

NEWSLETTER

No. 140

A Society for Applied Spectroscopy Affiliate
Editor: K. S. Kalasinsky

February 2005

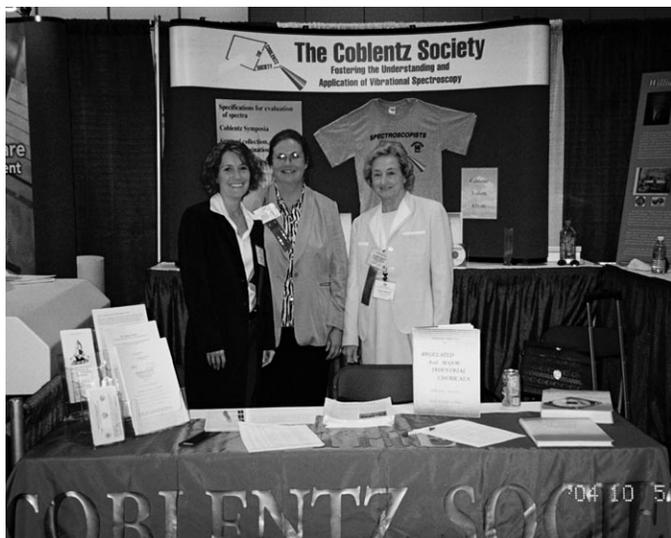
EDITOR'S COMMENTS

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 the Coblentz Society Newsletter in every February and August issue of *Applied Spectroscopy*.

KATHY KALASINSKY

PRESIDENT'S MESSAGE

The 50th Anniversary of the Coblentz Society is quickly coming to a close and I am happy to report that the Society begins its next fifty years on a solid footing.



Janie DuBois (L), Mary Carrabba, and Clara Craver (R) have a good time working the Coblentz Society Booth. It is always the favorite spot to be.

Membership is strong and the Society remains very active in the field of vibrational spectroscopy. Before I continue with this letter, I would like to thank all of those who supported the 50th Anniversary. This support came in the form of individuals arranging special symposia and receptions at PittCon, FACSS, and EAS as well as the speakers who presented in the symposia. Lastly, I would like to thank several organizations for providing financial support to offset the cost of the celebration. These organizations include the Pittsburgh Conference, FACSS, EAS, ABB, Bruker, Digilab, the Molecular Microspectroscopy Laboratory, Perkin Elmer, Pike Technologies, SensIR Technologies, Spectral Dimensions, and Thermo.

Looking into the immediate future, we have a very exciting and busy year ahead of us. First up will be the Pittsburgh Conference in Orlando, where the Coblentz Society will be presenting the Williams Wright Award to Dr. Fran Adar of Jobin Yvon and the ABB Sponsored Bomem Michelson Award to Dr. Paul W. Bohn of the University of Illinois. Invited speakers for each symposium are given below:

Williams-Wright Award Symposium**Fran Adar**, Jobin Yvon

Raman Spectroscopy and Microscopy—Solutions in Search of Their Problems

Paul Dhamelincourt, University of Lille 1—Sciences and Technology, France

The History of MicroRaman Analysis

Nancy Klymko, IBM

Vibrational Microspectroscopy Applications in CMOS Technology Materials Characterization

John Reffner, SensIR Technologies, Inc.

IR and Raman—Together at Last

Mike Carrabba, Hach Homeland Security Technologies
Raman and Fluorescence Spectroscopies in Homeland Security**Ruth Geiger**, Jobin Yvon, Germany

Raman Today and Acknowledged Methods in the Field of High Tech Analysis

ABB Sponsored Bomem–Michelson Award Symposium**Paul W. Bohn**, University of Illinois at Urbana–Champaign



Janie DuBois and Kathy Kalasinsky stop by the Coblenz Booth at the FACSS Conference in Portland this past October.

