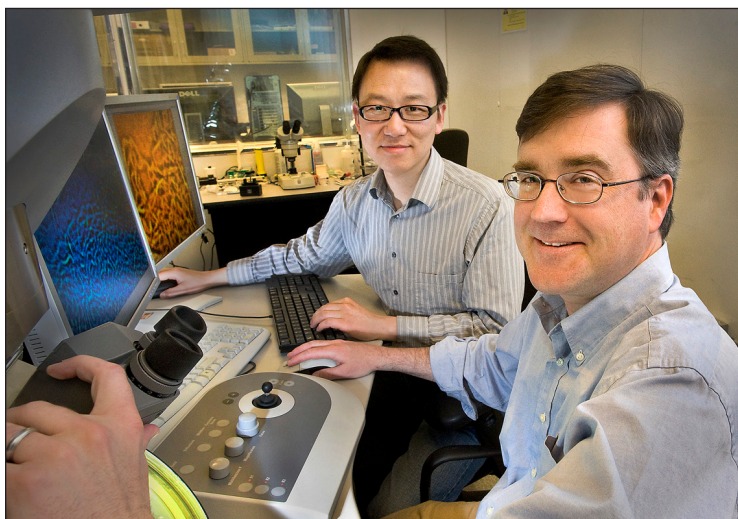


Activated Graphene in Supercapacitors For Superior Energy Storage

New material combines high storage capacity with quick energy release and unlimited recharge

Scientists at BNL have helped to uncover the nanoscale structure of a novel form of carbon, contributing to an explanation of why this new material acts like a super-absorbent sponge when it comes to soaking up electric charge. The material, which was recently created at The University of Texas - Austin (UT), can be incorporated into “supercapacitor” energy-storage devices with remarkably high storage capacity while retaining other attractive attributes such as superfast energy release, quick recharge time, and a lifetime of at least 10,000 charge/discharge cycles.

See *Supercapacitors* on p. 2



Dong Su (left) and Eric Stach use a powerful electron microscope to analyze samples of activated graphene at BNL's Center for Functional Nanomaterials.

SBU, Exxon Research at BNL's NSLS May Lead to Better Auto Tires

Scientists from Stony Brook University (SBU) and Exxon Mobil, working at BNL's National Synchrotron Light Source (NSLS), have investigated a material that may lead to greatly improved tires for cars and other vehicles. Their study is an example of how incorporating nanoparticles into a regular substance can produce a material with superior properties — in this case, increased durability and heat resistance.

The work, which was funded by the National Science Foundation and Exxon Mobil, was published in the October 15, 2010, edition of the journal *Polymer*.

The research team focused on a material that could serve as the inner polymer lining of tires. At the NSLS, they used x-rays to investigate how incorporating nanoparticles of a chemically modified clay material into a very thin layer of a polymer may achieve tires that last longer than those currently on the market.



“By enhancing the properties of the polymer, there could be significant improvements in tire performance and significant savings in gasoline consumption, perhaps up to 30 percent,” said SBU scientist Ben Hsiao, who led the study.

In particular, the researchers wanted to find out how adding the nanoparticles would affect the polymer film's gas permeability — that is, how well (or poorly, in this case) molecules can pass through it. Gas permeability is one way to gauge how a material will hold up over time.

They learned that the com-

bination of the particles' shapes and the varied ways they orient within the film create a “tortuous pathway” for permeating molecules, causing them to zigzag through the film. As a result, they have to travel a longer distance over a longer period of time to cross it.

The group introduced different concentrations of clay nanoparticles into several polymer film samples and studied each sample using both x-ray scattering at NSLS beamline X27C and electron microscope imaging. In combination, these...

See *Research for Tires* on p. 2

50 Future Crystallographers Drawn to the NSLS by RapiData 2011

About 50 students gathered at the National Synchrotron Light Source (NSLS) on April 3-8 for RapiData 2011, a weeklong crash course designed to introduce participants to the best and latest equipment and techniques for macromolecular x-ray crystallography. RapiData allows students to meet and learn from the leading developers of software in the crystallography field, and then actually to use NSLS beamlines to collect data.

This year marked the 13th consecutive year of the popular course, which is offered by BNL's Biology and NSLS departments, and reflects an educational component of the PXRR (Macromolecular Crystallography Research Resource), funded jointly by the National Center for Research Resources — a branch of the National Institutes of Health (NIH) — and DOE's Office of Biological & Environmental Research.

X-ray crystallography allows



RapiData 2011 participants in front of the NSLS-II construction site

scientists to determine the arrangement of atoms within a crystallized material based on the way x-ray light bounces off its electrons. This is especially important in determining protein and nucleic acid structures, which are needed to establish a fundamental understanding of life processes and for developing drugs and treatments for disease.

The course began with three days of lectures and tutorials

taught by an international team of scientists from BNL, industry, academia, and other national labs. Next, the students were divided into groups and guided through a marathon data-collection session of two-and-a-half-days on eight NSLS beamlines. At the same time, many tutorials were under way, run by the lecturers themselves. Half the students brought their...

See *RapiData* on p. 2

In Memoriam Maurice Goldhaber 1911–2011



Roger Stoulenburgh 02180511

Doug Humphrey 0010-659-67

Physicist & Former BNL Director Maurice Goldhaber Dies at 100

Maurice Goldhaber, a prominent physicist and a former director of BNL, died on May 11 after a short illness.

Goldhaber had celebrated his 100th birthday in April, 2011. He was born in Austria, and earned his Ph.D. in physics at Cambridge University in 1936. In 1938 he came to the U.S. as a faculty member of the University of Illinois. He joined BNL in 1950, along with his wife, the late nuclear physicist

Gertrude Scharff-Goldhaber. At the Lab, he served as chair of the Physics Department from 1960 to 1961, and as Laboratory Director from 1961 to 1973.

Goldhaber's research in the fields of nuclear physics and fundamental particles included experiment, systematics, technique, and theory. He made numerous significant contributions that helped to establish parts of the theory of...

See *Goldhaber* on p. 2



Michael Lucibella, APS

At a user science exhibition hosted by the National User Facility Organization (NUFO) in April are: (from left) William Brinkman, Director, DOE Office of Science; Antonio Lanzirotti, University of Chicago, NSLS Users' Executive Committee Chair, NUFO Vice-Chair; Congressman Charles Fleischmann (TN); and Thom Mason, Director, Oak Ridge National Laboratory.

