand-cranked mill to crack and grind grain as well as to "roll" oats for making oatmeal and that perhaps the rocking was due to the considerable effort needed to crank the mill; this brought the response that she wanted to "make oatmeal" For the next few years "making oatmeal" was our euphemism for a morning eye-opener. Sadly, the truth finally came out during the last year that Lou and May camped in my front yard. I saw Lou out raking the dirt (a favorite past-time of Lou's) while the van was rocking. I went outside and asked Louis what was going on in the van; he explained that Mary jogged in place every morning as part of her fitness routine and to help her handle sugar (which acted like a drug on Mary). I laughed and then shared with Lou my little story about "making oatmeal" and the misconception that I (and others ... see Jim Winefordner's comments ... Ed.) was under. Lou was somewhat flattered that I thought he could make that big van rock like that and had a good laugh over my explanation to my friend. To this day, every time I eat a bowl of oatmeal, I think of Lou and Mary ... and the lady who liked to "make oatmeal."


The Louis Owen Van

George Wittenberg, Glendale Community College, Tempe AZ

Lou died a few years ago of Alzheimer's disease. When he was in the hospital in the last year of his life, a number of his friends called the doctors treating him to make it known that Lou was more than the indigent and tired old man that he appeared ... that he was a prominent and respected scientist ... and should be treated accordingly. While some might not have approved of Lou's lifestyle, all recognized his great skills and knowledge and appreciated his innate kindness and care for nature and mankind. I can't think of anyone who better exemplifies a certain Frank Sinatra song. Yes Lou, you did it "your way".

In this short piece, we have touched on a few aspects of Louis E. Owen's life. I would welcome, in fact, urge those of you who have other memories of Lou to send them to me for publication in future issues of the newsletter. With thanks, in advance ... ME

Governing Board Meeting, October 17, 1995
Cincinnati, Ohio

I. CALL TO ORDER
A regular meeting of the Governing Board of the Society for Applied Spectroscopy was called to order at 8:12 PM on Tuesday, March 7, 1995 at the Regal Hotel in Cincinnati, Ohio by President David Coleman.

II. INTRODUCTIONS
David Coleman then introduced the Executive Committee members and Society staff.

III. ROLL CALL
A roll call indicated that a quorum was present. The members of the Executive Committee present were:

David Coleman, President
Nancy Miller-Ihli, President Elect
Peter Griffiths, Past President
John Koropchak, Secretary
Edgar Peck, Treasurer
John Dean, Newsletter Editor
Peggy Dean, Parliamentarian
Jo Ann Brown, Executive Administrator
James Holcombe, Journal Editor

The Local Section Delegates present were:

Section	Delegate
Balt.-Washington	Stephen Long
	Kristine Patterson
Chicago	Douglas Shrader
	David Lankin
Cincinnati	Vahid Majidi
Cleveland	Roy Cain
Delaware Valley	Sydney Fleming
	Christian Hassel
Detroit	Patsy Coleman
	Roscoe Carter
Indiana	Elizabeth Shanks
	Dan Burden
Intermountain	Paul Farnsworth
Kansas City	Truman Waugh
NNew England	Sue Franz
	Judith Koob
New York	Connie Paralusz
	John Fiorino
N. California	Ed Peck
Ohio Valley	John Olesik
Pacific Northwest	Pam Baxter
Penn-York	Ron Burdo
Pittsburgh	Stuart Chalk
Rocky Mountain	Hank Dequasie
St. Louis	Eileen McClendon
S. California	Jerold Kacsir
Rio Grande	Cynthia Mahan
Nevada	Delyle Eastwood
Snake River	Peter Griffiths

IV. MEETING RULES OF ORDER
The President stated that Roberts Rules of Order shall be the rules of order for the meeting.

V. APPROVAL OF THE MINUTES FOR THE PREVIOUS GOVERNING BOARD MEETING, OCTOBER 4, 1994
Motion: It was moved that the minutes of the previous meeting, as published in the August Newsletter 22 (2), 1995 be approved as published. The motion was seconded and approved unanimously.

VI. SECRETARY'S REPORT
None.

VII. TREASURER'S REPORT (from Ed Peck, appended, pages 10-13) Motion: It was moved that the Treasurer's Report be accepted. The motion was seconded and approved unanimously. The proposed 1996 budget was discussed. A modification of the budget includes a $20,000 reduction in journal expenses, which was balanced by the addition of $20,000 for enhanced member services.
Motion: It was moved that the modified budget be approved. The motion was seconded and approved unanimously.

VIII. PRESIDENT'S REPORT
Dave Coleman discussed the status of the Society. A summary of this discussion, serving as his report was published in Applied Spectroscopy, 49 (9), 1377 (1995).

IX. EXECUTIVE ADMINISTRATOR'S REPORT (appended, pages 14-15)

X. JOURNAL EDITOR-IN-CHIEF'S REPORT
Jim Holcombe expressed public thanks to the reviewers of the Journal. (appended, page 20)

XI. NEWSLETTER EDITOR'S REPORT
(appended, page 17)
The Governing Board expressed thanks to John Dean, who is stepping down from the position of Newsletter Editor. The incoming Newsletter Editor, Mike Epstein indicated that under his direction the Newsletter will have an 8 1/2" x 11" format, will be published three times per year and will include features on well-known spectroscopists. The Newsletter will be bundled and shipped with the Journal, rather than be mailed separately.

XII. MEMBERSHIP EDUCATION COORDINATOR'S REPORT
Jim de Haseth indicated to the Executive Committee that he will step down as Membership Education Coordinator. Dave Styris was nominated to be the new Membership Education Coordinator.
Motion: There was a motion to approve the nomination of Dave Styris to be the new Membership Education Coordinator, which was seconded. The motion was approved. Note added post-meeting: Jim De Haseth later agreed to complete his term as Membership Education Coordinator which expires at the end of 1996. In 1996, Dave Styris will be Membership Education Coordinator-Elect.

XIII. NATIONAL SAS COMMITTEE REPORTS
A Awards (appended, page 15)
B Motion: A motion to approve the nomination of Harry Rose for Honorary membership was seconded and approved unanimously.
C Constitution and Bylaws (None)
D Local Section Affairs (None)
E Membership (reports appended from the current committee Chair, and the 1996 Chair, page 19)
F Membership Education (None)
G Nominations
H Society members were encouraged to contact Karen Wohlnik with suggestions for candidates to Society offices.
I Publications (appended, page 16)
J Publicity (appended, page 17)
K Tour Speaker Program (appended, page 15)

XIV. AD-HOC REPORTS
A Internationalization (appended, page 19)
B Museum (appended, page 18)

XV. AFFILIATE'S REPORTS
A CESSE (appended, page 18)

XVI. LIAISON REPRESENTATIVE'S REPORT
Patsy Coleman and Nancy Miller-Ihli were to represent the Society at the FACSS Governing Board Meeting.

XVI. OLD BUSINESS
Jim Holcombe indicated that CSI would be held in Australia in 1997, and Turkey in 1999. South Africa and China are bidding for the meeting in 2001.

XVII. NEW BUSINESS
A Vahid Majidi discussed the Tour Speakers program and the highly variable attendance at these talks from section to section. He solicits any new ideas for use of the Tour Speaker funds.
B 1997 dues increase Motion: It was moved that dues for 1997 increase by $5. The motion was seconded.
Motion: A second motion to postpone the discussion of a dues increase to the next Governing Board meeting was moved, seconded and approved unanimously.

XVIII. DATE AND TIME OF NEXT GOVERNING BOARD MEETING
Motion: It was moved that the next Governing Board Meeting be held at Pittcon on March 5, 1996. The motion was seconded and approved unanimously.

XIX. ADJOURNMENT
The meeting was adjourned at 9:29 P.M.

John Koropchak

The Society for Applied Spectroscopy is now accepting nominations for the 1996 SAS Student Award

This award is given to a student in recognition of outstanding research in the area of spectroscopy. Any full time student who is engaged in spectroscopic research shall be eligible. The award consists of a plaque or scroll and an expense paid trip to the national SAS meeting where the award is to be made. Nominations should be submitted by the Local Sections, which are responsible for providing sufficient documentation to support the candidacy of particular students. This documentation should include a short paper describing the student's research, including a brief summary of the results to date. Recommendations from the student's faculty advisor and one other faculty member are also required. The documentation should include a transcript of grades and any other relevant material in support of the nominee. Nominations should be submitted no later than April 1, 1996 to:

Local Section Affairs Committee
Society for Applied Spectroscopy
201B Broadway Street
Frederick, MD 21701-6501

Win an SAS T-Shirt

Identify the two former SAS presidents shown in the above photograph. Send your entry to the SAS National Office at 201B Broadway Street, Frederick, MD 21701-6501. Two winners will be selected by random drawing from all the correct answers on April 1. Your entry should include your name, postal address, and T-Shirt size requested.

As one of the benefits of being an SAS member, you can receive a one-year discounted subscription to the **Journal of Analytical Atomic Spectrometry** starting January 1, 1996. This journal is published by The Royal Society of Chemistry. To receive your discounted subscription, send your name, address, phone number, and a check (payable to the Royal Society of Chemistry) or credit card (number, expiration date and signature) for $129 to:

BARRY ANDERSON, SALES & PROMOTION MANAGER
SALES & PROMOTION DEPARTMENT
THE ROYAL SOCIETY OF CHEMISTRY
THOMAS GRAHAM HOUSE
SCIENCE PARK, MILTON ROAD
CAMBRIDGE CB4 4WF, UNITED KINGDOM

Include your SAS membership number with your payment. If you don't know it, contact the SAS Office at (301) 694-8122.

it is always the best policy to speak the truth unless, of course, you are an exceptionally good liar.
- jerome k. jerome

Executive Administrator's Report

Membership

The membership for 1995 now stands at 3,418. This is a decrease of only 65 members. We are concerned over the drop in memberships over the last three years. In 1992 the membership was at 3,875. We need to evaluate who the member of the future is, what can we give them to meet the changing needs and how can we best posture our Society, our educational courses, and the journal to meet these needs. What new programs can we implement for our members? What other revenue-making avenues are available to SAS to help offset expenses, other than increasing dues? We have done several different test options to find out what is the most effective method for increasing membership. The promotions that are most cost-effective for the Society are the membership forms mailed from our office to each new member asking them to pass it on; Local Section officers passing out membership applications, monthly inserts in the journal; and promotions to companies to become corporate sponsors.

Local Sections

We have become more involved with working with the local sections to promote membership. We have updated the Local Section Newsletter and are utilizing fax-blasting for this. It is more economical and quicker. Some local sections now receive their mailing labels over the internet. This meeting we will hold our first Local Section Breakfast Meeting, on Wednesday at 7 a.m. to discuss different ideas used by the various local sections and how we can utilize some of their ideas. We still have not received any report on this year's local section activities from the following sections: Cincinnati, Niagara Frontier, Penn-York, Pittsburgh, St. Louis, Rio Grande, Arizona, Piedmont, Louisiana, Nevada, and Toledo. We have requested via fax, telephone, and newsletters to ask them to send us a brief report of what their local sections have done, so we can forward to them their dues distribution. We still account for the dues distribution for foreign members - this year that amount was $2,866.77. This is not set aside every year, but is put back into the Society.

Membership Directory

We have started contacting companies to advertise in this directory. We want to limit the number of pages to around 8-10. We would like to include the listing of Officers, Local Section Chairman (not the other officers), the Constitution and By Laws, listing of Corporate Sponsors, and the overall membership. I have attached a copy of the renewal notice so you will be able to see what type of information we are requesting.

Committees

Thanks to the hard work and dedication of Peggy Dean, Patsy Coleman, and Jean Kane, we have a new handbook. This year our goal will be to implement the new handbook and work closely with the committee chairs.

Office Personnel

At the last Governing Board meeting, there was discussion regarding who to call for assistance depending on the concern or question. Below is the listing of all Society personnel and the areas they are responsible for. Please keep in mind that all the Frederick office staff are cross-trained to some extent and should be able to help with your questions.

Jo Ann Brown, Executive Administrator - Jo Ann assists Board Members. She provides information regarding FACSS or SAS, such as who to contact; committee chairman and members; procedures of committees and local sections; short courses; workshops; other societies; journal-related questions; journal advertising, arrangements for FACSS and PITTCON; housing, registration, meeting room and catering arrangements, etc.; as well as FACSS Technical Program questions.

Barbara Stull, Office Assistant - Barbara is responsible for the incoming and outgoing mail, answering calls, and fielding requests for FACSS. She can help you with a member's address or phone number, information regarding FACSS registration, housing , exhibits; committee members and their appropriate telephone numbers, requests to be added to the FACSS mailing list, local section officers, and their respective telephone numbers.

Sandy Conner, Accounting Assistant - Sandy's primary function is the accounting for SAS and FACSS, the preparation of the FACSS Preliminary and Final Program, and registration of FACSS attendees. She can answer questions regarding payment of bills, invoicing, ads in the Preliminary and Final Program. She can provide budget information regarding specific line items, expense reports and allowances, local section dues distribution, and

registration, housing, and exhibits for FACSS.

Tina Kirkpatrick, Membership Coordinator - Tina is responsible for maintaining the database of all SAS members, Corporate Sponsors, and Library subscribers, She can answer questions regarding membership, payments, change of address, local sections, membership promotion ideas/recommendations. She can provide assistance with your local sections, library or company subscriptions, the membership directory, and short course registrations.

Sandy O'Neil, Assistant to the Editor - Sandy is located in Manhattan, Kansas and is responsible for coordinating journal-related articles with our printer, Allen Press. She is also responsible for editing all journal manuscripts and deadlines of all journal-related articles. She can provide assistance with submitting a paper to the journal, employment opportunities, or work regarding proofs, style, and editing. Sandy also works with the National Office on copy-editing membership promotions, short course ads, FACSS publicity, and award winner write-ups.

Diane Landoll, Technical Program Administrator - Diane, also located in Manhattan, Kansas, is responsible for the FACSS Technical Program. She works primarily with the FACSS Program Chair. She is responsible for the data entry of all titles, abstracts, deadline dates, program correspondence, etc. She prepares the camera-ready copy of the Preliminary and Final Program, Technical Program section.

New Booth

This year, with the recommendation of Nancy Miller-Ihli, we went to different exhibitors at the Pittcon and asked if anyone was interested in upgrading their booth and selling us theirs. Much to our luck, we were able to purchase a used booth and convert it. I hope everyone has had the opportunity to visit our new booth. I would like to thank Tina, Sandy, and Barb for all their ideas and hard work in making the booth what it is today.

Goals for the National Office in 1996

We want to **increase the overall membership** in accordance with Board approved promotions. Even though we have a membership coordinator, it is an effort of the entire national office. We meet regularly to discuss different ideas, brainstorm, and work together in completing the task.

We also need to develop a **procedures manual for the accounting functions**; **initiate the new SAS handbook**, working closely with committee chairs and establishing time lines; and **revamp the FACSS and SAS databases** for postal standards - (zip plus 4).

In conclusion, I would like to thank all the board officers, local section officers, and committee chairmen, for their dedication, hard work and endless hours given to our Society. I would also like to praise and thank all the Society staff who are there every day and help oversee the large projects and the numerous small details that make our Society run efficiently.

Jo Ann Brown, Executive Administrator

Tour Speaker Program - 1997

Shortly after FACSS'95, each local section will be contacted to determine their interest in the 1997 Tour Speaker program. During calendar year 1996, the committee will attempt to match section interests with available speakers. While we hope to emphasize presentations by younger spectroscopists (both they and the audience benefit from "getting the word out") and a wide range of research areas, the interests expressed by each local section will be of paramount importance. We are aware that the long lead times (a year in advance) in scheduling speakers present some problems; as explained by immediate past chair Vahid Majidi, these lead times are necessitated by the requirement that quality speakers have sufficient notice that they can fit the demands of a 4-day intensive presentation trip into their busy schedules. "I would never listen to a talk from a speaker who had nothing better to do that come give it!" With weak apologies to Woody Allen.

Alexander Scheeline
1996 Tour Speaker Committee Chair

Honorary Membership Committee

The Society for Applied Spectroscopy Distinguished Service Award is presented to Professor Jack E. Katon at the 1995 FACSS meeting.

The Society for Applied Spectroscopy Hon-

orary Membership Award is presented to Professor Jack L. Koenig at the 1995 FACSS meeting.

We recognize and appreciate Jo Ann Brown's work in obtaining and forwarding nominations, notifying the recipients, and arranging for publicity and plaques. Thank you Jo Ann.

The honorary membership committee unanimously presents Harry J. Rose Jr. for Honorary Membership in the Society for Applied Spectroscopy. A copy of the four-person nomination letter follows.

It is reminded that Roy Koirtyohann will be the next Chair of this committee. All future nominations should be directed to Roy who will take over on January 1, 1996.

Concetta M. Paralusz, Chair
Roy Koirtyohann
Robert Obremski
Honorary Membership Committee

Nomination Letter for Harry J. Rose, Jr.

It is with great pleasure that we nominate Harry J. Rose Jr. for Honorary Membership in the Society for Applied Spectroscopy. Harry has had a very active and successful career with the U.S. Geological Survey and has continued to be active as a consultant since his retirement in 1982.

Harry began his career as a chemist with the Geological Survey in 1951 and remained with them for 32 years until his retirement. From 1964 to 1982 he was head of the X-ray emission and electron optics laboratories. During his career, he was author of 90 research papers and 20 abstracts. Harry was frequently sought as an invited speaker at national meetings, both in the USA and abroad. During the Lunar Program sponsored by NASA, Harry was a principal investigator from 1968 until 1975. This was followed from 1974 to 1981 as a member of the Viking Mars Inorganic Analysis Team. While on temporary assignment at the Jet Propulsion Laboratory analyzing data returned from the Mars Lander, Harry was appointed visiting associate in geochemistry at Cal Tech.

