

Fifty-Year Celebration for the Annual Conference on Mass Spectrometry

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As you read this column, you may be preparing for the 50th American Society for Mass Spectrometry (ASMS) Conference on Mass Spectrometry and Allied Topics, to be held in Orlando, Florida, June 2–6, 2002. There, among the crowds, you will find the few of us who have attended more than 20 ASMS meetings. More likely, you will find many who are attending their first ASMS meeting, or whose attendance record spans only a few, more recent years. These “newer” colleagues now constitute the majority of ASMS members, as mass spectrometry (MS) maintains its steady growth in capabilities and applications, with attendance at the national ASMS meeting (Figure 1) mirroring that growth (1).

The business of the ASMS conference, promulgated in several parallel oral sessions and poster sessions with hundreds of presentations, will occur in Orlando. There will also be special events that commemorate the anniversary of the 50th conference. In collaboration with the Chemical Heritage Foundation, a celebration volume that documents the history and development of MS will be issued. Much as the 50th anniversary of the Pittsburgh Conference (PittCon) documented the suc-

cess and growth of that organization, the 50th ASMS conference will be a chance for reflection as well as prediction. Reflections at the conference might segue into the “good old days” of glass blowing, black wax, Glyptol, and light-beam oscillographs. Perhaps those will become topics for a future “Mass Spectrometry Forum,” but presented here instead is a brief overview of the beginnings of ASMS and some aspects of the conference history and development.

Before there was an ASMS meeting with 4300 attendees, before there were ASMS conferences scheduled around the country five years in advance, before there was a *Journal of the American Society for Mass Spectrometry*, before there was an American Society for the Testing of Materials (ASTM) E-14 committee (more to come on that shortly), first there was a devoted group of chemists and physicists who enjoyed getting together to talk about mass spectrometry (2). The first MS meetings in the United States were user-group meetings primarily for operators of CEC mass spectrometers, particularly the CEC Model 21-101, but later also instruments from General Electric. Early commercial mass spectrometers were purchased primarily by petroleum compa-

nies, starting in 1942 with the first CEC instrument delivered to the Atlantic Refining Company (Philadelphia, PA). These mass spectrometers were used for the analysis of petroleum feedstocks and products, and they were directly involved with the production of high-octane gasoline required for the war effort. Successful analyses required much attention to detail by the operators; user-group meetings became forums for the exchange of useful information — the secrets of the trade. An initial meeting in early 1944 was followed by a second users’ meeting held at the American Chemical Society fall meeting in September 1944, and then by annual meetings at various meeting venues around the country. As additional commercial instrument vendors entered the market, and as wartime cooperation gave way to postwar industrial competition, the need for a meeting held under the auspices of a professional organization became apparent.

Affiliation with several professional societies was considered. In June 1951, E.B. Tucker of the Whiting Research Laboratories of American Oil Company made the formal suggestion that an ASTM mass spectrometry committee be formed. The current mission statement from the ASTM In-



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is almost exactly the same age as annual meetings on mass spectrometry and allied topics, but in contrast, did not require a steering committee for his inception. He remembers when mass spectrometers came in colors other than beige, and when they had real scopes attached to them. In his garage is a box of spare parts for a DuPont mass spectrometer. He cannot bear to throw these precious items away, as he is sure that sometime, somewhere, somehow, they will be needed by someone yet to be determined. He can be reached at buschken@hotmail.com.

ternational web site states, "Organized in 1898, ASTM International is one of the largest voluntary standards development organizations in the world. ASTM International is a not-for-profit organization that provides a forum for the development and publication of voluntary consensus standards for materials, products, systems, and services." MS was proving extraordinarily useful in industrial applications, but needed the impartial oversight that an ASTM committee could provide.

