

NEWS - LETTER

UNIVERSITY OF ILLINOIS

Department of Mining, Metallurgy and Petroleum Engineering

January, 1964

AT LONG LAST!

Department Has 'New' Building

The biggest news of the year for the Department is our move into new quarters. No, it isn't a new building, but we have taken over the old Physics Laboratory at Green and Mathews now that Physics has moved into its new building. Some space will be temporarily shared with staff arriving as part of the staff buildup for the Materials Research Laboratory which is now under the first stages of construction.

The building is now officially named the "Metallurgy and Mining Building." In addition to providing space that will at last allow the staff to be housed together—we were formerly divided among ten separate buildings—we have a location on the street where people can see us and know we exist.

Recently, the release of \$300,000 for remodeling was obtained, and now extensive alterations will begin. The large (40'x60') first floor student laboratory will become our furnace room and powder metallurgy laboratory. The similar laboratory on the second floor will be the metallography laboratory, designed to permit the scheduling of two simultaneous sections of laboratory classes. The M & M Building will also have a sizeable

student lounge and a study conference room—features long desired for our students.

The move to the "new" building began last summer, as rooms which required only modest renovation became occupied. For example, the Department Office since last August has been 201 M and M Bldg. By this time, a majority of the staff have their offices moved into the new quarters. The machine shop has just completed its move into large quarters consisting of a large main machine tool area, and a complex of special purpose facilities with a total space of over 2,000 sq. ft.

The old Metallurgy Laboratory will be completely vacated, and is to be taken over by the Nuclear Engineering Program. The electron microscopy facility, however, will be retained in the Met Lab for at least some time. Also, the mining laboratory will be maintained in its present location, although the mining staff will be located in the new building.

We hope the move will be completed during the coming summer, and you will find inspection of this new facility an added incentive for a visit to the Department.

Dr. Frederick Seitz Is New Graduate Dean

Dr. Frederick Seitz has been named by the Board of Trustees as Dean of the Graduate School and Vice President of Research, effective Sept. 1, 1964. Dr. F. T. Wall, who is presently serving as Dean, will return to his position as Professor of Physical Chemistry. Dr. Seitz is currently Head of the Physics Department, but is also serving half time as President of the National Academy of Science.

The Vice President position was established by the Trustees at the time of Seitz's appointment.

Student Wins AIME Contest

Norris Dahlstrom, a junior in metallurgy, has been awarded first prize in the Chicago Section, AIME, student paper contest. The award is worth \$100, not to mention the professional recognition it brings its recipient. Norris is a Champaign boy, and an Honors student in the College.

His paper was based on the work he did as an assistant in Prof. Wert's laboratory, and was concerned with the production of single crystals of refractory metals.

Changes Made In Met Curriculum

Beginning next Fall, requirements in quantitative analysis for metallurgists will be satisfied by a new three-hour course instead of the five-hour course now given. We have long felt this change desirable in view of the trend away from this type of work by our graduates, and have finally persuaded the Chem Department to offer the new course. Now, students will have two lecture and one laboratory session per week.

The requirements in engineering drawing have been decreased to a single three-hour course which combines the important aspects of general drawing technique and descriptive geometry.

The College of Engineering requirements of eighteen hours credit in the humanities and social sciences has been achieved primarily by sacrificing the number of hours available as free choice electives.

Our two-hour course in Advanced Phase Diagrams has been changed from elective to required status, and is to be taken in conjunction with the engineering physical metallurgy courses, Met E 251 and 253. This change was believed desirable in view of the availability now of complex diagrams which permit interpretation of the structures of important commercial alloy systems that otherwise must be accepted "on faith." Some staff members, however, felt that a better solution would be not to require either the diagram course or the engineering physical metallurgy.

A final change has been to increase our requirement in mathematics. The student now may elect between differential equations and a course in the use of computers.

The paper has been forwarded to New York to be judged in national competition against other Section winners.

NEWS ABOUT THE STAFF

WALTER BRUCKNER TO TAKE SABBATICAL IN EUROPE

Prof. Walter Bruckner will take a sabbatical leave beginning in February, and will spend four months at Milano, Italy, at the Istituto Polytechnico with Prof. R. Peontelli. Walter plans to do some corrosion research there on single crystal orientation effects and corrosion in an a-c field. He also hopes find time to sample some of Italy's famous wines and song—Mrs. Bruckner will accompany Walt, to make sure the traditional trio of attractions is not completed. Walter will then spend a month at Brussels with Prof. M. Pourbaix of CEBELCOR and the Univ. of Brussels. Next will be a month at Cambridge Univ. in England, consulting with Prof. U. R. Evans. The Bruckners should be back in Urbana on Sept. 1 enriched by many new experiences and friendships.