UEC Represents NSLS, NSLS-II in Washington, D.C. Exhibition

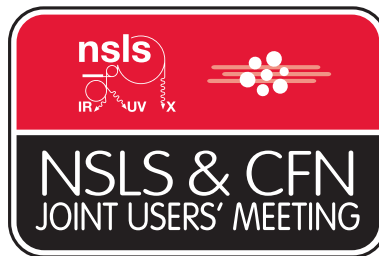
On April 7, 2011, representatives from the National Synchrotron Light Source (NSLS) Users' Executive Committee (UEC) went to Washington, DC to participate in a User Science Exhibition hosted by the National User Facility Organization (NUFO). The event, held in the foyer of the Rayburn House Office Building, was organized to highlight the significant and important role that scientific user facilities such as the NSLS and NSLS-II play nationally in advancing fundamental sci-

entific knowledge, promoting science education, and improving economic competitiveness.

Plans for the exhibition were initiated at the request of congressional representatives Rush Holt (NJ), Judy Biggert (IL) and former representatives Vernon Ehlers (MI) and Bill Foster (IL), who felt it was important to educate their colleagues about the research being done by facility users and how that work benefits the United States.

Despite the looming April 8...

See *NUFO Meeting* on p. 3



Annual Joint NSLS/CFN Users' Meeting, 5/23-25

All are invited to the plenary session on Tuesday, 5/24, at 8:30 a.m. with updates in science and budget, and a keynote address by 2009 Nobel Prize winner Thomas Steitz. Learn more: www.nsls.bnl.gov/users/meeting/page.aspx?id=home

Research for Tires from p. 1

...techniques allowed them to see, in detail, how the particles are distributed in the films.

They discovered that the particles take on two shapes, cylindrical stacks and platelets, and position themselves in two ways. Some particles settle horizontally within the polymer film, forming layers within it, and others are oriented perpendicularly to the film.

Further, the group found that how the particles become incorporated into the film is dependent on how the film is processed. When the films are created using a process called melt pressing, the particles tend to be cylindrical and orient themselves parallel to the layers of the film. This effect was more pronounced when the researchers increased the density of particles, which, they propose, seems to be because the particles do not have the space to orient themselves in other ways.

The x-ray analysis also showed that the particles were evenly distributed in the film. They did not tend to clump, even as the fraction of particles by total weight was greatly increased. — Laura Mgrdichian

Coming Up, 6/20-24**2011 RHIC/AGS Users' Annual Meeting: The RHIC & eRHIC Long Range Plan**

This year marks the start of the second decade of the Relativistic Heavy Ion Collider (RHIC) program, and a critical moment where major decisions about the future of the field must be made. The Users' Meeting will be dedicated to a set of workshops focused on the future of RHIC and eRHIC science and the detectors and machine upgrades needed to bring it about.

More details on the program will be announced in the Bulletin next week. To register and obtain more information please go to: <http://www.bnl.gov/aum>.

RapiData from p. 1

...own specimens with the goal of solving the structure of a particular enzyme, while the other half observed and helped.

During the data-collection session, the students gathered each afternoon, and then on the final morning, to discuss their results. They produced mini lectures about their data and scientific subject, announcing about half a dozen new results. "These are exciting little meetings, almost extemporaneous symposia," said Bob Sweet of the Biology Department, who, with Sal Scalfani of the Medical Department and Alex Soares of Biology, coordinated the course. "The enthusiasm of these young researchers for their work, and for the new skills they are learning, is palpable."

In addition to DOE and NIH funding, a special grant was provided by the International Union for Crystallography to assist seven Latin American students in attending the course. Additional support was provided by Brookhaven Science Associates, the NSLS, and several equipment vendors and drug companies.

For more information, go to www.bnl.gov/RapiData.

In Memoriam: Maurice Goldhaber

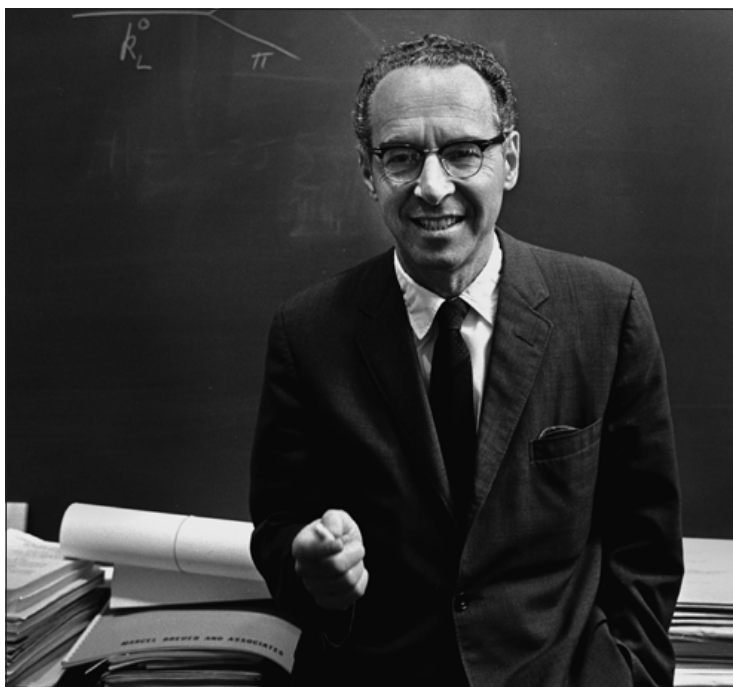
Goldhaber from p.1

...subatomic physics now known as the standard model. In 1934, with James Chadwick from the Cavendish Laboratory at Cambridge, he was the first to measure accurately the mass of the subatomic particle known as the neutron, showing that it was not a compound of a proton and an electron as was believed at the time, but a new particle. In addition to measuring the mass of the neutron, he contributed to the discovery of the nuclear photo-effect, the role of spin in nuclear reactions, observing the helicity of the neutrino, and a wide variety of additional physics research.

With some reservations, he also put forward some speculations, including what became known as the Goldhaber-Christie model (which has been cited as a precursor of the quark model), the notion of the doubling of fermions, which has been cited as helping promote the search for the second neutrino, and the notion of the cosmos originating in one of two particles produced together, the "cosmon" and the "anticosmon," which has been cited as a precursor to ideas of the multiverse current today.

As Lab Director, Goldhaber instigated and presided over an extraordinary period of scientific productivity at Brookhaven. Research during his tenure resulted in major discoveries in physics, three of which eventually garnered Nobel Prizes. Medical research that indicated the role of sodium in the development of hypertension and the value of the drug L-dopa to treat Parkinson's disease was also conducted at the Lab during that time.