**Nanofluidics and Mass-Limited Chemical Analysis:
Lessons Learned from Spatially-Defined Molecular
Spectroscopy**

Bruce Chase, DuPont

Raman Spectroscopy: A Probe of Polymeric Fiber
Structure at the Molecular Level

Robert M. Corn, University of California at Irvine

Surface Enzyme Kinetics for Ultrasensitive SPR
Imaging Measurements of Biopolymer Microarrays

Richard M. Crooks, Texas A&M University

Preconcentration of DNA Using a Hydrogel-Based
Transport Modulator

Robin L. Garrell, University of California, Los Angeles

Digital Microfluidics for Proteomics Analyses with
MALDI-MS, Synthesis, and Analytical Assays

Please keep in mind that the annual business meeting will be held after the Bomem-Michelson Award Symposium and the Coblenz Wine and Cheese reception will follow the business meeting. In addition, The Pittsburgh Conference has arranged for us to be in Spectroscopy Central once again. Please stop by the booth and say hello, check your membership, or buy a T-shirt. Our booth number is 3565 and we are looking forward to seeing you.

In June, the Ohio State University will be hosting the 60th Annual International Symposium on Molecular Spectroscopy. The Coblenz Society will be presenting the Coblenz Award to Dr. Sergey Nizkorodov, Assistant Professor of Chemistry at the University of California at Irvine. Later on in August the Coblenz Society will be supporting the International Conference on Advanced Vibrational Spectroscopy (ICAVS-3) to be held in Delavan, Wisconsin.

I am happy to announce that the Coblenz web site is now located on a server at Miami University and is directly under our control. Kathy Dittman, my Program Associate, and I have reviewed and updated the site as much as possible. Please visit the site at www.coblenz.org and let us know if we have overlooked anything. Two improvements we are currently investigating are online

membership registration and a secure way for individuals to determine whether their membership is current. Any other suggestions would be greatly appreciated.

Finally, I would like to offer my personal congratulations to our award winners Dr. Fran Adar, Dr. Paul Bohn, and Dr. Sergey Nizkorodov. I would like to encourage those of you who know similar deserving scientist to nominate them for the 2006 awards. Deadlines, instructions, and persons to send the nominations to can be found in this Newsletter and at the Coblenz website. The deadline for the upcoming Coblenz Student Award is March 1st. Nominations should be sent to Dr. Robert Messerschmidt.

In closing, should you have any suggestions or concerns regarding the Society, I am more than willing to listen. As I mentioned in my address at the Pittsburgh Conference, the biggest asset the Society has are its members. Through their collective knowledge, support, and dedication to the field, the Coblenz Society continues to thrive. I thank you all for your efforts and look forward to seeing you at the Pittsburgh Conference in March for the anniversary celebrations.

ANDRÉ J. SOMMER
PRESIDENT

**A CELEBRATION OF THE LIFE AND WORK
OF NORMAN B. COLTHUP**

Norman B. Colthup, a pioneer in the field of infrared spectroscopy, has devoted 60 years to the development and study of this field. Having started his career in 1944 at the American Cyanamid Company Research Laboratories in Stamford, Connecticut, Norm developed the Colthup Infrared Chart, which was first published in 1950. This is one of Norm's enduring achievements and is renowned worldwide and used by chemists, biologists, and physicists. Norm has written more than 35 scientific papers and two books on Infrared and Raman Spectroscopy. He has trained numerous scientists on the use and interpretation of IR spectra through his involvement at various training programs and continues to do so at Cytex Industries Inc. (formerly American Cyanamid).

Norman B. Colthup's 80th birthday was July 6, 2004.



Speakers at Norman B. Colthup's 80th birthday celebration; (L to R) Robert G. Michel, Peter Larkin, Dave Schiering, Elvira Longordo, Norm Colthup, Stephen E. Wiberley, and John Reffner.



Norman B. Colthup with his son, Bruce, and his 80th birthday cake.

