

NEWSLETTER

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A Society for Applied Spectroscopy Affiliate

Editor: K. S. Kalasinsky

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John Bertie, Coblentz Society Past-President (R), presents the Coblentz Award and the traditional Coblentz prism to Mounji Bawendi of the MIT at The Ohio State Molecular Symposium in Columbus this past June.

EDITOR'S COMMENTS

The Coblentz Society continues to grow and expand. This newsletter is your link with the rest of the society. You are welcome to contribute articles and comments for those items or events that you wish to broadcast. The next due date for newsletter submissions is May 1st for the August issue. Regardless of the number of contributions, we will always be printing the events and progress of the Society so you can keep in touch with the board members and officers. Newsletter requests can be mailed directly to the newsletter editor as noted in the officer section at the end. Be sure to look for "Coblentz Society Newsletter" in every February and August issue of *Applied Spectroscopy*.

KATHY KALASINSKY

PRESIDENT'S MESSAGE

The Coblentz Society, a professional society dedicated to the advancement of vibrational spectroscopy, is pleased to announce another successful half-year of operation. Society endowments continue to support a number of awards that recognize the impact of our field and the excellence of research efforts in academic and industrial venues. Annual membership dues support other Society programs that provide benefits to all the membership through dedicated efforts of volunteers representing academic, governmental, and industrial sectors.

The Coblentz Society is proud to be an active participant in the Federation of Analytical Chemistry and Spectroscopy Societies. As a benefit of our being one of the



Coblentz Society President Arlene Garrison distributes information on the Society in the Coblentz booth at the FACSS Conference in Providence this past fall.



Arlene Garrison, President of the Coblenz Society, conducts the Coblenz Society Board of Managers Meeting as Secretary David Schiering (R) takes minutes of the meeting in Providence at the FACSS Conference.

member organizations, our members receive a discount on registration for the annual FACSS conference. The Coblenz Society Board of Managers meets Monday evening of the conference as one of the semi-annual governance functions of the Society. At this meeting, nominations will be considered for positions on the board. Two new board members will be selected by mail ballot later this calendar year.

The Coblenz Society Web site, administered by Don Kuehl and his people at Galactic, continues to grow. It contains most of the information about the Society that you would wish to know. It is part of the Galactic Web site, at <http://www.galactic.com/Coblenz/>. We hope you will find the web site useful, and be sure to let us know about anything else you would like to see there. The Society is using list-server technology to provide a forum for discussions regarding on-line application of vibrational spectroscopy. Interested individuals can join the list serve by contacting me electronically at agarrison@utk.edu.

The Society runs programs in four main areas: student awards, data bases in hard copy or electronic form, support for international conferences held in North America, and awards for achievement by established scientists.

Student awards continue to provide encouragement to vibrational spectroscopists at the beginning of their careers. Rod McDowell capably chairs this program. The names of winners are published in the "Coblenz Society Newsletter" and are on the Web Site.

In collaboration with NIST, the Society is producing an inexpensive digital data base of high-quality infrared spectra. The initial target is the digitization of a significant fraction of our hard-copy spectra of authenticated samples. Kathy Kalasinsky is leading the committee addressing this effort.

There is currently discussion in the Society about creating a data base of Raman spectra. This challenge is a lot more tricky than an infrared data base, because there are more variables in Raman spectroscopy, such as the effect of different excitation wavenumbers. If you are interested in this effort, or have views on it, please speak to Fran Adar and Mike Morris, who are exploring this issue for the Society.



Relaxing after the board meeting are (L to R), John Hellgeth, Terry Gustafson, Arlene Garrison, and Bruce Chase.

The Coblenz Society provided financial support to the 11th International Conference on Fourier Transform Spectroscopy. This event was organized by Jim de Haseth and Rich Dluhy in Athens, Georgia, in August 1997, and was reported to be a very interesting and enjoyable conference.

The Society's awards for scientific achievement are the Coblenz Award, the Bomem-Michelson Award, the Lippincott Award, and the Williams-Wright Award. Please note that full details for these awards, and the deadlines and addresses for nomination, can be found on the Coblenz Society's Web site. All members are strongly encouraged to nominate the many outstanding spectroscopists who could be eligible for these awards.

The winner of the 1997 Coblenz Award was Mounji Bawendi of MIT for his spectroscopic studies of microstructures. Congratulations to Mounji, who gave his award lecture at Columbus in June. Thanks also to Paul Alivisatos for chairing the Selection Committee this year and for his three years of work on the committee, as well as to John Bertie for presenting the award on behalf of the Society. John Hellgeth has accepted the position of Chair of the Coblenz Award Selection Committee for the next three years.