Goldhaber retired in 1985, but he continued his research at the Laboratory until he was well into his 90s. He told those who saw him working long hours in his later years, "I don't have time to age." To acknowledge



Dong Humphrey 10-338-67

his significant contributions to physics and BNL, he was named Distinguished Scientist Emeritus at the Laboratory after his retirement.

Lab Director Sam Aronson said, "Maurice Goldhaber was a valued friend to the Lab community. His insight, intellectual curiosity, and wit will be sorely missed, but the influence he had on the Lab remains."

For many years the Harvard Physics Department has awarded annual prizes to distinguished graduate students in the names of Gertrude and Maurice Goldhaber. In 2001, BNL created the annual Gertrude and Maurice Goldhaber Distinguished Postdoctoral Fellowships at the Lab. In 2008, the Lab held the "Neutrino Helicity at 50" symposium to celebrate the half-century-old Goldhaber-Grodzins-Sunyar experiment on neutrino helicity, a landmark among elegant table-top experiments that had a major impact on particle physics. In 2009, Magdalene College, Cambridge University, established the Maurice Goldhaber Prize for Natural Sciences or Mathematics, in honor of alumnus Maurice Goldhaber, and in 2011, the University of Illinois Physics Department established a graduate student prize in his name.

Goldhaber's productive career has won him numerous awards, including the Tom W. Bonner Prize in Nuclear Physics in 1971, the J. Robert Oppenheimer Memorial Prize in 1982, the National Medal of Science in 1983, the Wolf Prize in Physics in 1991, and the Enrico Fermi Award in 1999.

Goldhaber was a member of the National Academy of Sciences and a fellow of American Academy of Arts & Sciences, the American Association for the Advancement of Science, and the American Physical Society, of which he was president in 1982.

Survivors include his sons Alfred Scharff Goldhaber and Michael H. Goldhaber; his grandchildren, David Goldhaber-Gordon and Sara Goldhaber-Fiebert; and four great-grandchildren, Zev and Shira Goldhaber-Gordon and Eytan and Miriam Goldhaber-Fiebert.

— Diane Greenberg

“The CFN provides access to scientists around the world to solve cutting-edge problems in nanoscience and nanotechnology. This work is exactly what this facility was established to do.”

Eric Stach of Brookhaven Lab's CFN

tional performance.”

The performance was so superior to other materials used in supercapacitors that the research team wanted to characterize its structure at the nanoscale to help them understand its function.

Ruoff had formed a hypothesis that the material consisted of a continuous three-dimensional porous network with single-atom-thick walls, with a significant fraction being “negative curvature carbon,” similar to inside-out buckyballs. He turned to Stach at BNL for help with further structural characterization to verify or refute this hypothesis.

Stach and BNL colleague Dong Su conducted a wide range of studies at the Lab's Center for Functional Nanomaterials (CFN), the National Synchrotron Light Source (NSLS), and at the National Center for Electron

Microscopy at Lawrence Berkeley National Laboratory, all three facilities supported by the DOE Office of Science. “At the DOE laboratories, we have the highest resolution microscopes in the world, so we really went full bore into characterizing the atomic structure,” Stach said.

“Our studies revealed that Ruoff's hypothesis was in fact correct, and that the material's three-dimensional nanoscale structure consists of a network of highly curved, single-atom-thick walls forming tiny pores with widths ranging from one to five nanometers, or billionths of a meter.”

The study includes detailed images of the fine pore structure and the carbon walls themselves, as well as images that show how these details fit into the big picture. “The data from NSLS were crucial to showing that our highly local character-

Messages from colleagues:

Martin Blume, Physics Department, a former BNL Deputy Director and retired editor-in-chief of the *American Physical Society*, said, “Maurice was a unique icon in the annals of physics. I was happy that I had the opportunity to learn so much from him, particularly during our discussions on physics and many other matters when I drove him to BNL — his house in Bayport was a short distance from mine in Sayville. This lasted nearly a decade, and was a most interesting time, although he became more frail (but his mind didn't) as time went by. It was good that he made it to his 100th birthday.”

Peter Bond, Senior Advisor to the Director said, “I fondly recall my interactions with Maurice over the years. I greatly enjoyed his reminiscences of the physics greats of the early 20th century. One of the greatest compliments I heard about his science was from Nobel Prize recipient Georges Charpak, who described the neutrino helicity experiment as the most beautiful experiment he knew. Perhaps as impressive to me was his broad knowledge of science in many fields that allowed him to ask penetrating questions and to come up with creative new ideas. Coupled to his continual creative ideas were his famous quips — one I have come to particularly appreciate is ‘Physics teaches old things to new people.’”

End note: In speaking of Maurice Goldhaber's long history of productivity and creative scientific contributions, Robert Crease, Chair of the Department of Philosophy at Stony Brook University (SBU), pointed out that Goldhaber and his son Alfred Scharff Goldhaber, Professor of Physics at SBU's C.N. Yang Institute for Theoretical Physics, very recently coauthored a paper explaining that many different phenomena conspire together to make observing a neutrino with positive helicity practically impossible. “The Neutrino's Elusive Helicity Reversal,” appears in the May 2011 issue of *Physics Today*.

ization was representative of the overall material,” Stach said.

“We're still working with Ruoff and his team to pull together a complete description of the material structure. We're also adding computational studies to help us understand how this three-dimensional network forms, so that we can potentially tailor the pore sizes to be optimal for specific applications, including capacitive storage, catalysis, and fuel cells,” Stach said.

Meanwhile, the scientists say the processing techniques used to create the new form of carbon are readily scalable to industrial production. “This material — being so easily manufactured from one of the most abundant elements in the universe — will have a broad range of impacts on research and technology in both energy storage and energy conversion,” Ruoff said.

The work at BNL was supported by DOE's Office of Science; the UT - Austin team's research was supported by the Office of Science, the National Science Foundation, and the Advanced Technology Institute.

— Karen McNulty Walsh
For more information, see www.bnl.gov/cfn/news/news.asp?a=1275&t=pr

BNL’s Terrence Buck Named GEM Standing Chair

Terrence Buck, principal human resources representative for the Photon Sciences Directorate, has been named Standing Chair, Human Resources Committee, for the National GEM Consortium. GEM stands for the National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc.