WERT TO DEVELOP HONORS PROGRAM

Prof. Wert has been named chairman of the College of Engineering Honors Council, and has been relieved of part of his teaching duties to devote adequate attention to this important phase of our educational program. This is a particularly challenging responsibility, as many feel the honors program at present does not live up to its potential in encouraging the development of the many exceptionally talented students who enter the College.

ROBB THOMSON WILL SPEND SABBATICAL IN JAPAN

Prof. Robb Thomson is another staff member planning a sabbatical leave. Robb will go to Japan, where he will be at the Institute for Solid State Physics at Toyko. The Institute is located near the Hardy Barracks, for the benefit of any GIs who may be familiar with Tokyo. Robb will work with Dr. T. Suzuki, who was once a research associate at Illinois.

ROSE RETURNS FROM FRANCE

Prof. Walter Rose recently completed a sabbatical leave during which he was Scientific Counselor at the Institute Français du Pétrole, in Paris. While he was in

Paris, Walter also prepared a text entitled "Some Aspects of Reservoir Engineering" (Editons Technip, Paris, 1964).

WERT SPENDS MONTH IN EUROPE

Prof. Charles Wert spent a month in Europe last summer during which he attended a meeting on refractory metals sponsored by a NATO Committee on Materials. Charley also visited laboratories in England and Amsterdam, and in particular the Heinken plant in

Holland, where he was surprised to see scores of touring American college students also taking in the attraction.

NEW TEXT ON SOLID STATE BY WERT AND THOMSON

Profs. Wert and Thomson have collaborated on a text which will be released by McGraw-Hill early in 1964. The book has grown from the lecture notes prepared for the service course in solid state fundamentals designed for electrical en- (Continued on page 4, Column 3)

RESIGNATIONS AND NEW APPOINTMENTS

Bob Balluffi To Take Position At Cornell

Prof. Robert Balluffi has accepted a position as Professor of Engineering Physics at Cornell University, and will begin his duties there at the end of this academic year. Bob has been particularly active in the field of radiation damage, and the study of defects in solids. He has taught courses here in X-rays, dislocations, thermodynamics, and a survey course in physical metallurgy for graduate students. The Department will miss his contributions but wishes him well in his new position.

Prof. Eadie Resigns

Prof. George Eadie resigned his position as Associate Professor of Mining Engineering effective last February in order to return to engineering practice. George is now with the Freeman Coal Company, a division of General Dynamics. George's new duties involve underground operations.

The Eadies are now located in Benton, Illinois. We are all very fond of the Eadies, and were sorry to see them leave the University.

Don Beaman Completes Ph.D., Accepts Position

Prof. Donald Beaman, who received his Ph.D. this year, has remained on the staff as Assistant Professor in order to continue experiments which were the basis of his doctorate research under the direction of Prof. Balluffi Don's

work concerns the interaction between solute atoms and point defects.

John Gilman Joins Metallurgy Staff

The Department is proud to have had John J. Gilman join the staff this Fall as Professor of Physical Metallurgy and Physics. Dr. Gilman has established himself as an outstanding researcher in metal physics. His numerous publications represent many important contributions to our understanding of the properties of solids.

John received his BS in mechanical engineering in 1946 and his MS in metallurgy in 1948 from the Illinois Institute of Technology. He received his doctorate from Columbia where he was a student of Tom Read.

Prof. Gilman was on the staff of the General Electric Research Laboratory until 1960, when he became Professor of Metallurgy at Brown University.

While at Illinois, Dr. Gilman plans to extend his research into three principal areas: the growth and properties of hard metal crystals; the physical and chemical nature of solids and their surfaces; and the study of micromechanical mechanisms in solids in the search for knowledge about inorganic crystals that might provide insight into the behavior of organic polymers.

The presence of Dr. Gilman will be of great stimulus to the staff and those students with which he comes in contact.

ALUMNI NOTES

J. W. Sherman, '37, still with St. Joseph Lead Co. in Herculaneum, Missouri, was a visitor to the department last winter. While we were discussing our move into new quarters, he pointed out that he could recall our move into the present Metallurgy Laboratory.

D. K. Davis, '40, after spending many years in the brass industry, is now with the Gilbert and Bennett Mfg. Co., Blue Island, Illinois. His home address is: 20425 Ithaca Rd., Olympia Fields, Illinois.

Robert S. Hogue, '40, had to cancel his reservations for the Alumni Luncheon last Fall due to an unexpected call from a customer, but wants to be remembered to his '40 classmates.

