

The Division conducted a salary survey of its members, a "first" for the Division.

A 1972 report by the Long Range Planning Committee, chaired then by Judy E. Davis, included recommendations such as:

- Divisional meetings should be directed at management level people as well as those doing original work
- local meetings should receive more attention
- conference-type and joint meetings with other societies should be encouraged
- consideration should be given to "what the Division does for its members"

The Division reestablished liaison with both the ASIS and the Special Libraries Association (SLA). Steps had been initiated to have "chemical information specialists" recognized as a job category in the ACS Employment Clearinghouse.

In the Fall of 1972 the Division mailed a questionnaire to the members trying to find out what activities had been considered as most useful and to solicit suggestions for the future. The results were tabulated and published in the Spring 1975 issue of *Chemical Literature*.

When in 1973 Peter Lykos initiated action to form a new ACS division, Division of Computers in Chemistry, James E. Rush contacted him and proposed that the new group join the already established Division of Chemical Literature to form a single division of broader scope, larger membership, and greater strength.

The new group, however, applied for independent recognition. The ACS Council in April 1974 approved the Division of Computers in Chemistry on a probationary basis. Full Divisional status was granted two years later.

The Division of Chemical Literature recognized that the new Division would include a broad coverage of computer activities such as simulation, modeling, computer-assisted instruction, and management; yet it noted potential overlap in, for instance, information storage and retrieval, especially online. Our Division decided to monitor the new Division's papers and foresaw future joint meetings and cooperative programming.

Discussion ensued about a new name for the Division. The three final candidate names were:

Division of Chemical Information
Division of Chemical Information Science
Division of Information Science in Chemistry

Finally, "Division of Chemical Information" was chosen as the new name. It was approved by the ACS Council on April 9, 1975, at the 169th ACS National Meeting in Philadelphia. At that time, the Division had 918 members and 134 affiliates for a total membership of 1052.

3. Symposia and Sessions at the ACS National Meetings, 1949-1975

The Beginning and the Early Years

The Division's first technical sessions were held at the 115th ACS National Meeting in San Francisco in March 1949. Three symposia were presented:

- The University Library as an Aid to Scientific Work (4 papers, Norman C. Hill, presiding)
- Literature Sources of Information on Western Chemical and Process Industries (3 papers, John Callahan, presiding)
- Trends in Indexing, Classifying, and Utilizing Chemical Literature (8 papers, James W. Perry, presiding)

The third symposium almost exclusively dealt with the experiments on the use of punched cards. One sorting machine was described that could sort cards with then amazing speed of 20,000 cards per hour.

The first meal sponsored by the Division was a luncheon attended by 43 people on March 29, 1949. At this event, G. Malcolm Dyson of Loughborough, England, the inventor of the Dyson chemical notation and later Director of Research at Chemical Abstracts Service, was the guest of honor. He congratulated the Society on the formation of the Division of Chemical Literature, stating he knew of no other chemical organization in the world which had recognized the broad importance of documentation by forming such a division.

From bibliographies of Divisional papers published in 1954 for the period 1943-1953, and in 1967 for the period 1943-1964, data can be derived on a total number of papers presented in those early days, as well as on who of the members were most active. The following summaries provide that information.

In the period 1943-1953 (including meetings of the Chemical Literature Group), 470 papers were delivered and the most prominent and prolific authors were:

Perry, James W.	25 papers
Smith, Julian F.	11
Crane, E. J.	10
Hill, Norman C.	10
Alexander, Mary	8
Doss, Milburn P.	8
Dyson, G. Malcolm	8
Egloff, Gustav	7
Singer, Tibor E. R.	7
Weil, Ben H.	7

For the period 1943-1964 (again including meetings of the Chemical Literature Group), 1486 papers were presented, and the following were the most active authors:

Perry, James W.	44 papers
Smith, Julian F.	27
Weil, Ben H.	27
Singer, Tibor E. R.	21
Crane, E. J.	19
Kent, Allen	17
Skolnik, Herman	17
Dyson, G. Malcolm	16
Stephens, Irlene R.	14
Heumann, Karl F.	13
Bernier, Charles L.	10
Cortelyou, Ethaline H.	10
Friedenstein, Hanna	10
Frome, Julius	10
Garfield, Eugene	10
Hill, Norman C.	10
Hoseh, Mordecai	10
Welt, Isaac D.	10
Casey, Robert S.	9
Doss, Milburn P.	9
Mellon, Melvin G.	9
Oatfield, Harold	9
Spitzer, Ernest F.	9
Waldo, Willis H.	9
Alexander, Mary	8
Bonnett, Howard T.	8
Egloff, Gustav	8
Fletcher, John H.	8
Schaler, Charlotte	8
Stevens, Leo J.	8
Taube, Mortimer	8
Whaley, Fred R.	8

These were the pioneers in the real sense of the word. There were others who investigated and introduced new approaches to handling chemical information in their companies or information services: Madeline M. Berry, Carleton C. Conrad, John H. Fletcher, Dean F. Gamble, Harriet A. Geer, Margaret H. Graham, Howard S. Nutting, Austin M. Patterson, Byron A. Soule, and Fred A. Tate. Their names as well as those

of other pioneers appear on the rosters of Officers and Councilors in **Appendixes 2 and 3** (pages 89 and 90) and in the listings of symposia organizers in **Appendixes 4 and 5** (pages 91 and 92).