GEM’s goal is to increase the participation of underrepresented groups (African Americans, American Indians, and Hispanic Americans) at the master’s and doctoral levels in engineering and science. Sponsored by a consortium of university and employer members, GEM offers fellowships to selected students. BNL’s Diversity Office administers GEM at the Laboratory. The GEM students work as paid summer interns for two to three summers with scientific and engineering staff.

Buck will be one of three members on GEM’s Human Resources (HR) Standing Committee. The objective of the GEM Human Resources Committee is to ensure that the right people are in the right place at the right time to accomplish the organizational objectives of the consortium. The expected outcomes are executive stakeholder involvement, clear role definitions, and quality implementation of the larger executive committee objectives.

At BNL, Buck will continue to recruit GEM students as summer interns while planning social activities for the students and mentoring their progress to ensure that their placements are successful in reaching the goals they set out to accomplish.

“I am honored to have been chosen for this new position with GEM,” Buck said. “I will be able to assist the GEM organization with its HR policies, and help both GEM students and BNL in this role. My goal is to begin placing some of the GEM students in positions at BNL to gain new and energized talent for the Lab as it grows in the future.”

The GEM program at BNL had only two or three students when Buck first became involved with it eleven years ago. Buck has steadily increased the number of students so that this year the



program will have a total of 15, including seven new students from seven universities.

Founded in 1976, GEM has connected more than 3,000 students with over 150 top-rated universities, national laboratories, and leading corporations. Buck has recruited City College of New York and Stony Brook University as GEM members. Also, two GEM students who were interns at BNL this past summer competed against 100 students nationally to win first- and third-place at the GEM Fellow Technical Presentation Competition during the annual Board of Directors meeting last year. Buck was honored last year for his own contributions to GEM as “GEM Employer Representative of the Year.”

Buck earned a B.S. in business public management from the State University of New York at Utica, and an M.S. in Human Resources Management and an MBA, both from St. Joseph’s College. Buck began his career in BNL’s Contracts and Procurement Division as an intern, later becoming a buyer and assistant contracts specialist in the division. He moved to the HR Division in 2000 as an HR representative. He became a senior HR representative in 2002, and a principal HR representative in 2007.

In addition to his hiring and career/job counseling responsibilities and his recruitment of college students for summer internships, he also recruits research associates and scientific staff, and he administers the High School Co-op and Youth on Campus programs. — Diane Greenberg

NUFO Meeting from p.1
...deadline for resolution of the FY2010 budget impasse and the potential for a next-day government shutdown, the event drew a large audience. Senators, congressional representatives, and their staff made time to learn about our facilities and the exciting science being done, a clear indication of the importance they place on supporting and highlighting our scientific achievements.

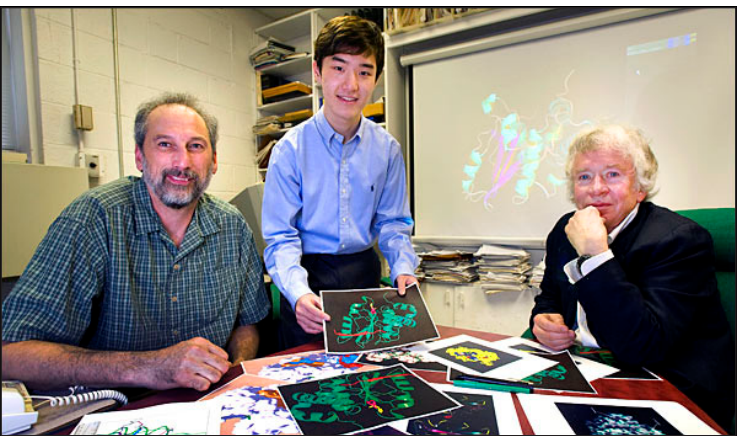
Attendees at this public exhibit included Congressional leaders (including senators, representatives, and their staff members), management from the U.S. Department of Energy’s Office of Science, four national laboratory directors (including Brookhaven Lab’s Sam Aronson), a representative from the National Science Foundation, and representatives from a number of science agencies or societies such as the American Physical Society, the American Institute of Physics, the Federation of American Societies for Experimental Biology, Physics Today, Coalition for National

Science Funding, the Alliance for Science & Technology Research in America, and the American Astronomical Society, among others.

I helped represent the NSLS along with Jen Bohon from Case Western Reserve University, and NSLS User Administrator Kathy Nasta. More than 60 representatives from 39 national user facilities came to the event, presenting posters from each of their respective facilities.

Brief presentations were made by Rene Bellwied, NUFO Chair and physics professor at Wayne State University, Thom Mason, Director of Oak Ridge National Laboratory, Congressman Charles Fleischmann (TN) and Stephen Wasserman from Eli Lilly and Company. They all stressed the key role that national user facilities play in facilitating science by providing the capabilities for key discoveries that advance new technologies and stimulate economic growth.

— Tony Lanzirotti, Users’ Executive Committee Chair and NUFO Vice-Chair



BNL Biology student Won (Ryan) Lee (center), reviews protein structures with BNL biology department researchers Wally Mangel (right) and Bill McGrath. Lee was awarded a \$100,000 Buick Scholarship and plans to study physics and chemistry at Harvard next year.

Biology Student at BNL Wins \$100,000 Scholarship

Even if you aren’t an avid basketball fan, you can imagine the excitement of high school student Won (Ryan) Lee of the Academy for the Advancement of Science and Technology in Hackensack, New Jersey when he received complimentary tickets from Buick to attend the “Final Four” championship game of the National Collegiate Athletic Association. Lee, who has been working on a biology research project with Lab scientist Wally Mangel, said he was even more excited during halftime at that game when he was presented with a \$100,000 scholarship from the Buick Achievers Scholarship Program.

Accomplished student piqued interest of Lab scientist

Normally, Mangel does not accept high school students to work in his lab. “They don’t have a lot of time to work on a research project and by the time you have trained them to do research, they are off to college,” he said. But Mangel realized that Lee was not your typical student. Before he even contacted Mangel about working in his lab, Lee had read papers on Mangel’s research, looked at the Mangel lab web site, and knew what project he wanted to work on. Lee informed Mangel that he could work full-time for 10 weeks in the summer and during the school year he could come in from New Jersey every Wednesday to work in the lab. As a high school junior, Lee had an A average and perfect scores (2400) on the SAT, including 800 scores in Chemistry and Math Level II. He had also completed a lot of college level coursework, was the principal violin in the school orchestra, and head of the debate team. So Mangel invited him for an interview. The interview was a success, and Mangel accepted Lee into his lab.

