Imagine: Tapping the power of the largest body in our solar system – the sun – by using nanoparticle semiconductors the size of one 10,000th the thickness of a human hair.

That’s the typical scale of nanotechnology’s products, which may someday significantly improve the efficiency of solar cells as a way to generate electrical power. A $1 million grant from the National Science Foundation (NSF) received by an investigative team spearheaded by Elena Galoppini, an associate professor of chemistry at Rutgers-Newark, is moving science closer to that goal and other potential uses of nanotechnology.

Galoppini and two co-investigators are developing new nanoparticle structures that are hybrids of both organic and inorganic materials. The trio is studying the electrical interaction and compatibility between the two types of particles.

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Mind and Body 101 by Mike Sutton

John Adams, director of intercollegiate athletics and recreations at Rutgers-Newark since 1985, passed away Oct. 20, shortly after giving this interview. Connections presents this story as a tribute to Adams and his remarkable accomplishments in reshaping and expanding Rutgers-Newark’s athletic and recreation program.

On any given weekday, about 700 of the people who head to the Golden Dome and the surrounding athletic complex at Rutgers-Newark are not looking to go toe-to-toe with top-tiered schools such as UCLA on the university’s Division I men’s volleyball team. Nor are they training to compete in the host of Division III sports that R-N offers as a member of the New Jersey Athletic Conference (NJAC).

Instead, these 700 people are faculty, staff and students with one goal in mind: staying fit.

When John Adams took the helm of the university’s sports and recreation programs in 1985, he said recently, “We took a different approach, which was unusual at the time, of moving toward a wellness program.”

And it shows. Daily classes under the wellness umbrella include aerobics, yoga, karate and tae bo. Members of the university community have access to a state-of-the-art cardiovascular room, which features stair machines and treadmills, as well as to weight rooms and both indoor and outdoor racquet-sports facilities. Outdoor activities sponsored by the athletics department include kayaking, hiking, alpine skiing, snowboarding, canoeing and even whitewater rafting. Training for CPR certification and other EMS techniques is also available.

People – faculty, staff, students – leave the athletic complex refreshed, in a better mood as they head back to work or class,” Adams said.

To learn more about wellness and recreation at R-N, go to www.rutgers-newark.rutgers.edu/sraiders/rec2/index.html.

Graduate Programs in American Studies to Begin at R-N by Carla Capizzi

The Rutgers Board of Governors approved new Rutgers-Newark M.A. and Ph.D. degrees in American Studies Oct. 10, paving the way for students to enroll in the interdisciplinary graduate program beginning in fall 2004.

The new program will draw on faculty in the arts, humanities, social sciences, business, criminal justice, law and nursing at R-N. Colleagues in appropriate fields on the Rutgers New Brunswick campus and from the New Jersey Institute of Technology (NJIT) also will be encouraged to participate.

The program’s diverse thematic approach will encompass areas of contemporary scholarship such as race, ethnicity and modern society; America in a global context; and women’s and gender studies.

An important aspect of the program will be public service. Toward that end, Rutgers-Newark will seek collaborations with the region’s cultural and other institutions.
Gottfredson Criminal Justice Library Dedicated

The late Don Gottfredson, who served as founding dean of the Rutgers School of Criminal Justice (SCJ) and helped build the program into one of the finest of its kind in the country, was honored by Rutgers officials, SCJ faculty, students and his family Oct. 15 at ceremonies dedicating the Don M. Gottfredson Library of Criminal Justice in the Center for Law and Justice.

Gottfredson’s son, Michael, who serves as executive vice chancellor at the University of California at Irvine, observed at the dedication, “My colleagues in academe generally regard the library as the heart of the university, and I want to express my gratitude for joining my father with the heart of this university.”

The newly named Gottfredson Library offers one of the most comprehensive collections of crime and criminal justice materials in the world. It includes 80,000 monographs, 7,000 dissertations, 2,500 bound periodicals, 225 subscriptions to journals and periodicals, and 20,000 documents on microfiche. The library acquires more than 3,000 new titles each year.

