

Chemist Burger takes retirement at hectic pace

By DEBRA BECK
ALUMNEWS Editor

"Retirement" takes on a new definition when one refers to 1993 distinguished alumnus Leland Burger.

Though his distinguished career in chemistry officially ended when he retired from the Battelle Memorial Institute in 1986, Burger has continued consulting work for Battelle. "Consulting" includes working two-thirds to three-quarter time on various Battelle projects. Contact with other professionals is the driving force behind this hectic pace at a time when most people are content to kick back and enjoy some leisure time.

"I can't imagine being isolated from science," Burger says, "and if I can't talk to other people engaged in research, then I am isolated."

This love for science dates back to Burger's youth in Buffalo, Wyo. Surrounded by technical materials in the home and supported by a mother also interested in science, he began experimenting when he was a young as 9 or 10 years old. His interests extended to every area of science, including chemistry. The wonders of electricity also challenged Burger's abilities as a researcher. Neighbors often found him stringing wires around town as he worked on another experiment.

By the time Burger reached high school and was able to enroll in his first real chemistry class, getting through the material was a snap — he'd learned a lot of it in his home lab.

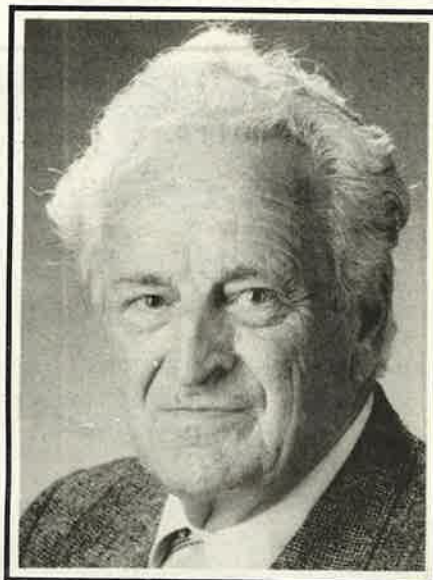
UW in a Model A

When college selection time came (during the Great Depression), Burger's choice was simple. A high school scholarship provided the critical financial aid that brought him to Laramie to attend the University of Wyoming. He admits, though, that there still was a bit of uncertainty even as registration day neared in 1935.

Like most UW students, Burger's accommodations were far from luxurious. Unlike most students, however, his apartment moved. Burger hitched a ride to Laramie with a hiking buddy from home who attached a small shack on the bed of his "Model A" truck. When they arrived on campus, the two parked the vehicle behind the university power plant and lived in the shack.

A sheep wagon stove provided cooking facilities, and they lighted their makeshift home with a Coleman lantern. Water came by the bucket from the power plant. The two men took turns cooking and washing. It was too crowded for joint studying, though, so Burger spent a lot of time in the campus library.

UW administrators didn't catch on to this unusual living arrangement until the spring semester, but no one seemed to mind. In fact, Burger says, it even earned them a bit of notoriety — and coverage in the local press.



Leland Burger

After the first year, a job as a weather observer and another as an assistant in the state chemist's laboratory made more conventional and comfortable living conditions possible.

As one might expect, the young scientist excelled in the classroom and laboratory. A Sigma Nu, Burger was named the outstanding chemistry student in 1935-36 and 1936-37; he was named to Phi Lambda Upsilon, Sigma Xi (associate), and Phi Kappa Phi. He graduated with honor in 1939, with a chemistry major and minors in physics and mathematics.

The Manhattan Project

Burger's journey toward a doctorate (from the University of Washington) took a three-year detour, when he accepted a position on the renowned Manhattan Project. It was Christmas 1941, and Pearl Harbor, Hawaii, had just been attacked by the Japanese.