Let the research begin

Lee first worked with Lab researcher Bill McGrath, who taught him the techniques he needed to use in his project — characterization of a mutant of a viral enzyme. “Everyone in our lab became impressed with Ryan,” said Mangel. “He not

only knew a lot of science, but knew how to apply his knowledge while working in the lab. Many students can do well on exams, but only a few can use the information they know to solve real problems.” Lee is currently writing up his research for publication in a major biochemistry journal. The paper will include the crystal structure of a protein he solved by himself from data he collected at the National Synchrotron Light Source.

When Lee was asked what was most valuable to him in his work at BNL, he replied, “The Mangel lab has daily morning meetings to discuss the previous day’s results and plan experiments for the day. Everyone knows what everyone else is doing, and they all help each other. I learned how to think about doing experimental science, how to focus on what is important, how to phrase questions that can be answered experimentally, how to design single variable experiments, and how to get information from good and bad data, especially bad data. I am grateful to Dr. Mangel and the Lab for the experience. I know this training will prove useful to me in anything I do in the future.”

On the road to Harvard

Lee was accepted to MIT, Yale, Princeton, and Stanford, but plans to attend Harvard this fall with a combined major in physics and chemistry. The Buick scholarship will allow him to focus more on academics. Lee hopes to be a research professor some day.

Mangel said it was nice to see the “system” reward a student who worked so hard. “Ryan is the perfect student,” he said. “We gave him an important research project. We spent three weeks training him in laboratory techniques, he then used those techniques to complete the project, and a major publication will be the result.

“I congratulate Ryan and look forward to following his accomplishments at Harvard and beyond,” said Mangel. “And, I must add that I enjoyed learning about Korean food from the Lee family — it is so good!”

— Jane Koropsak

Arrivals & Departures

— Arrivals —

Margaret Sullivan..... HR/OMC

— Departures —

John Amabile..... Lab Prot
Susan Evans-Singleton ...Site Res
Deborah Stoner-Ma.....Biology
Brian Sullivan.....Site Res

CALENDAR

— WEEK OF 5/23 —

Monday, 5/23

*NSLS/CFN Users’ Meeting Starts

From 7 a.m. Berkner Hall. Poster and Vendor set up. 8 a.m. Workshops around site. See agenda at www.nsls.bnl.gov/users/meeting/agenda.aspx?year=2011.

BSA Distinguished Lecture

4 p.m. Berkner Hall. 2009 Nobel Prize winner in Chemistry Thomas A. Steitz, Yale University, talks on “From the Structure and Function of the Ribosome to New Antibiotics.” All are welcome to this free lecture, open to the public. Visitors to the Lab of 16 and over must carry a photo ID. For more information, see Bulletin of 5/13/11.

IBEW Meeting

6 p.m. Centereach Knights of Columbus Hall, 41 Horseblock Rd., Centereach. A meeting for shift workers will be held at 3 p.m. in the union office. The agenda includes regular business, committee reports, and the president’s report.

Defensive Driving, Part II

6-9:15 p.m. Medical Bldg. 490 Large Conference Room. Part I was on 5/16. 821-1013.

Tuesday, 5/24

NSLS/CFN Users’ Plenary Session

8:30 a.m. Berkner Hall. Scientific talks, updates from DOE, BNL. Keynote address by Thomas Steitz (see BSA Lecture above) at 9:35-10:10 a.m. All Lab community welcome. See www.nsls.bnl.gov/users/meeting/agenda.aspx?year=2011.

Free: Best Foreign Lang. Film 2009

5 p.m. Berkner Hall. *Departures*, a film from Japan that won the 2009 Academy Award for Best Foreign Language Film will be shown free by BERA’s APAA as part of Asian Pacific American Heritage Month. An unemployed young cellist returns to his home village to become a *nakanshi*, who prepares the dead for burial. All are welcome.

— WEEK OF 5/30 —

Monday, 5/30

Memorial Day, Lab Closed

No Bulletin on Friday, 6/3

Thursday, 6/2

Elder Law and Medicaid Updates

Noon-1 pm, Berkner Hall, Room B. Talk by Nancy Burner, Elder Law Attorney. To register, contact Michael Thorn, mthorn@bnl.gov or Ext. 8612.

Friday, 6/3

*Talk: Physics & Consciousness

Noon. Berkner Hall. Swami Pavitrnananda, head of the Sree Gangnath Mahavev Ashram in Gujarat, India, will talk on “Physics and Consciousness.” All welcome. See p.4.

BERA Trips

Purchase tickets at the BERA Store in Berkner, weekdays, 9 a.m.-3 p.m.

NHRA at Raceway Park: Sat., 6/4. National Hot Rod Assoc. (NHRA) drag racing at English-town, NJ. Dep. BNL 7 a.m. \$65.

NY City Bus Trip: Sat., 6/4. Do-As-You-Please trip to Bryant Park area of NYC. Dep. BNL 10 a.m., dep NYC 6 p.m. \$20/person, ages four to 12/\$5; ages three and under/free, if they sit on your lap.

Atlantic City Showboat Casino: Sat., 6/11. Dep. BNL 8:45 a.m., dep. casino 8 p.m. \$30/each includes transportation and \$30 for slots. Ages 21 and over only.

Note: BERA has sold out of Yankees and Mets tickets. BERA will not purchase additional tickets, but you can still add your name to the wait list.

Want to join in the social scene at BNL with people interested in sports, discussion, travel, camping, and much more? See www.bnl.gov/bera/recreation/clubs.asp.

Classified Advertisements

Placement Notices

The Lab's placement policy is to select the best-qualified candidate for an available position. Candidates are considered in the following order: (1) present benefits-eligible employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present benefits-eligible employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action Plan, selections are made without regard to age, race, color, religion, national origin, sex, disability or veteran status. Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people. Except when operational needs require otherwise, positions will be open for one week after publication. For more information, contact the Employment Manager, Ext. 2882. Access current job openings on the World Wide Web at www.bnl.gov/HR/jobs/.

To apply for a position, go to www.bnl.gov. Select "Job Opportunities," then "Search Job List."

LABORATORY RECRUITMENT - Opportunities for Laboratory employees only.

CUSTODIANS (LG-1, temporary) - Under general supervision, perform general cleaning and housekeeping duties in all Laboratory buildings. Site Resources Division. Apply to Job ID # 15740.

