



Renee Meyer/The Gamecock

Graduate assistant Jeff Schumm (left) and James Tour work on developing an organic computer chip in one of the chemistry labs located in the Physical Science building.

Molecules could replace silicon chips

By TONIA MALLETT
Staff Writer

Organic molecules may replace silicon computer chips, if all goes well for a USC researcher.

"This discovery could lead to a reduction in computer size and faster, more efficient computers," said chemist James Tour, who has been researching at USC for two years.

Tour and his team, consisting of USC graduate students Ruilian Wu and Jeffry Schumm, have embarked on synthesizing organic molecules that could replace the common silicon computer chip.

Tour became interested in the research two years ago when he read a publication about Avi Aviram, an IBM scientist. Aviram prop-

osed that a theoretical class of molecules could act as electronic devices and could be used for memory, logic and amplification, according to an issue of *Science News*.

These molecules would also be 1,000 times smaller and 1,000 times faster than ordinary chips.

The reproduction of the structure is a complex procedure, but Tour said he has made batches of two molecules with structures similar to Aviram's description.

However, researchers are not certain if the new molecules will work and they are having difficulty working with such small molecular structures, Tour said.

"We are not sure a single molecule could function as a device," Tour said.

With the help of a new device called a scanning tunneling microscope, the chemists have been able to research single molecules.

"With the microscope, molecules can be tested and studied on an individual basis," Tour said.

IBM will perform the actual test on the molecules. They have already begun some of their testings.

The university has already filed a patent application for the molecule.

"This has really brought us a step closer to the molecular computing device," Tour said.

Tour studied at Stanford University, University of Wisconsin, Purdue University and Syracuse University.

Recycle

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"We're not here to usurp programs that are already started," Newman said, "We're here to cooperate with recycling on campus."

To get the entire campus interested in recycling, the recycling office is planning a USC Recycling Day for Sept. 26. Stands will be set up on Greene Street in front of the Russell House from 8 a.m. to 3:30 p.m. Only aluminum cans and newspapers will be accepted.

The recycling day is cosponsored by Students Allied for a Gre-

ater Earth, Student Government, Mortar Board, Department of Resident Student Development and Off-Campus Student Services, Operational Services and the Office of Community Service Programs.

If anyone is interested in volunteering or helping with other projects, the USC Recycling Office can be reached at 777-USED.

Student Government will also be awarding prizes for the three organizations with the greatest weight of newspapers and cans.

Library

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they had a certain individual in mind. Hills almost fell into their hands the night before, but he fled before units could arrive on the scene. The next night, however, Hills did not escape.

"Friday, he slipped right into the

net with the property in his possession," Couick said.

Couick said the police department was able to recover almost every book that was originally taken.

Fire

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The temperature inside the facility was so severe that after an hour of unsuccessful attempts to smother the flames one of the chiefs ordered his men to stay out of the building. He then ordered them to direct the firehoses into the building from the doorways and the vent openings on the roof.

In addition to the seven workers who were rolling the turf, three electricians were checking the lights and exhaust fans. One electrician who wished to remain anonymous commented on the cause of the accident.

"One spark caused the place to

go up," he said. "I heard someone holler 'Fire!' so I got down (from a ladder) and got my buddy out. That stuff went up quick. Everyone just bolted for the doors and made sure everyone got outside. No one was hurt. A guy called the fire department and they said they were already on their way here."

The \$1.6 million facility, slated for completion by Sept. 15, was to replace USC's former indoor athletic complex, The Bubble, which Hurricane Hugo destroyed in 1989.

The cost of the fire's damage has yet to be determined.

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