R-N Law School Hosts Forum on ‘Packing the Federal Courts’

Public officials, jurists and lawyers ranging from U.S. Sen. Jon Corzine (D-N.J.) to senior U.S. District Court Judge Dickinson Debevoise gathered at the Center for Law and Justice Oct. 13 to debate the fallout from attempts by legislators on the right and the left to load federal courts with judges whose conservative or liberal political and social views mirror their own.

Titled “The Threat to Justice: Packing the Federal Courts,” the forum was sponsored by the Rutgers School of Law-Newark’s Eric R. Neisser Public Interest Program. Panels included retired N.J. Supreme Court Justice Alan Handler, leading scholars on constitutional structure, and litigators representing groups such as the American Civil Liberties Union (ACLU) and trial lawyers.

Professor Frank Askin, director of the Constitutional Litigation Clinic at Rutgers-Newark and moderator of one of the panels, observed that those at both ends of the ideological spectrum agreed that conservatives and liberals alike were scrambling to fill federal benches with like-minded colleagues, and concurred that “at the U.S. Supreme Court level, ideology is extremely important.”

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Despite Changes at R-N, Koepp Sees Same Positive Core Values

by Carla Capizzi

When Al Koepp looks at today’s R-N, he feels quiet satisfaction, a confirmation that the more things change, the more they really do stay the same.

Certainly, the campus has been marked by dramatic expansion since Koepp (NCAS ’69) attended R-N in the 1960s. The enrollment hit a record high this fall – 10,465 students – and cutting-edge research and teaching facilities have emerged at a furious rate to keep pace.

But to Koepp’s thinking, the important things haven’t changed at all.

“I’ve always looked at Rutgers-Newark as a college community of serious-minded students,” as well as a campus infused with a “spirit of striving for excellence,” he said. Another thing that remains constant, he observed, is the campus’s interaction with the urban community.

“This was a campus without walls even before that term was popular,” he noted. “We were part of the community and reflected its values.”

One R-N professor had a particularly profound influence on Koepp: Henry Blumenthal, whom Koepp still reveres as a mentor. Blumenthal, director of the NCAS division of social sciences and later a dean, was the first Rutgers-Newark recipient of the Rutgers University Award, a medal given for distinguished service to the university through leadership and scholarly achievement.

Koepp said that Blumenthal taught him that positive changes only come from within, and cannot be imposed on an organization or people. Koepp applied that lesson successfully throughout his career, during which he came to lead each of New Jersey’s largest utilities at various points: New Jersey Bell Telephone (now Verizon) and PSE&G – the only person to ever serve as president of both companies.

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Grant, New Computers Will Strengthen Understanding of Brain Activity

By Mike Sutton

Rutgers-Newark has been chosen as one of only 19 research universities nationwide to receive a powerful new state-of-the-art computer through a grant from Hewlett-Packard. The computer will be used to dramatically enhance scientists’ ability to analyze brain activity and will give them the computing power to develop an educational model of a brain in action, which will be created for the Newark Museum.

“What we want to do is to build an understanding of the network of correlations and transmissions between the various elements of the brain as it goes about performing tasks,” said Stephen Hanson, chairman of Rutgers-Newark’s psychology department and director of the university’s RUMBA (Rutgers University Mind/Brain Activity) project.

Newark’s psychology department and director of the university’s RUMBA (Rutgers University Mind/Brain Activity) project.

The Hewlett-Packard Itanium II Workstation received through the grant to the RUMBA project will be linked with the Rutgers-Newark psychology department’s newly acquired 28-node Opteron computer cluster and a fiber-channel data-storage system capable of holding a trillion bytes of information.

As a result, analyses of the immense amounts of raw data generated by detailed human brain scans – between 300,000 and 500,000 variables per second – that would previously have taken months to complete can now be finished in days, according to Hanson, freeing scientists to spend more time focusing on why the brain is handling tasks the way it is rather than just on how.