Motor Vehicles & Supplies

08 JEEP LIBERTY – 37K mi. s/roof, roof rack, rem start, full pwr excel cond. \$14,000 neg. 766-7644, jmc3363@verizon.net.

08 MAZDA MIATA - Grd Touring Convertible, 31K mi. all pwr, 6 spd, c/c, multi CD, lthr, new tires, warr, \$18,500. Susan, Ext. 2888.

08 CHEVY IMPALA – 31K mi. Luxury Ed, loaded, w/heated leather, s/roof, spoiler, excel cond. \$14,000. John, Ext. 2745.

06 KAWASAKI VULCAN 500CC – 6.3K mi. runs well! red/blk, pix avail, grt starter bike, w/blk AMF helmet. \$2,300. thyberg@bnl.gov.

04 MERCURY SABLE LS – 92K mi. 4dr, 6 cyl, a/t, a/c, p/s, p/w, abs s/rf, traction cntrl, stereo, gd cond. \$6,200 neg. 807-1969.

04 FORD F150 HERITAGE – 61K mi. 8cyl 2wd a/t, new brks/tires, tow pkg, rem strtr, all pwr, pix. \$11,995 neg. chanady@bnl.gov.

02 FORD EXCURSION – 128K mi. V-10, leather, p/w, p/d, pwr/mirrors heated & signal, tow pkg, more. \$8,600 neg. 849-5555.

00 MAZDA MIATA – 75K mi. silver LS 5 spd package, runs perfectly. \$6,900 neg. Paul, Ext. 7178 or sampson@bnl.gov.

66 FORD THUNDERBIRD – 90K mi. 390 4 barrel, excel body, Landau top, needs paint, headliner. \$2,500 neg. Craig, Ext. 4252.

8FT. PICK UP BEDLINER – GMC/Chevy Pick Up OEM bedliner, grt cond. Fits 8ft. bed. \$75.00. Gregg, Ext. 4548, 872-5083.

HARDTOP – for '95 Jeep Wrangler, ask/ \$450. Bobbi, 291-0245, bmicar@bnl.gov.

RIMS W/TIRES – 4, 18" RT6 Enkei 360, perfect rims; 6 Lug; excel cond, under 1/yr old, pd/\$1,800; ask/\$700; pics. 813-6583.

RIMS W/TIRES – 4- 17" Cobra Rims M-1007-G178 v/gd cond w/245 40" tires, 1 yr old \$700. Ext. 3217.

TRI-FOLD TONNEAU COVER – brand new, black, for GMC/Chevy's w/5.8" bed, ask/\$475. Steve, 813-6583.

Boats

25' CAPE DORY CD25 – 25', '78 Tohatsu 6 hp lg shaft '07, new sails '09, ready to sail, Setauket. \$4,000 neg. Ext. 4708, 246-9294.

17' HYDRA-SPORT CTR CONSOLE – boat, motor, trailer, '89, bimini top, trim tabs, Baitwell, fishfinder, extras. \$3,500. 849-2329.

Furnishings & Appliances

5PC BEDRM SET – cherry wd, q/sz sleigh bed, 2/dressers, 2/ngt stands w/drwrs, pics, gd cond, ask/\$1,000, jtrutt@bnl.gov.

5PC WOOD KITCHEN SET – round tble w/ built-in leaf to seat 6-8, w/4 blk chrs buyer must pic up, ask/\$300. Janine, Ext. 2431.

AIR CONDITIONERS (2) – (1) 5K Btu: \$50. (1) 8K Btu \$75. Both in excel condition. Rick, Ext. 6183 or backofen@bnl.gov.

BEDROOM SET – dk pine w/qu headbrd, 2 n/stands, dresser w/mirror hutch, gd cond. \$500 neg, buyer must pickup. 882-9095.

CHAISE LOUNGE – Victorian style w/oak trim, \$350. Ext. 3054.

DINETTE SETS – lg Oak table, rd glass top, 5 chairs, \$500; lg Oak table, rd glass top, 4 chairs, \$350 . 235-4121.

KITCHEN SET – light maple table w/leaf, 4 spindleback chairs, 60"x 36", excel cond, \$300. 678-3299 or dgordon@bnl.gov.

MOVING SALE – q/bed mattress box frme/ head, ask\$550, crib w/mtrs/bdding, ask\$120, 3/seat sofabed ask\$150. wangt@bnl.gov.

OAK ENTERTAINMENT UNIT – up to 36" TV, CD storge rack; glass case w/light; 2/encl cabinets, excel, pics, ask/\$175. Ext. 3102.

SECTIONAL SOFA – CR Lane, w/cocktail table, nesting end tables, sofa table. Pet/ Smoke-free. Pics avail. Make offer. 523-7870.

TRUNDLE BED – workbench oak bed frame w/trundle/\$125. Ext. 7141.

WATER COOLER – Sunbeam stainless steel w/hot/cold dispenser, excel cond, ask/\$50. Ext. 3924 or wwilliams@bnl.gov.

Talk on 'Physics and Consciousness,' 6/3

On Friday, June 3, at noon, in Berkner Hall, Swami Pavitrananda, head of the Sree Gangnath Mahavev Ashram in Gujarat, India, will talk on "Physics and Consciousness." All are welcome to attend this free talk. Pavitrananda will discuss how modern quantum physics theories compare to the Vedanta school of Indian philosophy, delving into the concepts of real and unreal. Pavitrananda's educational background includes a degree in electrical engineering from the National Institute of Technology, Bhopal, India, and Master's degrees in Indian philosophy from Sanskrit University. He has made prior presentations on this topic in both Indian and U.S. universities.

Register Your Child for BNL Summer Science Camp

BNL employees are invited to register their children for the 2011 Summer Science Explorations Program, a free offering from the Science Learning Center (SLC). The three-day camp will be held on Tuesday through Thursday, from 8:30 to 11:30 a.m., for students entering 4th to 6th grades. During the first two days, students will investigate energy transfer through hands-on activities. On the third day, camp culminates at Weaver Pond for a morning of environmental exploration.

This educational program centers on research conducted at the Lab. In addition to SLC science educators, the children are mentored by pre-service teacher interns. The weeks of July 12-14 and August 16-18 have been reserved for the children of the BNL community. Space is limited, so register your child or grandchild early by contacting the SLC Office, Bldg. 400, Ext. 4495. Students must attend all three days and the parents of participating children are welcome to attend.

Audio, Video & Computers

KENWOOD HOME STEREO SYSTEM – incl receiver, CD Player, tuner, duel cass

deck & 2 spkrs, \$100. 678-3299.