A couple of old-timers, Don Crews, '41, and Jack Hanson, '40, visited the campus recently after many years and were amazed at the changes that had taken place. Both enjoyed touring the campus looking for old familiar landmarks. Don is Met Development Engineer for Clow Foundry in Coshocton, Ohio, while Jack is a captain for United Airlines. Jack couldn't believe Barney Ricketts was able to recognize him and call him by first name after all these years.

Harry Czyzewski, '41, busy as usual on the West Coast, staged his own "alumni luncheon" last year in connection with the Pacific Northwest Metals and Materials Conference, of which he was General Chairman. Harry Turner, '49, and Don Bertossa, '50, presented papers, and in attendance were Don Anderson, '41, and Prof Walter Voskuil, former staff member here in mineral economics and now at the MacKay School of Mines, Univ of Nevada.

J. T. Lange, '41, enjoyed identifying himself and his old classmates in the MIS photo printed in the Newsletter a few issues ago. His son is now at the University, where he is an Honors Student in Engineering Physics.

Otto Turnovsky, '46, made his first trip to the campus this Fall since his graduation. The princi-

pal attraction was the 90th anniversary celebration of the University YMCA — Tiny was a Board member in his undergraduate days — but we like to think he also wanted to visit his old friends in the department as well. Otto is with Youngstown Sheet & Tube, at Youngstown, Ohio, and is concerned primarily with corrosion problems.

L. H. Sheep, '49, has been named Manager of a newly established customer service department of the Metals Div, Aluminum Sheet & Plate, Olin-Mathieson Chem Corp, located in Hannibal, Ohio.

Charles Fournier, '49, was a recent visitor in connection with some business with the T & A M Department regarding fracture problems in high strength 4135 missile cases. Chuck is with Aerojet General, and his home address is 9021 Fashion Dr., Sacramento, California.

Paul Shewmon, '52, writes of his experience at Gottingen, Germany, where he is spending a year at the Max Planck Institute for Physical Chemistry, primarily in study, under a fellowship grant from the National Science Foundation. The family is enjoying the experience the more as they learn the language and customs, with the children leading the way, as would be expected. Paul will return to teaching on his return; he is now on leave from Carnegie Tech.

Jim Kerr, '52, finished work on his Ph.D. this year, and has followed the sun to California where he is working for Astronautics Div., General Dynamics. His home address is 5110 Clairemont Mesa Blvd, San Diego '17, Calif.

Vito V. Mitkus, '52, was a discussion leader for the ASM Shirt-sleeve Clinic held during the Fall meeting in Cleveland. The clinic was concerned with management problems, emphasizing organizational, motivational, and control techniques. Vito is with Diamond Chain in Indianapolis.

Keith Huges, '52, is now District Sales Manager for American Brass

Co., with headquarters at 3100 Richmond Ave, Houston, Texas.

Robert E. Thomas, '52, joined the Seaway Nickel Division of the Roblin-Seaway Industries, Inc last August, and is Manager of Nickel Product Sales. This is a newly formed company dealing in such nickel products as hot rolled bars, wire products, etc. At the present time, Bob is involved in the development of a continuous casting operation. His new business address is 101 East Ave., Tonawanda, New York.

Duane Moberg, '56, is now working at Astropower, where his activities are in the field of stress corrosion. His business address is: Materials Research, Astropower, 2121 Paularino, Newport Beach, Calif. His home address is 1395 A Baker, Costa Mesa, Calif.

Jack Sayles, '56, left Lindbergh Engineering Co. to take a position as Instrumentation Engineer for Universal Oil Products Co. The new job will involve a great amount of foreign travel, such as Jack so much enjoyed in his work with Lindbergh. Now that the Sayles children are in school, Anna has also returned to the classroom to obtain her teaching degree.

Earl A. Carlson, '56, was the speaker at the October meeting of the Chicago Section, AIME. He discussed the pressure pouring of stainless steel slabs. Earl is Project Engineer with AMSTED Research Laboratories. Prior to this position, Earl was in the Research and Development Department of Inland Steel.

Henry Otte, who was on the staff here ten years ago, is leaving RIAS in Baltimore to become the head of the Advanced Materials Division of the Research Laboratory of the Glenn L. Martin Co. at their Orlando, Florida plant. Henry was here recently to see if any of our graduates would be interested in making the move with him.

Kaye Johnson, '58, joined the exclusive homeowners club in Los Alamos last September when they moved into a home in the White
(Continued on next page)

☞ MORE ALUMNI NOTES ☜

Rock area at 106 Carlsbad. The main problem now is adjusting to all the room after being used to apartment living. Kaye's principal work at the Laboratory involves metallography of plutonium alloys.