In January 1952, a meeting at ASTM headquarters approved the formation of a steering committee. Bill Young of Atlantic Refining was chair of that committee. The work of organization proceeded quickly. Twenty-one papers on MS were presented at the 1952 Pittsburgh Conference, including the very first paper in those sessions (by Al Nier) with the now famous and recurring title, "Recent Developments in Mass Spectrometry." That 1952 Pittsburgh Conference also included a meeting that formally established the ASTM E-14 committee on MS, and Bill Young was elected chair of that committee. In 1953, a conference meeting of ASTM E-14 was held in conjunction with the Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, and the first annual conference on MS and allied topics held solely under the aegis of ASTM E-14 was held in 1954 in New Orleans (3). By the time of the

third ASTM E-14 meeting in San Francisco, there were 69 papers, but still no parallel sessions. The 200 attendees saw every presentation, and enjoyed an instrument clinic and exhibition, and (reportedly) several hospitality suites.

The annual meeting grew quickly, and photography by attendees of the slides presented at the first meetings soon gave way to a more permanent printed record of the meeting. The first publication of extended abstracts was for the 10th Annual Meeting held in 1962. MS grew not only in the United States but also overseas. The British Mass Spectrometry Society (BMSS) was established in 1964, and the first issue of *Organic Mass Spectrometry* appeared in 1968. The increased numbers of

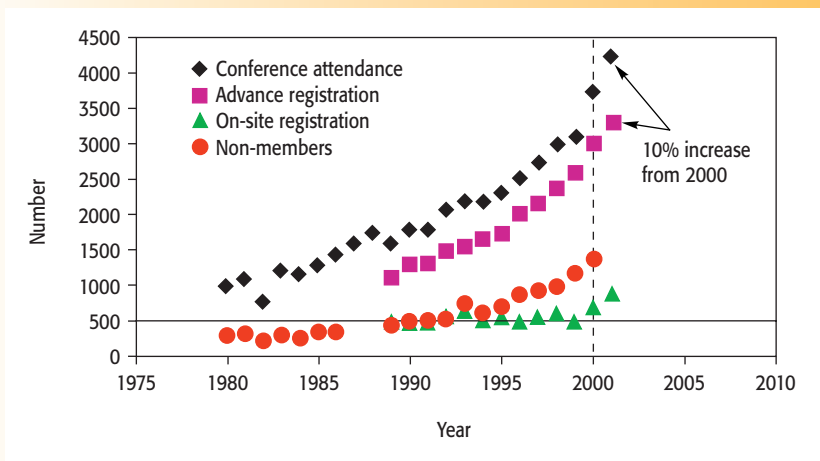


Figure 1. Attendance at annual conferences of the American Society for Mass Spectrometry (ASMS).

Do You Remember ?

1. In what year was the first ASMS conference held in a convention center?
2. At which year's ASMS conference did an early morning fire alarm offer the chance to spot eminent mass spectrometrists in their pajamas in the hotel lobby?
3. In which year was an ASMS conference site hotel demolished a short time after ASMS departed from their annual conference there?
4. At which year's ASMS conference was the usual conference schedule modified to accommodate the expected weather at the meeting site?
5. At which year's ASMS conference was a model of the Viking Mars lander displayed?

1. 1996; 2. 1986; 3. 1981; 4. 1990; 5. 1977

Thirty Years of ASMS Conferences

1976	San Diego, CA	1989	Miami Beach, FL
1977	Washington, D.C.	1990	Tucson, AZ
1978	St. Louis, MO	1991	Nashville, TN
1979	Seattle, WA	1992	Washington, D.C.
1980	New York, NY	1993	San Francisco, CA
1981	Minneapolis, MN	1994	Chicago, IL
1982	Honolulu, HI	1995	Atlanta, GA
1983	Boston, MA	1996	Portland, OR
1984	San Antonio, TX	1997	Palm Springs, CA
1985	San Diego, CA	1998	Orlando, FL
1986	Cincinnati, OH	1999	Dallas, TX
1987	Denver, CO	2000	Long Beach, CA
1988	San Francisco, CA	2001	Chicago, IL

2002	Orlando, FL
2003	Montreal, Canada
2004	Nashville, TN
2005	San Antonio, TX
2006	Seattle, WA

users of MS, and the increased needs for their professional interactions, made the need for a separate professional society apparent, and following a supportive ASTM Executive Committee meeting in March 1969, and approval at a full ASTM committee meeting in May 1969, ASMS was formed and then incorporated as a professional organization on August 8, 1969. As a result, in 1970 the annual conference on MS and allied topics became an annual meeting of ASMS, in cooperation with ASTM E-14 committee.