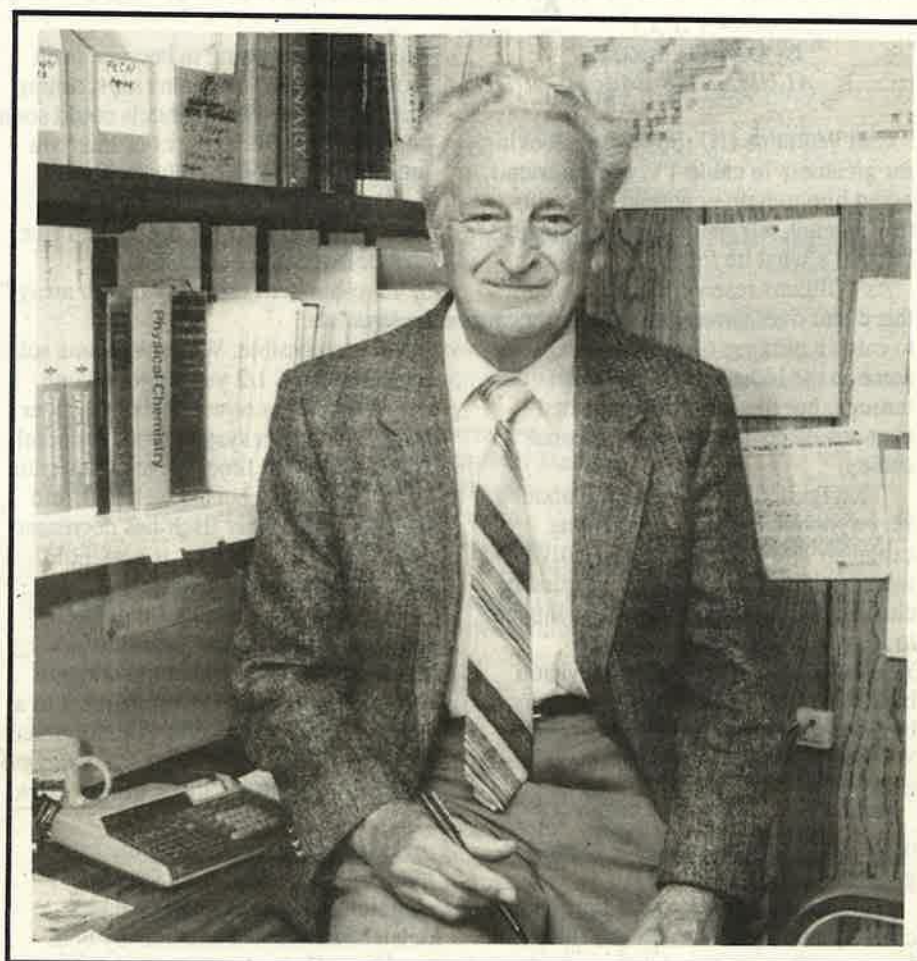
Burger went home to Buffalo on break and contemplated his options. Scientists weren't in big demand by the military at the time, and he considered where the military draft might take him.

He didn't have to wonder long. Burger had an invitation waiting to join the Manhattan Project at Columbia University, where he would help develop the diffusion process for the separation of uranium isotopes.

"When I got back to Seattle, I had a note from my professor, 'come back to Columbia. We'll put you to work.' So within the day, I was on a train to New York City," he says.

Burger's unit worked on fluorine chemistry for about two years, then they moved on to developing the gaseous diffusion process. Originally, the project was small — only 30-40 workers — and there were few outward signs of its importance.

"At the time, one wouldn't even know it was a secret project," Burger says. "There were no guards. You'd walk up three flights



in the chemistry building, and there was a big laboratory. I suppose someone watched people go in and out, but it's not like the installations today."

The time he spent in New York City was valuable for many reasons. Topping the list was Burger's 1942 marriage to Eleanor McMorris, his college sweetheart from Washington. That period also expanded his cultural horizons and helped him mature. In addition, it helped Burger organize his professional goals, as he interacted with all types of scientific professionals on the project.

"It taught me to think a lot about what I really needed to do and what I would have to do to get there," he says.

Burger returned to Washington after the war and finished his Ph.D. in 1948. After graduation, he took a position with General Electric as a research chemist and a section leader. While there, he helped develop the solvent extraction processes to separate plutonium. It was the "other end of the atomic energy program" from Burger's previous work.

In 1965, the Atomic Energy Commission transferred the laboratory section from G.E. to the Battelle Memorial Institute. There, Burger continued his work on the theory and mechanisms of solvent extraction. Soon the work shifted to research on the properties of radioactive materials that escape into the atmosphere. Beyond that project, his career at Battelle delved into nearly every field of physical chemistry, including thermodynam-

ics, kinetics, spectroscopy and radiation chemistry.