On July 14, a surprise celebration honoring both his birthday and 60 years of contributions in the field of infrared spectroscopy was organized by Elvira Longordo (one of Norman's own trained spectroscopists) and held at Cytec Industries' Stamford, Connecticut, research laboratories. Many invitees from the various stages of Norm's career were in attendance. The event recognized Norm's contributions to the research community at Stamford and to the vibrational spectroscopy field. Several speakers were on hand to offer reminiscences and congratulations. Stephen E. Wiberley of Rensselaer Polytechnic Institute spoke of his first meetings with Norm and how their coauthored volume, *Introduction to Infrared and Raman Spectroscopy*, came about. Peter Larkin of Wyeth Pharmaceutical Laboratories spoke of Norm's contributions to American Cyanamid and Cytec and Norm's efforts in mentoring young researchers new to vibrational spectroscopy, including himself. John Reffner of Smiths Detection offered intimate reflection of his first exposure to the Colthup chart and the intersecting careers and personal experiences of Norm and himself. John also moderated a session of reminiscences that included a humorous story related by Sam Wang, concerning Norm's contribution in saving a business of American Cyanamid by performing an infrared spectroscopic identification of a curing agent in a competitor's adhesive. Also on hand was one of Norm's three sons, Bruce, who reflected upon his admiration for his father. Robert G. Michel of the University of Connecticut represented the Society for Applied Spectroscopy and presented a plaque recognizing Norm's contributions to spectroscopy. David Schiering of Smiths Detection, representing the Coblenz Society, read and presented a congratulatory letter to Norm, recognizing his contributions of the Colthup Infrared Group Frequency Charts, his practical volume on infrared and Raman spectroscopy that is still very relevant today, his educational contributions through the Fisk and ACS infrared courses, and his awards, most notably one of the first Williams-Wright awards, recognizing contributions to the vibrational spectroscopy field by an industrial scientist.

Cytec Industries Inc. presented Norman with framed photos of himself from 1950 while using one of the first Perkin Elmer Infrared spectrometers, Model 12 Serial Number 101A, and a more recent photo with an inscrip-

tion reading: "On the occasion of the celebration of your 80th birthday, the R&D staff of Cytec Industries Inc. honor you for your pioneering work in Infrared Spectroscopy at this Stamford site and for 60 years of service and contributions to this science and to our research community." In addition, Norman was presented with the gift of a photovoltaic titanium chronograph.

Subsequent to reminiscences and presentations, lunch, including birthday cake, was provided. The attendees also toured the newly renovated Cytec Industries research labs.

DAVID W. SCHIERING

FACSS XXXI

As the General Chair of FACSS 2004 I'd like to thank all those who helped make the conference a success! Approximately 920 people attended FACSS, many of them Coblenz members.

Conference Format Changes. For several years, the organizing committee has listened to the constructive comments from attendees at past meetings. In response to that feedback, a new format for the technical program was implemented at the 2004 conference. This format was designed to provide more time to bring together the attendees to encourage, mixing, discussion, and exchange of ideas. Each day began with 'wake-up coffee' followed by plenary presentations by an internationally acclaimed speaker or FACSS award winner. The technical program consisted of nine highly focused, concurrent sessions per AM and PM period, and each of those sessions comprised both poster and oral presentations. Thanks to those of you who took the time to tell us what you thought about these changes!

Program Highlights. This year's technical program featured thematic symposia in the topical areas of Atomic Spectroscopy, IR and Near IR, Raman Spectroscopy, Education, Forensics, Chemometrics, Nanoscience and Nanomaterials, Process Analytical Chemistry, special sessions in recognition of FACSS award winners, and an expanded emphasis on Bioanalytical Chemistry. Sessions devoted to emerging areas included Metallomics, Sample Handling techniques for IR characterization and advanced IR data acquisition, and week-long emphasis on Proteomics by Mass Spectrometry, Nanotechnology for carbon tubes, and Bioanalytical research. Plenary lecturers included William Schopf from the Department of Earth and Space Sciences, and Center for the Study of Evolution and the Origin of Life, University of California, Los Angeles. Dr. Schopf's Monday morning address was titled *Earth's Earliest Fossils: Solution to Darwin's Dilemma*. Tuesday morning lectures were presented by Walt Jennings, Anachem Award winner, and Mike Carrabba, the Charles Mann Award Winner. The Wednesday plenary lecture was given by Boris Mizai-koff, the Meggers Award Winner. Thursday's plenary was presented by Richard A. Mathies, the Lippencott Award Winner.