LEXMARK 3200 PRINTER – \$20. Memo-rex CD Micro Syst, radio & sing. CD playr w/sm spkrs, rem, \$25. 878-2425.

SONY 36 – Trinitron TV, excel cond, will deliver in local area, \$40. Ext. 2752, 751-6571 or woody@bnl.gov.

Sports, Hobbies & Pets

BOYS BICYCLE – 20" gd cond, \$30. JS, 344-4290.

GALLIAN KRUEGER 250RL AMP – for guitar100 watts, 50 per side, stereo head,many extras, \$100. 678-3299 or dgordon@bnl.gov.

HALEX ELECTRONIC DARTBOARD – LCD Scoring. Unused, still in box, \$20. Donna, Ext. 2716, 878-2425 or storan@bnl.gov.

MEN'S IRONS – 3-P, Vectra, senior-flex, graphite shaft. Good for beginner, good condition. \$35. 929-4270.

TREADMILL – Nordic Track Power, Model PT60, rarely used, great cond, pd/\$1300, ask/\$500, have photos. 516-477-9119.

WEIGHT BENCH – Irongrip, adjustbl w/2 safety bars, 2 curl bars, 300 lb wt set & rack, rarely used, pics, \$175/neg. Pam, Ext. 3097.

Tools, House & Garden

CHAINSAW – 16", Skil, old but usable/\$20, 6 Peathole Ln, Bellport. R. Rau, 286-4774.

LAWN MOWER – gd cond, mulch or throw type/\$55. Joe, Ext. 3783, 487-1479.

STEP 2 RUBBERMAID GARDEN CART – \$50. Donna, Ext. 2716, 878-2425.

TABLE SAW – 10" Delta contractor's table saw w/moveable base, great cond, \$300, have photos, 516-477-9119. Ext. 5902.

Miscellaneous

BELLYDANCING – basic level classes forming Tues & Weds evenings in mirrored studio. Sabihia, 487-9971.

KITCHEN ART – Coffee themed for decorating your kitchen, \$40/for all pics. Wendy, Ext. 3924 or wwilliams@bnl.gov.

POWER/CHILL – Hot/Cold Thermoelectric Cooler, 40 qt, \$50. Exersaucer, car, vibrates, sounds, \$20. Girls bike, \$20. 878-2425.

ROOCASE – Executive e-Book case, genuine leather/storage flap/magnetic closure. In box, never used, \$25. storan@bnl.gov.

WE ARE MOVING – furn/beds/tools/lawn / garden,books/kitchen/household,toys more. Bob, Ext. 3903, 286-0037, chrien@verizon.net.

WETSUIT – youth size 12, excel cond, Pd/\$110, ask/\$55. Ext. 7235 or fitz@bnl.gov.

Happenings

CAR SHOW FUND RAISER @ – Miller Plc/ Mt. Sinai Historical Soc. Car Show, Sun. June 12, N. Country Road. Raffles, music, tours, great cars! \$6pp, kids under 12 free. Ext. 5090.

CRUISE – 7 Day Caribbean Carnival Cruise on Apr 15th 2012 to St Thomas, Barbados, St Lucia, St Kitts, St Maarten w/1-fun day at sea. All for \$876.72 dbl occup balcony. Call for details. Kim, Ext. 2896, 399-3098 or khayes@bnl.gov.

STRAWBERRY FESTIVAL/YARD SALE – St Thomas of Canterbury, BrooksDr. & Edge-water Ave, Smithtown, S. of Jericho Tpk, Sat, 6/11, 9a-4p, Space for rent, sell your own goods, Always lg turnout. 265-4520.

TODAY: SPRING FLING AFTER WORK PARTY – join us, May 20, The Flaming Hearth, 756 Horseblk Rd, Farmingville, 6 p.m. until ?? Advance tickets \$10. Appetizers, cash bar. Charles Gardner, 219-2884; Kevin Hester, 796-9168.

Free

BICYCLES – Schwinn, Men's 10spd, Women's 5spd, old, usable, need minor repairs, u pic up @ 6 Peathole Lane, Bellport. 286-4774.

MATTRESS – Twin, not very old, clean and in good condition. Ext. 3884.

Wanted

BNL FAMILY MEMBERS IN MILITARY – If you have a family member that has been deployed overseas, please contact Adopt-a-Platoon so we may send them a goodie package. Joanne, jrla@bnl.gov. ADOPT-A-PLATOON – Monetary donations gratefully accepted towards mailing shipments to military overseas and to send goodie packages to BNL family members. Thank you. Joanne, jrla@bnl.gov.

CAR – needed, less than 100K mi., that runs well, no accidents, \$3000-\$6000. Xiaoya, shix@bnl.gov.

DONATIONS OF DOG/CAT FOOD – For pets of struggling families/elderly and or Kent Animal Shelter. Collection bins in Bldgs: 134, 400, 510 (x5864). 725, 901, 902. Kathleen, Ext. 3161 or kratto@bnl.gov.

FIREWOOD – Cut downed hardwd logs oak, maple, etc, split/non split, will remove free nr Rocky Point. Ext. 7861, 849-2329.

MID-CONTROLS – for a '88 883 Sportster. Patty, 926-8125.

USED RECUMBENT EXERCISE BIKE – Must be gd cond. Fair price paid. Will pick up. Eric, Ext. 8226, ekramer@bnl.gov.

Lost & Found

FOUND – Silver beaded necklace in 400 lobby. Joanne, Ext. 8481.

For Rent

BROOKHAVEN HAMLET – Studio apt, full bath, pvt patio & ent, full stove & fridge, nice quiet area, no smkg/pets. \$750/mo. Donna Kotasek, 803-0429.

MASTIC – 3 bdrm hse, 2 full ba, forml l/r, d/r, fully equip eik, new carpeting, kit appli & baths, 7 min to BNL, walk distance to McD, Subway, Burger King, Kohl's, 7-11, P. \$1,750/mo neg. 210-369-5284.

NORTH CORAM – 3 bdrms, 2 baths, 2 car gar, use of backyd/pool, avail July 1st, plus util. \$2,400/mo. 466-4183.

PATCHOGUE VILLAGE – 2 bdrm hse, 1 block to water & park, 1.5 car gar, newly renov kitch, bath, master b/r, new w/d, huge priv yrd, deck, no smkg/pets. Pics. utils not incl. \$1,800/mo. Ext. 7278, 730-6831.

