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The rapt attention of the audience attests to the forcefulness of our principal speaker at the dedication ceremonies, Dr. George S. Hammond, Vice Chancellor of Natural Science, University of California at Santa Cruz. In the front row are the other speakers, Rev. Stanley E. Johnson, Dr. David White, and President Martin Meyerson. In the second row (l to r) are Mrs. and Dr. Robin Hochstrasser and Mrs. and Dr. Alan MacDiarmid. In the third row (l to r) are Dr. and Mrs. John Gall, Dr. Barry Cooperman, Dr. Madeleine Joulle, Mrs. Amos Smith, and, partly, Dr. Smith.



Following the dedication and refreshments, luncheon was served in the main reading room of the Kresge Library. If you need help in recognizing anyone in this picture, write us.

A Year of Celebrations

A year ago we spoke of plans to celebrate the dedication of the new chemistry building. That celebration took place last March 23 and it was a heart-warming house warming! The photographs show some moments of the inspiring dedication, merry reunion, and impressive displays. More than 250 were present, many coming long distances to be with us. We hope that many more of you will visit this splendid new laboratory soon. A description of it is given elsewhere in this issue.

On February 23, the Society of the Alumni of the College honored the Chemistry Department and celebrated College Day in our building. This full-day event featured morning seminars by faculty members Michael Topp, Amos Smith, Barry Cooperman, and Charles Price, luncheon at the Museum, and guided tours of the building. Many told us that it was one of the best College Days they had ever attended.

On April 18, the Diamond Jubilee of the Philadelphia Section of the ACS was celebrated here along with the reestablishment of the Edgar Fahs Smith Memorial Lectures. To start the ceremonies, Claude Deischer unveiled a plaque mounted in the lobby as a memorial of the founding of the Section seventy-five years ago in Room 207 of the John Harrison Laboratory. He spoke on "Our 1899 Heritage", picturing the whole scene, local and national, of that founding. It was especially moving to hear of the part played by Penn Chemists such as Sadtler, Shinn, Smith, and Taggart in creating and nurturing the Society and the Section. Dr. Gerald M. Edelman, 1973 Nobel laureate and a graduate of our Medical School, gave the Smith Lecture, and notably brilliantly, to an audience that overflowed the large lecture theater.

Last August 28, we met again in Chicago in the Conrad Hilton hotel where the first Penn Chemists meeting was held in 1967. This year our get-together will be in conjunction with the ACS meeting in Atlantic City in the week of September 8. The day, hour, and place of our meeting will be announced soon in C and

E News. Please be there and please send in your ballots and news items! R. M. Hochstrasser, A. B. Smith, M. R. Topp, and D. H. Voet served on this year's nominating committee.

In 1975, we will meet in the spring at the ACS convention held in Philadelphia, April 6-11. Watch C and E News for the listing of the Penn Chemists social hour. You need not register for the convention in order to attend our meeting.

We are happy to report that we have received donations totalling \$2972.50 from 141 Penn Chemists in this year. One of the gifts was for \$1250 and another amounted to \$650. We have also received \$580 marked for the H. A. Alsentzer Library Fund, of which \$500 came from one donor. Our balance in the Penn Chemists Fund is \$3475.37 and we will transfer a large fraction of that sum of the Chemistry Library Fund in the near future.

In closing, we want especially to congratulate David White for the major part he played in bringing the new chemistry building into existence. As Dr. Hammond remarked at the dedication, it took much courage in these times. It also called for much skill and hard work! We hope that Dr. White feels the satisfaction we wish him when he thinks of that building during his well-earned leave next year!

RALPH LANDAU
ARTHUR OSOL
WILLIAM ASHTON
CLAUDE DEISCHER

The Chairman's Report

This past year was one of special significance for me. It represented the completion of a project to which I had devoted much of my time and which had spanned a period of nearly eight years. I am, of course, referring to our new chemistry building and its dedication which many of you attended and helped us celebrate. Some of the highlights of this happy event are described in this issue, but what impressed me most was the continuing interest, concern, and involvement of so many of you in the affairs of this department. This close identification with chemistry here, even after many years and many changes, is very gratifying.

I believe that the completion of our new chemistry building may represent a turning point for the discipline of chemistry in this institution. The building is not simply a better and more modern facility replacing Old Harrison, but a new environment bringing together for the first time all of the research and instructional programs in chemistry under one roof.

As you well know, chemistry on this campus, although often fragmented, has always been an area in which there has been an intense interest on the part of



The afternoon was spent in tours of the building. Here, at the left, is Dr. Elizabeth Ralph showing the mass spectrometer facility on the fourth floor. She also showed how the facility is used in her interdisciplinary program of C-dating of archeological materials.

many other disciplines in the college and in many groups in the professional schools. Furthermore, it has represented an important part of many interdisciplinary programs where chemistry has been interfaced with physics, materials science, biology, the health sciences, and, more recently, the behavioral sciences. Our new facility can become the intellectual center for these many interests, interests to which new and basic knowledge of chemistry—more specifically, molecular structure in its most general sense—is central.

The evolution into that role may not be simple, particularly in view of the rapid developments in our field and the greater and greater complexity of the systems we are trying to understand. There is also the factor of the large and changing variety of interests represented in our undergraduate and graduate students, a factor I have earlier brought to your attention. Nevertheless, it is the role I feel we must assume and we have already done a good deal of planning on that score.

With regard to our undergraduate program, we still find an increasing interest in the area of chemistry on the part of undergraduates. How much of this will translate into a lasting commitment to the discipline is still uncertain. At present we are planning a B.A.-M.S. program as an elective alternative to the regular B.A. chemistry major. The program will feature two summer periods of intensive laboratory work in which the student will work full-time for 12 weeks in each period under the supervision of an individual faculty member. Another feature of this plan would be the elimination of distinction between undergraduate and

graduate students. The students would be encouraged to take graduate courses during the regular academic year as soon as they are qualified. The typical student should be able to complete this B.A.-M.S. program in four years, possibly involving one summer after the senior year. The N.S.F. has encouraged us to seek its support in getting this program started.

The number of graduate students seems to have reached a steady state which is about sixty percent of the peak of several years ago. With our new facility and some increase in the size of our faculty and the scope of our graduate program we hope this position will improve. Our optimism is limited somewhat by the slow return to normal of the job opportunities in chemistry.

Two new faculty members will join us soon. They are Michael Sinensky, now Junior Fellow in Biochemistry at Harvard, and Larry G. Sneddon, who has held a post-doctoral appointment at MIT for the past year. Dr. Sinensky has strong interests in the chemistry of membranes and Dr. Sneddon plans to continue research on organometallic compounds with novel structural features. Both of these young men will probably participate actively in the expanding interdisciplinary program referred to above.

The faculty have been as busy as ever and we have decided to cover those activities more fully by a separate column in this newsletter.

While I am on leave next year, Knut Krieger will serve as Chairman. He joins me in hoping that your loyalty, interest, and support for the department will continue.

DAVID WHITE

Our New Building

Some of you toured our new building when it was dedicated last March. Below are some facts that will help others gain some conception of its size and contents, especially by comparison with the old John Harrison Laboratory which it has replaced at the northeast corner of 34th and Spruce Streets.

The new building is a five-story red brick and concrete structure designed by the Ballinger Company in cooperation with several members of our faculty. The entire building is air conditioned. The gross floor area totals 140,000 square feet of which 70,000 are assignable. In comparison, the old Harrison building had approximately 35,000 gross square footage, with 22,600 assignable.

The wall of the first story is set back to form a wide walkway that extends around three sides and part of the back of the building. One enters the lobby of the first floor from this veranda along the front of the building on 34th Street. The lecture theater, two classrooms, and the passenger elevators open onto this lobby and two other classrooms and an 8-room administration office complex are located along two hallways connecting to this central area.

The basement space contains the machine, glass-blowing, and student shops, student organizations room, a "prep" room for the lecture demonstrations, a large classroom, and several teaching laboratories, including those for undergraduate physical chemistry and general instrumentation.

A lounge is located at the basement level in a well rising from the basement floor to the ceiling of the first floor. There is a free-standing white panel 22 feet in width and 33 feet high at the back of the well. Several prominent artists have submitted designs for appropriate decoration of that wall and the space it faces above the lounge. We hope soon to have exciting news about that decoration.

The impressive Kresge Library on the fifth floor has stacks for at least 35,000 books, a large reading room, and study carrels. Also on this floor are faculty offices, a large seminar room, and the faculty lounge.

The other floors are used primarily for research. The whole building contains 170 rooms, including 55 research laboratories of various sizes, 57 offices for faculty, research associates, and secretaries, 12 shielded instrument rooms, a specially equipped cold room and laboratory, 2 dark rooms, and a graphics room.

Most of the undergraduate laboratories and the store rooms are now housed in the 1940 and 1958 wings, the former along Spruce Street and the latter along 33rd Street.

The construction and equipment of the new building was made possible by fund-

ing from the General State Authority of Pennsylvania, a grant from the National Science Foundation and generous contributions from the following donors: Celanese Fibers Company; Walter Dannenbaum, ChE '13; The Camille and Henry Dreyfus Foundation, Inc.; E. I. duPont de Nemours and Co., Inc.; Gulf Oil Corporation; The Haas Community Fund; Russell P. Heuer, Jr., ChE '55, GChE '57; The Kresge Foundation; The Merck Company Foundation; Mobil Foundation, Inc.; Pennwalt Foundation; and Union Carbide Corporation.

To date, the building has not been named other than the "Chemistry Building".

The Seventh Lukens Scholarship Awards

For the year 1974-5, a full-tuition scholarship has been awarded to Richard J. Fruncillo, who will be in his senior year as a chemistry major. He has an A record and has been on the Dean's List with Distinction. As a freshman he won the CRC Chem. Award and he is a member of Phi Lambda Upsilon and Phi Beta Kappa. Richard is also a member of the track team and has been V.P. of our chapter of ACS Student Affiliates.

Neil S. Weintraub has been granted a part-tuition scholarship for his senior year. He has a perfect 4.0 over-all average and has been on the Dean's List every term. Neil has been head tutor for the ACS affiliates, is a member of the Backgammon Club and has been elected to Phi Beta Kappa and the pre-med. honor society, Alpha Epsilon Delta.

Some Faculty Activities

Michael P. Cava was on leave during the winter semester and spent the term in residence at the Chem. Dept. of the Univ. of the West Indies, Kingston, Jamaica, a dept. with which he has had close professional and personal ties for many years. Part of the time was used in collecting new plant species for his NIH-sponsored research on new alkaloids having anti-tumor activity. **Barry S. Cooperman** has been awarded an Alfred P. Sloan Fellowship for 1974-76 and will spend two months in M. Nomura's labs in Wisconsin studying ribosomes. **Claude K. Deischer** is Chrmn. of the National ACS Centennial Exhibit Comm. for 1976 of the Hist. of Chem. Div. He also serves on the Program Comm. of the Old Timers' Group of the Phila. ACS Section and is kept busy writing and speaking on the history of chemistry and of the Penna. Germans. **Jerry Donohue** has been named William Warren Rhodes—Robert J. Thompson Professor of Chem. His new book, "The Structures of the Elements",

is published by Wiley-Interscience. Jerry will be on leave for the spring semester 1975, in the laboratory of Prof. Edgar Heilbronner, Basel Univ., Switzerland. **Robin M. Hochstrasser** has been invited lecturer, mainly on lasers in chemistry, at many universities this year. The list includes Yale, Florida State, Utah, U. of Cal. at Santa Barbara, U.S.C., Florida, Cal Tech., U.C.L.A., Michigan, Yeshiva, Chicago, Harvard, MIT, and Indiana. He has also been speaker at the Phila. ACS Section and Visiting Lecturer and Professor at Grenoble Univ., France. This summer he will be invited speaker at the Gordon Conf. on Raman Spectroscopy and at a symposium on Laser Studies of Radiationless Transitions at Schliersee, Germany. **Madeleine M. Joullie** has been promoted to Prof. of Chem. She is a member of two National Council Committees of the ACS: Professional Relations and Economic Status. Last October, she was the speaker at the Cleveland ACS Section meeting. Last Sept., **Alan G. MacDiarmid** took on the editorship of "Inorganic Syntheses" and on Jan. 1 of this year became Chairman-Elect of the Div. of Inorg. Chem., ACS. He and Prof. Reinhard Schmutzler of the Technische Univ., Braunschweig, Germany, have received a NATO res. grant for collaborative research on "Even-electron Paramagnetic Phosphorus Compounds". **Charles C. Price** has received two major ACS awards: The Award for Creative Invention and the Charles Parsons Award for Outstanding Public Service. He has also been elected a member of the Board of Managers of the Franklin Institute and he played the part of **Wm. H. Keating**, Prof. of Chem. and a founder, at the Founders' Day Program of the Institute. He has also added to a long list of continuing commitments the Board chairmanship of the Council for a Livable World and membership on the ACS Council comm. on the Centennial Celebration in 1976. **Amos B. Smith** has been awarded a Cottrell Research Grant to support his work on an anomalous Wolff rearrangement. **Edward R. Thornton** attended the Gordon Research Conference on Proteins this June. He is now working mainly on the structure and reaction mechanisms of glycolipids and certain enzymes. **Donald H. Voet** has been promoted to Assoc. Prof. of Chem. **Bradford B. Wayland** has received a NIH grant for research on heme protein model systems. He will go to Ireland in mid-August for the International Conf. on Coordination Chem. **David White** will be on leave next year, starting in December or January. He plans to be at the Institute of Applied Quantum Mechanics in Paris and at Oxford Univ. in England.

NEWS ITEMS

Harold J. Abrahams recently completed two manuscripts: "The Richey-Chrétien Aplanatic Telescope: Letters from G. W. Richey to Elihu Thomson", published in the Proceedings of the Amer. Phil. Soc. and "A Tenth-Century Physician Prepares His Medicines", published in the Transactions and Studies—College of Physicians of Phila. **David S. Alcorn** is Exec. V.P. of the Dyes and Chemicals Div. of Crompton and Knowles Corp., Fair Lawn, N.J. **Charles M. Ambler** recently completed a two-year term as President of our Engineering Alumni Society. He has also been named a Fellow of the AIChE. **Louis C. W. Baker**, Prof. of Chem. and Chrmn. of the Chem. Dept. at Georgetown University, spoke on Heteropoly Electrolyte Chemistry at the Phila. Sec. ACS meeting on March 21. Lou was also featured in the report on Continuing Education in C and E News, May 20. **Yonathan Bard**, who is with the International Business Corp. in Cambridge, Mass., has published a book on Nonlinear Parameter Estimation. **Dennis Barrett** left the Univ. of Cal. at Davis to join the Dept. of Biological Sciences at the Univ. of Denver. In the summertime he continues to teach in the Physiology course at the Marine Biol. lab. at Woods Hole. **Joseph N. Bartlett** retired as Prof. of Chem. as of Jan. 14 at St. Joseph's College. His 45 years of uninterrupted service to that school is the longest period of time that any faculty member has served. Joe will continue an active program on revising his book on analytical-general chem. and will continue to prepare films illustrating proper techniques in that field. **Mark D. Bealor** is Res. Supvr., Chem. Res. Dept. at S. C. Johnson & Son, Inc., in Racine, Wis. **George J. Beichl** has been elected thirty-seventh president of the German Society of Penna., which was founded in 1764. **Mark L. Berch** has received his Ph.D. in chem. from M.I.T. **Ernst Berliner**, Prof. and Chrmn. of the Chem. Dept. at Bryn Mawr Coll., was at the Univ. of Auckland, New Zealand, on leave for the spring term. **Alan Berry** is now Asst. Prof. of Chem. at George Mason Univ., Fairfax, Va. **Horace R. Blank**, Prof. Emeritus of Geology, Texas A. & M. Univ., continues research in geol. and does some consulting work. A group of present and former collaborators of **John O'M. Bockris** have organized an Electrochemistry Symposium, devoted to reviewing the active and developing aspects of electrochem. The event will be held at Imperial Coll., London, April 3-6, 1975. The list of speakers includes many Penn chemists such as **J. McBreen**, **S. Srinivasan**, **A. Pilla**, **A. Damjanovic**, **N. E. Richards**, **A. R. Despic**, **B. E. Conway**, and **A. K. N. Reddy**, as well as John himself. He and **Zoltan Nagy** have recently published

a book on Electrochemistry for Ecologists. **Edward Boyer** is Mgr. of Operations Res. Group—Ampex Magnetic Tape Corp. for the past four yrs., located halfway between Atlanta and Montgomery, Ala. **Robert D. Brown**, now at Bristol-Myers in Syracuse, stopped in for a visit while in Phila. attending a conference on mass spectrometry. **Terry R. Brown** is presently a Ph.D. Biochem. candidate, Dept. of Pharmacology, Milton S. Hershey Medical Center, Pa. State Univ.