The Bomem-Michelson Award for 1997 was won by William H. Woodruffe, for his development and use of very fast infrared spectroscopy, particularly for biological systems. Woody received the award and delivered his award lecture at the Bomem-Michelson Symposium at the Pittsburgh conference in March. Thanks to John Hellgeth for chairing the selection committee and to Henry Buijs of Bomem for his continuing sponsorship of this award.

In cooperation with OSA and SAS, the Coblenz Society rotates the selection of the Lippincott Award. Robin Hochstrasser was chosen as the winner of the 1997 Lippincott Award.

The Society provides one of the few awards targeted on the work of industrial researchers. The Williams-Wright Award recognizes outstanding vibrational spectroscopists who are currently employed in industry. The winner of the 1997 Williams-Wright Award was Mike Pelletier, who received the award and gave his award lecture at Pittcon last March. Particular thanks are due to Richard Palmer, who has chaired the Selection Committee for the past two years.

The board constantly rotates, and at the end of Pittcon 1998, Robin Garrell and Nancy Ferris end their terms as board members. At the close of the last board meeting at Pittcon 1997, I started my term as president. I am excited and have found a great deal of enthusiasm among the Society members. Working together and in cooperation with related organizations, we should continue the excellent program that has become the trademark of the Coblenz Society. Anyone with an interest in committee service or conference booth duty is invited to contact me.

ARLENE GARRISON

THE QUIET SOCIETY

The Coblenz Society is a quiet society. But it is a society that provides important financial support to conferences relevant to vibrational spectroscopy. A second major activity, again carried out quietly but effectively, is to assist in the creation and provision of data bases of infrared and Raman spectra at modest prices. And our third major activity is a very active and much appreciated program of awards to students of spectroscopy and to scientists who distinguish themselves by their contributions to spectroscopy.

The Society sponsors conferences within its mandate, such as the International Conference on Fourier Transform Spectroscopy, the Advanced Infrared Spectroscopy (AIRS) Conference, and the International Conference on Raman Spectroscopy.

The Society is a member of the Federation of Analytical Chemistry and Spectroscopy Societies, which organizes the FACSS Conference held each fall.

The Society publishes several data books of vibrational spectra at modest prices, and works with NIST, the National Institute of Science and Technology, to produce digital spectral data bases.

The Society has an active student award program. Approximately 20 students receive the award each year, after nomination by their professor.

The Society offers four major awards to established scientists.

The Coblenz Award is presented each year at the Ohio State Molecular Symposium to an outstanding young molecular spectroscopist under the age of 36.

The Bomem-Michelson Award is presented each year at the Pittsburgh Conference to a scientist who has advanced the technique of molecular spectroscopy in the infrared or optical regions through experimental or theoretical work. The Bomem-Michelson Award Symposium follows the presentation.

The Williams-Wright Award is presented each year at the Pittsburgh Conference to a scientist who has made significant contributions to vibrational spectroscopy while working in industry. The Williams-Wright Award Symposium follows the presentation.

The Ellis R. Lippincott Award honors the late Professor Lippincott of the University of Maryland. It is awarded jointly with the Optical Society of America and the Society for Applied Spectroscopy and is presented each year at a conference judged appropriate by the host society of that year, which is the Coblenz Society every third year. The winners are chosen for their contributions to vibrational spectroscopy as judged by their influence

on other scientists. It is awarded for either pure or applied research.

And in a new development, the Society is currently working to establish an e-mail list server to provide quick answers to questions about process analytical vibrational spectroscopy.

All of this is done for the low membership fee of \$10 per year or \$5 per year for students.

JOHN BERTIE

COBLENTZ/NIST TO PRODUCE IR DATA BASE

The Coblenz Society and the National Institute of Standards and Technology (NIST) have joined efforts to produce a much needed digital infrared data base for spectral searching and identification. The Coblenz Society has long been noted for its high-quality evaluated infrared reference data and for the recommended standards for infrared data productions. NIST has long had the reputation of producing the highly circulated mass spectral data base and is now entering a joint effort to likewise produce an infrared data base. This new joint effort is initiated under a Cooperative Research and Development Agreement (CRADA) pursuant to 15 U.S.C. section 3710a. Under this agreement, NIST and Coblenz will produce a digital infrared data base for distribution through NIST as the *Coblenz/NIST IR Data Base*.