The organizational structure of ASMS has changed during the past 30 years, but the primacy of the annual conference has remained a constant. The addition of the Asilomar Conference in 1984 and the Sanibel conference in 1989, along with the fall workshops, to the list of ASMS-sponsored events did not detract from the attraction of the annual conference to mass spectrometrists. The sidebar "Thirty Years

of ASMS Conferences" lists the locations of ASMS conferences for the past 30 years; the meeting sites have been rotated geographically to allow as many to attend the meetings as possible. This formal rotation has become more difficult as the size of the meeting has grown, and the demand for presentation and poster space, as well as hotel rooms, has forced the meeting into convention centers and a few larger hotels. Three parallel oral sessions during the meeting became four, then sometimes five, and poster sessions expanded from a collection of a few dozen boards to literally hundreds within a single session, stretching ballrooms and exhibition space to capacity. The ASMS meeting came to be preceded by short courses and users' meetings, and included basic tutorials, award addresses, interest group meetings, and invited-speaker presentations. The support of the ASMS corporate sponsors has remained extraordinarily valuable during the organization's years of growth and evolution. Equally important is the enthusiastic support of ASMS members, as shown in their continued attendance and participation.

It is instructive to consider a few trends in meeting topics that have emerged during the recent past of ASMS. Sessions on fundamentals seem to comprise a declining fraction of the meeting as the method of MS matures. The environmental wave of interest that traversed the 1970s and early 1980s has subsided to a smaller subset of the field. MS applications in the petroleum industry (where MS was first widely applied) have almost disappeared from the ASMS meeting. The burgeoning pharmaceutical and biochemical applications of the 1990s continue, but have given way to what has been termed the "proteomics juggernaut." Other professional meetings have separate sections on MS and its applications. Read the journals, where the *x*-axis label has evolved from *m/e* to *m/z* to Da to kDa to mass. Student attendance and participation at ASMS conferences is encouraged, and aided especially through fellowships and work opportunities offered by ASMS. Students meet their

colleagues from around the country and the world, marvel at the intricacies of the scientific world that they have joined, and attempt to survive the entire week on munchies offered during social and hospitality events. At the same meeting, but perhaps better fed, mass spectrometrists from industry roam through the aisles of posters, looking for hints and secrets that will help them in their own work while being careful not to reveal too many of their own. In this quest, the spirit of the ASMS meeting is perhaps not so far removed from those very first user-group meetings of the 1940s, with attendees still a bit in awe of what could be accomplished and eager to learn how to do it better. Not too bad, you must agree, for a method based on a "capricious and unaccountable" instrument (according to F.W. Aston), and, as described by E.B. Tucker in the early 1940s, "a machine that almost doesn't quite work." Congratulations, ASMS, and see you at the centennial celebration in 2052 (4).

References

1. The figure is taken from a presentation at the ASMS business meeting, Chicago, Illinois, June 2001.
2. H.F. Wiley, "ASMS Retrospective Lectures," in proceedings of the 32nd Annual Conference on Mass Spectrometry and Allied Topics, San Antonio, Texas, 1984, p. 102 (ASMS, Santa Fe, NM).
3. The site of this first "official" meeting was the Jung Hotel, which is on the National Register of Historic places, presumably not for its role in MS, but for its part in the musical history of the city. The Jung hotel is now the Radisson Hotel in New Orleans at 1500 Canal Street. See www.geocities.com/parish_photogy/pc_no.html for the image of an old picture postcard of the Jung hotel.
4. I have already reserved my rooms in New Orleans for the celebration. ■