Rutgers-Newark will share RUMBA’s new ability to crunch gigantic amounts of data with the University of Medicine and Dentistry of New Jersey (UMDNJ).

$1 Million Grant...from page 1

The work is already yielding tangible results: One of Galoppini’s co-principal investigators, Gerald Meyer, a professor of chemistry at Johns Hopkins, is in the early stages of testing prototype solar-energy conversion cells that are much more effective at capturing light and transforming it into usable electrical energy than solar cells that don’t use the hybrid nanostructures.

Galoppini’s specialty, synthetic organic chemistry, allows her to design and build nanostructures. Piotr Piotrowiak, a professor of chemistry at Rutgers-Newark and a co-principal investigator on the multidisciplinary team, is an expert in ultra-fast laser spectroscopy, which permits him to measure the electrical communication between the organic and inorganic components of the new semiconductor nanostructures that the team is developing. Ultra-tiny “nanowires” built by Galoppini will link these nanostructures to macrosized electronic devices, said Piotrowiak. The research team is working to create an entire range of nanotechnological options for manufacturers of high-tech devices that were not available previously, Galoppini noted.

“We foresee numerous technological applications of what we are learning and building,” Piotrowiak said.

Painting the Town Blue

Rutgers-Newark Police Chief Marty Roddini shows off the new mural adorning a wall in the renovated headquarters of the Department of Public Safety. Designed by a group of R-N visual arts majors, the black, blue and white mural – which features some very familiar University Avenue landmarks such as the clock tower that crowns the Center for Law and Justice – is meant to emphasize the sense of community between the department and the campus that it serves.
A Risk Taken, Two Lives Changed
by Nivin Zaghloul, NCAS '00

Many of us can remember having a bad day in school when we were teased or treated like an outcast. Unfortunately, for Cal (not his real name), one of the middle-school students I teach at an elementary school in Newark, every day was bad.

Cal struggled with his course work and was barely able to read and write. The other students gave him a very hard time. He was miserable. And I was unsure how to intervene. I decided to hold a class meeting – even though I was nervous that the other children would miss the point of this approach, and this action would only further isolate Cal.

I came up with an excuse to send him out of the room during the meeting. I had decided to take a backseat approach, merely facilitating the conversation instead of leading it. I asked the students why they thought Cal – whom several classmates described as “cruel” – behaved the way he did. After some initial defensiveness, one of the students said, “He’s tired of the way everyone has been treating him.” Another student added that maybe Cal would be nicer to them if they were a little nicer to him.

I explained to the students that we all have our strengths and weaknesses, and Cal’s weakness happened to be his academics. I asked the students to stop and think of a time when they had failed at something and people mocked them because of it.

At that point, the students showed much more empathy, and I was taken aback by how they took over the conversation, some of them even volunteering to help as impromptu tutors when Cal struggled with material.

The class learned a valuable lesson. But so did I. At first I felt helpless. I was afraid to take the risk of holding a class meeting. Since then, I have learned that teaching is all about taking risks.

Some risks can change a student’s life.

FROM THE NEWARK METRO
www.newarkmetro.rutgers.edu

Since its debut a year ago, The Newark Metro, Rutgers-Newark’s online student journal, has been winning accolades for intriguing articles, photographs and poems capturing life in the city and the metro area. Connections is pleased to present an ongoing series featuring excerpts from the Metro. For the complete Newark Metro, go to www.newarkmetro.rutgers.edu.

Koeppe…from page 4

Koeppe’s accomplishments have not gone unnoticed by his alma mater. This year, he was elected to Rutgers University’s Hall of Distinguished Alumni.

Koeppe is chair of the state’s Economic Development Authority and serves on a number of boards and committees – including one that selects the recipient of R-N’s annual Blumenthal scholarship. As newly named president and chief executive of the Newark Alliance, he is working to promote city schools and Newark’s downtown development.