

Spectrometers, computer will aid in chemical research

By Yvette Jefferson
Of the Emerald

The University chemistry department will receive a \$550,000 spectral facility designed for precise analysis of chemical compounds this month.

The facility, which will include two mass spectrometers and a computer, will replace the 20-year-old, non-automated system the department currently uses and will be placed in the Science II building.

Mass spectrometers measure the mass of molecules and can determine the structures of many materials, said Thomas Koenig, chemistry professor.

One of the spectrometers, when used with a chromatograph, will analyze

compounds in the gas phase and separate complex mixtures into pure substances, said Charles Klopfenstein, chemistry professor and director of laboratories. The other will vaporize compounds by shooting atoms at them, enabling scientists to study heavier compounds, he said.

The range of the facility is quite broad, and once it is installed, researchers will be able to do such things as measure the weight of molecules and examine the structure of big and little DNA, Klopfenstein said. DNA transmits genetic information.

The computer is just as important as the spectrometers because it is able to collect, sort and analyze data 100 times per second, Koenig said.

Basically, the spectral facility will speed research on biochemical subjects due to its rapid and automated analysis, Koenig said. And even though the system is fast, it also has a high degree of accuracy, he added. Everyone in the department will have access to the spectral facility, but mostly chemistry graduate students will use it, Klopfenstein said.

Some chemistry courses that are 300 level and above also may

use it, Koenig said.

Oregon State University's agricultural chemistry department has a facility similar to the University's. However, it does have some different abilities and functions, Koenig said. Because the systems each have unique characteristics, the departments plan to make the facilities available to each other and to collaborate, Koenig said.

Three grants from the M.J. Murdock Charitable Trust, the

National Science Foundation and the Public Health Service enabled the department to purchase the facility, Koenig said.

The spectral facility was scheduled to arrive around Aug. 15, but Koenig said that it is usual for a system as big as the spectral to be late. In fact, the facility is so large that a whole side of Science II will be removed so that movers can put it in by crane, Koenig said.

This year's convocation will celebrate diversity

A woman who is working to change the way Americans view their past will keynote the University's 1986 opening convocation Wednesday.

Rayna Green, director of the American Indian Program at the Smithsonian Institution's National Museum of American History and president of the American Folklore Society, will talk about rediscovering this country's native history, culture and values.

Her talk, "Goodbye Columbus: Rediscovering an Indian America," will begin at 2:30 p.m. in the EMU Ballroom and will address the convocation theme, "Celebrating Racial and Ethnic Diversity in Contemporary Society."

Green, who is a Cherokee, is redesigning historic and contemporary Native American exhibits at the Smithsonian Institution to help discard past stereotypes. As an author and poet, she has edited an anthology of writings by contemporary Native American women.

University President Paul Olum will convene the convocation, his first official appearance before the University community this academic year.

Following the convocation, University faculty members and off-campus experts are offering a dozen seminars on issues related to the day's theme. All are free and open to the public.

Seminar topics and locations include: "The University and the Future of Oregon's Native American Communities," EMU Forum room; "Legends, Myths and Tales of Oregon and the Northwest," Room 101 EMU; "Folklore, Ethnicity and the American Dream Machine," Room 129 Law Center; "Afro-American Art in Contemporary Society," Koinonia Center, 1414 Kincaid St.; and "Non-White Students and the Burden of Double Conscience," Room 307 Allen Hall.

Other seminar lectures are

"Ethnic Adaptation, Cooperation and Contribution," EMU Oak Room; "Indian Peoples in the Americas," Wesley Center, 1236 Kincaid; "The Sanctuary Movement: Lessons about Intercultural Sensitivity," Room 167 EMU; "U.S. Foreign Policy, Chicanos and Hispanics," EMU Maple Room; "Southeast Asian Immigrants: Transition and Culture Interfacing," Room 110 EMU; and "Japanese from Japan and Japanese Americans," Room 221 Allen Hall.

Indian lore will be brought to life with the Eugene Ballet's preview of "Children of the Raven" at 8 p.m. in the Hult Center's Silva Concert Hall. Free tickets are available to University students, faculty and staff on a first-come, first-serve basis and may be picked up at the EMU Main Desk.

Following the performance, Green will lead a panel with the ballet's creators and Caroline Shell, head of the University department of dance, in discussing the issues involved in making the transition from oral tradition to the world of ballet.

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