ROCKY POINT – 1 bdrm apt sep ent, full kitch/bath, new carpet/paint, pets welcome, walk to beach, approx 10 mi from lab. \$1,100/mo neg. Nelly, Ext. 8104, 516-967-6699 or nellyklein@bnl.gov.

SHIRLEY – lg 1 bdrm bsmt apt, single person, close to beaches/parks/free-ways/lirr/lab, all incl, 1 mo + 2 mo sec. \$750/mo. Ext. 3846.

SHOREHAM – share a hse w/professional, lg furn bed room, cable, int, no smkg/ pets, 8 mi to BNL, avail now. \$675/mo. 578-0108 or gg19582003@gmail.com.

SPEONK – immac, 3 bdrm ranch, 1 bath, part fin bsmt, w/d, cac, deck, lg fen bkyl, cul de sac, 15 min to Lab, 10 to beach. \$1,850/ mo neg. Ext. 2289, lhubbell@bnl.gov.

YAPHANK – 2/3 bdrm condo, eik, 1 1/2 baths, living room, finished basement, inground pool, tennis/basketball courts, landscaping & snow removal, 3 mins to BNL. 1 mo. sec. \$1,500/mo. 988-8233.

WARREN, VT – Condo loc at Sugarbush Resort, sleeps 4, tennis and 18 hole Robert Trent Jones golf course, price/neg dep. upon dates req., www.sugarbush.com. Colleen, Ext. 4919 or cmichael@bnl.gov.

For Sale or Rent

SPRING HILL, FL – priv Gulf Coast Ranch, 70m Orlando, 45m Tampa, nr beach, tennis, par, fly Islip direct, screen/igp, lanai, fruit trees, SW architecture, 3bdrm, 2bth, d/r, f/p, 2x gar, shed, photos, \$950/mo neg.; \$129,900 neg. James, 344-5537.



Alex Reben 0340511

Safety Advocacy is a Full-time Job For Dan Galligan of ES&H

Dan Galligan joined BNL 18 years ago and safety has been on his mind every day since then, he said.

"I started here as a refrigeration and air conditioning engineer, became a shop steward in 1996, and since 1997 I've been one of the two IBEW 2230 safety representatives here at the Lab," Galligan said. "But that safety rep effort was in addition to my Lab job, so I was constantly juggling my responsibilities between the two."

So now, in 2011, as part of the new International Brotherhood of Electrical Workers (IBEW) safety initiatives instituted in the latest collective bargaining agreement approved by membership, Galligan's safety job is a full-time position within the Environment, Safety & Health (ES&H) Directorate.

"Safety is full-time, all the time with everyone in the bargaining unit," Galligan said. "But we're always learning, always adjusting to change. And this new union safety representative position is a result of some very good, proactive change. Jobs around the Lab are evolving, and instead of playing catch up with safety trends we're focused on getting ahead."

This means Galligan is out in the field, visiting work sites and teams constantly. "Out in the field, you have to work with people in real situations, facing real risks, and making real decisions that affect their lives," he said.

But he also notes that his role is not to point a finger or act as a "safety cop."

"I'm an advocate, first and foremost," he explained. "As the union safety representative, I'm in a position to make real change happen around the Lab, to help people plan their work

See Dan Galligan's story in a video online:
<http://intranet.bnl.gov/safety/news/news.asp?a=2338&t=today>

better, work more safely, and avoid injuries."

One of Galligan's primary roles is bringing union concerns to the attention of Lab management. He does this as a direct report to Ed Nowak, Manager of the Safety & Health Services Division, and as a member of the Joint Safety Operations Council, or JSOC, another new IBEW Safety Initiative the membership approved. He serves on the JSOC with Nowak; Frank Raynor, IBEW Local 2230 member and treasurer; John Berry, IBEW; Robert Geib, IBEW; Bruce Penn, ES&H Business Operations Manager; Ray Costa, Facility & Operations Directorate Operational Excellence Manager; and Leo Somma, Facility Complex Manager for the north complex.

"The JSOC members are always asking 'what can we do to make the Lab a safer place to work, to help workers be safer on their jobs?'" he said. "Since I'm attending morning planning meetings nearly every day, and visiting work sites all around the Lab, I can bring my experience and activity to bear on what the JSOC does to improve the safety culture here."

Next up for Galligan is ramping up safety communications to union members at the Lab and providing input during safety audits, he said.

"Having the right, timely information helps you make better decisions on the job," he said. "I'll be delivering the safety message to workers around the Lab and help them deliver valuable information back to Lab management and audit teams as they do their work, as well."

— Will Safer

Safety makes science possible at Brookhaven National Laboratory

<http://intranet.bnl.gov/safety>

Join BNL's Veggie Club!

Join the Community Supported Agriculture (CSA) group to get fresh produce from a local organic farm. For 26 weeks, June 2 to November 22, freshly picked seasonal produce of 350 varieties will be delivered to BNL for members to pick up. The fee is \$420. Pay immediately or in two installments of \$285 on sign-up, by May 20, with one post-dated check for \$135, post-dated for July 13, 2011. For more information, contact Ruth Comas, comas@bnl.gov or Ext. 3545.

For Sale

LAUREL – 3 bdrm, 2 ba, 2500 sq ft ranch, 3 gas f/p, Mattituck SD, c/a, new gas heat sys, 3-car det gar w/legal 1 bd rm apt above, walk to deeded bay rt of way. \$459,000 neg. Andreas, Ext. 3140, 335-7173.

LOWER EAST SIDE – Seward Park Co-op, 1/bdrm, lg l/r, d/r, eik, balcony w/view of NYC, laundry room, fitness center and more, asking. \$600,000. 467-4386.

THREE VILLAGE SCHOOLS – beautiful, young 3 bdrm, 2.5 bath Colonial, 1/mi to SUNY, convenient to all, many amenities, lsd reduced. \$419,000 neg. 473-5957. YAPHANK – Whispering Pines, 3br, bsmt,

gar, newly updated kitch/appli, w/d, hrdwd flrs, new bathrms, jet tub in mstr/bath, custom f/p, clubhse, pools & playgrounds, brick patio & open yd. \$265,000. 255-6156.

In Appreciation

My deepest gratitude to my colleagues at BNL for their caring and support on the passing of my mother, Joan Gunther, on Mother's Day.

— Bill Gunther

My prayers and sincere thanks go out to all my friends and coworkers for your kind words and acts of support on the passing of both my parents, Peter and Veronica, three weeks apart.

— Gerry Shepherd