In 1968, Harry was appointed visiting lecturer in the chemistry department at the University of Maryland. The following year he became visiting Professor and Chair of the Division of Geochemistry, a position he held until 1983. He taught courses in x-ray methods of analysis and in analytical geochemistry.

Upon his retirement from government service, Harry became president of Products International, a consulting company that also manufactured hardware and software for x-ray spectroscopy. After Products International was incorporated in the Diano Corporation in 1986, Harry became applications manager and a member of the Board of Directors of the Company. He still consults for Diano.

Over his career, Harry has been the recipient of several prestigious awards. In 1964 he received a Presidential Citation from President Lyndon B. Johnson. He shared the 1969 Meggers Award with co-author Frank Cuttitta for the best paper published in Applied Spectroscopy in 1968. Between 1976 and 1977 he received four joint awards to the Viking Project Scientists. The Meritorious Service Award, the highest honor bestowed by the Department of Interior, was awarded in 1982. The following year, the Italian Mineralogical Society selected Harry to receive its Plinius Award for his many achievements in science.

A member of the Baltimore Washington Section, SAS since its beginning, Harry was one of the organizers of the First National SAS Meeting held on the Campus of the University of Maryland. It is without doubt that Harry J. Rose, Jr. has earned the respect of the scientific community and the many people who have known or worked with him. He is a worthy nominee for Honorary Membership in the Society for Applied Spectroscopy.

James R. Lindsay
Paul J. Lamothe
Anthony F. Dorrzapf, Jr.
Jean S. Kane

Publications Committee

The only action of the Publications Committee this year has been to advise the Executive Committee on the selection of a new editor for the Newsletter. Four excellent candidates submitted credentials; all had both the technical skills and experience to do a credible job. Mike Epstein of NIST was recommended and his nomination accepted for this important post.

In addition, Editor J. Holcombe with the help from Jo Ann Brown, is looking into who should print Applied Spectroscopy after the end of the

current contract with Allen Press. The chair of the Publications Committee, together with Holcombe and Brown, visited some of the candidate publishers. Electronics is widely impacting all publishers; while some are a few months ahead of others in using the Internet, microcomputer-assisted typesetting, or CD-ROMs, all are on a common path into the uncharted waters of virtual and hyper-linked journals. SAS, in common with many other scientific societies, will be influenced by these strong, yet still mystifying currents. We can be grateful that Don Anderson has given us our official presence on the Internet. Future committees will need to keep in close touch with both technology, our printer/publisher, and the editor so that we can benefit from new developments.

Alexander Scheeline
Chair, Publications Committee

Publicity Committee Report

The Publicity Committee has focused its efforts to date on establishing and updating its connections with the local sections and with relevant technical media. A letter to the 1994-1995 local section chairs was sent in June encouraging section officers to copy the Publicity Committee on all announcements of upcoming activities. To date, this has netted responses from the Minnesota and Milwaukee chapters, and these are appreciated. This mailing will be repeated before the end of 1995 to an updated list of new 1995-1996 chairs. As news is received, it will be disseminated to a mailing list of approximately 20 key publications dealing with relevant technologies and industries. The data base of key publications will be continually updated, and an effort will be made to identify the appropriate contact person within each staff to who announcements should be directed.

All SAS members are encouraged to contact the committee with any ideas for building awareness of the society and its goals. The Publicity Committee can now be reached through e-mail at the following address: spectrscpy@aol.com

Michael MacRae
Chair, Publicity Committee

Newsletter Editor

Since the last report to the March 1995 Governing Board, the following issues have been printed and distributed to the membership in the United States and Canada: February, 1995, 48 pages; August 1995, 47 pages. Only the November issue remains to be assembled and distributed before my appointment as Newsletter Editor terminates and Michael Epstein assumes the Editorship. Over the twelve years from 1984 to 1995, Peggy and I have enjoyed doing the newsletter for the Society, our small contribution for the welfare of SAS.

At the time I began editorship, the Newsletter was running approximately 80 pages a year. It has grown to be as much as twice that many pages in a year. Initially the Newsletter was composed during evenings or weekends on borrowed computers. The newsletter took on different appearances as Peggy and I purchased new and more powerful computers and a variety of software for our home offices. Other duties of the Newsletter editor include serving on the Executive Committee and the Governing Board. These, too, have been enjoyable. Hopefully my participation in the proceedings of the Executive Committee and of the Governing Board has had a positive influence over the years. Thank you for allowing me the privilege of rendering this service to the Society.

The Newsletter editor's job reaches out to people throughout the Society, and I want to thank each of you for your cooperation throughout the years. To all the officers, the members who contributed articles and material to the Newsletter, and to those who expressed appreciation and provided encouragement, Peggy and I wish to express a very special note of thanks. Another big "thank you" goes to Jo Ann and the Society Office for their helpfulness.

John Dean
Newsletter Editor

Museum Committee

The last meeting of the Museum Committee of the SAS was held at the Pittsburgh Conference in New Orleans. Since then, there has been constant contact with the Chemical Heritage Foundation (CHF) to develop the Chemical Instrumentation Museum Group (CIMG) as a division of CHF. The By-Laws of CIMG are in the process of final adoption with the SAS having three members on the Board. The other six professional groups each will have one member on the Board. In addition to the seven groups contacts will continue to be made with other groups to invite them to become a member of CIMG.

The second meeting of the CIMG was held on April 26, 1995 just prior to the dinner meeting of the Board of CHF to allow as many members of CIMG to meet the Board of CHF as possible. Only about three groups in addition to the SAS were represented at this meeting. Discussions centered mainly around the fund raising effort for the museum program. Contacts with leaders of the major instrument companies as well as with owners and instrument foundations were suggested as the starting effort in the program.

The other main effort of the SAS Museum Committee and the CIMG is to publicize the fact that help in a variety of ways is needed to make the museum a success. In May at the Middle Atlantic Regional ACS (MARM) meeting, Ed Brame gave an invited paper in Washington, DC on the plans for the museum. Next came the comprehensive article in the June issue of American Laboratory. It was authored by Ed Brame, John Ferraro, and Irene Lukoff (of the CHF staff). It received wide circulation and provided good interest in the museum. Finally, in the September issue of Applied Spectroscopy a special guest editorial by Ed Brame was published. Its message was aimed more at the SAS group than the previously mentioned publication.

The fall meeting of CIMG will be held in conjunction with EAS on Monday, November 13, 1995 at the Radisson Hotel in Somerset, NJ. Final adoption of the By-Laws will take place along with reports from the fund-raising subcommittee, the Vision/Mission subcommittee, and the Instrument Collection Policy subcommittee.

Because of the efforts of the SAS Museum Committee members, the Society for Applied Spectroscopy is now an official member of the Board of the Chemical Heritage Foundation. We expect this relationship to grow and deepen over the years as the museum, archival, and other mutually useful programs grow.

E.G. Brame, Jr.
Chairman of Ad Hoc Museum Committee

CESSE Conference

General Review

This July 1995 conference theme seemed to focus on "Creating an International Image." Below are some of the recommendations and ideas shared by the societies that have started to create such an image:

- It takes a minimum of 5 years to project an international image.
- You need to build relationships - telemarketing is not effective.
- Co-sponsored conferences do not work immediately. It is a ripple effect and you will not get your money's worth.
- We need to focus on one particular marketplace, i.e. Europe, Germany, England, etc. All literature needs to be geared towards that particular area. Do not use slang or "catchy" phrases. Formal British grammar should be used.
- Needs are different internationally than in the USA. We need to provide different benefits for Europe than with the USA.
- Foreign members need formal communication and confirmation.

Below is an outline of the strategy other associations are using:

- Write an effective mission statement.
- Prepare research reports to define where members exist, the needs of those members, and the areas that they represent (i.e., academia, industry, government, etc.).
- Appoint International Representative to Board for that specific region.
- Establish governance for foreign members.
- Write a policy for international local chapters.

It was stressed that one should start small with one region at a time, and then build on that.

Future Members

One of the other items discussed at this meeting was identifying the member of the future. CESSE has agreed to hire a firm to do data marketing to find out what the future trends will be and how we can market effectively to them. There will be a special meeting in March of all CEO's of CESSE to meet, review their findings, and discuss how to implement them into our societies. I will be attending that meeting this year and hope to share that with the executive committee and governing board members at the FACSS conference.

Educational Opportunities

This was an area which the majority of the societies have placed a large portion of their budgets. They are giving workshops, courses, and on-line training courses, with continuing education units. They are finding more and more that the companies are depending on societies to train individuals. The societies are presenting these courses at the beginning or end of conferences that their members would attend. They are also offering them at local sections. This is where we could upgrade the Tour Speaker Program and offer weekend courses at appropriate local sections. It was interesting that 3/4's of the small societies now have appointed a staff member whose job is to create the courses, workshops, etc., and implement them.

As always, CESSE proves to be a great source of information. Next year Tina will be going with me to attend the membership sessions.

Jo Ann Brown,
Executive Administrator

Internationalization & Regionalization Committee

A special committee is being assembled to address issues related to further internationalization of the Society for Applied Spectroscopy (SAS). Later this fall they will be given a charge to evaluate issues related to: expansion of SAS international membership and related benefits and costs; evaluate the concept of regional governance (to better facilitate representation of the membership as a whole, including international members); and to look at the members benefits package to ensure that all members are receiving benefits. It is my hope that their insights will be shared with the SAS Executive Committee in the spring of 1996 so we can share them with the SAS Governing Board at PittCon'96. For the most part, their business will be conducted via email.

In selecting the committee, an effort was made to get representation for the general membership in both a geographical and career sense (we tried to ensure political correctness and have young and old, male and female, US and non-US). Individuals who have agreed to participate include:
Eileen Skelly-Frame (chair), Rock Carter, Cythia Mahan, Paul Farnsworth, Gary Hieftje, Joe Caruso, Clare Smith. Individuals who have been suggested but not yet confirmed are: Neil Barnett and Ralph Paroli.

Both Peter Griffiths and Nancy Miller-Ihli (from the SAS Executive Committee) as well as Tina Kirkpatrick (from the SAS Office) will also serve as ad hoc members and resource people providing information.

Membership

This committee got a list of membership promotion ideas to the executive Committee for consideration this year. These were reviewed and several ideas were approved by the Committee for implementation.

Memberships are being offered at FACSS for $25 for three months (Oct-Dec). Twelve month (Jan-Dec) and 15 month (Oct-Dec + Jan-Dec) memberships are also available.

The Wine and Cheese Membership Reception that was presented by SAS the past two years at FACSS is again at FACSS for 1995. This year, however, the reception is sponsored through the regular annual donations of our Corporate Sponsors. They will all be duly recognized at the event.

Our main membership promotion for the year is a $20 rebate for a member's dues for every new member that is signed-up by the existing member. Three new members brought in by any member in a year would result in a full dues rebate (USA regular membership) for the year. (No carry overs for sign-ups to subsequent years and discounted student memberships do not count.) Record keeping will be maintained by having the new member indicate the name of the sponsoring member on his member application form.

Our Society brochures are encouraged to be distributed by our membership at all scientific con-

ferences. Many of our membership attend scientific meetings that the Society itself is not able to attend with booth solicitation. We encourage all members to distribute our membership brochures at those meetings to increase the breadth of our Society.

Thanks to President and the Executive Office, membership recruitment letters have continued to be sent to every member of the Society. Every member should take it upon themselves to try to bring in at least one new member each year. This can result in a reduction in your dues!