Lewis W. Butz, **Arthur E. James**, and **Leopold Pessel** were recently paid honor as 50-year members of the ACS. **John Bycoskie**, Chrmn. of the Sci. Dept. of Downingtown Sr. High Sch., is recipient of the 1974 Middle Atlantic Regional Award for Excellence in High School Chem. Teaching. **Marvin Carmack** attended the Dedication and Celebration of our new building in March. He continues his research of Prof. of Chem. at Indiana Univ. together with extensive travel (Munich and Hamburg Chem. conferences last August) and vacations at his second home in Snowmass Resort, Colorado. Over 200 scientists met at a symposium in honor of **Britton Chance** at the IXth International Congress of Biochemistry, and then held a formal dinner for him at the Operakällaren of the City of Stockholm. The papers at that symposium on Energy Transducing Membrane will be published as a volume in his honor.

Stuart W. Churchill, Carl V. S. Patterson Prof. of Ch.E., has been elected to the National Academy of Engineering. **Ralph Connor** serves the National Board of Directors of the ACS as a member of its Investments Comm. **Alan D. Craig** is project coord. for a joint venture between Hercules and Montedison S.p.A. (Italy) covering pharmaceutical products developed by two affiliates, Farmitalia and Carlo Erba S.p.A. **H. Lee Craig**, Assoc. Prof. of Ocean Engineering at the Univ. of Miami, received the Sam Tour Award, which is given to the author of an outstanding paper published by the A.S.T.M. LaSalle College held a Silver Jubilee Celebration in honor of **Brother Gregory Claude Demitras** this May. Greg is Chrmn. of the Chem. Dept. at LaSalle.

James Salmon was celebrant of the eucharistic liturgy at the Jubilee. **Elaine R. Deyerle** is living in Hockessin, Del.

Edward Dowden was promoted to Assoc. Prof. of Chem. at the Phila. Coll. of Textiles and Science. **John S. Dowlin**, who is with the Foods Dept. of Proctor and Gamble, has served on the City Council and has recently been elected Mayor of Sharonville, Ohio. **Leon Eisenberg**, Prof. of Psychiatry, Harvard Medical School, and **Seymour S. Kety**, Dir., Psychiatric Res. Labs., Mass. General Hosp., have been elected to the Institute of Medicine of the National Acad. of Sciences. Prof. Eisenberg was a member of the small group of prominent scientists

and philosophers of science that met in W. Germany this May to "dissect creativity" to see if and how it can be taught and nurtured. **Abner Eisner** has retired as Res. Chemist for the Eastern Regional Res. Center of the U.S. Dept. of Agriculture, a position he held for 31 years. **Marie Watlington Eldridge** and husband Frank have built and now operate the Bermuda Breezes Country Hotel at Port Macquarie (a tourist resort) in Australia.

They have three sons—Mark, Glen and Hugh, who help run the motel. **James S. Falcone, Jr.**, had been employed by Union Camp Co. Now a Res. Chemist in Princeton, N.J. **James P. Ferris** has been promoted to Prof. of Chem. at Rensselaer Polytechnic Institute. **Augustus M. Filbert** has been appointed mgr. of bio-materials res. and dev. in the applied chem. and biol. dept. at Corning Glass Works. **Joseph M. Fox** has been appointed assistant to the Exec. V.P. of Merck and Co. **Marie D. Francia** is now Asst. Prof. of Chem. at Barnard Coll.

David and **Mina Frank** and their new son now reside in Rochester, N.Y., where David is a Sr. Res. Chemist for Eastman Kodak Co. **Milton J. Freiwald**, Prof. of Ophthalmology, Albert Einstein Med. Center, Phila., is applying significant chemistry to prevention of blindness.

Publishes and has lectured in the U.S.S.R. and The People's Republic of China.

Anthony F. Garito is now Assoc. Prof. of Physics at Penn and continues his synthesis and study of new materials of extraordinary electrical conductivity.

Francis W. Glaze took the Aegean Adventure flight. **Jack M. Goldstein**, Pres. of Moduspec Co., has been appointed Consultant on Instrumentation at Harvard Sch. of Publ. Health and the Biol. Dept. of Boston Univ. **Donald A. Gooss**, V.M.D., is living and practicing in Georgetown, Del. **Maxwell Gordon** is now V.P. of res. planning and licensing of Bristol Labs. div. of Bristol-Myers.

Edward J. Gornowski, Exec. V.P. of Esso Res. and Engineering Co. in Linden, N.J., has been elected a Fellow of the AIChE. **Irvin M. Gottlieb**, Head of the Chem. Dept. at Widener College, has been named a Fellow of the Royal Institute of Chemists. On Founder's Day, January 19, **Serge Gratch** was given an Alumni Award of Merit in recognition of his outstanding service to the University. He is Dir. of the Chem. Sciences Lab. of the Ford Motor Co., in Dearborn. **Wilson F. Gum** is now Res. Mgr., Organic Chemicals and Intermediate Sec. in the Ag-Organics Development Group of Dow Chemical in Midland, Mich. The early contribution of **John F. Harris** to the development of melt fabricable fluorocarbon polymers was discussed in a recent issue of the DuPont magazine, "Innovation". **William Hassler**, Pres. of Indiana Univ. of Penna., is presently also Pres. of the Pa. Assoc. of Colleges and

Universities. **William J. Hawley**, Building Mgr., and with our Dept. since 1950, retired in June. We will miss him very much. **Russell P. Heuer, Jr.**, is V.P. and Dir. of the Essex Research Corp., Wilmington, Del. **Arthur E. Humphrey**, Dean of Engineering and Applied Sci. at Penn, received the 1973 Food and Bio-Engineering Award of the AIChE last November. More recently, he was this year's Distinguished Lecturer in Agriculture and Natural Resources at Michigan State Univ. **Robert H. Jacoby**, Res. Assoc., Gulf Res. and Dev. Co., Pittsburgh, dropped in for a visit at the Lab. while he was attending the AIChE meeting in Phila. in Nov. **Raymond J. Joehl** was graduated from St. Louis U. School of Med. '74. Elected to Alpha Omega Alpha-National Med. Honor Soc. Begins residency at Hershey Med. Ctr. for 2 yrs. in Gen. Surgery. Accepted to residency in otolaryngology—Mass. Eye & Ear Infirmary, Harvard Med. School, to begin July 1976. **Teresa Chin Jones** is now on duty as a physical sci. officer in the Nuclear Weapons Technology Sect. of the Arms Control and Disarmament Agency. Her husband has a parallel assignment in the Regional Political-Military Sect. of the State Dept. **Nikos K. Kalfoglou** is now a faculty member of the Chem. Technology Lab. at the University of Patras, Patras, Greece. **Sidney A. Katz**, Prof. of Chem. at Rutgers Univ. Camden campus, has been awarded a NATO senior fellowship to study neutron activation analysis at the Univ. of Reading in England. **George B. Kauffman**, Prof. of Chem., Cal. State Univ., Fresno, was one of two faculty members in the 19-Campus Cal. State Univ. and Coll. system to be recipient of the \$1000 Outstanding Prof. Award. He is the author of five books and more than 200 papers and articles on chem., the history of sci., and chem. ed. **Stanley E. Kerr**, a former officer in the U.S. Army Sanitary Corps, clinical biochemist and photographer and later for four decades Prof. of Biochem. at the Amer. Univ. of Beirut, recently turned historian to complete a book—"The Lions of Marash", published by the State Univ. of N.Y. Press. **F. William Kirsch** serves the national ACS as a member of the Exec. Comm. of the Member Advisory Board and as a member of the Council Comm. on Economic Status. **Lewis C. Knox**, Chief Engineer of Catalytic, Inc., has been appointed V.P. of the firm. **Curtis I. Kohn**, an "old guard", is an enthusiastic Lawn Bowler in Edmonds, Wash. **Carolyn T. Kritchin**, M.D., is now Clinical Dir., Southeast La. Hosp.—a state psychiatric institution. **George C. Kugler** is Vice-Chrmn., Phila. Sec., Electrochem. Soc. **Philip Lisan**, M.D., is Med. Dir. of John F. Kennedy Memorial Hosp., Phila. He is also Chrmn. of the Div. of Med. and Dir. of the Cardiac Care Unit. **Bernard Loev**, Assoc. Dir., Chem. Res., Smith Kline and French Labs., will re-

ceive the 1974 Phila. Sect. ACS Award in October. **Joseph Lomax** is in private medical practice in Coral Gables, Fla. **George McCoy** has been named Senior V.P. at Pennwalt Corp. He directs activities in the health field. **Martin M. Mandel** has been a member of the group at the University Museum carrying out the radiography and dissection of mummies. He has been interpreting the dissections of the central and peripheral nervous systems and has written extensively of all of the findings of this fascinating and useful project. **Harry C. Mandell** has been named Pres. of the chemical specialties div. of Pennwalt. **Raymond P. Mariella**, Assoc. V.P. for Res. and Dean of the Grad. Sch. of Loyola Univ., has been elected to the Board of Dir. of the ACS. He has served recently on the ACS Council Policy Comm. and its Long Range Planning Comm. His son, Ray, Jr., received his Ph.D. in Chem. from Harvard last year. **James E. Mark**, Prof. of Chem. at the Univ. of Michigan, lectured in the ACS Short Course in Polymer Chem. in Phila. last October. **Jon L. Mathason** recently became Sr. Experimental Eng. with Pratt & Whitney Aircraft, a Div. of United Aircraft in West Hartford, Conn. **Theodore S. Matter** states that none of his three sons became a chemist. All three were wrestlers, Andy a two-time NCAA champion and Kemble placed third. **Stanley P. Mayers** is now Prof. of Health Care Planning, Coll. of Human Dev., Penna. State Univ. in University Park, Pa. **Francis A. Moffitt**, ChE 12, visited us on Alumni Weekend in May. Told us many enjoyable anecdotes of his days as a student at Penn and of his associations with Wm. Cody, Annie Oakley, Col. Chance, and other famous persons. **Vadim C. Neklutin** is still with Uniroyal. Travels extensively to England, Italy, S. Africa, S. America and Mexico. His wife, Maeda, travels with him often. **John T. Orr** has been given a DeForest Merit Award for res. in basic materials and assisting in development of the DeForest Audion tube by DeForest Pioneers, of which he is a Director. **Carl D. Perchomock** is employed in the Medicinal Chem. Div. of Smith-Kline Corp. **Harry Perry**, consultant to National Economics Res. Associates, Inc., was author of the timely article on The Gasification of Coal in the March issue of Scientific American. He has recently been res. advisor to the Asst. Sec. of the Interior for mineral resources. **Michael J. Pohorilla** has been named market area mgr. for petroleum chemicals, Rohm and Haas, Phila. Large numbers of Penn Chemists were active in the Middle Atlantic Regional Meeting at Wilkes-Barre in April, either as speakers or chairmen. This MARM was called the **Joseph Priestley MARM** and included a bicentennial commemoration of the discovery of oxygen. **O. Bertrand Ramsay**, Assoc. Prof. of Chem. at Eastern Mich. Univ., is the lecturer of the new ACS

Audio Course on the Use of Chemical Abstracts. **Harold J. Read** is enjoying retirement, traveling, swimming, boating and fishing from his Grove City, Fla., home. **Robert A. Sallavanti** is presently Assoc. Prof. of Chem. at the Univ. of Scranton. Last summer, **Gert G. Schlesinger** was appointed technical service supervisor at General Sci. Corp., Bridgeport, Conn. **Lester D. Shubin** is Program Mgr. for Standards of the National Institute of Law Enforcement and Criminal Justice, U.S. Dept. of Justice, Wash., D.C. **Alvin Silverstein** has completed a textbook of Coll. Biol. to be published by Holt, Rinehart and Winston. He and **Virginia Opshelor Silverstein** have co-authored more than 30 Juvenile Sci. books. They are also writing a syndicated newspaper column—"Tales from Dr. A.". **William J. Steele** is associated with the Dept. of Pharmacology, Univ. of Iowa in Iowa City. **Fred W. Stone** has become Tech. Dir. for R. and D. of chem. products at the G.A.F. Corp. **Peter S. Strilko** is the president of the U. of P. Alumni Soc. of Del. A second daughter joined his family recently. **Lester W. Stroock**, living in Salem, Mass., has been elected to honorary membership in the Soc. of Appl. Spectroscopy. A portrait of **Russell D. Sturgis** was unveiled last Nov. in the Russell D. Sturgis Reading Room in the Ursinus College Pfahler Hall of Science. **Roger P. Staiger**, Chrmn. of the Chem. Dept., assisted in the ceremony. **Lindsay C. Taliaferro, Jr.**, recently formed a Corp., Viresco Industries, Inc., involved in several phases of the chem. industry. **Walter W. Thomas** is Mgr., Res. & Dev. of Haskon Div., Hercules, Inc., Wilmington, Del. **Elizabeth Kaplan Thornton** was recently given tenure as Asst. Prof. of Chem. at Widener Coll. **William Torop**, Prof. of Chem. at West Chester State Coll., has received a grant from Harrisburg and has developed a computer-managed instruction system for introductory chemistry. **Mendel Trachtman**, Prof. of Chem. at the Phila. Coll. of Textiles and Science, will take sabbatical leave next school year to do research at the Weizmann Institute in Rehovoth, Israel. His wife, Betty, and daughter, Sima, will go with him, but his son, Chaim, will stay here to start study at Penn Med. School. **Mordecai Treblow** received his Ph.D. at Univ. of Pittsburgh, and is presently Chrmn. of Physical Sciences and Math Dept., Mercy College of Detroit. Recently presented a paper at 6th International Conf. on Organometallic Chem. at Univ. of Mass. **Monroe E. Trout** is now corporate V.P. of Sterling Drug. Appeared as expert witness on "The Advocates" on TV last Feb. 21. Last July, **Frank H. Wetzel** was named Dir. of R. and D., coatings and specialty products dept., Hercules, Inc. **Norman E. White**, after serving as Chrmn. of the Chem. Dept. for six years, is now prof. at Bloomsburg State Coll., devoting full

time to teaching and research. **Lee Zehner** received his Ph.D. from Univ. of Minn., and is employed by Atlantic Richfield in Phila. **George L. Zimmerman**, Prof. of Chem. at Bryn Mawr Coll., spent the fall

term doing research here in **Robin Hochstrasser's** lab. **Arden Zipp** has been promoted to full Prof. of Chem. at SUNY, Cortland.

What Some of the Newest Penn Chemists Are Doing

Rita R. Boggs, Postdoc. Fellow (Chem.), Cornell. **Myung-un Choi**, Postdoc. Fellow (Chem.), Northwestern. **Robert Chrzanowski**, Med. School, Rutgers. **Felicia A. Corsaro**, Asst. Prof. of Chem., Gwynedd Mercy Coll. **Robert Fish**, Shared Medical Systems, King of Prussia, Pa. **William R. Hall**, Postdoc. Fellow (Chem.), McMaster Univ., Hamilton, Ontario. **Ervin Lee Halterman**, T.R.W. Electronics, Phila., Pa. **David A. Hardman**, Clinical Res. Center, Phila. General Hospital. **William M. Ingle**, Postdoc. Fellow (Chem.), California State Univ., Fullerton, Cal. **Fred Kaplan**, Postdoc. Fellow (Chem.), Penn. **Kenneth W. Kauffman**, Postdoc. Fellow, Nat. Center

for Energy Management and Power, Penn. **Frank J. Lanzetta, Jr.**, Grad. School (Regional Planning), Penn. **Michael B. Moeller**, Postdoc. Fellow (Chem.), Penna. State Univ. **Catherine J. Pelczar**, Med. School, Hahnemann. **Richard Plotzker**, Med. School, St. Louis Univ. **Milan J. Smolko**, Med. School, Duke. **Mark A. Sprecker**, Postdoc. Fellow (Chem.), Illinois. **David S. Studdert**, Postdoc. Fellow (Chem.), Illinois Inst. of Technology. **Terng-Tzong Su**, Translator, Franklin Inst. **Brian K. Tabata**, Med. School, Univ. of Hawaii. **Walter Tsou**, Med. School, M.S. Hershey Med. Center. **Ahmed Zewail**, Postdoc. Fellow (Chem.), Univ. of California, Berkeley.

Harold J. Barnhard, ChE 29, June 26, 1973.
Paul J. Byler, ChE 20, August 17, 1973.
John F. Dowdall, Gr 47, May 9, 1972.
Henry H. Eastman, ChE 25, November 25, 1971.
Frederick W. Eckfeldt, ChE 03, March 8, 1974.
G. Kenneth Flavell, ChE 12, May 2, 1974.
Frank A. Fletcher, Gr 36, August 25, 1973.
Joseph S. Haas, Col 50, November 30, 1973.
Joseph S. Kulp, ChE 39, November 10, 1973.
Marvin S. Levy, Col 36, Med 40, December 24, 1973.
Harold P. Murphy, ChE 11, March 2, 1974.
John A. Patterson, Gr 34, May 12, 1974.
Nancy Pearson, Gr 57, July 17, 1973.
Henry L. Pinkerton, ChE 31, Gr 32, August 11, 1973.
Peter P. Pritchett, ChE 30, October 15, 1973.
Edward T. Severs, ChE 37, January 28, 1974.
Charles G. Sower, ChE 23, June 20, 1973.
Samuel Vilmar, ChE 47, February 22, 1974.
Franklin S. Weiser, ChE 11, June 10, 1973.

BALLOT FOR OFFICERS OF PENN CHEMISTS

1975-75

President: Arthur Osol, M.S. '31, Ph.D. '33, Philadelphia College of Pharmacy and Science, now President-Elect, will automatically become President for 1974-75.

President-Elect: Serge Gratch, B.S. in Ch.E. '43, Ph.D. '50; Ford Motor Co., Dearborn, Michigan.

or

Secretary: George McCoy, B.S. in Chem. '39, Ph.D. '43; Pennwalt Corporation, Philadelphia, Pa.

or

Treasurer: Claude K. Deischer, Ph.D. '33; Chemistry Department, University of Pennsylvania

or

Detach if desired

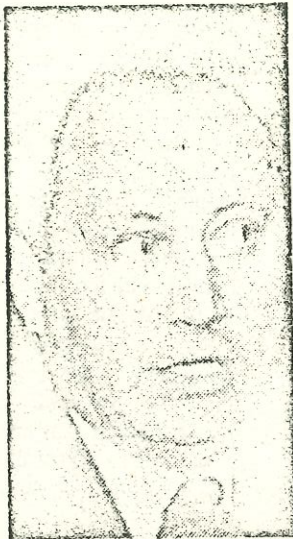
News Items and Suggestions

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If the address we have used is incorrect, please give correct address:

(Signature) _____

Checks for contributions should be made payable to the "University of Pennsylvania" and sent with this sheet in the envelope enclosed or by separate mail addressed to "Dept. of Chemistry, University of Pennsylvania, Philadelphia, Pa. 19174." All contributions are tax deductible and will be deposited in a Penn Chemists Fund for our use. Many thanks for your interest and support!



Gennadi Gerassimov
... 'always want more'

Penn Parley Hears Foreign Journalists

By WALTER F. NADELE..
Of The Bulletin Staff

A leading Soviet journalist said in Philadelphia yesterday that the nuclear arms limitation agreement that President Ford and Russian Premier Leonid Brezhnev signed at Vladivostok last month may be too high.

Gennadi Gerassimov, bureau chief for Novosti Press Agency in the United States, told a University of Pennsylvania audience that "perhaps it is too big, but at least it is a ceiling."

Militarists in the United States and in the Soviet Union are to blame for the large number of missiles that both sides have agreed to build he implied.

Always Want More... ..

"It doesn't matter how much they have," Gerassimov said of militarists in general, "they always want more."

The Soviet newsman said "it is easy to criticize the meeting in Vladivostok," he added that in Russia "we really want to consider war obsolete."

Gerassimov was among several foreign nationals who addressed the opening sessions of the three-day War or Peace: 1976 symposium sponsored by the University of Pennsylvania Museum.

icen Event

The \$20,000 three-day conference is the fourth of these independently run Bicentennial events Penn intends to sponsor through 1976.

The Pennsylvania Bicentennial Commission gave Penn \$10,000 for this week's sessions. The previous three, beginning in November of last year, cost a total of \$35,000. Private contributions covered most of the cost, Penn sources say.

Clovis Maksoud, a Lebanese journalist who was the Arab League special envoy to the latest meeting of the United Nations, briefly outlined the Arab approach to aid to underdeveloped nations.

His message was that charity begins at home.

"The money that we're getting from the rise of the cost of crude oil must be used for the amelioration of poverty in Arab countries," Maksoud said.

Poor People

"We are a rich nation of poor people," he said, speaking of all the Arab countries as one nation.

"The concentration of oil wealth (in Arab countries) must be used to ameliorate the concentration of poverty (in those countries). It is very crucial that people begin to realize this."

The senior editor of the Beirut journal An-Nahr, said it is necessary for Americans caught in the energy crisis to understand that "the price of oil for many of the oil-producing countries has been underpriced."

"The rise in price might have been justified," Maksoud said, "but not the consequences of it."

Inquirer Bi Cen.
76

4-B Friday, Dec. 6, 1977

Global Needs Debated

By PAUL JABLOW
Inquirer Staff Writer

For three days this week, the University of Pennsylvania Museum became an ideological Waring blender.

In a global town meeting that ended Thursday, about 60 scholars, diplomats and public officials discussed ways the nations of the world might avoid starving to death or blowing one another off the globe. They were watched and questioned by an audience of students, doves, hawks, militants and Main Line matrons.

The symposium, entitled "War or Peace: the State of the Globe," was the fourth in a series of 10 that constitute the museum's Bicentennial program.

Joseph Clark, the former mayor and U.S. senator, who organized the program, stressed the quiet, peaceful nature of most of the participants, although he was disappointed at the low turnout.

"Most of the people here are lovers," Clark said in a break in the proceedings. "You can easily say they don't accomplish a . . . damn thing and make a case for it. But public opinion is formed in strange ways."

Clark and several other participants seemed to suggest that peace was too important an issue to be left to world leaders.

Revival Need

"I believe," said Dr. Richard Falk, an international law professor from Princeton University, in the keynote speech, "that what we need is a world-order revival meeting rather than a world-

order think tank.

"The world-order movement needs a Billy Graham much more than it needs an Albert Einstein."

U. S. Rep. Paul McCloskey (R., Calif.), said, "There never was a time when the deliberations of the American people were more needed by their government."

In lectures and workshops tucked among the museum display cases, participants discussed issues such as disarmament, natural resources, hunger and the threat of war in the Middle East.

Penn. president Martin Meyerson called it a search for "the peaceable kingdom . . . a thought that has guided man in the darkest days."

It did not, of course, arrive.

Groans, Mutters

The Wednesday afternoon session on the Middle East was punctuated by groans and mutters of "lies" from the audience and venom-dipped questions by the participants.

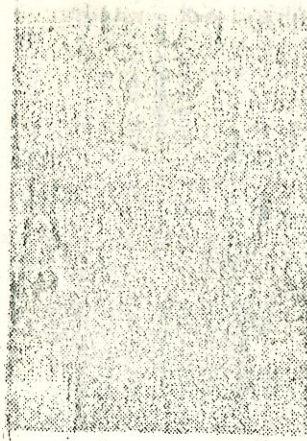
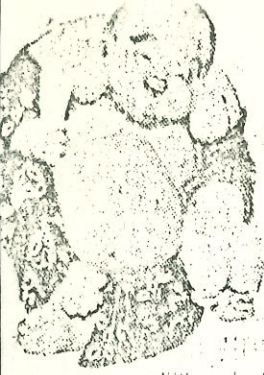
Dr. Adil Kanaan, an assistant professor of economics at Penn, said in tones tinged with weariness, "It's almost irrelevant to talk about justice in the Middle East."

Kanaan, a Lebanese, predicted that the Palestine Liberation Organization eventually would accept a separate state on the west bank of the Jordan.

Dr. Zvi Adar, an economics lecturer at Penn and an Israeli, said, "Most of the people who come to gatherings like this have heard all the arguments."

The participants almost unanimously condemned the current practices of major powers.

"We've got to cut the . . . damn military down to size," Clark said. "They run this country. We've lost civilian control of the military since Johnson took office. . . . This Kissinger phobia about balance of power rather than working through institutions such as the U.N. Kissinger can't run the world."



Pg. 3
Daily

Japanese jug . . .

. . . Charles Addams

Statuette . . .

. . . critic John Canaday

Heddle pulley . . .

. . . Harold Rome



Your Art: Like or Likeness?

By MARGARET HARRIS

Look around your room: are your art objects shaped like you?

If you're lean and lanky, have you surrounded yourself with tall, thin vases or statues? Do you take to paintings with angular lines?

Or maybe you're well rounded. Do circular objects and shapes fill your living space?

WHEN I HEARD that six well known persons had rummaged through the storerooms of the University Museum, each coming up with about a dozen choices to put on display, I wondered what shapes these people would go for.

To see for yourself, go down into the museum's basement, and wander along a patch surrounded by stacked-up boxes with labels such as "Eskimo boot soles and grass

stockings." Each celebrity greets you in the form of a photograph of himself or herself, a biography, and a continuously repeated tape recording of his or her reason for making each selection. The show, "Into Storage," continues through Jan. 12.

And were there look-alikes between the faces and the artifacts? Here's how they shaped up:

Charles Addams, 62, cartoonist who created the ghoulish Addams family, has a round, jolly face. And he chose a roly-poly, grinning Japanese pottery man, 19th century.

Addams apologizes for selecting four mummified humans, but says, "I have a kind of cozy feeling about the nonliving."

JOHN CANADAY, 67, New York Times art critic and former education director at the Philadelphia Museum of Art, is thin and scholarly looking. He zeroed in on a ramrod-straight, solemn alabaster statuette from Arabia, made about 400 B. C. "If you don't know why it appealed to me, there's no point in explaining," he hints on the tape.

Another choice was a large glass bottle from Palestine, Roman period. As "light as a soap bubble to hold"

mottled gold-colored surface with mother-of-pearl touches. Much of ancient ware is "awfully ugly," Canaday says, and "I understand why it's in storage." So he picked this for its beauty.

Victoria Donohue, 45, artist and newspaper art critic, chose a New Guinea "man catcher" that has a shape very similar to her own oval face. The tool's shape is "pleasing," she says on the record.

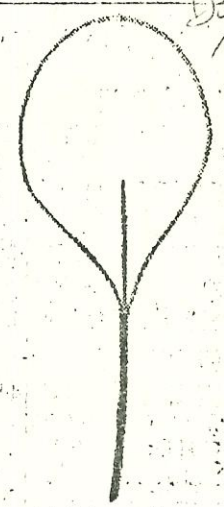
Ms. Donohue said yesterday she didn't know what a "man catcher" was used for. But the museum's Lin Foxhall explained that a warrior, out after a member of a hostile tribe, would snag him with a hoop, then ram the sharpened wooden spike through his neck. A lethal weapon.

Ms. Donohue also selected a Sioux buckskin beaded vest from South Dakota, 20th century, because it shows "a variety of effects using conventional forms."

ROBERT INDIANA, 46, the artist famous for "LOVE" designs, chose a Hopi Indian Kachina doll from Arizona, 20th century, that has a charming ass's head. The doll doesn't look like Indiana, but struck a chord another way: "It was just startling to find a five-pointed star (on the sash) . . . it's one of the symbols I've used most frequently."

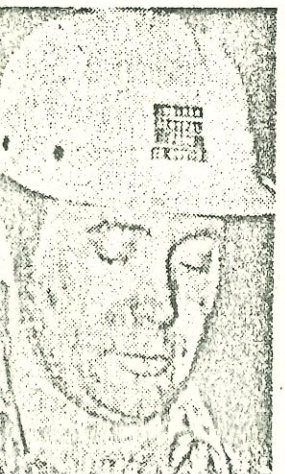


Prince



"Man Catcher" . . .

Daily News
12/13/74



. . . Robert Indiana



Continued on Page 38

Splendor of Isfahan at University Museum

Inquirer

12/29/74

By VICTORIA DONOHOE

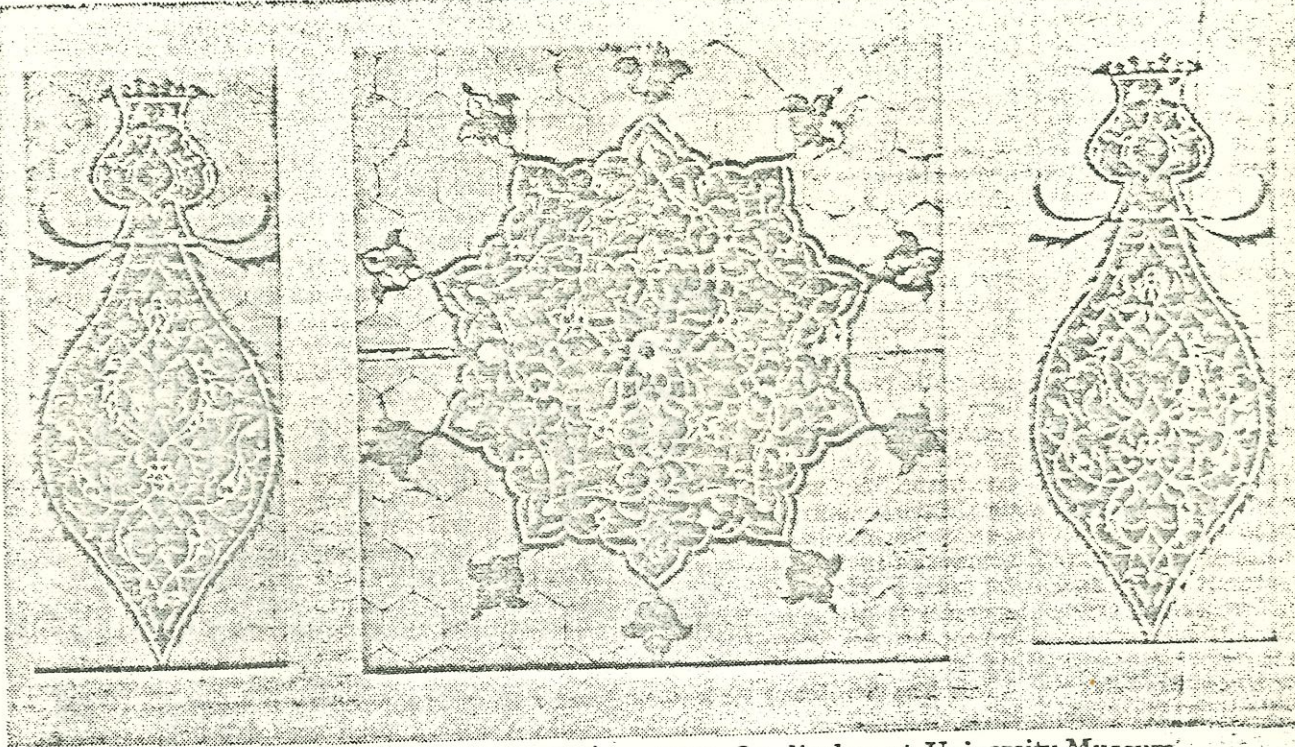
Picture a very civilized Middle Eastern Islamic city created by one man. Its main public plaza, among the largest in the world, is twice the size of Moscow's Red Square and seven times as big as St. Mark's Square, Venice. Picture, too, a long avenue designed like Paris' Champs Elysees as a grand approach, this having had, instead of a median strip, a long canal awash with floating roses. Isfahan, as this Persian city is called, is a current tourist attraction located in the heart of Asia in what is now Iran near the age-old trade caravan route between Cathay and the West.

Shah Abbas the Great launched a century of splendor and prosperity in his native land when he established Isfahan as a major capital of the world in the 17th century.

The idea of centralizing his government there occurred to the shah in a flash of inspiration on Persian New Year's Day, 1598. Thus began Isfahan's Golden Age, during which kings, emperors and popes eagerly dispatched envoys and ambassadors there. And European merchants, adventurers and curious people came flocking to see exotic sights, new places, bridges and mosques that were part of a vast building program.

Isfahan in its heyday had a tolerant and humane government, no taxes, the poor well cared for, splendid and dramatic forms of art, a well-stocked zoo, and safer main streets than Europe because of the efficient royal archers on patrol. Since there were no prisons, swift justice meant that lawbreakers (including the baker who sold underweight loaves during a period of scarcity) were seized and beheaded in the public square.

The exhibition "Restoring Isfahan" at the University of Pennsylvania Museum, 33d and Spruce Sts., tells us how the other half lived. For "Isfahan is half the world," an old Persian poem says. A first and lasting impression of the display is that it's an



Mosaic of ceramic tile, Isfahan, 17th century. On display at University Museum.

color transparencies of Isfahani mural paintings, structural drawings of major buildings, a scale model, ceramics and miscellaneous architectural fragments. Until now, rarely have exhibits in American museums zeroed in on the art, architecture and town-planning of a single Mid-Eastern city during a 100-year period of its history. In doing so, this event provides a glimpse of interesting things in store for wide audiences and specialists alike as the new and developing field of Islamic studies begins flexing its muscles.

The arts were late-flourishing in Isfahan. Somehow there isn't the purity in the many important painted battle scenes, court reception pictures and groups of lounging figures one would have found in Persian art of an earlier date. A "new" cycle of battle scene pictures, recently discovered, is of some interest. And certain correspondences between these wall paintings and manuscript miniatures of the same period is evident. Ruby lustreware ceramics here hint of 17th-century Isfahan's definite contribution to ancient Iranian ceramic art tradition. The influence of the art of the Persian garden, devel-

But, most of all, for Asia at this time, Abbas the Great's pioneering conception of an ordered city was extraordinary.

This display (after Jan. 5, it travels to the Royal Ontario Museum, Toronto) is an upshot of an Isfahan colloquium held at Harvard University's Fogg Museum of Art months ago. Dr. Renata Holod of Penn's art history department organized both events. Dr. Holod is friendly with Italian restoration experts currently renovating several of Isfahan's principal buildings and their park-like settings under sponsorship of the Iranian government and the Italian Institute for the Middle and Far East.

She and a Toronto colleague in Isfahan last summer stumbled upon that city's earliest printed map, presented here as the core of the show.

Back in Philadelphia, Dr. Holod just as unexpectedly came across in University Museum storage a variety of Isfahani fragments and objects acquired over 50 years ago including an intricately painted piece of ceiling from Chihil Sutuan Palace (best surviving example of 300 palaces Shah Abbas constructed to be put at the disposal of visiting dignitaries

and diplomats, and now undergoing restoration). Several sets of wooden doors, also on view here, came from a mystic's retreat near Isfahan.

Landscape architects will be fascinated by the scale model showing the tree-lined "Avenue of the Four Gardens" and by the concepts of city garden living presented in a region of the world that prizes water and greenery as much as good coffee, melons and hospitality.

Close observation of some of the drawings here shows that certain basic structural problems are being ingeniously solved by the Italian restorers who had to contend with vaults that are double-sheathed throughout entire buildings at Isfahan such as the Ali Qapu monumental gateway complex.

Such buildings are sheathed once functionally, and sheathed again to accommodate mural paintings or cut-out geometric designs that hide the structure. The restorers have learned an intricate (17th-century) method of shoring up the structure before repairing the paintings, that Dr. Holod declares "a fantastic achievement."

Formerly the Isfahan populace liked to catch a breath of fresh air evenings by

strolling back and forth across their river on arcades and bridges decorated to suit every taste. Besides erotic paintings, the decor used to include gilded inscriptions for the public's edification bearing such morally uplifting texts as: "The World truly a Bridge; pass over. Weigh and measure all that you meet with on your passage. Everywhere Evil compasses the Good and transcends it."

Everywhere except Isfahan, Pearl of Persia. There the Good Life prospered long as the great progress Shah Abbas lived.



Man and Molecules

American Chemical Society
News Service

1155 SIXTEENTH STREET, N.W.
WASHINGTON, D.C. 20036
Phone (202) 872-4446

Masco

November 3, 1975

Dr. Froelich Rainey
University Museum
33rd & Spruce
Philadelphia, PA 19104

Dear Dr. Rainey:

Here is a complimentary tape of the Man and Molecules radio program "The Dating Game," which will be released to 550 radio stations this week and presumably will be aired shortly.

Also enclosed is a listing of the radio stations that broadcast Man and Molecules. We release two shows every other week, but the program directors decide which shows to play and when to air them. You may want to phone the stations in your area to find out exactly when they plan to broadcast this particular show.

Thank you again for your cooperation in making this show possible.

Sincerely,

Tom Burroughs

Tom Burroughs
MAN AND MOLECULES

Enclosure

Meetings

MAN AND MOLECULES

The following is a listing of the radio stations around the country that carry ACS's "Man and Molecules" science broadcasts. Each week C&EN announces the title of the particular program to be released the following Friday. Please check with your local station for time of broadcast.

ALABAMA

Anniston, WHMA
Birmingham, WVSU
Bridgeport, WBTS
Cullman, WKUL
Huntsville, WPIX, WNDA
Lacey's Spring, WRSA-FM
Mobile, WLPR
Sheffield, WSHF
York, WYLS

ALASKA

Anchorage, KNIF-FM, **KBYA**,
Cordova, KLAM
Dillingham, KDHS
Fairbanks, KUAC-FM,
KFAR
Juneau, KTOO
Kotzebue, KOTZ

ARIZONA

Flagstaff, KCLS
Phoenix, KFCA-FM,
KOOL-FM, KRUX,
KMCR-FM
Tucson, KHYT, KTKT
Williams, KCYN
Yuma, KBLU, KAWC

ARKANSAS

Conway, KCON, KHDY
Fayetteville, KFAY, KKEG
Hope, KKAR
Jonesboro, KASU
Little Rock, KLRE
Malvern, KBOK
Nashville, KBHC
Newport, KNBY
Paragould, KDRS

CALIFORNIA

Chico, ECHO, KMFM-FM
Concord, KYLS
Fremont, KOHL
Fresno, KKNV
Lancaster, KOTE, KHEZ
Long Beach, KLOK,
KSUL-FM
Los Angeles, KLAC, **KFI**,
Modesto, KDHS
Northridge, KCSN
Palm Springs, KDES
Pasadena, KPCS-FM
Pomona, KWOW
Riverside, KLLU, KBBL
San Bernardino, KFXM
San Diego, KPBS-FM,
KFSD
San Francisco, KALW
San Jose, KLHS
San Luis Obispo, KPCR
Santa Monica, KCRW
Twenty-nine Palms, KDHI,
KQYN

COLORADO

Alamosa, KASF
Burlington, KNAB
Colorado Springs, KRYT-
AM&FM, KEPC-FM,
KRDO-FM
Denver, KLAK

Gunnison, KGUC
Pueblo, KFEL

CONNECTICUT

Danbury, WXCI
Hartford, WHCN
New Haven, WPLR

DELAWARE

Wilmington, WMPH-FM

DISTRICT OF COLUMBIA

WAMU-FM
WASH

FLORIDA

Coral Gables, WVUM-FM
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Jacksonville, WJCT-FM
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Greenville, WGRN
Kankakee, WKOC
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Terre Haute, WTHI-FM
GREENCASTLE, WGRE
LOWA

Ames, KPGY & WOI
Burlington, KBUR
Carroll, KOIM-AM&FM
Cedar Falls, KHKE-KUNI-
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Cedar Rapids, KCOE-FM
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Davenport, KSIT, KRVR
Denison, KDSN-AM&FM
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MAINE

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Norway, WNWY
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Flint, WTAC
Houghton, WMTU,
WGGI-FM
Kalamazoo, WMUK-FM
Mt. Pleasant, WCMU-FM
Muskegon, WQWQ
Oak Park, WOPR
Saginaw, WHNN-FM
Ypsilanti, WEMU-FM

MINNESOTA

Blue Earth, KBEW
Crookston, KUCM
Mankato, KMSU-FM
Northfield, WCAI-FM
Rochester, KWEB
Roseville, KTIS
St. Cloud, KVSC-FM

MISSISSIPPI

Brookhaven, WJMB
Canton, WDOB
Columbus, WCBI
Corinth, WCMA
Greenville, WESY
Grenada, WNAG
Hattiesburg, WBKH
Houston, WCPC-FM
Kosciusko, WKOZ
Laurel, WNSL
Meridian, WDAL
Mississippi State,
WMSS-FM
Natchez, WNAT
Newton, WBKN
Ocean Springs, WOSM
Oxford, WOOR-FM
Pascagoula, WPMP
Philadelphia, WHOC
West Point, WROB

MISSOURI

Cape Girardeau, KFVS
Columbia, KFRU
Jefferson City, KLUM-FM
Kansas City, KWKI-FM,
KLJC
Liberty, KWPB
Maryville, KXCV
Rolla, KMMS
St. Louis, KADI, KCFM,
KWMU, KLSR-FM,
KOMR
Springfield, KSMU-FM
Warrensburg, KCMW-FM

MONTANA

Billings, KOYN
Bozeman, KGLT
Great Falls, KMOM
Havre, KOJM
Helena, KCAP
Libby, KLCB
Missoula, KUFM

NEBRASKA

Ainsworth, KBRB
Blair, KDCC-FM
Columbus, KTLX-FM
Grand Island, KRGI
Lincoln, KUCV-FM
North Platte, KJLT
Omaha, KGBI-FM
Valentine, KVSH

NEVADA

Ely, KELY
Las Vegas, KENO, KLUC,
KRGK
Reno, KUNR, KOLO
Winnemucca, KWNA

NEW HAMPSHIRE

Durham, WUNH-FM
Exeter, WPEA-FM
Henniker, WNEC-FM
Manchester, WGIR
Plymouth, WPCR-FM

NEW JERSEY

Asbury Park, WHTG-
AM&FM
Bridgeton, WSNJ-AM&FM
Camden, WTMR
Dover, WDHA-FM, WRAN
Flemington, WCVH-FM
Lincroft, WBJB-FM
Madison, WFDM
Millville, WMVB
Princeton, WHWH
Somerville, WBRW
Trenton, WWRC, WTSR
Vineland, WDWL, WWBZ
Zarephath, WAWZ-FM

NEW MEXICO

Alamogordo, KINN
Albuquerque, KHFM, KZIA,
KDEF-AM&FM
Clayton, KLMX
Las Cruces, KRWG-FM
Portales, KENW-FM
Ramah, KTDB
Roswell, KSWB
Sante Fe, KSNM

NEW YORK

Binghamton, WNBF, WHRW
Bronx, WPUV
Buffalo, WBFO, WEBR/
WBCE
Canton, WSLU
Central Square, WCSQ
Corning, WOLI
Cortland, WKRT
Elmira Heights, WEHH-FM
Endwell, WSKG
Garden City, WBAU
Glen Falls, WBZA
Greenville, WCWP
Hamilton, WRUC
Ithaca, WICB
Liverpool, WCNY-FM
Massapequa, WBER
Newburgh, WGNV
New York, WNYC, WYUR,
Radio Free Europe
Olean, WHDL
Ossining, WOSS-FM
Rochester, WRUR,
WXXI-FM
Syracuse, WHEN
Utica, WRUN-AM&FM
Watertown, WOTT

NORTH CAROLINA

Charlotte, WAYS
Durham, WDBS, WDNC
Gastonia, WLTC
Greenville, WOOW
Jacksonville, WJNC
Kannapolis, WCUZ
Kinston, WPTC, **WISP**,
Raleigh, WYNA
Southern Pines, WIOZ
Spring Lake, WFBS
Wadesboro, WADE
Washington, WEEW
Winston-Salem, WTOB

NORTH DAKOTA

Carrington, KDAK
Devils Lake, KDLR
Fargo, KDSU
Grand Forks, KFJM, KNOX
Minot, KCJB-FM

OHIO

Akron, WAUP
Alliance, WRMU-FM
Batavia, WCNE
Bowling Green, WBGU
Chillicothe, WBEX
Cincinnati, WGUC-FM,
WWEZ-FM, WUBE
Cleveland, WERE, WZAK,
WBOE-FM, WRUW
Columbus, WOSU,
WCBE-FM
Dayton, WSMR-FM
Delaware, WSLN
Gambier, WKCO
Granville, WDUB
Greenville, WGOV
Kent, WKSU-FM
Kenton, WKTN
Marietta, WCMO-FM
Morrow, WLMH-FM
New Concord, WMCO-FM
Painesville, WPVL
Reading, WRGJ
Streetsboro, WSTB-FM
Struthers, WKTL-FM
Toledo, WCWA
University Heights, WUJC
Wilberforce, WCSU-FM
Wooster, WCVS-FM
Yellow Springs, WYSO
Tiffin, WHEI-FM

OKLAHOMA

Edmond, KCSC
Muskogee, KMUS
Norman, WNAD
Oklahoma City, KPNB,
KJAK-FM (subcarrier)
Ponca City, WBBZ
Peteau, KINB
Stillwater, KOSU-FM
Weatherford, KWEY

OREGON

Ashland, KSOR
 Corvallis, KOAC
 Eugene, KRVM-FM
 McMinnville, KSLC-FM
 North Bend, KBBR
 Pendleton, KTIX
 Portland, KLIQ
 Salem, KORI-FM, KBZY
 Woodburn, KWRC

PENNSYLVANIA

Bethlehem, WLVR
 Braddock, WLOA-AM&FM
 Charleroi, WESA
 East Stroudsburg, WESS-FM
 Gettysburg, WGET, WWSB
 Greenville, WTGP
 Grove City, WSAJ
 Harrisburg, WFEC, WMSP-FM
 Hershey, WITF-FM
 Kane, WKZA
 Lebanon, WLBR-AM&FM, WAHT
 Mansfield, WNTE
 Mt. Wolf, WRHY
 New Wilmington, WKPS
 Philadelphia, WFIL, WRCP
 Pittsburgh, WDUQ-FM, WSHH
 Portage, WWML
 Punxsutawney, WPME
 Reading, WXAC
 Scranton, WDDL-FM, WVMW-FM
 St. Marys, WKBI-AM
 Villanova, WKVU
 Wilkes-Barre, WCLH, WRKC-FM
 Williamsport, WRAC

RHODE ISLAND

Providence, WBRU-FM
 Westerly, WERI-AM&FM

SOUTH CAROLINA

Aiken, WLOW
 Cheraw, WCRE
 Columbia, WEPR
 Darlington, WJAR
 Due West, WARP-FM
 Greenville, WEPR
 Spartanburg, WSPA
 Traveler's Rest, WBBR

SOUTH DAKOTA

Aberdeen, KASD
 Brookings, KESD-FM
 Rapid City, KTEQ-FM
 Sioux Falls, KCFB-FM, KAUR-FM
 Spearfish, KBHU-FM
 Springfield, KSTI-FM
 Yankton, MMC

TENNESSEE

Chattanooga, WYNQ-FM, WDYN-FM
 Church Hill, WMCH
 Collegedale, WSMC-FM
 Columbia, WKRM
 Cookeville, WHUB, WTTU
 Johnson City, WETS-FM
 Knoxville, WUOT-FM
 Martin, WCMT, WUTM-FM
 Memphis, WLYX-FM, WMPS, WQOX
 Nashville, WPLN, WWGM

TEXAS

Abilene, KCAD
 Austin, KRMH
 Conroe, KIKR
 Corpus Christi, KEYS, KIKN
 Dallas, KRLD, KERA
 Denton, KNTU-FM
 El Paso, KTEP
 Greenville, KQVL
 Houston, KUHF, KODA-FM, KPFT
 Huntsville, KSHU-FM
 Keene, KSUC-FM
 Kingsville, KTAI-FM
 Laredo, KJAR
 Lubbock, KOHM-FM
 Marshall, KDUX
 Odessa, KOCV-FM
 Palestine, KNET
 San Antonio, KSYM-FM
 Stephenville, KSTV
 Waco, KWBU-FM
 Wichita Falls, KWFT

UTAH

Logan, KUSU-FM
 Ogden, KWCR
 Salt Lake City, KCPX
 St. George, KRDC-FM

VERMONT

Burlington, WDOT
 Montpelier, WSKI
 Winoski, WWPV-FM

VIRGINIA

Altavista, WKDE
 Bristol, WZAP
 Hampden-Sydney, WWHS-FM
 Harrisonburg, WEMC-FM, WMRA-FM, WKCY, WQPO
 Lynchburg, WLVA
 Norfolk, WTGM
 Portsmouth, WNHS
 Radford, WRAD
 Roanoke, WVWR-FM
 Rocky Mount, WYTI
 Warrenton, WEER
 Waynesboro, WAYB
 Yorktown, WYCS

WASHINGTON

Bellevue, KBBS, KBES-FM
 Bellingham, KERI-FM, KPUG
 Centralia, KCED-FM
 Cheney, KEWC-FM
 College Place, KGTS-FM
 Newport, KUBS-FM
 Pasco, KALE
 Seattle, KNHC-FM, KRAB-FM, KCMU-FM, KETO-FM
 Spokane, KPBX-FM
 Tacoma, KPEC-FM, KLAY-FM, KTOY-FM

WEST VIRGINIA

Buckhannon, WVWC-FM
 Clarksburg, WBOY
 Huntington, WMUL
 Morgantown, WAJR
 Sutton, WSGB

WISCONSIN

Appleton, WLFM
 Burlington, WBSD-FM
 Madison, WHA
 Milwaukee, WUWM, WRIT, WBOS
 Oshkosh, WRST-FM
 Ripon, WRPN
 River Falls, WRFW-FM
 Stevens Point, WWSP-FM
 Superior, WSSU-FM
~~KEWAUNEE, WAUN~~
 WYOMING
 Buffalo, KBBS
 Laramie, KVWR-FM, KOWB
 Newcastle, KASL

OUTSIDE THE U.S.**AUSTRALIA**

Adelaide, VL5UV

CANADA

Edmonton, Alta., CKUA
 Saskatoon, Sask., CJUS-FM

EUROPE

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WEST INDIES

Trinidad, NBS Radio 610