The initial product from NIST is targeted for a 1998 release and will contain approximately 20 000 spectra. Approximately half the spectra are from the NIST/EPA library and half are spectra from digitized Coblenz reference data. Initially the IR data base will include both gas-phase and solid-phase spectra but will be broken down into subsets by phase and compound class once the data base is sufficiently large to warrant such treatment. Specialty subsets of IR data much like the existing Coblenz reference volumes are on-line for production. The existing 10 000 spectra volume series of Coblenz data are also on-line for inclusion in the Coblenz/NIST IR Data Base. Updates of the data base are scheduled to be produced periodically.

NIST will be providing additional data measurements and data base compilation for distribution including software developments for data handling. The Coblenz Society will be spearheading data solicitation and data evaluation. Any individuals or organizations that have produced IR reference data sets are encouraged to participate in this effort. The Coblenz Society will be collecting data sets and evaluating them for inclusion into the *Coblenz/NIST IR Data Base*. Contributors may retain the copyright for donated spectra or assign the copyright to NIST or the Coblenz Society.

If you are interested in this data base or in contributing data to this national/international effort, please contact either Kathy Kalasinsky (301/319-0055) or Clara Craver (573/358-2589) for further information.

PROCESS ANALYSIS LISTSERV

The Coblenz Society Process Analysis (cspa) listserv was created to meet a need first identified by Leslie May and Chris Hassell at an interesting session at the 1996 FACSS meeting. In that workshop, the need

for improved communication between process analysis practitioners was identified. The *csa* listserv is an attempt to meet the need. Attendees at the FACSS session have been added to the list. In order to provide focus, we are suggesting that messages to the listserv describe activities involving on-line applications of vibrational spectroscopy. Questions in the same subject are also welcome.

The listserv is currently managed by the University of Tennessee Measurement and Control Engineering Center. We hope this new listserv will become an active program of the Coblenz Society. Please inform any colleagues using IR, NIR or Raman spectroscopy on-line about the listserv. You can subscribe by contacting Arlene Garrison (e-mail is preferred) with your name and e-mail address.

ARLENE GARRISON
E-mail: agarrison@utk.edu
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INTERNATIONAL CONFERENCE UPDATE

The 3rd International Symposium on Advanced Infrared Spectroscopy, **AIRS III**, will be held July 5–9, 1998, in Vienna, Austria. The symposium will focus on new developments in the field of dynamic infrared and Raman spectroscopy as well as other emerging and industrially relevant techniques of advanced vibrational spectroscopy. Some of the topics to be included are time-resolved FT-IR spectroscopy (rapid-scan, step-scan) and Raman spectroscopy; new developments in irradiation sources and lasers; new developments in monochromators and detection systems; microscopy and imaging; SEIRA and SERS; miniaturized and hyphenated systems; 2D-correlation analysis and chemometrics; process control and sensor developments; and VIS, NIR, MIR, and FIR. The scientific program will consist of invited plenary lectures, contributed papers presented as posters, and an exhibition of latest instrumentation and software. AIRS III will be preceded by an Intensive Short Course on Advanced IR and Raman Spectroscopy at the Vienna University of Technology. For more information about AIRS III, contact:

Eva-Maria Schaub, Congress Consultant
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The Sixteenth International Conference on Raman Spectroscopy, **ICORS XVIth**, will be held September 6–11, 1998, in Cape Town, South Africa. For more information contact:

Dr. Anton M. Heyns
Institute of Applied Materials
University of Pretoria
0002 Pretoria, South Africa
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CALL FOR NOMINATIONS FOR THE COBLENTZ SOCIETY'S AWARDS

The Coblenz Society requests nominations for the prestigious awards it supports:

Coblenz Award. The Coblenz Award is presented annually to an outstanding young molecular spectroscopist under the age of 36. The candidate must be under the age of 36 on January 1 of the year of the award. Previous recipients of this award are John Overend (1964), William Fateley/Robert Snyder (1965), Edwin Becker (1966), Peter Krueger (1967), Jon Hougen (1968), James Durig (1969), Guiseppi Zerbi (1970), Clive Perry (1971), George Leroi (1972), C. Bradley Moore (1973), C. K. N. Patel (1974), Bernard J. Bulkin (1975), Geoffrey Ozin/George Thomas, Jr. (1976), Peter Griffiths (1977), Lester Andrews (1978), Lionel Carreira (1979), Richard Van Duyne (1980), Laurence Nafie (1981), Christopher Patterson (1982), Dave Cameron (1983), Steve Leone (1984), John Rabolt/Graham Fleming (1985), Joel Harris (1986), Alan Campion (1987), Keith Nelson (1988), Geri Richmond (1989), Hai-Lung Dai (1990), Paul Bohn (1991), Tom Rizzo (1992), Peter Felker (1993), Paul Alivisatos (1994), David J. Rakestraw (1995), Xiaoliang Sunney Xie (1996), and Mounji Bawendi (1977).