Kathy Kalasinsky
Chair, Membership Committee

Membership Committee Budget and Plans for 1996

The committee members recognize the problems of declining enrollment in the Society and the need to reverse that trend. The committee also recognizes the need for closer, more frequent communication among the committee, and has therefore planned six formal discussions throughout 1996 by telephone to insure this communication. The schedule for these teleconferences will be drawn up by mutual agreement prior to January 1996. Proposed budget for 1996 is $5000 to include:

- $500 Ideas 1 (drawing/new members expenses)
- $500 Committee expenses
- $2000 Student campaign (new students only)
- $2000 SAS Pittcon gift

Discussions among the committee members to increase membership over and above the current incentive campaign included the following ideas, presented in no particular order:

- Drawing for set amount ($500 - $1000) to cover expenses for attending a professional meeting (FACSS, PITTCON) open to new full members during the 1996 year only.
- Launch a major campaign to target new student members:
  - free one year student membership
  - during the year heavily target student members with mailings, with emphasis on continuing membership and benefits
- Corporate membership
  - levels of membership
  - potential benefits such as copies of the journal and discounts as exhibitor to FACSS.
- PITTCON
  High visibility, quality gift to members only (available to those who sign up at booth as well.)

The budget impact of several of these ideas needs to be discussed with the Executive Committee. The majority of the committee is in favor of the student campaign. Questions to be addressed are:

- Who is eligible? If all students, cost will be the current student member income (at approximately $2500) plus new student members.
- Cost of promotional mailings. Does this come under the Membership Committee budget? Also, we need an estimate from the Society office for the total cost of the program.
- We need a feedback mechanism to evaluate success, such as a questionnaire. Implications for the next budget years must be considered.

The committee needs feedback from the Society on the success of current Wine and Cheese Reception costs versus benefits from increased membership. It is clear to the committee that this reception always overlaps similar receptions put on by our sponsors and exhibitors. How will this impact our Corporate Sponsors and Members?

Journal Editor-in-Chief's Report

State of the Journal

Applied Spectroscopy is doing well... and I extend my appreciation in this report to the reviewing community for their assistance to both the authors and the journal. Their insightful comments are typically instrumental in making improvements in the quality of the papers and, as a result, the quality of the journal.

In the year ahead... Six Focal point articles are targeted for 1996. February will have the first Focal Point of the year with some focus articles on the topic of NIR in Biological Samples (R. Lodder). Other tentative focal points scheduled for the year include: Vibrational Circular Dichroism (L. Nafie), Optical Spectrometric Methods for Charac-

terization of Biomolecules (W. Woodruff), Effect of Aerosol Droplets and Solute Particles in ICP Spectrometry (J. Olesik), Ultra-Small NMR Instrumentation (J. Sweedler), and Role of Spectroscopy in the Human Genome Project (N. Dovichi).

Additionally, T. Vo-Dinh and J. Bertie have agreed to write an article dealing with IUPAC and its relationship to the spectroscopic community. Likewise, our Newsletter Editor (Mike Epstein) has agreed to address the topic of "Pathological Science"... and hopefully we won't have any articles in that issue to illustrate his point. Suggestions for topics of this feature in the journal can be addressed to Gary Hieftje (Indiana University).

Electronic media and electronic publishing.

Don Anderson continues to do an excellent job in maintaining and updating the SAS web site. Particularly interesting are the pages that Mike Epstein has put together for the Newsletter. I encourage all of you to visit if you have not already done so.

December's Focal point article on chemometrics by Steve Brown will be installed on the Web as an experiment. There will be some downloadable data that can be used by interested readers. Unfortunately, "chemometric software" (e.g., freeware or shareware) will not be available for downloading from the site.

We are gearing up for manuscript submission by disk as an option to authors in 1996. This will not be for use as Camera Ready Copy (CRC) but rather a mode which will, at the very least, minimize typesetting errors.

New additions...

Tom Vickers is operating smoothly as the new Book Editor and Jack Katon will be honored on Tuesday evening at FACSS for his many contributions to SAS, not the least of which is his long term role as the journal's Book Editor.

Debbie Bradshaw, who has done an excellent job as Society News Editor and News of Other Societies Editor will be leaving that position. I will sincerely miss Debbie's contributions to the journal which always mirrored her creativity and energy.

Special input from members...

If you have information that you feel may be of interest to spectroscopists, they can be sent to me if you are unsure of which one of the feature editors may be the more logical source. This can include reports on meetings that you have attended, announcements of various types, etc. In general, the journal is intended to disseminate information to scientists around the world; and you, the scientific community, are the obvious best source for this information.

Naturally, I welcome comments, suggestions and questions on any topic. I can be reached by mail (Dept. of Chemistry; University of Texas; Austin, TX 78712) or by e-mail at holcombe@hpcf.cc.utexas.edu).

James Holcombe
Journal Editor

As one of the benefits of being an SAS member, you can receive a one-year discounted subscription to **Spectrochimica Acta B** starting January 1, 1996. This journal is published by Elsevier Science BV in the Netherlands. To receive your discounted subscription, send your name, address, phone number, and a check (payable to Elsevier Science BV) or credit card (number, expiration date and signature) for $145 to:

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Include your SAS membership number with your payment. If you don't know it, contact the SAS Office at (301) 694-8122.

The Society for Applied Spectroscopy is now accepting nominations for the 1996 Poehlman Award

This award is granted to a Local Section of SAS that is recognized as having made the most significant contributions toward meeting the goals and ideals of the Society during the previous year. The award consists of a certificate and an honorarium, and will go to the Local Section. Submissions for nominations should include a list of regular programs and any special conferences, workshops, or other activities that were organized by the Local Section. Efforts to increase and promote membership, assist local students, and contribute to local school programs, science fairs, or other related organizations should also be listed. Nominations should be submitted no later than April 1, 1996 to:

Local Section Affairs Committee
Society for Applied Spectroscopy
201B Broadway Street
Frederick, MD 21701-6501

Call for Nominations
The Ellis R. Lippincott Award

The purpose of the award is to honor the memory of Ellis R. Lippincott by recognition of significant contributions and notable achievements in the field of vibrational spectroscopy. The award is sponsored jointly by the Coblentz Society, the Optical Society of American, and the Society for Applied Spectroscopy. Nominations should include the nominee's name and affiliation of the nominee, curriculum vitae, and list of publications. The sponsor of the nomination must also include a brief letter of recommendation along with two other supporting letters from two other individuals. The awardee will recieve an honorarium of $1500.00 and must be present at the designated meeting to receive this award. Meeting places are determined, in rotation, by the sponsoring societies. Nominations should be submitted no later than May 1, 1996 to:

Award Coordinator
Optical Society of America
2010 Massachusetts Ave., NW
Washington, DC 20036
1-202-416-1400

Society for Applied Spectroscopy

The Society for Applied Spectroscopy is an association of scientific and professional people who have organized to advance and disseminate knowledge and information concerning spectroscopy and other allied sciences. The scope of the Society covers the art and science of absorption, emission, infrared, Raman, mass, nmr, x-ray, and other related forms of spectral investigation for the determination of the composition and structure of matter. Membership includes a personal subscription to APPLIED SPECTROSCOPY, the Society Newsletter, and local section membership activities. Most local sections hold monthly technical meetings with an invited speaker. SAS promotes scientific meetings through its local sections by sponsoring an annual National Traveling Lecture Program in cooperation with Society sponsoring members. The Society holds a National Meeting each year in conjunction with the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS).