General Characteristics

A detailed list of symposia and general sessions at the ACS National Meetings for the 1949-1975 period is presented in **Appendix 5** (page 92). The information given includes the number of papers in each symposium or session, the name of the presiding chairman, and the name of the cosponsoring ACS Division or ACS Committee, if applicable.

The Division took part in all but three of the 55 numbered ACS National Meetings in that period, 115th through 169th. In two consecutive years, 1963 and 1964, there were three numbered ACS National Meetings each year, instead of the usual two. The Division did not participate in the 146th ACS National Meeting in Denver in January 1964 (which was one of the three in that year), in the 159th ACS National Meeting in Houston in February 1970 (since it participated in the ACS/CIC Joint Conference in Canada in May 1970), and in the 165th ACS National Meeting in Dallas in April 1973 (since it had its own meeting that month in Columbus, Ohio).

The total number of papers presented in the 1949-1975 period was 1,927. The two meetings with the record number of Divisional papers were:

128th, Fall 1955 - Minneapolis, 68 papers
130th, Fall 1956 - Atlantic City, 73 papers

Some topics presented in these years have never faded away and are being discussed to this day just as they were 50 years ago. Admittedly, the problems and solutions are different, because of the evolving laws and customs, increasing application of mechanized and electronic methods, and changing interactions between scientists at large, information professionals, and the governments worldwide.

These perennial topics are:

- patents
- copyright
- education
- nomenclature
- Chemical Abstracts (CA)

On the topic of education, discussion centered primarily on courses, formal and informal, at universities and colleges. A gradual shift of terms occurred from "chemical literature" to "chemical documentation" to "chemical information".

The subject of nomenclature as a method for unequivocal communication of chemical substance information was hotly discussed. The pros and cons of various needs and uses of trivial and systematic names were debated. The ACS has always had a Committee on Nomenclature for whom the Division provided formal and informal forums for their reports. Every pioneer in this field, starting with E. J. Crane and continuing with Austin M. Patterson, Howard S. Nutting, G. Malcolm Dyson, W. Conard Fernelius, and Kurt L. Loening, spoke before the Division at one time or another.

The last topic, Chemical Abstracts and Chemical Abstracts Service (CAS) as it was instituted in 1956, was in one form or another on the program of almost every meeting. Every aspect of CAS activities was reported at one time or another, including coverage of specific chemical fields, mechanization and computerization of production operations, description of publications and services, and planned expansion.

From the mid-1960's, CAS regularly conducted CAS Open Forums at the ACS National Meetings. They were not officially part of the Divisional program, but their timing was coordinated with Divisional activities. Many members participated and did not shy away from expressing their opinion and concerns.

It should be noted that almost every ACS National Meeting had one or more Divisional general sessions. These included papers on individual subjects which could not be grouped under a common theme. Yet, they were important as they often reported breaking new ground or announcing a significant advance. Frequently, such a single paper became a precursor of a large number of papers which appeared as the field developed. Then such papers were grouped and presented under a specific symposium topic.

It is of interest to review programming trends over the years and to list the most popular topics covered by symposia in each succeeding decade.

In the 1940's (including the activities of the Chemical Literature Group), the Division learned about and discussed:

- abstracting, indexing, classifying, and coding
- punched card applications
- sorting and scanning devices
- chemical notation systems
- record keeping
- technical writing
- literature of specific fields and countries

By far the largest number of papers was on punched cards. Punched cards, and other cards such

as optical cards, were quite fascinating to utilize in indexing literature and compiling data on chemicals and processes. Many of the papers on that topic were reports of the ACS Committee on Punched Cards.

The ability to mechanically manipulate punched cards prompted the investigation into notation systems or ciphers. These could replace polysyllabic Geneva-system names with unique linear expressions consisting of letters, numerals, and punctuation marks, and yet describe uniquely the full structure of a compound. By 1951, nine such notations were proposed. Dyson and Wiswesser notations are two examples. Digital computers potentially capable of revolutionizing methods of indexing and retrieval of chemical information were first discussed in 1949.

The topics of record keeping and technical writing were the outgrowth of increasing volumes of data and the resulting requirement for organization and accurate reporting. The communication, verbal as well as printed, became more confusing, as new fields of endeavor were investigated and new jargon was generated accordingly.

Papers on the literature of specific fields provided sources of information on specific materials and processes such as those related to plastics or textiles, rather than giving hints how to find specific information.

In the 1950's, the topics discussed were:

- communication of chemical information
- searching techniques and aids
- pharmaceutical and medicinal literature
- industrial information activities
- foreign chemical literature
- language and translation problems
- microdocumentation

Chemical information had become more of a household word. Papers were presented to national and international audiences on efficient methods of communicating research results in textual as well as graphic form.

As electronic digital computers became available, more and more studies were reported on their application to chemical literature searching. The ACS Committee on Punched Cards was renamed the Committee on Scientific Aids for Literature Searching. In 1956, the Division established its own Committee on Aids to Chemical Documentation which conducted open forums.

The increased medical research and development of drugs prompted many investigations into novel

ways of recording and retrieving chemical and biological data. Pharmaceutical companies reported success with centralization, coordination, and integration of their files. Concerns were expressed about toxicity data. Some government agencies, such as the Food and Drug Administration (FDA), reported on their methods for handling data.

In that period, industrial information activities received much attention. Organizations reported on improved communication of technical information within industrial research groups. Individual companies created technical information groups and services, and thus information specialists or information intermediaries came into being. Esso, in 1957, formed its Technical Information Division.

In the 1950's more was published in languages other than English than it is today. Consequently, foreign languages received attention, especially with respect to problems of translation, transliteration, foreign abbreviations, and language instruction. Early attempts to mechanically translate technical literature were described. The launching of Sputnik in 1957 created an unprecedented interest in the Russian language and in Russian technical literature.

The growth of printed publications, primary and secondary journals alike, research reports, and patents, and the scarcity of library shelves gave impetus to the development of all types of microforms such as microcards, microfiche, and microfilm. Experiences in producing, using, and maintaining them against the background of costs and benefits were reported.

In the 1960's the topics were:

- chemical structure searching
- vocabulary control and thesaurus
- machine-produced publications and indexes
- mission-oriented literature searches
- specialized information systems and centers
- selective dissemination of information (SDI)
- value and cost of information

First attempts to code chemical structures for the specific purpose of retrieving structures and substructures by computer were reported in the late 1950's, but many more were described in the 1960's. Innumerable techniques involving fragment coding, connection tables and connectivity matrixes, and line notations were investigated, tested, and proven successful within a given company's environment. The National Research Council (NRC) investigation of chemical notation systems was reported. The CAS Registry System, based on connection tables, and the ISI's Index Chemicus Registry System, based on Wiswesser Line Notation (WLN), became operational.

As the literature searching utilized more and more mechanized aids and as profiles to retrieve the relevant information had to become relatively precise, the need for fairly comprehensive standardization and vocabulary control was examined. Various dictionaries, lists of descriptors, and thesauri were described in detail.

The big innovation of the 1960's was the machine production of printed publications and indexes. KWIC, KWOC, and even double KWIC indexes were produced. These were first exemplified by CAS' *Chemical Titles*, and ISI's *Science Citation Index*. ISI's *Rotadex* was an example of rotated molecular formula index. Design and implementation of mechanized systems to produce such publications were described. The key to success was that from a single data entry multiple products could be derived. In other words, creation of a database could yield individually tailored publications and products.

Mission-oriented concerns first led to the need of searching interdisciplinary databases and then to the creation of mission-oriented bibliographic services. Specialized information systems such as those of the Department of Defense (DOD), National Library of Medicine (NLM), and National Aeronautics and Space Administration (NASA) are examples.

Computerized literature searches led to the creation of other information centers, often within the academic communities. Their purpose was to experiment with batch searches and to provide selective dissemination of information (SDI) services.

With the mounting expenses associated with the acquisition of electronic hardware, development of software, and creation of information centers and services, questions arose about the value of such services, with emphasis on the cost of missing the needed information. Cost effectiveness was also questioned.

Highlights at Selected Meetings

At the 119th ACS National Meeting in Boston in April 1951, the Division members toured the Library of the Massachusetts Institute of Technology (MIT).

At the 120th ACS National Meeting, which was the Diamond Jubilee Meeting, in New York in September 1951, the Division presented three symposia on "Mechanical Aids to Chemical Documentation", "Communication of Chemical Information", and "Chemical Nomenclature". The attendance averaged about 250, with a high of about 300. The luncheon speaker was Pieter E. Verkade of The Netherlands, a long-time

chairman of the IUPAC Commission on the Nomenclature of Organic Chemistry.

A 1988 review paper by Charles E. Meadow cited Mortimer Taube's paper on "The Coordinate Indexing of Scientific Fields", presented at the 1951 symposium on "Mechanical Aids to Chemical Documentation" (James W. Perry, chairman), as one of the "firsts" in the development of information science.

Within the symposium on "Communication of Chemical Information", D. H. Killeffer presented a paper entitled "We Talk to Ourselves - Too Much", commenting on the inability of scientists to explain what they were doing to laymen, and pointing out the need for a group of people who would be able to stand between and in contact with both scientists and the lay public.

For the symposium on "Chemical Nomenclature", Austin M. Patterson remarked in his introduction that the symposium was a unique event, since it constituted the first such symposium held anywhere, not counting prior conferences on chemical nomenclature. Six different countries and three IUPAC nomenclature commissions were represented among the speakers.

At that ACS Diamond Jubilee meeting, E. J. Crane, Editor of *Chemical Abstracts* since 1915 and the first elected chairman of the Division (1950), received the highest ACS honor, the Priestley Medal.

At the 124th ACS National Meeting in Chicago in September 1953, the Division included in its program an exposition with demonstrations of equipment for the preparation, reproduction, and utilization of technical information. Forty-six companies exhibited all varieties of equipment from dry-type photo copiers to microcopiers with such names as "Coxhead DSJ Machine", "Develop Combi", "EZ Sort System", "Thomas Tandem Collator", and "Stenefax".

At the 125th ACS National Meeting in Kansas City in April 1954, an interesting prediction was made that the number of known compounds in the organic chemistry field was expected to increase from about 600,000 to over 1,000,000 within the next 20 years. [The CAS Registry had close to 3,000,000 chemical substances by the end of 1974, the majority of which (over 96%) contained carbon, and only 6 years later by the end of 1980 the number rose to over 5,000,000.]

At the 126th ACS National Meeting in New York in September 1954, a symposium on "Aids to the Use of the Foreign Chemical Literature" was organized in participation with the Modern Language Association of America. The attendees were invited for an evening

demonstration of a Mechanical Translation Machine at the IBM office in New York.

At the same meeting, Tibor E. R. Singer presented a paper, coauthored with Hanna Friedenstien, Ronald M. Warren, and Albert T. Winstead, on "Preparing a Program of the Division of Chemical Literature". The paper was later published in the Spring 1955 issue of *Chemical Literature*.

At the 127th ACS National Meeting in Cincinnati in March 1955, a symposium on "New Tools for the Resurrection of Knowledge" was organized by James W. Perry and Allen Kent. A hot topic, it continued through several more meetings including the 133th ACS National Meeting in San Francisco in April 1958. Among the tools considered were notation systems, structural codes, encoders, electronic searching equipment, automatic language translation, unit concept coordinate indexing, and chemical structure display on the oscilloscope.

At the 129th ACS National Meeting in Dallas in April 1956, E. J. Crane paid tribute at the Divisional luncheon to Austin M. Patterson, former Editor and long-time consultant to Chemical Abstracts, and a pioneer in the development of chemical nomenclature.

At the 130th ACS National Meeting in Atlantic City in September 1956, Chemical Abstracts observed its 50th anniversary by presenting a symposium on CA policies, production, and use. At the same meeting, there was an open discussion on documentation needs of ACS members, organized by a newly appointed Divisional Committee chaired by Allen Kent.

At the 134th ACS National Meeting in Chicago in September 1958, papers in the symposium on "Organic Chemical Nomenclature" not only discussed specific fields (boron and phosphorus compounds, steroids, vitamins, carbohydrates, and polymers), but reported on the French, Japanese, German, and Russian chemical nomenclature and on the activities of national and international committees. At an informal evening session devoted to the comparison of the U.S.S.R. and U.S. scientific literature, two Russian visitors, Victor V. Kafarov of the All-Union Institute of Scientific and Technical Information (VINITI) of the U.S.S.R. Academy of Sciences, and Sergei J. Komov of the Committee of Invention and Discovery of the U.S.S.R. Council of Ministers (equivalent to the U.S. Patent Office) told the attendees that scientific literature abstracting services in the U.S.S.R. faced the same challenges as their U.S. counterparts. It was pointed out, however, that the Soviet Union's patent system differed by giving the inventor either a patent, i.e., exclusive right of invention, or an author's certificate

which assigned the invention to the state as its property. A third Russian visitor, K. Postnova, represented the Chamber of Commerce in Moscow.

At the 136th ACS National Meeting in Atlantic City in September 1959, Herman Skolnik chaired an open meeting of the Committee on Chemical Documentation to discuss chemical literature problems. This open meeting of the Committee eventually became a regular feature at almost every meeting for the next 10 years. The last one was at the 155th National Meeting in San Francisco in April 1968. The consecutive chairmen were Carleton C. Conrad, Helen F. Ginsberg, and Henry M. Kissman.

Another panel discussion, organized by J. G. Tolpin, Ben H. Weil, and Hanna Friedenstein took place on Soviet technical literature, ways and means of increasing its proper use. Two Soviet academicians, N. S. Nametkin and K. A. Andrianov, were invited to attend. Gennady M. Kosolapoff and Michael Becker served as hosts and translators for the visitors.

During another session of the same meeting, Hans Peter Luhn described the Keyword-In-Context (KWIC) index of titles, automatically processed with the aid of electronic data processing equipment.

At the 137th ACS National Meeting in Cleveland in April 1960, Division members toured the Center for Documentation and Communication Research at the Western Reserve University.

At the 141st ACS National Meeting in Washington, DC, in March 1962, during a symposium on "Education of Literature Chemists" a question was posed: "What makes a literature chemist?". Identified were training in chemistry and library science, technical writing, literature searching, foreign language, and "more", which meant on-the-job training. At that time, information retrieval and storage could only be learned on-the-job. These subjects were not taught at schools as yet, and were not considered quite respectable academically.

At the 144th ACS National Meeting in Los Angeles in April 1963, a whole day was devoted to visiting the Armed Services Technical Information Agency (ASTIA) and Douglas Aircraft Company to see "information systems in action".

At the 148th ACS National Meeting in Chicago in September 1964, an evening session was organized in conjunction with a symposium on "Mechanized Handling of Information on Drugs". This gave the opportunity to further interact with the speakers and to continue relevant discussion. At the same meeting the

report of the National Academy of Sciences/National Research Council (NAS/NRC) Committee on Modern Methods of Handling Chemical Information was discussed in detail.

At the 149th ACS National Meeting in Detroit in April 1965, the Division sponsored a trip to Chemical Abstracts Service in Columbus, Ohio.

At the 152nd ACS National Meeting in New York in September 1966, chemical nomenclature was revisited after a long absence. Reports were presented on the nomenclature of organic, inorganic, and biochemical compounds, polymers, carbohydrates, and highly fluorinated hydrocarbons. The need for users' feedback on chemical information sources was highlighted by a symposium on user evaluations.

At the 153rd ACS National Meeting in Miami Beach in April 1967, the subject of "selective dissemination of information", which became better known as "SDI", was discussed at length. This was the result of the advances in handling and extracting information from magnetic tapes.

The 154th ACS National Meeting in Chicago in September 1967 included a symposium on "Present and Future Communication within the Division of Chemical Literature". It was a reexamination of the ways the Division functioned in the past. Suggestions were offered on how to communicate better in the future. Of main concern were the development of information science as a field in its own right and the emergence of a multitude of documentation groups. It was concluded that the Division must relate to those other groups and to broader activities in the field of documentation.

At the 157th ACS National Meeting in Minneapolis in April 1969, Ralph E. O'Dette chaired an open meeting with a panel discussing "Literature and Creativity, Help or Hindrance". This form of an open discussion on broad topics was repeated at subsequent National Meetings with such themes as "How It Will Be in 10 Years?", "Information - Does It Cost What It Is Worth?", and "Information Issues and Problems". The last two were chaired by Charles E. Granito.

In May 1970, the Division participated in the ACS/CIC Joint Conference in Toronto, Canada, celebrating the 25th anniversary of the Chemical Institute of Canada (CIC). Since the CIC had no formal counterpart of the ACS Division of Chemical Literature, the Division organized and presented two symposia on communicating scientific and technical information. Among 24 speakers, there were eight Canadians reporting on their problems and solutions.

At the 160th ACS National Meeting in Chicago in September 1970, Karl F. Heumann in a paper on "How To Listen To a Paper Given Before the ACS Division of Chemical Literature" suggested that the listener should approach a spoken talk as an opening to a free-form discussion somewhat modeled after Gordon Research Conferences. He presented mechanical and organizational requirements for such a new approach.

At the 166th ACS National Meeting in Chicago in August 1973, the Division observed its 25th anniversary with an open forum and panel moderated by James E. Rush with a theme "Where to Now?". Other panelists were Florence E. Wall, Herman Skolnik, Peter B. Schipma, and Anthony E. Petrarca. The following questions were explored:

Where is the Division headed?
What should be its scope?
What should be its goal?

At that meeting, due to the concerns of many Division members about Chemical Abstracts Service (CAS) and its publications and services, a joint symposium was held with the ACS Board Committee on CAS on "Chemical Abstracts in Transition".

At the 168th ACS National Meeting in Atlantic City in September 1974, Herman Skolnik presented a paper on "The Division of Chemical Literature: A Historical Survey - 1943 to the Present" [Ref. 13].

Just how important the CAS publications and services were to the chemical information community was again illustrated by a symposium on "User Reactions to CAS Data and Bibliographic Services". Cynthia H. O'Donohue chaired this session at the 169th ACS National Meeting in Philadelphia in April 1975.

4. Special Meetings, Joint Meetings, and Regional Activities, 1949-1975

A detailed list of symposia and sessions at the special and joint meetings is presented in **Table II** (page 21), along with the number of papers and the names of organizers and chairmen.

Divisional Meetings

The first Divisional regional meeting, outside the framework of any ACS National Meeting, was held in Houston on February 25, 1955. Eight papers were presented on topics ranging from training and activities of the literature chemists to reviews on patent documentation, microdocumentation, and mechanical aids in

documentation. The papers were well received, but attendance was not large, possibly due to lack of publicity.

The next Divisional special meeting was held in Pittsburgh on January 19-21, 1958, with 157 attending. It also covered a wide range of topics from acquisition of material and copyright aspects to evaluation of information sources and information departments to available mechanized documentation equipment. An unusual feature of the meeting was a panel discussion on the future of the Division of Chemical Literature, moderated by the 1958 Chairman, Ben H. Weil. All living past-chairmen of the Division participated, E. J. Crane, James W. Perry, Julian F. Smith, Robert S. Casey, Byron A. Soule, Milburn P. Doss, Melvin G. Mellon, and John H. Fletcher, along with Hanna Friedenstien as chairman-elect.

The Winter Conference in Columbus on March 14-17, 1973, chaired by Judy E. Davis, was an experiment that grew out of the Long Range Planning Committee's recommendation. It covered the field of chemical information from a broader perspective and was organized in such a way that participants could engage in a dialog with the speakers and among themselves. Each panel in seven different technical areas, ranging from information handling in small and large industries to the operation of information suppliers and information centers to university research to copyright law revision, was skillfully moderated by a professional knowledgeable in a given area. One-hundred-and-forty seven (147) participants attended, and many also toured information services in the Columbus area: Chemical Abstracts Service, the Battelle Memorial Institute, the Ohio State University Library, and the Ohio College Library Center (OCLC).

Joint Meeting

The Division participated in the Nuclear and Engineering Science Congress in Cleveland on December 11-15, 1955. A 1-1/2 day symposium on "Literature Resources Applied in Peaceful Use of Atomic Energy" was sponsored.

Local Section Activities

The Division had realized early that only a certain number of members can regularly attend the ACS National Meetings. The Division, or rather dedicated individuals on the local scene, formed local Chemical Literature Groups as counterparts of the Division on the national level.

Table II.
Special and Joint Meetings, 1949-1975

<p>Regional Meeting, February 25, 1955 - Houston, TX</p> <p>The Activities of a Literature Chemist (Martin Padwe) What Management Expects in a Literature Chemist (Louis Koenig) Training the Literature Chemist (Otis C. Dermer) Geological Literature in the Gulf Coast Area (H. B. Stenzell) Patent Practices in Southwestern Research Institutions (Charles E. Zerwekh, Jr.) The Present Status of Mechanical Aids in Documentation (James W. Perry) Market Research from the Literature (Douglas Benton) Microdocumentation (John Eben)</p>
<p>Regional Meeting, January 20-21, 1958 - Pittsburgh, PA</p> <p>Punched Cards and Chemical Documentation (3) (Allen Kent) Future of the Division of Chemical Literature (9) (Ben H. Weil) General (11) Acquisition of Material (6)</p>
<p>Winter Conference, March 14-17, 1973 - Columbus, OH</p> <p>Information Center Outlook (3) (Gerald J. Lazorick) Information Handling in Small Industries (3) (Hanna Friedenstien) Outlook on Proposed Copyright Revision (2) (Ben H. Weil) Information Supplier Outlook (3) (Russell J. Rowlett, Jr.) New Directions in University Research (3) (Anthony E. Petrarca) Information Handling in Large Industries (3) (Judy E. Davis) Information Handling in Government (3) (Saul Herner)</p>

The first such Group was the Delaware Valley ACS Chemical Literature Group, jointly sponsored by the ACS Delaware and Philadelphia Local Sections. Herman Skolnik, the 1960 Divisional Chairman, and Herbert K. Livingston, the 1960 Delaware Section Chairman, were most responsible for the formation of the Group. The group was formally launched on May 10, 1961, with a talk by G. Malcolm Dyson on "Fundamentals of Mechanized Chemical Documentation". The first elected officers of the Group were:

Carleton C. Conrad	chairman
Fred A. Tate	chairman-elect
Benn E. Clouser	treasurer

In 1962, a new Chemical Literature Group became active in the ACS Chicago Local Section. This Group evolved from the Midwest Science Information Club, organized two years earlier by Walter Southern, Howard T. Bonnett, and Frederick K. Broome.

The Division established the Section Liaison Committee in 1962 with the following goals:

- to provide potential speakers to Local Sections on various aspects of chemical literature
- to work with Local Sections in planning

- programs on chemical literature
- to aid in formation of local chemical literature groups

The ACS Columbus Local Section organized a panel discussion on "Problems in Finding and Using the Chemical Literature", chaired by Kurt L. Loening, on May 18, 1962.

ACS Regional Meetings

While the regional meetings of the ACS Local Sections had a long history, most of the formalized ACS Regional Meetings started in the 1960's (Middle Atlantic in 1963, Great Lakes in 1964, Midwest in 1964, and Central in 1968). As with the Local Section meetings, the Division was interested in promoting programs on chemical literature, but had no organizational resources to do that formally. Therefore, the Division depended on individual members to become responsible for promoting, organizing, and chairing the chemical literature or documentation symposia.

A complete list of participation in the ACS Regional Meetings is not available, but representative examples for the period 1949-1975 are listed in **Table III** (page 23).

A most active group was that associated with the Middle Atlantic Regional Meeting (MARM), primarily due to the large concentration of active members of the profession in that geographical area.

5. Educational Activities, Workshops, and Seminars, 1949-1975

Long before the formal organization of the Division in 1948, concerns were expressed by chemistry educators and researchers on educating undergraduate and graduate students to utilize chemical literature. Two 1937 papers presented at the 93rd ACS National Meeting in Chapel Hill, "Acquainting the Undergraduate with the Chemical Library" and "Use of References and Collateral Readings in Inorganic Chemistry", were examples of such concern.

The seminal 1943 paper by Gustav Egloff, presented at the 105th ACS National Meeting in Detroit, provided impetus for the formation of the Chemical Literature Group. Clearly identified was the "lack of fundamental training in the use of chemical literature".

When the Division was formed in 1948, there was no clear reference in the Bylaws to initiate educational activities. Yet, the Division's role was interpreted as providing assistance to the laboratory chemists in their own work with the literature, and providing a forum for the exchange of knowledge and techniques facilitating the use of chemical literature.

Early papers presented before the Division often referred to the topic of instruction or instructional materials, for example, "Training the Student in the Use of Chemical Literature" and "Searching German Chemical Literature".

In 1953 during the week of April 13-18, the Division joined in the sponsorship of a "Workshop on the Production and Use of Technical Reports", held at the Catholic University of America in Washington, DC. More than 250 participants registered from the Government, and from industrial libraries and laboratories.

At the 124th ACS National Meeting in Chicago in September 1953, the Division had its own booth at a highly successful exhibition held in conjunction with the symposium on "Equipment for the Preparation, Reproduction, and Utilization of Technical Information".

At the 127th ACS National Meeting in Cincinnati in March 1955, the Division presented, jointly with the ACS Division of Chemical Education, a symposium on "Training of Literature Chemists" (Melvin G. Mellon,

chairman). Specific topics included training in colleges and universities, on-the-job training in industry, the role of library schools, and careers such as abstractors and indexers.

At the 128th ACS National Meeting in Minneapolis in September 1955, the Executive Committee discussed "possible activities to promote the choice of chemical literature as a career, particularly for women".

In 1956, the ACS Advances in Chemistry Series No. 17, "Training of Literature Chemists" (Melvin G. Mellon, editor) was published. It contained the seven papers presented before the Division in 1955.

In the Fall 1957 issue of *Chemical Literature*, Ben H. Weil reviewed the 2nd edition of "A Guide to the Literature of Chemistry" by E. J. Crane, Austin M. Patterson, and Eleanor B. Marr (John Wiley, New York), praising the book. He commented on what a tremendous growth had occurred in the 30 years since the first edition and on the new attempts to cope with it, among them the efforts of the Division itself.

At the 133rd ACS National Meeting in San Francisco in April 1958, the Executive Committee authorized approaching the Division of Chemical Education with a proposal to form a joint committee on chemical literature courses. This committee would study the existing courses, prepare a suggested course outline, set up minimum library holdings necessary for such courses, and work toward the preparation of course requirements needed for approval by the ACS.

In 1959, the Divisional Chairman, Hanna Friedenstein, included among the Divisional goals "instruction in chemical literature in all ACS accredited schools". She repeated that Division members felt strongly that all chemists should receive instruction in the effective use of the chemical literature as part of their college education. In that year, for the first time, a dedicated Committee was established:

Committee on Instruction in Chemical Literature
(Melvin G. Mellon, chairman).

Later in the year it evolved into a joint Committee of the Division of Chemical Education as well. In February 1960, the Committee began a survey of training in the use of chemical literature in the U.S. by mailing a questionnaire to about 600 colleges.

At the 139th ACS National Meeting in St. Louis in March 1961, the Committee reported on the completion of this survey of 330 responding schools that taught chemistry and chemical engineering. More than 96% were teaching the use of the chemical literature, but only

Table III. Symposia at the ACS Regional Meetings, 1949-1975	
5th Middle Atlantic, April 1970 - Newark, DE Chemical Documentation. General (10) (Herman Skolnik; Paul N. Craig) Information System Design (8) (Melvin L. Huber; Paul N. Craig) Polymer Nomenclature (5) (Herman Skolnik)	
3rd Central, June 1971 - Cincinnati, OH Chemical Documentation (7) (Anthony E. Petrarca)	
3rd Northeast, October 1971 - Buffalo, NY Wordage Problems: Amount, Languages, Access (8) (Charles L. Bernier; Russell J. Rowlett, Jr.; Peter F. Urbach) General (5) (Charles L. Bernier)	
7th Middle Atlantic, February 1972 - Philadelphia, PA Chemical Documentation (19) (Herman Skolnik; Charles E. Granito; G. D. Little; Bruno M. Vasta)	
4th Northeast, October 1972 - Hartford, CT Information Retrieval (3) (Robert E. Maizell)	
8th Middle Atlantic, January 1973 - Washington, DC Chemical Documentation (16) (Herman Skolnik; Bruno M. Vasta) Panel Discussion: Current Status of Information Programs Concerned with Environmental Quality (Henry M. Kissman)	
5th Central, May 1973 - Cleveland, OH Chemical Literature (8) (M. Parsons)	
9th Middle Atlantic, April 1974 - Wilkes-Barre, PA Informational Groups in Chemical Companies - Services, Special Systems, and Research and Development (10) (Herman Skolnik; Barbara A. Montague)	

about 40% taught formal courses. Others taught by course projects, assigned reading, reports, term papers, and the like. While the proportion of schools giving some instruction was high, there was evidence that in many cases the quality of this instruction was not good.

As a follow-up of the survey, the Division jointly with the Division of Chemical Education organized at the 141st ACS National Meeting in Washington, DC, in March 1962, a symposium on the "Education of Literature Chemists" (Melvin G. Mellon; Willis H. Waldo, chairmen). One paper by Elbert G. Smith specifically suggested that new methods of chemical information retrieval should be part of a college chemistry curriculum.

In 1962, Waldemar T. Ziegler succeeded Melvin G. Mellon as chairman of the Committee on Instruction in Chemical Literature. Its task was reaffirmed as being concerned with collecting information on and helping

to improve college and university instruction of chemists and chemical engineers in the use of chemical literature. This included the desirability of developing a curriculum and perhaps setting standards as well.

At the 155th ACS National Meeting in San Francisco in April 1968, a tutorial session (conducted by Elbert G. Smith) on the Wiswesser Line Notation (WLN) took place. Earlier a considerable discussion was held at the Executive Committee's level on whether the Division should sponsor such a tutorial in the first place. At that time the matter of using the WLN was still controversial and some members wished to avoid any possible perception that the Division was actually approving this notation.

At the 156th ACS National Meeting in Atlantic City in September 1968, yet another joint symposium with the Division of Chemical Education was presented on "Training Chemists in the Use of the Chemical Litera-

ture" (Gerald Jahoda, chairman). One paper summarized the results of an earlier survey on the status of chemical literature teaching practices in the U.S. chemistry departments with graduate programs. A decline in the number of chemical literature courses was ascribed to a faculty preference for integration of chemical literature in other courses and to a belief that chemical literature was less important than other courses.

A tutorial on available computer programs for information retrieval (chemical structures, physical data, analytical data, document processing system) was conducted by Freeman H. Dyke, Jr., at the 158th ACS National Meeting in New York in September 1969.

In 1971, the Division reinstated the Committee as

Committee on Continuing Education (Margaret H. Graham, chairman).

The Committee took note of comments and suggestions offered by the members in conjunction with the 1971 salary survey. Mentioned were:

- continuing education programs
- courses at affordable prices
- education programs oriented toward modern information services, including their management techniques
- courses on utilization of information resources for bench chemists and information scientists

In spite of apparently high interest in continuing education programs, when two workshops on "Introduction to Computers" and "Fundamentals of Indexing" were conducted at the 168th ACS National Meeting in Atlantic City in September 1974, the attendance was disappointingly small. Similar workshops planned for the 169th ACS National Meeting in Philadelphia in April 1975 had to be cancelled.

6. Publications, 1949-1975

Chemical Literature Bulletin

At the 116th ACS National Meeting in Atlantic City in September 1949, James W. Perry and Ben H. Weil were authorized to collect items of interest to the Division, and to issue a news bulletin to Division members about four times a year. Ben H. Weil was appointed the Editor of the bulletin, named *Chemical Literature* (with a byline "News Bulletin of the ACS Division of Chemical Literature"), which made its debut in November 1949. It was five-pages long and contained an inaugural editorial, articles on program plans for the next two Divisional meetings, a "1950

Dues Now Due" notice, news notes, and a two-page "Annotated Bibliography on Chemical Documentation", contributed by Mary Alexander, Milburn P. Doss, Frances Jenkins, Arthur B. Johnson, and Julian F. Smith.

With Issue No. 2 of Volume 2 (Spring 1950), the "Annotated Bibliography on Chemical Documentation" was divided for the convenience of the readers into several sections:

- chemical terminology
- presentation of data
- reproduction of data
- classifying, indexing, coding
- sorting
- searching, abstracting
- library operations
- miscellaneous

In 1950, the Executive Committee approved the carrying of advertisements in the bulletin. Three advertisements from a book publisher, a serials book-seller, and a translation service appeared in the Winter 1950 issue. The Spring 1951 issue included an article by E. J. Crane entitled "Are Abstracts Expensive?". The Fall 1951 issue had an article by Ben H. Weil on "Preparation of Scientific and Technical Papers".

A complete set of Divisional abstracts for a forthcoming ACS National Meeting was first included in the Fall 1951 issue and so was the "1951 Directory of Members and Associates". Ben H. Weil contributed an ode:

"The chemical literature worker
Delves deep into journals and books,
But unless he is wise
His work testifies
To the references he overlooks.

Oh chemical literature worker,
Adrift on a deep sea of lore,
Take heed while you may
And go not astray,
For whatever you find, there is more."

The Winter 1951 issue introduced a new feature "Know Your Officers", a list of biographies of Divisional Officers. The Summer 1952 issue reported on the Executive Committee's lengthy discussion on the Divisional publication policy, especially with respect to the publication of papers presented before the Division, on the future of the bulletin, and on the role of preprints and photocopies. This eventually led to a full-fledged article by Ben H. Weil on "Division Publications" in the Spring 1953 issue. He concluded that *Chemical*