Looking Forward to 2005. FACSS 2005 will be held October 9–13, 2005, in Quebec City, Canada. This will be a joint meeting with the Canadian Society for Analytical Sciences and Spectroscopy (formerly the Spec-

trospectroscopy Society of Canada). Join your fellow Coblentz members “north of the border”!

DAVID S. TRIMBLE
2004 FACSS GENERAL CHAIR

CALL FOR NOMINATIONS FOR THE COBLENTZ SOCIETY'S AWARDS

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

Coblentz Award. The Coblentz 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), Mounji Bawendi (1997), Pat Treado (1998), Brooks Pate (1999), Martin Gruebele (2000), Stacey Bent (2001), Andrei Tokmakoff (2002), Andrea Callegari (2003), and Sergey Nizkorodov (2004).

The award carries with it a \$2000 prize plus a \$500 travel allowance. Files of candidates will be kept active 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. Curt Marcott, Proctor & Gamble Co., Miami Valley Labs Box 538707, Cincinnati, OH 45253-8707; phone (513) 627-2806; fax (513) 627-0655; e-mail marcott.ca@pg.com] on or before September 1st.

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, 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 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.

copy 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 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), Michael J. Pelletier (1997), Henry Buijs (1998), Don Kuehl (1999), John Reffner (2000), Raul Curbelo (2001), Isao Noda (2002), Neil Overall (2003), Neil Lewis (2004), and Fran Adar (2005).

This award includes a \$2000 cash prize plus \$500 toward travel expenses to the Pittsburgh Conference. Nominations should be sent to the Chairman of the Williams–Wright Award Selection Committee [Dr. Rebecca Dittmar, 3M Company, 3M Center, Bldg 201-BS-07, Maplewood, MN 55144-1000; phone (651) 737-7701; fax (651) 733-0648; e-mail bmdittmar@mmm.com] before March 1st.

Bomem–Michelson Award. This award is dedicated to the memory of Professor A.E. Michelson, developer of the Michelson interferometer. Bomem, Inc. 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, government 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 Coblentz Society. The presentation will be made at the Pittsburgh Conference.

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), William H. Woodruff (1997), Bruce Chase (1998), Sandy Asher (1999), John F. Rabolt (2000), Larry Nafie (2001), Dan Neumark (2002), Peter Griffiths (2003), Dave Haaland (2004), and Paul Bohn (2005).

The nomination should include a resume of the candidates' 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. Christine Wehlburg, MITRE Corp., MS T630, 7515 Colshire Drive, McLean, VA 22102-7508; phone (703) 883-6081 and fax (703) 883-6989; email cwehlburg@mitre.org. Nominations will close March 31st.

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 Coblentz Society, 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 Delhay (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), Robin Hochstrasser (1997), Takeshi Oka (1998), Mitsuo Tasumi (1999), Donald Levy (2000), Lester Andrews (2001), Sandford Asher (2002), Shaul Mukamel (2003), and Richard Mathies (2004).

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 October 1 in any given year will be considered for the award to be presented in 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) 416-1420; fax (202) 416-6134.

SOCIETY ANNOUNCEMENTS

Membership. Anyone wishing to join the Society may do so by sending \$10 to Richard Larsen, Coblentz Society Membership Chairman, 6807 Gravel Branch Road, Hurlock, MD 21643.

Board Meeting. The Coblentz Society Board will hold its semi-annual meeting Monday evening, February 28th, at the Pittsburgh Conference in Orlando, Florida. Any article of business that you want the Board members to consider needs to be sent in writing to Dr. André Sommer, Coblentz Society President (see address at end of newsletter), prior to the conference.

Annual Meeting. The annual meeting of the Coblentz membership will be held after the Bomem-Michelson Award Symposium at the Pittsburgh Conference. Be sure to attend, since the general business of the Society will be conducted.

Wine & Cheese. The Coblentz Society wine and cheese reception will be held after the general business meeting following the Bomem-Michelson Award Symposium at the Pittsburgh Conference in Orlando. Stop by the Coblentz Booth for time and place announcement for the reception.

COBLENTZ SOCIETY BOARD

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