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Society for Applied Spectroscopy
201B Broadway Street
Frederick, MD 21701-6501

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AIRS II SYMPOSIUM TO BE JUNE 17-19 AT DUKE UNIVERSITY

AIRS II, the 2nd International Symposium on Advanced Infrared Spectroscopy, is scheduled for June 17-19 on the campus of Duke University in Durham, North Carolina. As a follow-up of the highly successful AIRS Symposium held in Tokyo in March, 1993, AIRS II will again focus primarily on dynamic infrared spectroscopy. The emphasis will be on various dynamic techniques of Fourier transform spectroscopy, as well as other emerging techniques of vibrational spectroscopy using infrared radiation.

The Program Committee is working to create a meeting which will provide a comprehensive view of the frontiers of modern infrared spectroscopy--the advancing edge. The program is designed to include advances in both techniques and applications. While the theme of dynamic methods will carry over from the Tokyo symposium, new lines of research will be introduced, including IR spectra imaging, infrared laser methods, new surface techniques, materials applications and biophysical spectroscopy. Contributed papers reflecting the scope of the invited lectures or on any other innovative infrared spectroscopic topic will also be welcome.

The program structure will consist of:

- invited lectures
- contributed papers in the form of posters
- a panel discussion on current and future challenges for IR instrumentation
- an exhibit of instruments designed for advanced infrared applications.

In addition to the SAS, sponsors of the Symposium are Duke University and the Coblentz Society. Corporate sponsors include Bio-Rad Digilab Division, Bruker Optics Division of Bruker Spectrospin, Mattson Instruments, and Nicolet Instruments.

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Calendar of Meetings

1996

- **March 3 - 8**
  47th PITTCON, Chicago, IL
- **Sept 30 - Oct 4**
  FACSS XXIII, Kansas City, MO

1997

- **March 16 - 21**
  48th PITTCON, Atlanta, GA
- XXIXth Colloquium Spectroscopicum Internationale, Melbourne, Australia
- **Sept 21 - 26**
  FACSS XXIV, Cleveland, OH

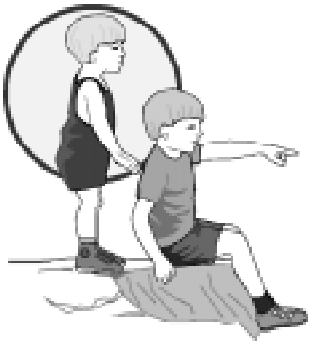
1998

- **March 1 - 6**
  49th PITTCON, New Orleans, LA
- **Oct 10 - 17**
  FACSS XXV, Austin, TX

1999

- **March 7 - 12**
  50th PITTCON, Orlando, FL
- FACSS XXVI, Vancouver, British Columbia

the easiest thing of all is to deceive one's self; for what a man wishes, he generally believes to be true ... demosthenes



Resources for Teaching Youngsters the Scientific Method

by Mike Epstein

Did you ever wonder at what age you should start to train children to use the scientific method, skepticism, or "critical thinking skills" to examine their world? Can it ever be too soon? Will early introduction of "critical thinking" destroy the fantasy world that is so much a part in the development of a child's mind? I'm certainly not qualified to speculate on those topics but they are food for thought. I suspect that for most children in the US, their first true application of critical thinking results in the discovery that Santa Claus is really their parent(s). In any event, here are a few suggested resources for introducing the scientific method to children. Hopefully some of you can suggest other references as well.

- Prometheus Books, Buffalo, NY, carries a number of books dealing with children and skepticism. One of the best is MAYBE YES, MAYBE NO: A GUIDE FOR YOUNG SKEPTICS that is authored by Dan Barker. Following is a recent review of that book that I did:

MAYBE YES, MAYBE NO: A GUIDE FOR YOUNG SKEPTICS
Dan Barker, Prometheus Books, Buffalo, NY, 1990, 80 pages, $12.95

As scientists, we should have developed the capability for critical thinking. But if we look back at our formative years, it's unlikely that we can pinpoint how we developed that ability to think scientifically. In a unique attempt to influence young minds to think critically, Prometheus Books recently released this book to teach the essentials of critical thinking - "Check it out," "Repeat the experiment," "Try to prove it wrong,", "It has to make sense," "Keep it simple," "Be honest" - illustrating each of these rules with clear examples. It assures young readers that they are fully capable of figuring out what to believe and of knowing when there just isn't enough information to decide.

The first part of the book features young skeptic Andrea, who investigates a haunting at a friend's house. The friend claims that ghosts are moving the kitchen dishes and making noises in the middle of the night. Andrea discovers that the friend's mom had moved the dishes while having a midnight snack, and that the noises were generated by a family of raccoons. When faced with the friend's continued dogmatic opinion that her investigations still didn't prove "there is no such thing as "ghosts", Andrea replies intelligently: "Maybe yes, maybe no". Fine so far. That is a fair and open-minded statement. But then the author lists all the things that skeptics don't believe in such as ghosts, UFOs, ESP, telepathy, telekinesis, prophecy, out-of-body experience, dowsing, levitation, astrology and horoscopes, and faith healing. And not satisfied with just the secular realm, the author continues: "Skeptics do not believe in miracles." Why? "A miracle is something that breaks the rules of nature. Since the laws of nature never change, a miracle is something impossible. Most religions tell miracle stories ...Some religions teach that you can pray to a god ..."

