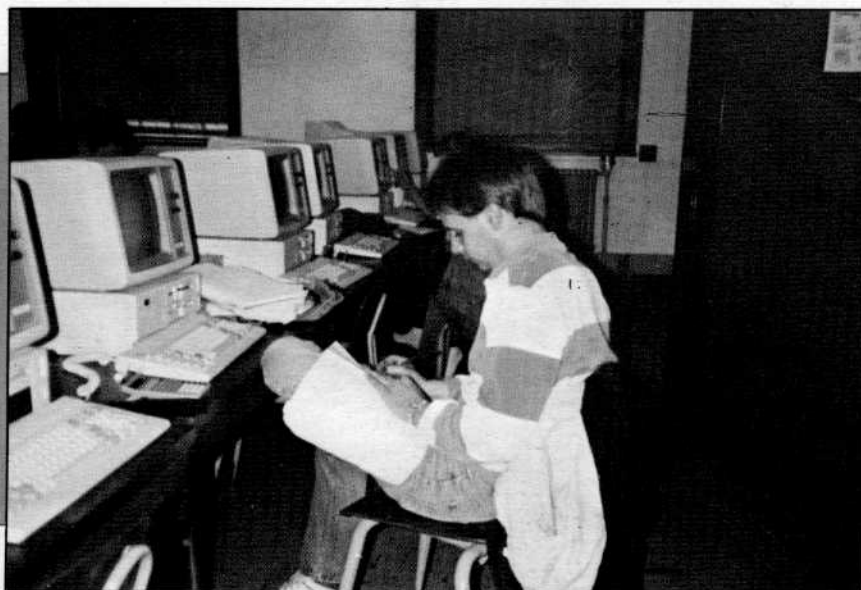


THE GOESSMANN GAZETTE

A publication of the Chemistry Department, University of Massachusetts at Amherst

Spring 1988



Chemistry Resource Center

In the last issue of this gazette the decision to create a new Resource Center in Goessmann Laboratory was announced. During the summer and fall of 1987 that plan was carried out and the Center has been in use by approximately 1500 beginning chemistry students and five classes of advanced students.

Two adjacent classrooms (151-152) were furnished with new tables and equipment and were open to all chemistry students 32 hours per week. Primary uses included: viewing of video tapes of pre-lab instructions, computer checking of one laboratory unknown, taking brief weekly quizzes on the Plato computer system (all the foregoing were required), viewing of video tapes of lectures, and drop-in tutoring. Other activities included use of word processing, graphing, plotting, simulation, and drill programs in both general and advanced chemistry.

The rooms have 45 Leading Edge microcomputers (30 of which are also connected to Plato on the Cyber main frame), 10 printers, 8 VCR/TV viewing stations, a check-in area, software storage area, tables for study and tutoring use, and an area for small group presentations. Also available is a video projector which can throw the image from either a CRT or a TV onto a large projection screen.

The usage level started out higher than expected and continued to grow during the semester. The early use seemed to be primarily short span (less than 30 minutes per student per session) but gradually shifted during the semester to a higher percentage of individual sessions longer than one hour. Since no required use was longer than 30 minutes, this means that more and more students found the other (non-required) uses to be helpful.

Little software was available during the first semester of a simulation nature or designed to offer drill in selected topics, and what was available was not advertised. During the second semester this type of software is being expanded and students encouraged to use it whenever it could be of help in a course. (Specific suggestions in this regard will be welcome.)

Because the microcomputers are fully functioned, students can and do use them for other types of activities as well—preparing written papers, writing programs in BASIC or other computer language, preparing graphs or spreadsheets, searching data bases, etc. Such uses are not necessarily related to a specific chemistry course, but are available to students enrolled in any chemistry course. □

If you have not yet seen the Center, we invite you to drop in during any M-T-W afternoon to sample what's available.

Alumni Help For the Department

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The views expressed by contributing authors are not necessarily those of the Goessmann Gazette, the Department of Chemistry, or the University. The editor welcomes comments about this issue and suggestions for future issues.

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With the 1987 issue of the GOESSMANN GAZETTE, a program was announced whereby our Alumni could make contributions that would be of immediate benefit to activities in the Department. **The Chemistry Annual Fund** was established, and Alumni invited to make contributions to it. Many Alumni chose to do this, or to continue to send their contributions to the University Annual Fund but designate Chemistry as the recipient, and we were greatly encouraged by the net response. The stated goal was to establish each year a fund that could be used to provide graduate fellowships or to make significant improvements in our seminar program. **The fund for 1987 has exceeded \$12,000!** Much can be done with this generous response, and **we are deeply grateful to our Alumni for this very substantial act of confidence.** We appreciate that aspect of the contributions as much as the monetary part.