The award carries with it a \$1000 prize plus a \$500 travel allowance. Files of candidates will be kept alive until the date of age eligibility is exceeded. Annual updates of files of candidates are encouraged.

Nominations, which should include a detailed description of the nominee's accomplishments, a curriculum vitae, and as many supporting letters as possible, must be submitted to the award chairman [Dr. John Hellgeth, SRN Company LLC, 22 Arnoldale Rd., West Hartford, CT 06119; phone: (806)236-3123; fax: (806)236-3127; e-mail: jhellgeth@aol.com] on or before July 1, 1998.

Williams–Wright Award. This award is presented annually at the Pittsburgh Conference to an industrial spectroscopist who has made significant contributions to vibrational spectroscopy while working in industry. The work may include infrared and/or Raman spectroscopy and instrumental development, as well as theory and applications of vibrational spectroscopy. Government labs are not considered industry in this definition. No restrictions are placed on the selection of the awardee because of age, sex, or nationality, but the awardee must still be working at the time the award is presented. The nominating document should clearly state the significance of the contribution made by the nominee, e.g., the introduction of novel methods, techniques or theories; innovative work in the field of vibrational spectroscopy; significant improvement on existing methods, theory, or techniques; or important impact on the field of vibrational spectroscopy arising from the volume of contributions in a specific area. The nomination should include a resume of the nominee's career and highlight the accomplishments including any publications and talks. Seconding letters to the nomination are useful but not necessary. Files on nominees will be kept active for three years, after which the candidate must either be renominated with an updated file or the file will be closed.

Previous recipients of the Williams–Wright Award are

Norman Wright (1978), Norman Colthup (1979), Jeannette Grasselli (1980), Paul Wilks/James Harrick (1981), Robert Hannah (1982), Harry Willis (1983), Robert Jakobsen (1984), Clara D. Craver/Richard A. Nyquist (1985), Abe Savitzky/Joseph J. Barret (1986), A. Lee Smith (1987), Darwin L. Wood (1988), D. Bruce Chase (1989), John F. Rabolt (1990), Robert J. Obremski (1991), Timothy Harris (1992), Curtis Marcott (1993), John M. Chalmers (1994), Michael R. Philpott (1995), Bob Messerschmidt (1996), and Michael J. Pelletier (1997).

This award includes a \$1000 cash prize plus \$500 toward travel expenses to the Pittsburgh Conference. Nominations should be sent to the chairman of the William–Wright Award Selection Committee [Dr. David Haaland, Sandia National Laboratories, MS 0342, Albuquerque, NM 87185-0343; phone and fax: (505)844-5292; e-mail: dmhaala@sandia.gov] before February 1, 1998.

Bomem–Michelson Award. This award is dedicated to the memory of Professor A. E. Michelson, developer of the Michelson interferometer. Bomem, Hartman & Braun sponsors the award to honor scientists who have advanced the technique(s) of vibrational, molecular, Raman, or electronic spectroscopy. Contributions may be theoretical or experimental, or both. The recipient must be actively working and may be associated with the academic, industrial, governmental, or private sector. The awardee must be 37 years of age. The award consists of a crystal symbol of the Bomem–Michelson Award and an honorarium. In order to ensure that the award is based on an independent evaluation of the candidate's achievements, the selection is made by a committee chosen by the Coblenz Society. The presentation will be made at the Pittsburgh Conference in March 1998.

Previous recipients of the Bomem–Michelson Award are Thomas G. Spiro (1987), Carl Linberger (1988), Richard J. Saykally (1989), William Klemperer (1990), Alan Pine (1991), Jyrki Kauppinen (1992), Jack L. Koenig (1993), Herbert L. Strauss (1994), Terry Miller (1995), Ira Levin (1996), and William H. Woodruff (1997).

The nomination should include a resume of the candidate's career as well as the special research achievements that make the candidate an eligible nominee for the Bomem–Michelson Award. Files on nominees will be kept active for three years, after which the candidate must either be renominated with an updated file or the file will be closed. The nominating letter and supporting letters should be sent to: Dr. Nancy Ferris, Analytical Technology Division, Eastman Kodak Company, Rochester, New York 14650-2132; phone: (716)722-0418; fax: (716)477-7781. Nominations will close March 31, 1998.

Ellis R. Lippincott Award. The purpose of the Ellis R. Lippincott Award is to honor Dr. Lippincott's memory by the recognition of significant contributions and notable achievements in the field of vibrational spectroscopy. The medal is sponsored jointly by the Coblenz Society, the Optical Society of America, and the Society for Applied Spectroscopy. It is awarded annually at an appropriate scientific meeting. The award consists of the medal and travel allowances to the meeting. The awardee will present an address related to contributions for which he/she is being honored. In addition there may be a symposium of talks by invited speakers.

Recipients of the medal must have made significant contributions to vibrational spectroscopy as judged by their influence on other scientists. Because innovation was a hallmark of the work of Ellis R. Lippincott, this quality in the contributions of the candidates will be carefully appraised. The contributions may be theoretical or experimental or both, and may have been made in the course of applied as well as basic research.

No restriction is placed on the citizenship or national origin of candidates. A candidate need not be a member of any of the sponsoring societies. The award will not be made posthumously unless an awardee should die after the procedure of selection has been completed.

Previous recipients include Richard G. Lord (1976), Lionel Bellamy (1977), Bryce Crawford, Jr. (1978), E. Bright Wilson (1979), George C. Pimentel (1980), Ian Mills (1981), Michel Delhaye (1982), John Overend (1983), Jon T. Hougen (1984), Ira W. Levin (1985), Wolfgang Kaiser (1986), C. Bradley Moore (1987), Andreas C. Albrecht (1988), Marilyn E. Jacox (1989), Robert W. Fields (1990), Richard J. Saykally (1992), John F. Rabolt (1993), Herbert L. Strauss (1994), Giacinto Scoles (1995), Giuseppe Zerbi (1996), and Robin Hochstrasser (1997).

Nominations should contain the name and affiliation of the nominee and sufficient background information to justify the nomination. A nominator is expected to believe sufficiently strongly in the quality of the work of his or her candidate to provide evidence for that belief. No restriction is placed on who may nominate, and all nominations received by the committee prior to May 1 in any given year will be considered for the award to be presented in the fall of the following year. Files on nominees are kept active for three years, after which the candidate must be renominated with an updated file or the file will be closed. Nominations should be submitted to: Chairman, Lippincott Award Selection Committee, % Optical Society of America, 2010 Massachusetts Ave., N.W., Washington, D.C. 20036; phone: (202)416-1403; fax: (202)416-6130.

SOCIETY ANNOUNCEMENTS

Membership. Anyone wishing to join the Society may do so by sending \$10 to John Hellgeth, Coblenz Society Membership Chairman, SRN Company LLC, 22 Arnoldale Rd., West Hartford, CT 06119.

Board Meeting. The Coblenz Society Board will hold its semi-annual meeting Monday evening, March 2nd at the Pittsburgh Conference in New Orleans. Any article of business that you want the board members to consider needs to be sent in writing to Dr. Arlene Garrison, Coblenz Society President, Director of MCEC, 102 Eastbrook Hall, University of Tennessee, Knoxville, TN 37996-2350, prior to the conference.

Annual Meeting. The annual meeting of the Coblenz membership will be held prior to the William–Wright Symposium Tuesday Morning, at the Pittsburgh Conference. Be sure to attend, since the general business of the Society will be conducted.

Wine & Cheese. The Coblenz Society wine and cheese reception will be held immediately following the Williams–Wright Symposium on Tuesday at the Pittsburgh Conference in Atlanta (in the symposium lecture room).

COBLENTZ SOCIETY BOARD

<u>Name</u>	<u>Term Expires</u>	<u>Telephone</u>
Dr. Nancy Ferris Analytical Technical Division Eastman Kodak Company, Bldg. 82 Rochester, NY 14650-2132	1998	(716)722-0418
Dr. Robin Garrell Department of Chemistry UCLA 405 Hilgard Ave. Los Angeles, CA 90024	1998	(310)825-2496
Dr. Fran Adar Instruments S.A. 3880 Park Ave. Edison, NJ 08820	1999	(908)549-7144
Dr. Terry Gustafson Department of Chemistry The Ohio State University Columbus, OH 43210	1999	(614)292-1832
Dr. Nancy Klymko IBM Corp. Hudson Valley Research Park Route 52 Hopewell Jct., NY 12533	2000	(914)894-5752
Professor M. D. Morris Department of Chemistry The University of Michigan 930 N. University Avenue Ann Arbor, MI 48109-1055	2000	(313)764-7360
Dr. John Coates Coates Consulting P.O. Box 3176 Newton, CT 06740-3176	2001	(203)426-8495

Dr. Concetta Paralusz 2001 (908)828-9136
1365 Carlisle Road
North Brunswick, NJ 08902

COBLENTZ SOCIETY OFFICERS

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