This is, unfortunately, where the book fails, and that's a shame. The author, who is described as a lecturer, composer, and regular contributor to Freethought Today, is obviously attempting to foist some of his personal beliefs on young minds in the guise of promoting critical thinking. He advises that "to be a good scientist you have to be very careful to follow certain rules", and most of his rules are indeed valid. One that isn't is "if something is true, then it must make sense." He ignores the fine point that while the laws of nature may never change, our ability to understand them does. Indeed, that the world was flat and the sun revolved around the earth made good observational sense to people a few centuries ago.

Over 95% of the book is good, solid advice and worthwhile reading for youngsters. However, I would caution parents to read the book first. In fact, I would urge them to remind their children to apply as much skepticism to someone asking them not to believe as they do to someone asking them to believe. Did I like the book? Well, maybe yes, maybe no. [Did you expect me to say anything else?]

Mr. Barker has at least one other similar book for children. Check them out.

- **WONDERSCIENCE** is published by the American Chemical Society and is a joint venture of that organization and the American Institute of Physics. For almost 10 years this magazine has been presenting "Fun Physical Science Activities for Children and Adults to Do Together." Definitely suitable for children in the third grade and above, and for advanced children of younger age, this magazine has included topics such as:
  - Measurement
  - Magnifiers
  - Colors of Light
  - Optical Illusions
  - Reflection

  that fit well in the training of a young spectroscopist.

- **HELPING YOUR CHILD LEARN SCIENCE** by Nancy Paulu is another publication of the American Chemical Society. This 56-page booklet is a wealth of information on experiments and resources for training young minds to think scientifically. For further information you can contact the ACS at 800-227-5558.

- **CHEM MATTERS** magazine, also published by the American Chemical Society, is perhaps the best reference for teaching contemporary issues in chemistry and spectroscopy to high school and college students. Taking on topics from hair curling to drug testing, this outstanding learning tool is a must for any educator and parent. Over 13 years of back issues are available.

Next time we will examine sources of educational material on the World-Wide Web.

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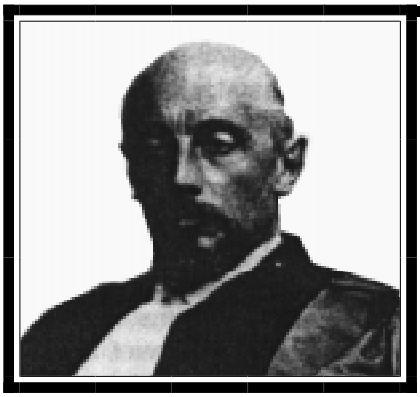

N-Rays: Real or Imaginary
A Spectroscopic Investigation

by Mike Epstein

René Blondlot was a distinguished professor of physics at the University of Nancy, France, a corresponding member of the Academy of Sciences, and the recipient of a number of scientific awards. Professor Blondlot, while trying to polarize X-rays which had been recently discovered by Roentgen, claimed in 1903 to have discovered a new invisible radiation which he called N-rays (in honor of his home town of Nancy). He used prisms and lenses made of aluminum to focus and disperse the N-Rays, and he detected the spectrum by passing a fine thread, coated with fluorescent material, across the focal plane. His results were replicated by a number of laboratories. Numerous claims were made for N-rays, such as they could be conducted along wires, like electricity.

Blondlot was visited by American spectroscopist Robert Wood (author of the classic book "Physical Optics", and discoverer of the phenomenon of atomic fluorescence), who had tried to duplicate the N-ray experiments, but failed. A number of experiments were performed in Wood's presence. First, N-rays were focused on an electric spark and the brightness of the spark was supposed to increase when the N-rays were present. Wood saw no effect and was told that his eyes weren't properly sensitized.

Next, Wood was shown several photographs which supposedly showed a brightening of the spark image, but they were made under conditions that were subject to a number of errors.

Finally, Wood was shown how the N-rays were refracted by an aluminum prism in a spectrometer whose entrance slit was a piece of wet cardboard with a slit cut into it. Wood was suspicious, because the slit of Blondlot's N-ray spectrometer was 3 mm wide, yet Blondlot could detect changes in spectral intensity on the order of 0.1 mm at his focal plane. Wood asked Blondlot to demonstrate the apparatus, and secretly removed the aluminum prism from the N-ray spectrometer in the darkened room when Blondlot could not see him. Yet Blondlot continued to see the N-ray spectrum. Wood published his results in *Nature (Vol 70, p.530, September 29, 1904)*, and N-rays disappeared from the scientific literature within several years.

This story has been told many times, and was discussed by Irving Langmuir as an instance of pathological science in his 1953 lecture that was reprinted in *PHYSICS TODAY, Oct 1989, p. 36*. But there's more to the story. There are inconsistencies between Robert Wood's original article and another published in 1940, and some have claimed that Wood never removed the prism and this was another one of his pranks.

Sour grapes? Probably, but Wood once used his redoubtable talents in optics to fabricate what must have been one of the first photographs of an Unidentified Flying Object (UFO). He has been described as a showman who long after adolescence was "an inveterate perpetrator of pranks and hoaxes." But it was likely Wood's ability to understand the mechanisms of pranks and hoaxes that led to his unraveling of the N-ray affair. He went into such a situation with the intent to disprove the effect if possible, rather than an intent to reproduce the effect. Scientific research carried out with the latter objective can have disastrous consequences. Have we seen this recently? How about polywater and cold fusion. The axiom that we learn most from our mistakes holds as true in science as it does in any other form of human endeavor.

Want to read more about the N-ray saga? Perhaps the best source of information is the sociological study of N-rays by Malcolm Ashmore: *The Theatre of the Blind: Starring a Promethean Prankster, a Phony Phenomenon, a Prism, a Pocket, and a Piece of Wood*, Social Studies of Science, Vol. 23 (1993), 67-106.

The author wishes to express his special thanks to Professors Marcello Truzzi and Ray Hyman for the information and references on N-rays that they provided me.