Jim Hanafee, '58, who had planned to return to graduate studies after obtaining industrial experience, is right on schedule. He is now working on his Ph.D. at Case Institute after having spent a year at International Nickel at Bayonne, N. J.

Bob Luetje, '59, was here with the Armco interviewing team this Fall, and came by the Lab to exchange greetings. Bob has a very interesting job acting as liaison between the company's patent attorneys and the technical staff.

Ken Kamber, '58, who left here with his MS for further study at Stanford, has now received his Ph.D. there, and has taken a position in the Los Angeles area, but our informant can't recall the name of the organization. Send us the details for the next Newsletter, Ken.

Ed Horak, '59, was brought to the campus recently to present an equipment donation to the M. E. Department Foundry on behalf of his employers, the National Cylinder Gas Corp. Ed is involved with research and development work in industrial gases, primarily in customers' plants, and consequently does a lot of traveling.

Pat Bunn became the first woman to receive an advanced degree in the department when she obtained her MS last June. Pat came here from Pratt & Whitney in Hartford, and is now working for P. R. Mallory in Burlington, Mass.

Glenn Canfield, '59, recently brought us up-to-date on his adventures since leaving the campus. Presently, he is Process Metallurgist, Cold Finishing Quality Control, Latrobe Steel Corp. Glenn first went with Allegheny-Ludlum after graduation, and also worked in the Atomic Fuel Division of Westinghouse prior to joining Latrobe. Glenn's list of civic and local activities indicate that his professional work must consume

only a small part of his energy: Republican committeeman, various offices in Young Republican Club, President of local civic club, secretary of volunteer fire department, secretary of church council, lay delegate to church organizing convention, advisor to American Field Service on Student Exchanges, and lecturer on Science and Engineering for Engineering Week. On top of this, he is editor and publisher of the local neighborhood bi-weekly newspaper. It seems hard to believe, but the Canfields have also found time to increase the family to three children now. And you say you don't have enough time to clean out the garage!

Jim Gaebe, '59, has graduated from Western Electric's engineering training center in the general engineering development course. Jim has been with Western Electric since his graduation.

Joe Yadron, '60, is now back at the University, where he is enrolled in the MS program in Business Administration. Joe joined Douglas Aircraft following his graduation, and more recently was with McDonnell Aircraft before becoming a student again.

George Vytanovich, '60, is now with the Rawland Corp., a subsidiary of Zenith, where his work is concerned with material specifications for television production. George was with Republic Steel, and then spent six months in the army before taking his present position. George joined the Ukrainian students on the campus for their International Supper presentation at the YMCA here, and came by to visit with us.

Vonne Linsie, '62, is now with Battelle Institute in Columbus, after resigning his position with Esso Research and Engineering, Linden, N. J.

Prof. Bruckner had the opportunity to visit with several alumni at the second International Conference on Corrosion of Metals held last Spring in New York. Walter and Robert Hinton, MS '61, both presented papers. Bob has returned to the campus to work on his doctorate after working for Universal Oil Products. Also at the

meeting was C. A. Robertson, '56, Don Hise, '59, and Frank J. Bruns, '49.

We picked up a few address changes at the Alumni Luncheon in Cleveland last October: Carl Janis, '58, is with IBM and his address is 408 Raylene Dr., Vestal, N. Y.; Robert W. Hailey, '43, is with Super Temp Corp., and living at 11008 S. Norwalk Blvd., Santa Fe Springs, Calif.; and Roy Hardin, '42, has taken a position with Sherritt Gordon Mines, Ltd.

STAFF NEWS (from p. 2)

engineering students. Besides being an excellent text, this book will also be useful to engineers who need to review recent developments in solid state physics.

LIBERMAN BACK FROM TWO-YEAR POST WITH ONR

Prof. David Lieberman and his family returned in September from a two-year leave of absence with the U.S. Office of Naval Research's London office. In his capacity as Liaison Scientist for Physical Metallurgy, he visited university, government, and industrial laboratories, attended meetings and lectured in England, France, Germany, Belgium, Holland, Switzerland, Italy, Greece and Israel.

The results of these visits were reported along with the information from the other liaison scientists and technically trained naval officers in various technical bulletins and scientific notes which are sent to the Navy, other government agencies, and scientists whose work is supported by government contracts. Part of the liaison effort included distributing reports of U.S. research to the European scientists.

Lieberman found the differences in educational systems, the spectrum of working and research conditions, the different status of university professors, and the extreme range of relative emphasis on fundamental research technology particularly intriguing. Dave expects to discuss some of his observations at a forthcoming MIS meeting.

The Liebermans enjoyed their stay in Europe very much, and heartily recommend the tour.