

New Low-Temperature Process Produces 'Pure' Hydrogen

May have wide applications in fuel cell technology

Devinder Mahajan of the Energy Sciences & Technology Department was recently issued U.S. Patent 6,596,423 for his development of a novel, low-temperature process of producing "pure" hydrogen for use in fuel cells. The process may help address one of the most significant difficulties in developing efficient and affordable fuel cells — how to extend the life of the catalysts that make them work.

"The commercial viability of fuel cells for power generation depends upon solving a number of manufacturing, cost, and durability issues," said Mahajan. "Finding a simple, inexpensive method of producing hydrogen that is essentially free of carbon monoxide would help address many of those issues."

Fuel cells combine hydrogen and oxygen without combustion to produce

direct electrical power and water. They have been pursued as a source of power for transportation applications because of their high energy efficiency, their potential for source fuel flexibility, and their extremely low emissions.

An important problem facing today's most promising fuel cell technologies is, however, that the same hydrogen that feeds the reaction often contains high levels of carbon monoxide formed during the hydrogen production process. The carbon monoxide (CO) "poisons," or degrades, the expensive platinum catalysts that convert hydrogen into electricity within the fuel cell.

Through his research funded by DOE's Office of Fossil Energy, Mahajan developed his new process for making hydrogen feed containing only a few parts per million of CO and which is at the correct temperature to be fed directly into a fuel cell. The process also minimizes the amount of waste produced during the reaction due to low temperature operation, high product selectivity, and high catalytic activity.

"It's quite an economical reaction, and it happens very quickly, in just a few seconds," said Mahajan, "The process works with impure hydrogen produced by any method, including coal and biomass, and can be easily scaled up for more substantial production."

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Devinder Mahajan uses a gas chromatograph to analyze carbon monoxide levels in hydrogen purified using his patented process.

Roger Stoutenburg D7280903

John Jay LaValle Visits BNL



Roger Stoutenburg D0281203

At beam line U10B at the National Synchrotron Light Source, researcher Lisa Miller explains to Brookhaven Town Supervisor John Jay LaValle how she uses infrared light to study bone composition in osteoporosis.

To learn more about research being done at BNL, which is one of Brookhaven Town's largest employers, Brookhaven Town Supervisor John Jay LaValle visited the Lab for the first time last December 15.

Laboratory Director Praveen Chaudhari welcomed LaValle and his office staffer Christopher Nuzzi, who both also met Michael Holland, DOE's Brookhaven Area Office Manager; Marge Lynch, Assistant Laboratory Director for Community, Education, Government & Public Affairs (CEGPA); and Jeanne D'Ascoli, CEGPA Community Relations Representative.

The visitors then toured part of the Lab, with a first stop at the National Synchrotron Light Source (NSLS). There, Associate Laboratory Director for Light Sources and NSLS Chair Steven Dierker gave an overview of how Lab scientists and some 2,500 researchers from across the nation and overseas who visit BNL annually use x-rays and ultraviolet and infrared light to make discoveries in biology and physics, chemistry and geophysics, materials science and medicine.

At the next stop, Bill Christie of the Physics Department talked about the massive STAR detec-

tor, where about 450 researchers are among the approximately 1,000 scientists, engineers, and technicians from the U.S. and abroad who work at the Relativistic Heavy Ion Collider to replicate conditions at the dawn of time to gain a better understanding of how the universe evolved.

Then, at the Positron Emission Tomography (PET) facility, the visitors learned from scientist David Schlyer of the Chemistry Department about BNL's work in probing the brain chemistry of addiction, mental illness, and aging, and recent work to find effective treatments. — Liz Seubert

Thomas Kirk Elected AAAS Fellow

Thomas Kirk, BNL's Associate Laboratory Director for High Energy & Nuclear Physics, has been elected a Fellow of the American Association for the Advancement of Science (AAAS). AAAS is the world's largest federation of scientists, with almost 140,000 members and 272 affiliated organizations from 130 countries, serving a total of 10 million individuals.

Kirk was one of 348 members elected as Fellows by their peers in 2003. The Fellows were chosen because of their efforts to advance science or foster applications that are deemed scientifically or socially distinguished. New Fellows will be presented with an official certificate and a gold and blue rosette pin on February 14, at the 2004 AAAS annual meeting in Seattle, Washington.

Kirk's citation reads: "For innovative research in particle and nuclear physics across a wide range, for leadership in developing new accelerator facilities and detectors, and for excellence in research administration."

"I am pleased and honored to receive this acknowledgment of my performance," Kirk said. "I've had a rewarding career in physics, and, with many new projects on the horizon, I anticipate more interesting challenges in the future."

Responsible for an annual budget of



Roger Stoutenburg CNE-200-98

\$190 million, and a staff of about 800, Kirk oversees BNL's Collider-Accelerator Department, Physics Department, Center for Accelerator Physics, Instrumentation Division, Superconducting Magnet Division, and the Relativistic Heavy Ion Collider-Alternating Gradient Synchrotron Users Office.

Kirk earned his B.S. in engineering physics from the University of Colorado in 1962 and a Ph.D. in physics from the University of Washington in 1967. He first came to Brookhaven in 1965 while working on his thesis, joining Harvard University after earning his doctorate. Kirk rejoined BNL in 1994 in his current position. He also serves as program director for BNL's accelerator and detector participation in the Large Hadron Collider at CERN, the European physics laboratory.

From 1980 to present, Kirk has been an advisor and consultant for DOE and the National Science Foundation on numerous physics topics. He became a Fellow of the American Physical Society in 1989, and, in 2003, he was given the George Norlin Distinguished Alumni Award from the University of Colorado.

— Diane Greenberg

Note: For more information, go to <http://www.bnl.gov/bnlweb/pubaf/pr/2003/bnlpr111803.htm>

BNL Added \$22 Million-Plus To 2003 Long Island Economy

BNL purchased more than \$22 million worth of supplies and services from Long Island businesses in fiscal year 2003, a period from October 1, 2002, to September 30, 2003.

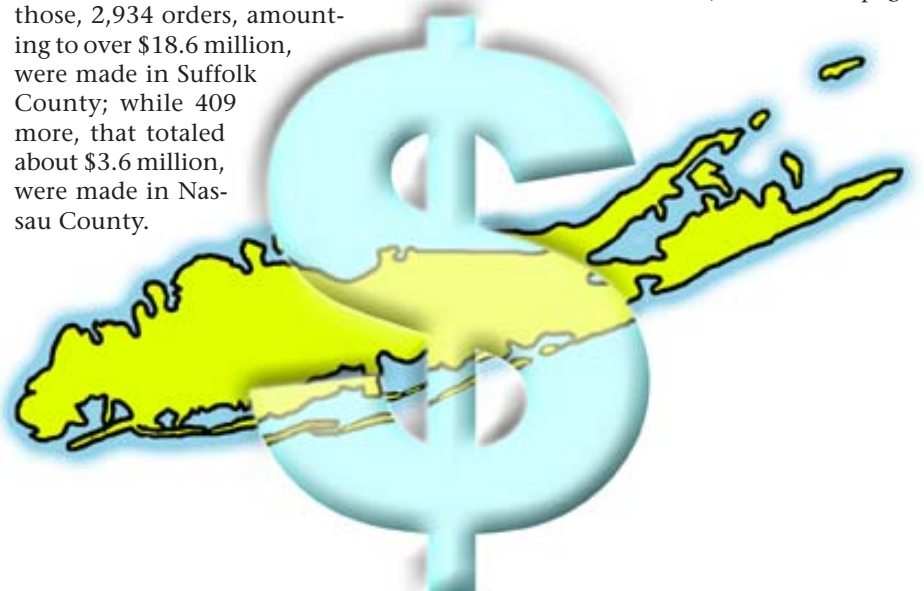
In addition to BNL's buying goods and services from Long Island vendors, most of the Laboratory's 2,780 employees live in Suffolk County and do most of their shopping on Long Island. All told, employee salaries, wages, and fringe benefits account for almost 62 percent, or about \$274 million of the Laboratory's total annual budget of approximately \$443 million.

In fiscal year 2003, BNL made 3,343 purchases on Long Island. Out of those, 2,934 orders, amounting to over \$18.6 million, were made in Suffolk County; while 409 more, that totaled about \$3.6 million, were made in Nassau County.

Mary-Faith Healey, Manager of the Procurement & Property Management Division, which handles purchasing for BNL, said, "The Laboratory strives to be a good neighbor by purchasing our requirements from local businesses whenever possible. We value their participation in the work performed by the Laboratory through the services and supplies they provide."

Environmental cleanup and new electronics accounted for a large part of local expenditures in fiscal year 2003. For example, the top two local vendors — ADJO Contracting Corporation of Bohemia and Bensin Contracting, Inc.,

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Calendar
of Laboratory Events

- The BERA Sales Office is located in Berkner Hall and is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347; or Chris Carter, Ext. 2873.
- Additional information for Hospitality Committee events can be found at the Lollipop House and the laundry in the apartment area.
- The Recreation Building (Rec. Hall) is located in the apartment area.
- Contact names are provided for most events for more information.
- Calendar events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.

— EACH WEEK —

Mondays: BNL Gospel Choir
5:15-7 p.m. Berkner Hall. All faiths are welcome. www.bnl.gov/bera/activities/choir/.

Weekdays: Free English for Speakers of Other Languages Classes
Beginner, Intermediate, and Advanced classes. Various times. All are welcome. Learn English, make friends. See www.bnl.gov/esol/schedule.html for schedule. Jen Lynch, Ext. 4894.

Mon., Tues., & Thurs.: Kickboxing
\$5 per class. Mon. & Thurs. noon-1 p.m. in the gym; Tues., 5:15-6:15 p.m. in the gym; Thurs., 5:15-6:15 p.m. in Brookhaven Ctr. Registration is required. Christine Carter, Ext. 2873.

Mon., Thurs., & Fri.: Tai Chi
Noon- 12:45 p.m., Brookhaven Center North Room. Adam Rusek, Ext. 5830 or rusek@bnl.gov.

Tuesdays: Welcome Coffee
10-11:30 a.m. Rec. Hall. Hospitality event. Come and meet friends. The first Tuesday of every month is special for Lab newcomers and leaving guests. Hospitality Chair Monique de la Beij, 399-7656.

Tuesdays: BNL Music Club
Noon, North Room, Brookhaven Center. Come hear live music. Joe Vignola, Ext. 3846.

Tuesdays: Singles Club
5:15 p.m., Brookhaven Center. Contact: Jean, Ext. 4391.

Tuesdays: Jiu Jitsu Club
6:30-7:30 p.m. in the gym. All levels, ages 6 and above. \$10 per class. Tom, Ext. 4556.

Tuesdays: Toastmasters
1st and 3rd Tuesday of each month, 5:30 p.m., Bldg. 463, room 160. Guests, visitors always welcome. www.bnl.gov/bera/activities/toastmasters/default.htm.

Tuesdays & Thursdays: Aerobics
5:15-6:30 p.m., \$4 per class. Rec. Hall. Pat Flood, Ext. 7886.

Tuesdays & Thursdays: Aqua Aerobics
5:15-6:15 p.m. Christine Carter, Ext. 2873.

Tues. & Thurs: Upton Nursery School
9-11:30 a.m. in the Rec. Hall. For 3 & 4 year olds. Alison Tilp, Ext. 4465, or tilp@bnl.gov.

Wednesdays: On-Site Play Group
10 a.m.-noon. Rec. Hall. An infant/toddler drop-in event. Parents meet while children play. Cindy Otteman, 821-4482.

Wednesdays: Weight Watchers
Noon-1 p.m. Michael Thorn, Ext. 1612.

Wednesdays: Yoga Practice
Noon-1 p.m., Brookhaven Center. Free. Ila Campbell, Ext. 2206.

Wednesdays: Open Chess Night
5-8 p.m., Rec. Hall. Christine Carter, Ext. 5090.

Fridays: Family Swim Night
5-8 p.m. at the BNL Pool. \$5 per family.

Fridays: BNL Social & Cultural Club
6-9 p.m. North Ballroom, Brookhaven Ctr., dance lessons, 9-11:30 p.m. general dancing. Rudy Alforque, Ext. 4733, rudy@bnl.gov.

— WEEK OF 1/12 —

Wednesday, 1/14

***BSA Noon Recital**
Noon, Berkner Hall. All are welcome to the next BSA Noon Recital, when award-winning pianist Nadejda Vlaeva will be playing works by Liszt, Scarlatti, and Grieg. See notice on page 4. Noon recitals are free and open to the public. Visitors age 16 and over must carry a photo ID.

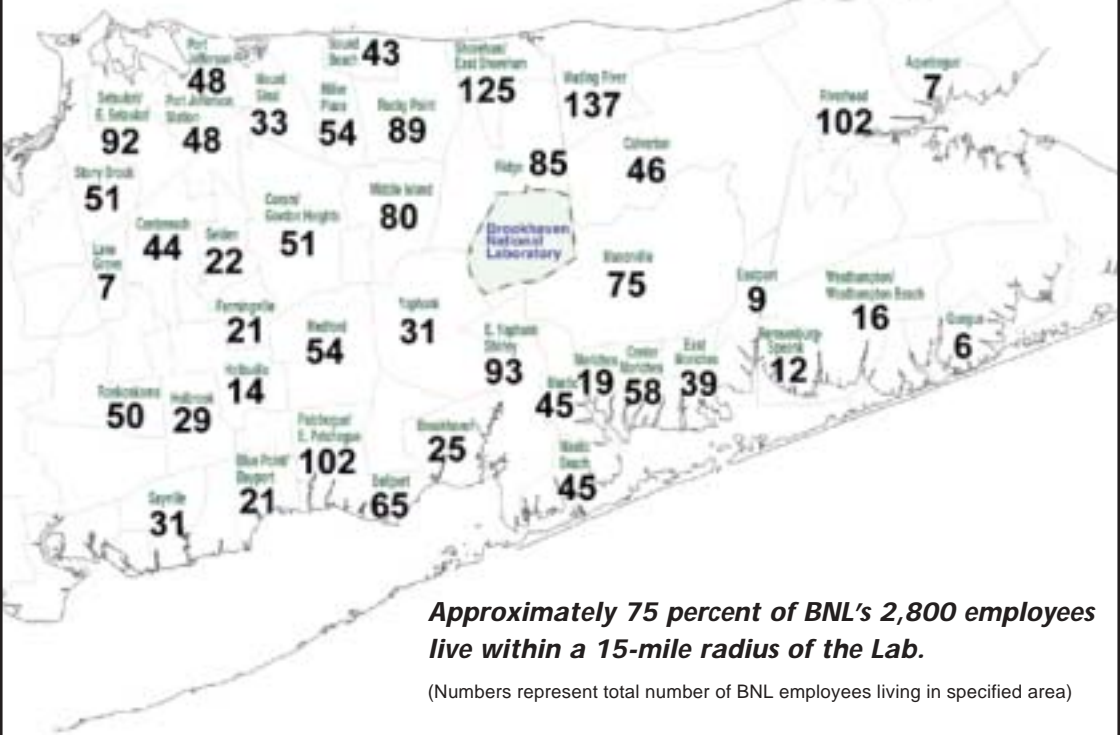
L.I. Economy (cont'd.)

of Holtsville — both installed groundwater treatment systems south of the Lab site. These systems will clean up volatile organic compounds that had migrated off the Lab site due to past waste management practices that were followed when regulatory standards were not as stringent as they are today.

The number-three Long Island vendor, Applied Power Systems, Inc., of Hicksville, supplied high-power electronics for the Alternating Gradient Synchrotron and the Relativistic Heavy Ion Collider — and for the Spallation Neutron Source (SNS) currently under construction at Oak Ridge National Laboratory. BNL is one of six national laboratories that are building the SNS, which will provide neutron beams for scientific research and industrial development when it is completed in 2006.

— Diane Greenberg

BNL Employees Are Long Island Neighbors



Northport Student Wins BNL Art Prize



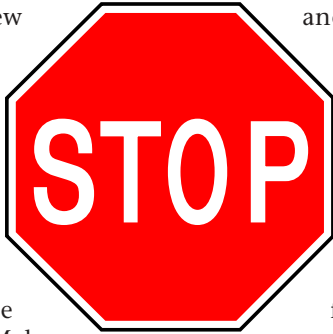
Roger Stoutenburgh D1471103

Travis Wingate, a senior (right) at Northport High School, has won the 2003 BSA “Discovery Award” for his sculpture called “Aphrodite” (see photo above). Laboratory Director Praveen Chaudhari (second from right) presented Wingate with a certificate and a \$500 savings bond at the BNL Art Society Thanksgiving art and crafts show held in Berkner Hall, while Wingate’s parents, Mary and Keith Wingate, enjoyed the moment. BSA awards the Discovery prize annually to a local high school senior for artwork that best exhibits the spirit of scientific discovery. The BNL Art Society chooses a winner from the artworks exhibited at a show for high school seniors held by the South Bay Art Association each November. Wingate’s art teacher, Richard Nunziato, said, “Travis is an exceptionally talented and hard-

working student. He used foam for his winning work, a new method to cast the mold for the sculpture. It is a spontaneous method, and Travis used it extremely well.” The award citation from BNL explains that Wingate’s sculpture represents the spirit of discovery in two ways: Aphrodite rising from the waves depicts the discovery of the world and the introduction of love to humankind, and the use of the new technique is in itself a form of discovery. The citation concludes: “Using a foam developed commercially for insulation purposes, the artist makes a spectacular work which appears to be a heavy bronze of great antiquity. It is, however, an extremely lightweight object made in the modern classroom. It represents, therefore, a happy marriage of art and science.” — Diane Greenberg

New Stop Signs Near Berkner Hall

The Traffic Safety Committee announces the installation of two new stop signs at the intersection of Johns Hopkins Street and Lewis Road. These stop signs will control traffic traveling north and south on Johns Hopkins and will complement the two existing signs controlling traffic traveling east and west on Lewis. This intersection receives a lot of pedestrian traffic because of its location near Berkner Hall. Making this intersection a four-way stop is expected



to increase safety for both pedestrians and vehicles. The signs have been installed, but will remain covered until the morning of Monday, January 19. When the signs are uncovered and placed in service, drivers will be expected to comply with the posting. As an aid to all personnel, Safeguards & Security Division staff will monitor the area for one week and issue warnings as necessary. After this period, violators will be ticketed for noncompliance.

In Memoriam

Lyle Smith, who had joined the then Proton Synchrotron Division as an associate scientist on September 13, 1948, and, as a senior physicist, had retired from the Accelerator Department on September 30, 1984, died at age 83 on May 23, 2003. He had received tenure in 1955 and had served as deputy department chair in the 1960s. **Fritz Bloch**, who, as an assistant chemist, had joined the Department of Nuclear Energy on April 1, 1957, and had retired as an associate chemist on July 16, 1973, from the then Department of Applied Science, died on May 24, 2003. He was 92. **Patricia Towey**, who had joined the Physics Department on April 12, 1954 as a clerk B, and on November 30, 1988, had retired as an administrative assistant from the then Department of Applied Science, died on May 31, 2003, at age 77. **Robert Stauber**, who had arrived at BNL as a consultant on August 23, 1976, and joined the Plant Engineering Division as an architectural design engineer on February 1, 1977, died on June 7, 2003. He was 64. He had left the Lab on July 22, 1994. **George Hrabak**, who had joined the Lab as a printing machine operator in the Design Group on August 24, 1950, and had retired from the Physics Department as a technical associate I on April 7, 1985, died at age 75 on June 12, 2003. **Walter Reams**, who had joined the Nuclear Energy Department as a technician B on October 27, 1958, had risen to chemical associate I by 1983, and had retired from the then Department of Applied Science on October 31, 2000, died on July 4, 2003. He was 70. **Raymond “Dutch” Stoenner**, who had arrived at BNL to join the Chemistry Department as an associate chemist on February 21, 1949, and had risen to Senior Chemist in 1978, died on July 18, 2003, at age 82. He had worked closely with Nobel Prize winner Raymond Davis and others at BNL in solar neutrino research for many years. He had retired from Chemistry on March 31, 1992, continuing with a guest appointment until 1997. **Constance Swezey**, who had joined the then Health Physics Department on October 23, 1950, as a technician C, and had retired as a senior technical associate on July 8, 1986, died on July 29, 2003, when she was 80.

Arrivals & Departures

Arrivals	
Narasimharao Krishnamurthy	Biology
Departures	
Richard Bernier	Plant Eng.
Thomas Blum	Physics
Walter Hughes	Plant Eng.
Kevin Manning	CEGPA
James McBreen	Mat. Sci.
Brian Murfin	CEGPA
Kenneth Perkins	ES&T
Philip Plunkett	C-A
Timothy Powers	Office of Dep. Dir. for Ops.
John Shaw	Waste Mgmt.
Christophe Suire	Physics
Bernd Surrow	Physics
Royal Thern	Rad. Ctrl.
Michael Vicino	Plant Eng.

Service Awards

The following employees celebrated BNL service anniversaries during December 2003.

35 Years
Lawrence T. Arnold C-A

30 Years
Adolph R. