ARCS & SPARKS

FALL — WINTER 1973

VOLUME 18-NO. 2

published for our friends in Spectroscopy

and Analytical Chemistry

by ULTRA CARBON CORPORATION — the graphite specialists

Bay City, Michigan

WILLIAM F. MEGGERS AWARD RECIPIENT

Dr. M. S. Wang

The Society for Applied Spectroscopy is pleased to announce the awarding of the William F. Meggers Award to Dr. M. S. Wang of the Monsanto Corporation. The paper, entitled "Impurity Determination in Group III-V Elements" was selected as the winner for 1972.

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Arcs & Sparks is published by Ultra Carbon Corporation, P.O. Box 747, Bay City, Michigan 48706, for the advancement of the professions of spectroscopy and analytical chemistry. News stories, changes of address and other pertinent correspondence should be directed to the Editor.

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Bay City, Michigan 48706

Is there a fellow scientist or a special laboratory you would like to see featured? Let us know — we'll try to oblige.

15¢ THE BAY CITY TIMES HOME EDITIO
BAY CITY, MICHIGAN, TUESDAY, OCTOBER 23, 1973

Ultra Carbon Expands

Ultra Carbon Corp. today announced acquisition of the former Met-Bay, Inc., plant at 900 Harrison and plans to be fully operational in early 1974.

Ultra Carbon's employment has grown steadily and company officials say they anticipate adding workers in the future.

Delbert R. Hughes, president, said the newly-acquired plant, "conveniently located on the Saginaw River, contains more than 125,000 square feet of manufacturing and office space, and will thus triple our firm's current production capabilities."

He added: "The larger facility will house most of Ultra Carbon's existing manufacturing equipment as well as new machinery and instruments presently on the site. The frim will continue to maintain its present location (First and N. Madison) and will operate it primarily for its Research and Deveiopment, Coating and Conversion Departments."

"The expansion of the company's manufacturing and research capabilities was necessitated by the increased world-wide demand for Ultra's carbon and graphite products," Hughes said.

"We have doubled our labor force in the past six months. We now have about 145 on the payroll and are climbing. The skilled labor market here is non-existent, so this has meant extensive training for the manpower we so badly need.

"But the (Bay-Arenac) Skill Center is a real blessing, and will prove its worth in providing this training in the years ahead."

Kelley's Ruling Favors Retirees

LANSING, Mich. (AP) — State agencies should pay increases in health insurance premiums for retired state employes, Michigan Atty. Gen. Frank J. Kelley says.

Kelley said in an opinion the agencies should take the funds from their retirement appropriations as ordered by the Michigan Civil Service Commission, even though the legislature has not appropriated any specific funds for increased health insurance premiums.

"The commission's action is authorized by the Michigan Constitution which provides that the Civil Service Commission shall 'fix rates of compensation for all classes of position,' " Kelley said.

Last November, the commission voted to require two state departments to pay 90 per cent of the health insurance premiums for employes retiring after July 1, 1973.

In a letter to Civil Service Commission Director Sidney Singer, Kelley said the commission's order was subject to review by the legislature and could have been rejected or reduced by a two-thirds vote by lawmakers within 60 days of the action.

Kelley noted this had not been done.

Bridges Get Load Limits

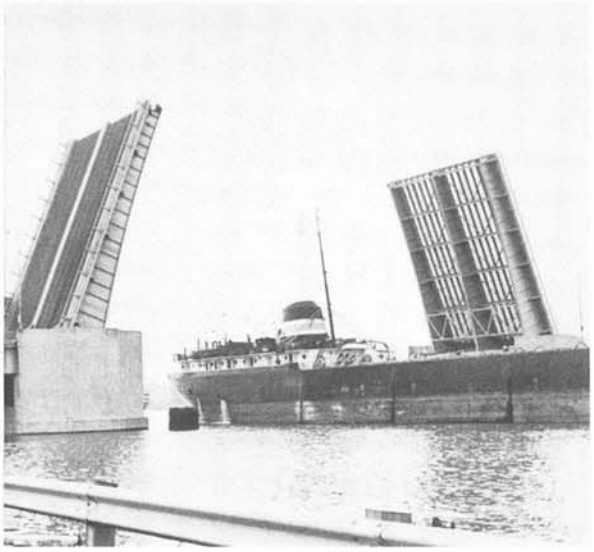
LANSING, Mich. (AP) — Maximum load limits will be posted on three bridges in Lenawee County, the Michigan Highways and Transportation Department says.

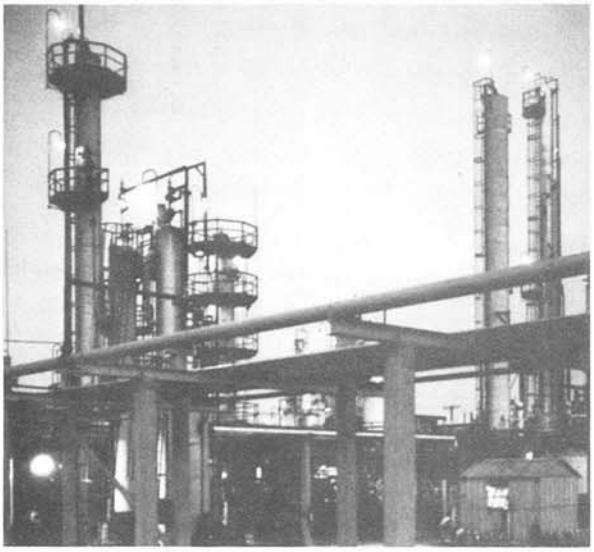
Tributes Pour In to Pablo Casals

SAN JUAN, P.R. (AP) — Tributes poured in today ac-

He returned to Spain in the 1930s to conduct his own orch-

THE GOLDEN TRIANGLE....A Gre





As one approaches for landing at Tri-City Airport the scene below is a perfect blending of blue waters, forest, industry, homes and rich farmland. Viewing the course of the mighty Saginaw River as it flows into the Bay which forms the thumb of the "mitten" which is Michigan, and on into Lake Huron, it is easily evident why this area is growing and prospering. Bounded on one side by the river which, via the St. Lawrence Seaway, carries ships loaded with products to and from every port in the world, and bounded on the other by Interstate 75, which travels non-stop from Sault Ste. Marie, Michigan to St. Petersburg, Florida, the Golden Triangle forms one of the most important manufacturing empires in the midwest.

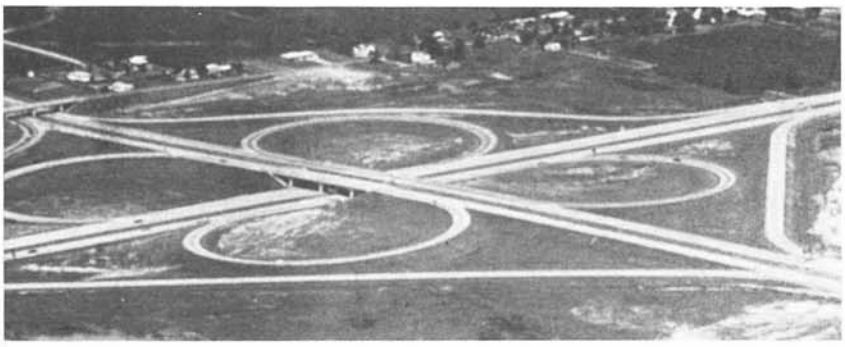
A tradition of industrial progress is the heritage of the Saginaw Valley, for 46 years of the Nineteenth Century it was the acknowledged lumber capital of the world. Today, the area boasts more than 700 industries manufacturing a wide spectrum of products. Agriculture has and is playing a leading role in the growth of the community. Seventy percent of the world supply of white navy beans are grown in the Valley. Thousands of acres are planted in sugar beets which are processed into sugar here in the area. This fertile valley produces fruits and vegetables which are shipped to major markets throughout the east and midwest.

Located on the eastern side of Michigan, 95 miles north of Detroit, the three major cities of the Golden Triangle take their names from the counties in which they are situated. Bay City, the apex of the Triangle, is located at the mouth of the Saginaw River, up-river about ten miles is the City of Saginaw and to the nowthwest on the Tittabawassee River, the City of Midland.

Each of the cities retains its own characteristics but their proximity to one another has created an awareness of the necessity to join forces in community and economic development. Business and industrial leaders have long known that any economic impact which effects one city will effect the others. The untiring efforts of these community leaders has created an almost ideal working, living and recreational area. The availability of industrial and business sites, utilities, local work force and the general business climate is an invitation to all who are considering relocating.

The Triangle, served by a network of major highways leading to key points in every direction benefits everyone and has been one of the factors in the growth and expansion of the community. Motor freight service is excellent with a number of the major trucking companies maintaining terminals in each of the cities. The Valley is also served by five railroads. Tri-City Airport handles the 3rd heaviest air traffic in the state. The Port of Bay City has been designated a Foreign Trade Zone which means that foreign products may be brought into the port for processing and then reshipped abroad without paying either import or export tax.

The Tri Cities offer excellent public and parochial school facilities which



at Place To....

Live....Work....And Play!

are further enhanced by the advanced education courses offered by Saginaw Valley and Delta Colleges and Northwood Institute. Too, the community is less than two hours driving time from the campuses of the University of Michigan and Michigan State University. For those who wish to participate or for the spectator there are cultural activities to suit every taste. An annual calendar lists scores of activities available to area residents, lectures, concerts, exhibitions, art exhibits, recitals, and plays are year-round events offered by the colleges, Saginaw's new Civic Center and Midland's Center for the Performing Arts.

This area probably offers the widest variety of homes in the country and the architecture is as varied as the commerce which created them. From well-kept ornate Victorian homes built by the old lumber barons to the stark lines of ultra modern apartments, a home within the city or suburban living, there is a style and price to fit all. The most recent addition to modern living is BAY VALLEY, a complex of luxury condominiums which offers country living at its finest. This 70-million dollar development represents total environmental planning. Carefully designed to blend into the countryside, its theme is recreation, entertainment and relaxed living. There is a championship 18 hole PGA golf course designed by world famed Scottish golf course architect, Desmond Muirhead, lakes for boating, fishing and swimming, indoor-outdoor pools and tennis club and a fully equipped health spa. In addition there are unique shops, convention facilities, an inn and dining rooms.

Recreation and tourists are the second largest industry in Michigan and the Golden Triangle plays a big role in this water wonderland. One can remain within the Triangle and participate or be a spectator to most every recreational activity known. For the golfer there is a course to fit every handicap. The baseball fan will find games from Little League to professional and the tennis buff can make use of indoor and outdoor facilities. Auto races, yacht and sailboat races are weekly events throughout the summer. The waters of the Saginaw River, Saginaw Bay and Lake Huron are ideal for the sailor or the fisherman. Parks and picnic areas abound. The bird watcher and nature lover will find it all here.

The hunter will find ducks, geese, rabbits and fox only minutes away or if the white tailed deer or bear are his game, a drive of less than an hour will put him on the trail. The fisherman will go after bass, perch, pike, panfish or even the famous coho salmon. Ice fishing, ice boating, hockey and snowmobile trails are just a few of the winter sports available. Less than 80 miles north lies the snow belt of the Lower Peninsula and the finest skiing facilities in the midwest. In the summer this same area offers a wealth of recreational waters, parks and forests.

The Golden Triangle — truly a cross section of good living — at its best!

Federation of Analytical Chemistry and Spectroscopy Societies

ATLANTIC CITY, NEW JERSEY
FIRST ANNUAL MEETING

November 18 - 22, 1974

For information concerning 1974 meeting contact:

Dr. James White
Analytical Chemistry Division
Oak Ridge National Laboratory
Oak Ridge, Tennessee 37830

Dr. George E. Heinze
Johnson & Johnson
ESDP
New Brunswick, New Jersey 08903

DEADLINE FOR SUBMISSION OF ABSTRACTS, JULY 15, 1974

In the next few years the symbol shown above will become familiar to scientists throughout the world. It is the emblem chosen to represent the new Federation of Analytical Chemistry and Spectroscopy Societies. FACSS was incorporated in November, 1972 and since that time its Governing Board has been meeting to establish policy, objectives, and future national meeting sites and programs. This federation is designed to be a cooperative of existing professional scientific societies which are concerned with the development of chemical analysis by bringing together all facets of analytical problem solving.

The discipline of analysis by chemical and physical means is rapidly becoming a paramount factor in all problems of society, such as health care, environment pollution and crime. The objective of this federation is to provide a forum to which concerned and involved representatives of academic, industrial and government institutions can participate and cooperate in an effort to confront this challenge and share their knowledge. The forum in the form of a national meeting will be held the third week of November each year beginning in 1974. A technical program, consisting of symposia and plenary lectures,and an exhibition of analytical equipment and instrumentation will comprise each annual meeting.

Surplus funds accruing from the meeting will be used in the advancement of analytical chemistry and spectroscopy in the form of fellowships and grants to graduate students and faculty members as well as assistance to regional meetings with the same objectives.

The Societies Which Make Up FACSS And Its Governing Board Are As Follows:

AMERICAN MICROCHEMICAL SOCIETY
Mr. Alexander N. Prezioso
Fort Lee, New Jersey

Mrs. Uni Zeek
Warner Lambert Company
Morris Plains, New Jersey

ANALYSIS INSTRUMENTATION DIVISION
INSTRUMENT SOCIETY OF AMERICA
Mrs. Margaret Cochran
Instrument Society of America
Pittsburgh, Pennsylvania

Mr. Richard Hagstrom
Olin Research Center
New Haven, Connecticut

ASSOCIATION OF ANALYTICAL CHEMISTS, INC. (ANACHEM)
Dr. Ira J. Holcomb
Parke Davis & Company
Detroit, Michigan

Dr. Edward J. Havlena
Detroit Edison Company
Detroit, Michigan

DIVISION OF ANALYTICAL CHEMISTRY
AMERICAN CHEMICAL SOCIETY
Dr. James White
Oak Ridge National Laboratory
Oak Ridge, Tennessee

Dr. Ed Dunlop
DuPont Experimental Station
Wilmington, Delaware

EASTERN ANALYTICAL SYMPOSIUM
Dr. Edward G. Brame, Jr.
DuPont Experimental Station
Wilmington, Delaware

Dr. George E. Heinze
Johnson & Johnson
New Brunswick, New Jersey

MID-AMERICA CONFERENCE
Dr. Claude Lucchesi
Northwestern University
Evanston, Illinois

Mr. John Forrette
Velsicol Chemical Company
Chicago, Illinois

SOCIETY FOR APPLIED SPECTROSCOPY
Mrs. Jeanette G. Grasselli
The Standard Oil Company (Ohio)
Cleveland, Ohio

Mr. Raymond S. Vogel
University of Illinois
Urbana, Illinois

FACSS MEETINGS

1st November 18-22, 1974
Atlantic City, New Jersey
Chairmen: Dr. George Heinze
Dr. J. C. White

2nd October 6-10, 1975
Indianapolis, Indiana
Chairmen: Dr. G. Wallace
Dr. I. J. Holcomb

3rd November 14-20, 1976
Philadelphia, Pennsylvania
Chairmen: Dr. E. C. Dunlop
Dr. K. Heinrich
Dr. E. Brame

Liaison with the Colloquium Spectroscopicum Internationale:
Mr. B. Scribner
Dr. E. Brame

4th November 7-11, 1977
Detroit, Michigan

NATURAL GRAPHITE CALIBRATION STANDARD NOW AVAILABLE

Work on the development of calibration standards for natural graphite was first announced in 1972 as a joint effort of Ultra Carbon Corporation, Bay City, Michigan and Accu-Labs Research, Incorporated, Wheat Ridge, Colorado. During the Rocky Mountain Conference, August, 1973, Dr. Howard E. Taylor of Accu-Labs Research, Incorporated, presented a paper on, Further Advances in the Certification of Natural Graphite Calibration Standards. The paper gave the present status of this work and the methods of analysis being used.

Dr. Taylor's paper dealt with the certification of lead, barium, copper and chromium. The certification is based primarily on four methods of trace analysis: isotope dilution mass spectrophotometry and emission spectroscopy. Detail of the techniques involved in each of these methods was described and tables showing the results of each method were presented.

It is believed the primary advantages of this type of standard over commonly available synthetic graphite standards are: elements have not been doped in but are present as they naturally occur, even distribution of elements throughout the material, uniform particle size distribution (to minimize degree of segregation of material on standing), and relatively low concentrations of trace elements certified.

Data on certification of additional elements will be available as they are certified in the future. At present a Natural Graphite Calibration Standard Kit made up of six certified elements is available.

For additional information contact:

Dr. Howard E. Taylor
Accu-Labs Research, Incorporated
9170 West 44th Street
Wheat Ridge, Colorado 80033
Telephone: 303-421-9590

"Scotty"

ROBERT K. SCOTT

July 2, 1913 - May 28, 1973

The Spectroscopy Society of Pittsburgh sadly announces the death of one of its best known members, Robert K. Scott, more affectionately known as "Scotty" to his many friends. Mr. Scott was a research chemist in the Research Laboratories of Harbison-Walker Refractories Division, Dresser Industries Incorporated, Pittsburgh, Pennsylvania.

"Scotty" was a member of the American Chemical Society, Spectroscopy Society of Pittsburgh, the Society for Analytical Chemists of Pittsburgh, the American Ceramic Society, American Society for Testing and Materials. In the latter organization he was especially active in Committee D-19 on Industrial Water, and E-2 on Emission Spectroscopy. He was widely known for his work as Co-ordinator of Meetings for the Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. He served that group since its inception in 1950 in most of the capacities, including the General Chairman in 1955. In addition to his technical affiliation he was Director of the Wilkinsburg-Penn Joint Water Authority, a member of the Forest Hill Rotary Club, the Forest Hills Planning Commission, and the Mulberry United Presbyterian Church. "Scotty's interest, enthusiasm, and concern drew him into many activities where he worked unstintingly. He will be missed by a large body of friends in Pittsburgh and elsewhere across the nation. "Scotty" is survived by his wife, Mary Scott, son R. Douglas Scott, and daughters Mrs. Marilyn Cross and Mrs. Nancy Jenks.

R. K. SCOTT MEMORIAL

National College Grants Award Program

The Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, the Society for Analytical Chemists of Pittsburgh, and the Spectroscopy Society of Pittsburgh jointly announce the first year of funding for the "R. K. Scott Memorial National College Grants Award Program." $1500 Awards will be presented to each of two small, private colleges for the purchase of scientific instrumentation, audio-visual and other teaching aids, and/or library materials to be used in the teaching of science.

"KICKOFF" 1974 PITTSBURGH CONFERENCE SILVER ANNIVERSARY

1974 Conference Committee Officers and Chairmen (L to R): Robert W. Baudoux, U.S. Steel Corp. Research Lab., Exposition Chairman; Charles J. McCafferty, PPG Industries, Vice President; Harold A. Sweeney, Koppers Company, Registration Chairman; Dr. Edwin S. Hodge, Carnegie-Mellon University, Administrative Assistant; Dr. Joseph A. Feldman, Duquesne University, President; Dr. Richard Danchik, Alcoa Research Lab., Program Chairman and Alex Kavoulakis, Shenango, Inc., Treasurer.

1974 Conference Committee Officers and Chairmen (L to R): Oswald Wilkinson, Alcoa Technical Center, Chairman of Special Projects; William M. Hickam, Westinghouse Research Lab., Coordinator of Society Meetings; George L. Vassilaros, Colt Industries, Housing Chairman; Florence A. Eggers, Jones & Laughlin Steel Corp., Coordinator of Society Meetings; Joseph C. Halovanic, Consolidation Coal Company, Activities Chairman; Thomas Garland, Gulf Research & Development Company, Audio-Visuals Chairman; Jayne S. Carson, Employment Chairman and Mary Scott, Ladies Activities Program Chairman.

1974 Board of Directors (L to R): H.L. Retcofsky, Chairman of Spectroscopy Society, and Conference Assistant Treasurer; Charles J. McCafferty, Vice President; Dr. Joseph A. Feldman, President; Jane Harter Judd, Chairman of Society for Analytical Chemists, and Conference Executive Secretary; Joseph R. Ryan, Chairman-Long Range Planning Committee, 1973 Past President; Dr. Gerald L. Carlson, Chairman-Elect of Spectroscopy Society, 1969 Past President and Alex Kavoulakis, Chairman-Elect of Society for Analytical Chemists, and Conference Treasurer.

Joseph R. Ryan, 1973 Conference President, passing the Conference gavel to Dr. Joseph A. Feldman, 1974 President, at the first official meeting held September 22, 1973, opening the year of the 1974 Silver Anniversary Pittsburgh Conference.

The Pittsburgh Conference will celebrate its Silver Anniversary during the week of March 4-8, 1974, at the Convention Center in Cleveland, Ohio. The past 25 years have seen the "Pittsburgh Conference" attain a reputation as the finest meeting of its kind. Recognizing the scope and caliber of the technical papers and instrument exposition, scientists throughout the world have attended and participated in increased numbers each year, with the result that in 1972, the U.S. Department of Commerce designated it an International Conference.

The Silver Anniversary Conference promises to exceed the past with a program of more than 400 technical papers presented by leading scientists in their respective fields. At the Exposition of Modern Laboratory Equipment the analytical chemist and spectroscopist will view the most recent and modern instrumentation and laboratory equipment produced by more than 300 of the world's leading manufacturers.

The 1973 Conference saw 7,486 registered scientists, 318 technical papers presented and an exhibit of 515 booths representing 253 exhibitors. In addition, 4,000 persons not attending the technical sessions viewed the exhibits. This increase in attendance and exhibitors manifests the esteem which this conference has justifiably earned since its humble beginning in 1950 when 800 attendees were offered 56 technical papers and 14 companies displayed their products.

The Annual Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy is an outgrowth of separate conferences held prior to 1950 by the two sponsoring organizations, The Society of Analytical Chemists of Pittsburgh (The Analytical Chemistry Group of the Pittsburgh Section, American Chemical Society) and the Spectroscopy Society of Pittsburgh, the Pittsburgh Section of the Society for Applied Spectroscopy. For the past 25 years it has been the cooperative efforts of volunteers from each of these organizations which attributed to the increased excellence of each succeeding technical program and exhibition.

The Society for Analytical Chemists was organized in 1942 by a group of chief chemists and research analysts to provide for an interchange of ideas, develop solutions to problems in analytical chemistry, and to encourage sociability among practitioners of the same profession. In 1945, this society became affiliated with the Pittsburgh Section of the American Chemical Society as its Analytical Group. Its first Analytical Symposium on problems of current interest was held on February 6, 1946, with interest and participation in these symposia showing growth. In 1949, the first Exposition of Modern Laboratory Equipment was held in conjunction with the symposium and has been an integral part of the "Pittsburgh Conference" every year since.

(continued next page)

Pittsburgh has been a leader in the field of spectroscopy since the work of Dr. David Alter who, in 1854, reported on "Certain Physical Properties of Light, Produced by the Combustions of Different Metals in the Electric Spark, Refracted by a Prism." This work was reported before the work of BUNSEN. In 1881, at the Allegheny Observatory of the University of Pittsburgh, Dr. LANGLEY started his work on the bolometer and the mapping of the solar spectrum. Shortly after 1900, John BRASHEAR built at least one double prism spectroscope. Since 1919, the work of Dr. Keivin BURNS at the Allegheny Observatory, on standard wave-lengths of high precision, has been a basic contribution to spectroscopy. Interest in spectroscopy continued to grow and in 1946, the Spectroscopy Society of Pittsburgh was organized to foster and promote its growth. The first Pittsburgh Conference on Applied Spectroscopy in 1940, was sponsored by the Spectroscopy Laboratory of the University of Pittsburgh, under the direction of Dr. Mary E. WARGA, for the purpose of discussing industrial applications of spectroscopy. The formation of the Spectroscopy Society of Pittsburgh in 1946 was an outgrowth of these meetings. They were held during the succeeding years through 1949.

Today's "Pittsburgh Conference" had its inception in 1950, when the Society for Analytical Chemists and the Spectroscopy Society of Pittsburgh combined their individual meetings, symposia and exhibits into the first successful "Pittsburgh Conference."

In addition to the broad technical program, and extensive exhibit of laboratory equipment, the sponsoring societies present annual awards which have gained national recognition. During the year, both sponsoring societies support many other programs. The Society for Analytical Chemists sponsors a college scholarship program in Chemistry, or Chemical Engineering, also college senior chemistry awards, and summer graduate fellowships under the auspices of the Analytical Division of the American Chemical Society. The Spectroscopy Society of Pittsburgh gives an annual award alternately to an emission or an absorption spectroscopist, and the Keivin Burns citation to outstanding high school science teachers in the Pittsburgh area. Since 1957, the Spectroscopy Society of Pittsburgh has made annual grants to several district colleges for needed scientific equipment and library materials. Both sponsoring societies support the book fund of the Carnegie Library Technology Section, and the annual Buhl Planetarium High School Science Fair.

Since 1964, the Conference has been incorporated under the laws of the Commonwealth of Pennsylvania with the two sponsoring societies as the principal stockholders. Thus, operating as a business corporation, the Conference Corporation is better able to meet the needs and requirements of the conferees and the scientific community.

Since 1968, the "Pittsburgh Conference" has met in the City of Cleveland, Ohio, which has offered more convenient facilities for the increasing growth of the Conference.

For information contact:
Chairman:
Dr. Joseph A. Feldman
6537 Aylesboro Avenue
Pittsburgh, PA 15217

For information contact:
Exhibit Chairman
Mr. Robert W. Baudoux
Research Laboratory M.S. 57
United States Steel Corporation
Monroeville, PA 15146

SYMPOSIUM HIGHLIGHTS - Next Page

1974 PITTSBURGH CONFERENCE SILVER ANNIVERSARY HIGHLIGHTS

MARCH 4-8, 1974
CLEVELAND, OHIO

SILVER ANNIVERSARY SYMPOSIUM "GREAT MOMENTS IN ANALYTICAL CHEMISTRY AND SPECTROSCOPY"

Four outstanding speakers will discuss some of the most noteworthy developments that have occurred in analytical chemistry and spectroscopy during the last quarter century.

A. J. P. Martin, Nobel Laureate and the co-discovered of partition chromatography, will discuss the development and the present status of this field.

Howard Cary will describe the development of recording double beam spectrophotometers. He has played a central role in this, starting with his work on the pioneering Beckman DU spectrophotometers. The company which he founded produced the much-admired Cary spectrophotometers. He has also made important contributions to Raman and infrared instrumentation. Because of the breadth of his experience, he is uniquely qualified to discuss this subject.

Charles N. Reilley, noted analytical chemist, will survey and evaluate the many electroanalytical methods that are now available.

Alan Walsh, the Australian scientist who founded the enormously important technique of atomic absorption spectroscopy, will give his personal reminiscences of its development and his evaluation of the field at present.

Here is a unique opportunity to hear about important scientific history from the people who made it.

THE ROLE OF ANALYSIS IN CONSUMER CHEMISTRY

Consumers want more information about the food they eat, the efficacy and safety of the medicine their doctor prescribes, and the quality of the materials used in manufacturing their automobiles and other consumer products. It is invariably analytical chemistry which provides the scientific data upon which decisions can be made regarding food pollutants, drug potency and acceptability and conformity to designated specifications.

Professor Clifton E. Meloan of the Department of Chemistry, Kansas State University and a FDA Science Advisor will discuss the detection of the adulteration of foods and analytical problems associated with the determination of toxic metals and pesticide residues in foods.

Dr. Daniel Banes, Director of the Drug Standards Division of the United States Pharmacopeia and former Director of the National Center for Drug Analysis will present a provocative talk on "The Evolving Rule of Analysis in Drug Evaluation." The importance of reliable, discriminating methods of analysis and the use of meaningful standards, will be discussed.

The talk to be given by Dr. Lynn L. Lewis, Research Laboratories of General Motors Corporation, will emphasize the development and application of analytical techniques in the automotive industry and how specific advances have contributed to the material sciences and to the solution of environmental problems.

1974 PITTSBURGH SPECTROSCOPY AWARD SYMPOSIUM "MATRIX ISOLATION SPECTROSCOPY"

This special symposium has been organized to honor Professor George C. Pimentel of the University of California who has been named as the recipient of the 1974 Pittsburgh Spectroscopy Award. This award has been presented annually since 1957 by the Spectroscopy Society of Pittsburgh to individuals who have made outstanding contributions to the field of spectroscopy.

Among Professor Pimentel's many contributions to chemistry and spectroscopy has been the development of the low temperature technique called matrix isolation for the infrared spectroscopy study of very reactive substances at cryogenic temperatures. This technique has found significant application in many areas of chemistry and has been chosen as the topic of this special symposium. Professor Pimente's Award address is entitled "MATRIX ISOLATION INFRARED STUDY OF HYDROGEN BONDS AND THEIR LITHIUM COUNTERPARTS." Other contributors to the symposium will be Dr. Lester Andrews, University of Virginia, Dr. Joseph Nibler, Oregon State University, and Dr. William Weltner, University of Florida, all former colleagues of Professor Pimentel who have continued to develop and exploit the matrix isolation method in spectroscopic studies of unstable and reactive materials.

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1974 PITTSBUR
SILVER ANNIVER

MARCH 4-8, 1974
CLEVELAND, OHIO

Symposium on Applied Liquid Chromatography

The symposium on applied liquid chromatography will be keynoted by Professor Howard Zimmerman of the University of Wisconsin. The purpose of this symposium will be to demonstrate how real problems have been attacked by real people using both analytical and preparative liquid chromatography. A sampling of work from several universities and different industries will show how liquid chromatography can support a research activity, ensure the purity of raw or incoming materials, isolate specific compounds, analyze competitive products, follow stability of materials susceptible to change, and control production quality.

Modern, high speed liquid chromatography can do all this with only a fraction of a gram of material, often in a matter of a few minutes. It can be a productive tool immediately after installation since no special training or course work is required to obtain separations and analyses. No special procedures are required for direct analysis of labile or non-volatile materials and major components or trace impurities can be separated with comparative ease in molecular weight ranges as low as 100 or as high as 10,000,000.

ASTM E-2 1974 Mini-Symposium "Determination of the Spectrochemical Working Curve"

The drawing of the best-fit working curves by geometrical aids has been common practice since the onset of quantitative spectrochemical analysis. Today, with the availability of electronic calculators and computers, this operation can now be carried out mathematically with greater precision and speed. The use of such aids allows almost instantaneous conversion of intensity measurements into percentage composition, with simultaneous correction for inter-element interferences and matrix effects. Even though these techniques are being applied on a rapidly increasing scale, it is a matter of some concern that in many instances they may be misapplied, due to a lack of a more extensive knowledge of the principles involved.

The objective of this symposium is to discuss these principles and the best methods for their application, at the same time describing problems which may arise and their treatment. Examples of specific applications currently employed by manufacturers and users of optical emmission and x-ray fluorescence instrumentation will also be given. It is hoped that the relevant papers and subsequent discussion will prove helpful and valuable to all spectroscopists working in these fields.

RECENT DEVELOPMENTS AND TRENDS IN CLINICAL CHEMISTRY

One of the many new items to be included in the Silver Anniversary Conference is a symposium on Clinical Chemistry. The symposium will include the following experts in various areas of this ever expanding field.

Dr. George N. Bowers, National President-Elect of the American Association of Clinical Chemists, Hartford Hospital, Hartford, Connecticut, will discuss new ultramicro enzyme analytical systems as well as the state of the art of clinical chemistry in general.

Dr. Charles D. Scott, Chief of the Biochemical Technology Section of the Oak Ridge National Laboratory, will discuss the combination of recent advances in development of high pressure liquid chromatography systems along with recent analytical results from clinical and biochemical research laboratories using such systems.

Instrument Consultation and Development expert, Dr. Nelson L. Alpert, Ridgeway Station, Stamford, Connecticut. will bring the symposium audience up to date on trends in clinical instruments. He will also give a comparison and contrast of instrument needs of clinical and analytical chemists.

Dr. Barry G. England. Director of the Central Ligand Assay Laboratory of the University of Michigan will share his expertise on radioimmunoassay techniques.

GH CONFERENCE
SARY HIGHLIGHTS

MARCH 4-8, 1974
CLEVELAND, OHIO

MONITORING OF WATER POLLUTANTS FOR ABATEMENT, FOR PREVENTION, FOR ECONOMICS

Recognition of the need to provide greater controls over water quality has led to increased State and Federal programs for managing our water resources. The implementation of these programs requires increased levels of effort in the characterization of current water quality, assessment of trends, identification and quantification of point and non-point pollution sources. This effective control can only be accomplished by wide scale introduction and use of effective monitoring approaches.

The monitoring systems now in use are described and the techniques of personnel training, construction of facilities, calibration procedures, maintenance, and data processing are discussed. A good working relationship with industry and other agencies in various aspects of water pollution is necessary since water problems know no political boundries.

REMOTE SENSING OF ENVIRONMENTAL AIR POLLUTANTS

The Symposium on Remote Sensing of Atmospheric Contaminants demonstrates the objective of the Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy to present the new and novel applications of analytical instrumentation and spectroscopy.

The symposium will include the application of tunable lasers in the sensing of atmospheric contaminants, remote Raman spectroscopy will be discussed as to its contribution in detection of contaminants hundreds of meters away from the equipment. Optical correlation techniques will also be presented that will permit the remote sensing of air pollution from satellites.

ASTM SYMPOSIUM ON COMPUTERIZED LABORATORY SYSTEMS

This symposium is being sponsored by ASTM Committee E-31 on Computerized Laboratory Systems. It is the first contributed paper symposium to be sponsored by this newly formed committee.

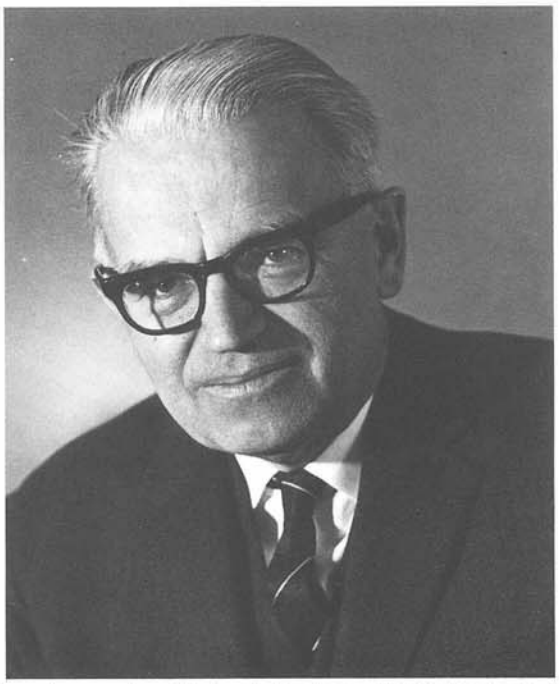
Since laboratory automation is a newly emerging and complex discipline for which standards and guidelines are not readily available, symposium objectives have been focused on how to define, implement, evaluate, and document computerized laboratory systems. The primary goal is to provide the scientific community with specific examples of operational systems which have been developed under this concept of automation. It is expected that a general reference based on papers presented at this symposium will be published in late 1974. Typical subjects include methods for specifying a computerized laboratory system, implementation criteria, functional design criteria, specific examples of evaluation methods, and examples of documentation criteria used for completed systems. Highlights of the symposium will include invited papers by Dr. Jack W. Frazer, Lawrence Livermore Laboratory, Livermore, California and Dr. Sam Perone, Department of Chemistry, Purdue University, Lafayette, Indiana.

RECENT ADVANCES IN SELECTIVE ION ELECTRODES

Because it has been several years since the subject of ion-selective methods has been treated in a planned symposium at the Pittsburgh meeting, the program committee has organized this symposium to reflect the continued wide and growing interest m this very active field of electrochemical research. Invited papers will include contributions from Profs. George G. Guilbault and Wilhelm Simon of the academic community and Drs. James Ross and Ted Light from industry. These speakers will provide the basis for coverage of the latest developments in blomedical, pollution monitoring, and industrial applications of ion-selective electrodes, as well as the theory and design of electrodes for future applications.

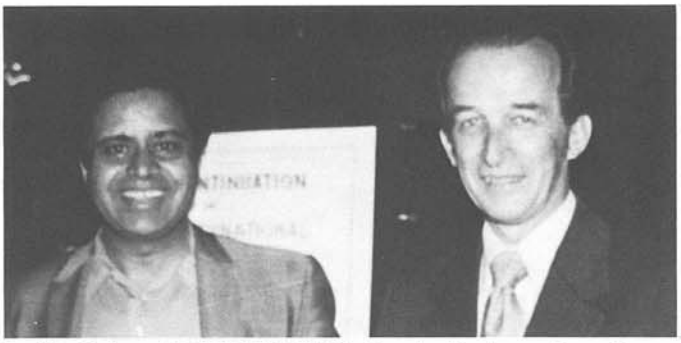
It is expected that the general trend toward continuous use of electrodes in biomedical and industrial monitoring situations will receive major attention both in the invited and contributed papers.

4th INTERNATIONAL CONFERENCE ON ATOMIC SPECTROS TORONTO, ONTARIO, CANADA,



Keynote speaker, Gerhard Herzberg, Nobel Laureate in Chemistry 1971 (Canada).

Plenary Lecturer, Professor C.Th.J. Alkemade, University Utrecht, Utrecht, Netherlands.

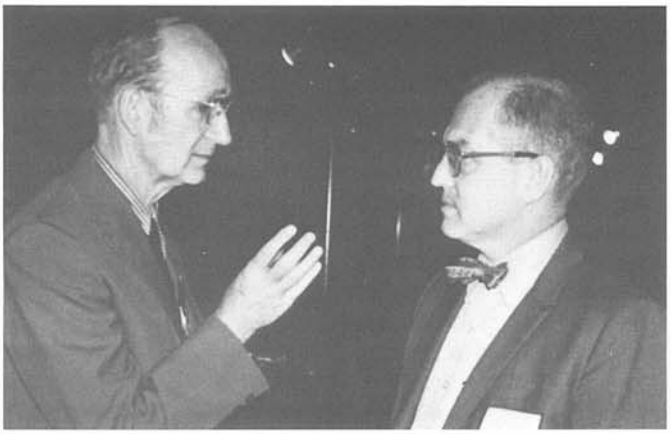


Dr. Vir D. Anand, USAFSAM/VNA, Brooks Air Force Base, Texas and Plenary Lecturer, Dr. V. A. Fassel, Iowa State University, Ames Laboratory, Ames, Iowa.

Plenary Lecturers, Dr. R. K. Skogerboe, Colorado State University, Fort Collins, Colorado, and Dr. J. B. Willis, CSIRO, Clayton, Victoria, Australia.

Dr. J.M.M. d'Olieslager, University of Leuven, Heverlee, Belgium and Plenary Lecturer, Dr. I. Rubeska, Geological Survey Prague, Praha, Czechoslovakia.

COPY and the 20TH CANADIAN SPECTROSCOPY SYMPOSIUM 29 OCTOBER — 2 NOVEMBER, 1973



Mr. Joseph Goleb, U.S. Treasury, Washington, D.C. and Dr. Marvin Margoshes, Technicon Instrument Corporation, Tarrytown, N.Y.

Headquarters for the Conference, the beautiful INN ON THE PARK.

Dr. C. L. Chakrabarti, Carleton University, Ottawa, Ontario and Professor Gary M. Hieftje, Indiana University, Bloomington, Indiana.

Professor E. D. Schmid, University of Freiburg, Germany, Professor Peter J. Krueger, University of Calgary, Calgary, Alberta and Dr. I. Voinovitch, Laboratoy Central des Ponts et Chausses, Paris, France.

M. Z. Katzendorfer, St. Romuald, P.Q. and Mr. Peter Tymchuk, National Research Council, Ottawa, Ontario.

Mr. Bernard Boyd, Angstrom Incorporated, Belleville, Michigan and Mr. Charles E. Pepper, National Lead Company of Ohio, Cincinnati, Ohio.

Dr. Maurice Pinta, Office de la Recherche Scientifique, Bondy, France and Mr. Charles Disant, CENG/LCAC, Grenoble, France.

(continued next page)

4th INTERNATIONAL CONFERENCE ON ATOMIC SPECTROSCOPY and the 20th CANADIAN SPECTROSCOPY SYMPOSIUM

Mr. P. J. Skerry and Mr. Robert Burley both of Northern Electric Company Ltd., Montreal, Quebec.

Dr. F. N. Abercrombie, Abbott Laboratories, North Chicago, Illinois, Mr. Louis E. Owen, Tomorrow Enterprises, Portsmouth, Ohio and Dr. Michael D. Silvester, Barrington Research, Toronto, Ontario.

Professor George H. Morrison, Cornell University, Ithaca, N.Y., Professor Keiichiro Fuwa, University of Tokyo, Japan, Dr. J. Hwang, Brookline, Mass., and Mr. Akbar Montaser, Michigan State University, East Lansing, Michigan.

Dr. K. Govindaraju, C.N.R.S., Nancy, France, Mr. W. H. Champ, Geological Survey of Canada, Ottawa, Ontario and G. R. Webber.

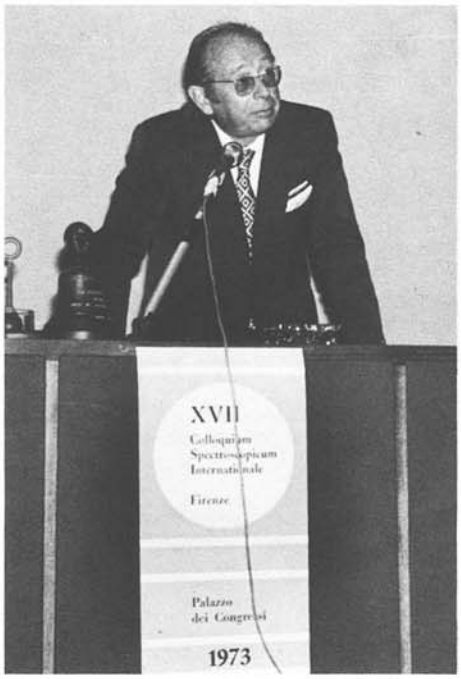
Professor F. Rousselet, University of Paris, France, Dr. Guy Baudin, Atomic Energy Commission, France and Dr. I. Voinovitch, Central Laboratories, Paris, France.

Dr. K. W. Jackson, Dr. Kenneth M. Aldous, both of New York State Department of Health, Albany, N.Y. and Dr. Donald Osten, SRR Instrument, Santa Monica, California.

COLLOQUIUM SPECTROSCOPICUM INTERNATIONALE XVII

Florence, Italy September 16 - 22, 1973

MR. & MRS. CARL J. LEISTNER - This was a combined business trip and honeymoon for Jeanne and Carl. At the close of the conference they made a two week tour of Europe. Mr. Leistner is Technical Director for Ultra Carbon Corporation, Bay City, Michigan.



CONFERENCE PRESIDENT - Professor Oscar Masi.

ORGANIZING COMMITTEEMEN - Dr. E. W. Salpeter, Scientific Director, Dr. M. Reggiani, Vice President, Professor O. Masi, President, Dr. B. Morello, Executive Director and Professor R. Baistrocchi, Executive Director.

Professor A. Karjakin, Dr. Adel Gomeniouk and Professor S. L. Mandelstam, representing the USSR.

CONFERENCE HOSTESSES - Elena, Carola and Danieca.

COLLOQUIUM SPECTROSCOPICUM INTERNATIONALE XVII

Florence, Italy September 16 - 22, 1973

Spanish representatives, Professor J. Morcillo, Dr. F. Alvarez and Dr. M. Roca.

T. A. Read, UK, G. M. Hieftje, R. McGowan, both U.S.A. and A. Petrakiev, Bulgaria.

A threesome from France, M. Ricard, M. Neuilly and L. Franc.

Thursday night dinner and cocktails in one of the magnificent dining halls of the Congress Building.

H. Kaiser, Germany and I. Rubeska, CSSR.

The Tower of Pisa is the background for this group shot of Mrs. Jeanne Leistner, USA, Mr. and Mrs. D. E. Stiijfhoorn, Norway and Mrs. Ann Follo, Norway.

R. L. Mitchell, Scotland, Father Junkes, Italy, L. R. Butler, S. Africa, and Carl Leistner, USA.

H. J. Eichhoff, Kurt Laqua both BRD, and Eduard Plsko, CSSR.

COLLOQUIUM SPECTROSCOPICUM INTERNATIONALE XVII

Florence, Italy September 16-22, 1973

A. Strasheim, S. Africa and R. Barnes, USA.

From Norway, A. Follo, G. Faye and M. Odegard.

At the entrance of the Congress Building, Mr. and Mrs. Jean Artaud, France.

The Monday evening concert of classic and modern music played by the Piano Duo Canino-Ballista in the Main Hall of the Congress Building.

Lecturer, Dr. H. Kaiser, Germany

On Wednesday there was a break in the scientific program for a visit to The Tower.

CALL FOR PAPERS

10th TOKYO CONFERENCE ON APPLIED SPECTROSCOPY
AN INTERNATIONAL MEETING

The organizing committee, recognizing the International character of spectroscopy, has decided that the 10th Tokyo Conference will be an International meeting on Applied Spectroscopy with an Exposition of Apparatus.

The meeting will be held in Tokyo, Japan,

November 6 through 8, 1974.

Although the broad field of Applied Spectroscopy will be covered, special emphasis will be given to applications in the Environmental Sciences.

Japan extends a global invitation to spectroscopists for this, the first international Tokyo meeting of Applied Spectroscopy.

Abstracts of papers submitted for presentation should be approximately 200 words and must meet the deadline date of 29th June, 1974. Send to:

10th Tokyo Conference on Applied Spectroscopy
The Japan Society for Analytical Chemistry
1-1-5 Hon-machi, Shibuya-ku, Tokyo, Japan 151

21st CANADIAN SPECTROSCOPY SYMPOSIUM, OTTAWA, CANADA

October 7-9, 1974. Contact:

Mr. J. L. Dalton, Secretary
21st Canadian Spectroscopy Symposium
Dept. of Energy, Mines and Resources
Mines Branch
55 Booth Street
Ottawa, Ontario, K1A OG1, Canada

FIRST ANNUAL FACSS MEETING TO BE HELD IN ATLANTIC CITY, NEW JERSEY

November 18-22, 1974. Deadline for submission of abstracts, July 15, 1974. For information contact:

Dr. George E. Heinze
Johnson & Johnson
ESDP
New Brunswick, N.J. 08903

Dr. James White
Analytical Chemistry Division
Oak Ridge National Laboratory
Oak Ridge, Tenn. 37830

COURSES OFFERED

For information contact:

Dr. D. T. Burns
University of Technology
Loughborough Leicester LE11 3 TU
England

Vapour Phase Chromatography
February 11 to February 15, 1974.

Spectrofluorimetry and related methods
March 25 to March 26, 1974
(Fee £15 for 2-day course)

Gel Filtration and Electrophoresis
April 1 to April 5, 1974.

Aspects of Electroanalysis
September 23 to September 27, 1974.

Fee for 1-week courses, including accommodation: £50

17th CONFERENCE ON ANALYTICAL CHEMISTRY IN NUCLEAR TECHNOLOGY

Gatlinburg, Tennessee, October 23-25, 1973

Dr. J. P. Biscar, Department of Physics, University of Wyoming and Dr. J. M. Dale, Oak Ridge National Laboratory.

Dr. R. A. Osteryoung, Department of Chemistry, Colorado State University, and Mrs. R. A. (Janet G.) Osteryoung, Department of Microbiology and Civil Engineering, Colorado State University and Dr. Gleb Mamantov, Department of Chemistry, University of Tennessee.

Committee Chairmen: C. E. Lamb, assistant general chairman, Oak Ridge National Laboratory, L. J. Brady, general chairman, ORNL, H. R. Beatty, treasurer and exhibits chairman, ORNL, and Dr. H. H. Ross, technical program chairman, ORNL.

J. C. White, director, Analytical Chemistry Division, ORNL and Dr. V. A. Fassel, Ames Laboratory, Iowa State University.

Dr. J. C. White, director, Analytical Chemistry Division, ORNL; and R. F. Hibbs, president, Nuclear Division, Union Carbide Corporation. (Mr. Hibbs was the speaker at the dinner on Oct. 23rd.)

Dr. V. A. Fassel, Ames Laboratory, Iowa State University, Dr. M. S. Webb, UKAEA, Harwell, England, Mrs. H. H. Ross and Dr. H. H. Ross, ORNL.

15th ANNUAL ROCKY MOUNTAIN SPECTROSCOPY CONFERENCE DENVER, COLORADO, AUGUST 20-21, 1973

Charles Wagner, Shell Development, Houston, Texas, C. Gordon Cleaver, G.E. Vallecitos Nuclear Center, Pleasanton, Calif., Victor Buhrke, The Buhrke Co., Menlo Park, Calif., Conference Chairman, Bob Heidel, U.S.G.S., Denver, Colo. and Carl Leistner, Ultra Carbon Corporation, Bay City, Mich.

Banquet speaker, Dr. Vernon E. Derr, NOAA, Boulder, Colo., Mrs. Derr, Mrs. Wiginton and Mr. B.J. Wiginton, Marathon Oil, Littleton, Colo.

Mrs. Valente, Mr. Stephen E. Valente, Regis College, Denver, Colo., Mrs. Roberts and Mr. D. Blair Roberts, Westinghouse Geo-Research Lab., Boulder, Colo.

Mrs. Glaze, Mr. Ivan L. Glaze, American Cast Iron Pipe Co., Birmingham, Ala., Del Hughes and Ray Baney, Ultra Carbon Corporation, Bay City, Mich.

Lial Brewer, Sandia Laboratories, Albuquerque, N.M., Mrs. Mensik, and Mr. John D. Mensik, Colorado School of Mines, Golden, Colo.