Both G.E. and Battelle had a "fairly intelligent approach to research," according to Burger.

"We (staff researchers) were permitted to do, pretty much, what we felt was important to the projects," he says. That autonomy encouraged scientists to look several months and years into the future as they worked on solutions to problems and developed new ideas.

"It was a productive time at the Hanford plant," according to Burger.

Today, Battelle is involved in virtually every field of technology. Its client list expanded beyond the atomic energy program to include other government branches and even the private sector. The work is sometimes quite interesting, sometimes dry, Burger says; but it's always worthwhile.

Later generations of chemistry students have benefitted from his vast experience. Burger began teaching chemistry at the Joint Center for Graduate Studies (now the Tri Cities Campus, Washington State University) in Richland, Wash., in 1950. He organized and managed the chemistry program from 1965-1984; he also taught, advised graduate students and coordinated programs with three universities. Though retired from active teaching, Burger still holds an appointment as adjunct professor of chemistry at WSU, sitting in on seminars and

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Law College reunion, education calendar full

Several events, including class year reunions, CLE courses and an alumni banquet, highlight the UW College of Law calendar this fall.

"Fifth-Year Reunions" are scheduled Sept. 8 in Jackson, Wyo. Functions are planned for JD graduates of the following years, 1988, 1983, 1978, 1973, 1968, 1963, 1958, 1953, 1948, 1943, 1938 and 1933. For registration information, contact Gina Rowsam at (307)766-4074 by Sept. 3.

These Continuing Legal Education Programs also are scheduled this fall:

9/4 — WESTLAW, three hours credit.

9/11 — LEXIS, three hours credit.

9/25 — Administrative Law, three hours

credit.

10/23 — Insurance Claims: The Bad Faith Problem, three hours credit (lawyers and insurance professionals).

10/30 — The Role of Tribal Courts in the American Judicial system, three hours credit (lawyers and government officials).

11/19-20 — Business Transactions: Legal Document Drafting, six hours.

For more information, contact Rowsam at the number above.

Former law students are also invited to the College of Law Alumni Banquet, scheduled for Nov. 20 at the Centennial Complex.

For registration information, call Rowsam at the number above.

Burger...

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Ph.D. exams.

Burger's distinguished career has also included a sabbatical at Oregon State as a visiting professor of nuclear engineering; six patents (one pending); 100 papers and reports, including chapters in nine books; and membership in Sigma Xi (now emeritus), American Chemical Society (emeritus), American Nuclear Society (emeritus), and Phi American Institute of Physics, and Phi

Kappa Phi. He was elected as a fellow in the American Association for the Advancement of Science. Burger also received the Outstanding Chemist Award from the Richland Section of the American Chemical Society.

Leisure time activities include hiking, camping, electronics, music reproduction, woodworking, travel and gardening.

Burger and his wife have three children: Harold, 48; Virginia Tracy, 42; and James, 39.

Ag Weekend honorees...

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science courses. He won two Outstanding Teacher Awards (1981 and 1984) and an Outstanding Research Scientist Award (1988) for his development of tolerant sorghum and salt tolerant alfalfa. Dobrenz is a professor of plant sciences at UA.

Gordon Niswender (BS '62) is a professor and associate dean at Colorado State University, where his teaching ability was recognized when he was named a University Distinguished Professor. Niswender's research in animal reproduction and endocrinology has a direct impact in improving Wyoming's livestock operations, and he shares his findings with UW faculty. Niswender also promotes efforts between the two agricultural colleges to

share seminars, develop cooperative research projects and improve the educational training of their students.

Paul Joe Ogg (BS '68, MS '70) has spent his entire career with the American Cyanamid Company, where he is currently senior scientist for a four-state region that includes Wyoming. He is recognized as a strong supporter of UW's academic and research programs. Ogg has made personal donations to support agricultural scholarships; was directly responsible for several unrestricted contributions from the American Cyanamid Company to underwrite research projects in the UW Department of Plant, Soil and Insect Sciences; and has participated in field day programs conducted by the college throughout the state.

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