Other Alumni have helped in other ways. **Dr. Edward Marram**, President of GEO-CENTERS (Newton Centre, MA), has been responsible for his firm making an award of a full academic-year fellowship, as is described in more detail elsewhere in this GAZETTE. Also, the endowment fund established last year by **Donald and Phyllis Kuhn** continues to grow through their contributions, and income will soon be available for expenditure. To all contributors, the Faculty and Staff of the Department send their heartfelt thanks, and hope that the 1988 Chemistry Annual Fund will be even more successful. Again we enclose a contribution card and envelope with this GAZETTE, and we will look forward to having your support. If your employer has a matching gift program, this can double or even triple the award that you make. This was true of many contributions made last year, and there was a great enhancement of many gifts.

Please find the contribution card at the bottom of page 11.

Department of Chemistry Plays Major Role in 1988 Winter Conference on Plasma Spectrochemistry

Department of Chemistry analytical chemistry faculty, post-doctoral associates, present and former students played an active part in the **1988 Winter Conference on Plasma Spectrochemistry** held January 3-9, 1988 in San Diego, California.

Professors Edward Voigtman, Peter Uden, and Ramon Barnes played prominent roles in the organization and management of the Conference, while **Drs. William Elliott (Ph.D. 1987), Xiaoru Wang (Ph.D. 1987), Gerhard Meyer (Ph.D. 1982), Bruce Quimby (Ph.D. 1979), and Mrs. Elzbieta Bakowska (Ph.D. candidate)** presented papers or aided in operation of the meeting.

Professor Voigtman chaired a special symposium on "Plasma Atomic Fluorescence Spectroscopy" which featured a plenary lecture by Professor James D. Winefordner (University of Florida), in whose research group Professor Voigtman had worked prior to coming to the University of Massachusetts in 1986.

Professor Uden did triple duty at the Conference by organizing and chairing a special symposium on "Plasma Spectroscopic Detection in Chromatography" consisting of 16 invited and contributed papers, and a panel discussion on "Plasma Source Chromatographic Detectors: Research or Routine Tools?", and by teaching a pre-Conference short course on "Plasma Spectroscopic Detection in Chromatography". During the symposium Professor Uden co-authored a lecture on "Inorganic Reaction Studies by GC-MIP" with Mr. Tao Wang, a Ph.D. candidate. Dr. Quimby, who has been employed at Hewlett Packard Avondale Division since his graduation from the University, co-authored three

papers describing an improved microwave cavity, discharge tube, and gas flow system for GC atomic emission detection; the characterization of this GC emission detector system arrangement and instrumentation, the application of the GC-MIP system.

Dr. Meyer, who is employed at Dow Chemical in Midland, Michigan, also chaired a special symposium on "Plasma Automation and Instrumentation" consisting of ten papers including one he presented describing an automated process stream analysis air ICP emission spectrometry. Dr. Meyer also taught two pre-Conference short courses on "On-line and Remote Instrumentation" and "Non-argon ICP's for Spectrochemical Analysis."

Dr. Elliott presented two papers, co-authored by Professor Barnes, describing aerosol size distribution and density characterization using absolute angular scattering measurements as well as the spatial distribution measurements of aerosol velocity and density in the three electrode DCP.

Mrs. Bakowska gave a poster presentation describing the determination of gold by ICP mass spectrometry in low concentration, limited volume samples resulting from 2000-fold pre-concentration of seawater. This work was a co-operative effort with scientists at MIT and was coauthored by Professor Barnes.

Dr. Wang and Mrs. Bakowska also assisted in the registration and operational details of the meeting which was attended by 350 scientists from around the world. Miss Sophie Bobrowski (M.S. 1984), presently operating an ICP emission spectrometer at Oak Ridge National Laboratory,

also attended the meeting as did Scott Charvat (M.S. 1985), employed by Lederle Laboratories.

The Conference was sponsored by the *ICP Information Newsletter*, edited and published monthly for the past 13 years by Professor Barnes. Professor Barnes was the Conference chairman.

Approximately 160 papers were presented during the six-day meeting. This Winter Conference was the fifth biennial meeting held in January since 1980. Previous meeting sites included San Juan, Puerto Rico; Orlando, Florida; San Diego, California; and Kailua-Kona, Hawaii. The 1990 Winter Conference is being planned for January in Florida.

For additional information about the *ICP Information Newsletter* or the **Winter Conference on Plasma Spectrochemistry** series, please contact Professor Barnes. □

ACS Meeting TORONTO June 7, 1988

The Chemistry Department, together with the Department of Polymer Science and Engineering, will sponsor an alumni social hour: Tuesday, June 7, 1988, 5:30-7:30 PM, Sheraton Hall in the Sheraton Centre.

Hope to see you there!