ULTRA PEOPLE

RICHARD (NIP) NAPIERALSKI
Assistant Superintendent of Manufacturing

"Nip," that nickname was pinned on Richard Napieralski more than 17 years ago when he joined Ultra Carbon. Promoted to Assistant Superintendent of Manufacturing in October, 1973, Nip is another of the Ultra people who has come up through the ranks and has grown in experience and knowledge along with the company.

Eighteen, fresh out of high school and looking for a job, Nip was hired as a furnace operator, but it soon became apparent that he had an aptitude and interest in graphite machining. He was enrolled as an apprentice in Ultra's then new Tool & Die Makers Certification Program. After four years of night school and on-the-job training, he was among the first five employees to receive his Toolmaker's Certificate.

Nip has been a machine operator in every department and on every kind of machine used in the plant. In 1968 he was made foreman of the Micro Department and later was promoted to general foreman of the Automatic and Micro Section. In his present position he is responsible for production and processing of both Plants #1 and #2.

Married and the father of three, two boys 8 and 11, and a girl 13, they enjoy a pool in their backyard and bowling is big with the Napieralskis. Fishing, baseball, basketball and football are enjoyed as a family group. Nip is an avid deer hunter and, as a member of the Ultra Golf League, took the 1973 President's Trophy. Along with these many activities he is a member of the Industrial Management Club and an umpire for Little League baseball.

When talking about Ultra Carbon and his work with new employees, his enthusiasm is infectious. Nip is proud of Ultra's growth, remembering when he started the machine shop area was slightly larger than a two-car garage. Highly skilled work on a production basis and quality before quantity, are points he stresses with new machinists.

Nip is a big booster of Ultra's continuing education and profit-sharing programs. He, like other long-time Ultra members, take the young, new machinists under a wing and watch their progress and aptitudes. He encourages these beginners to take advantage of the company paid education programs and suggests courses which fit their capabilities. Sometimes it is difficult to get the younger ones to see the advantages of profit sharing and what it will mean to them many years in the future, but Nip's own experience with Ultra Carbon is an incentive to most. Nip's concern and pride in his work has contributed, in no small measure, to Ultra's continued growth and success.

ROBERT R. JOHNS
Romar International

Recently appointed to represent Ultra Carbon in Southern California, Bob Johns makes his home in Covina. For 13 years he held the position of Western Regional Sales Manager for Olin Corporation, Aluminum Group.

Bob received a BS degree in Administrative Engineering in 1949 from the Sibley School of Mechanical Engineering, Cornell University. He is highly qualified in the field of primary metals and metal product manufacturing.

The Johns family have two horses, one a registered Quarter Horse which their daughter Cindy, shows at local horse shows. They have a sail boat which they frequently race and have also cruised to Mexico a number of times with this boat. Kim, their eldest son, is a major in electronics engineering at Cal Poly and their younger son, Richie, is a pre-med student at UCLA.

DAVID DEMAREST

With headquarters in Seattle, Washington, Dave represents Ultra Carbon in Oregon, Idaho, Montana and Washington. A native of the east, he was born and educated in Hackensack, New Jersey. After serving a hitch in the Navy he attended Union College in Schenectady, New York, graduating in 1950 with a BS degree in Civil Engineering.

Dave was employed for six years as Sales Engineer in both the Syracuse, New York and San Francisco, California headquarters of Aluminum Company of America. From 1958 until late 1973 when he formed Demarest and Associates, he was employed as Branch Manager for Olin Corporation, Aluminum Products Division in Seattle.

Dave, his wife, Peggy and their five children ranging in age from 10 to 17 years love the Northwest and the outdoor activities the area offers. Much of their leisure time is devoted to fishing, tennis, backpacking and skiing near Snoqualmie Pass where Dave serves with the Ski Patrol.

ULTRA CARBON
CORPORATION
P.O. BOX 747, - BAY CITY, MICHIGAN 48706

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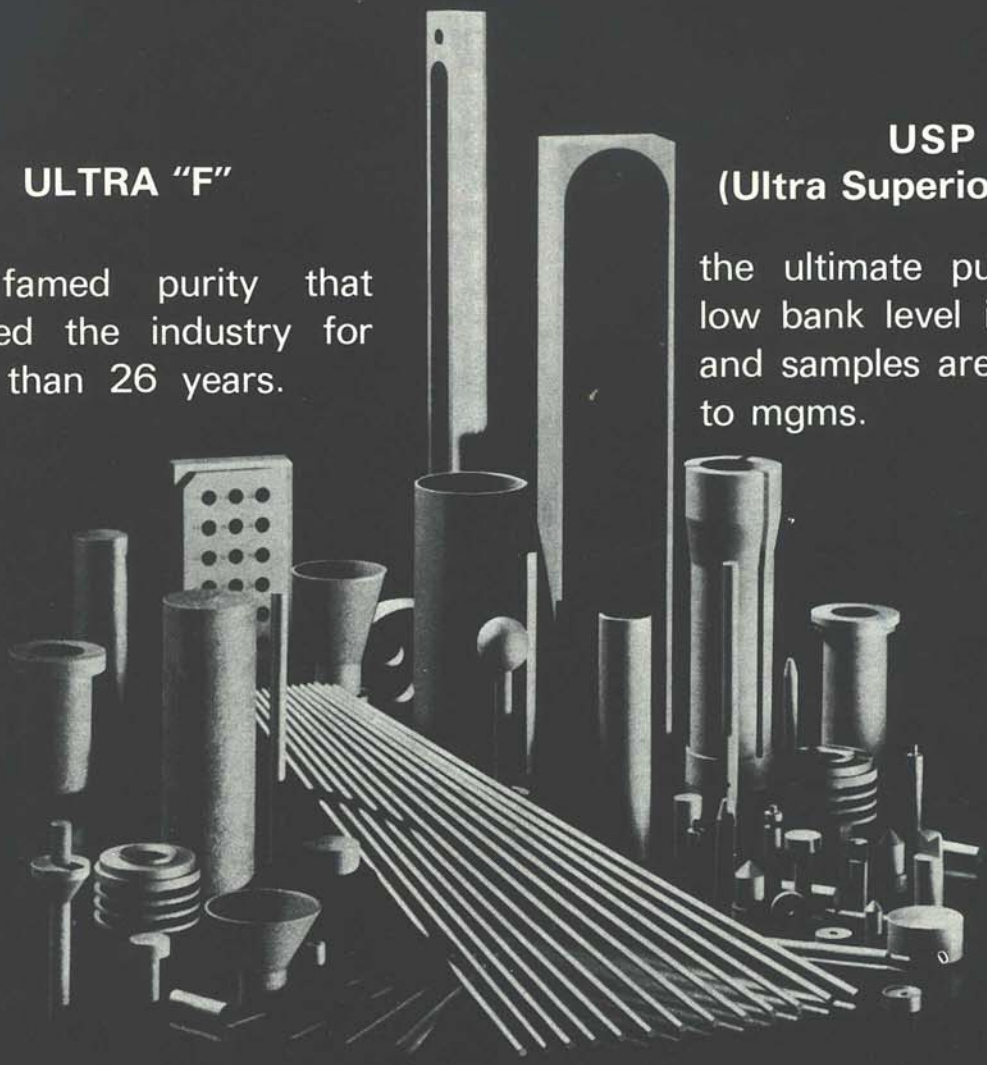

ULTRA CARBON

the graphite specialists

Ultra Carbon Corporation, P.O. Box 747, Bay City, Michigan 48706.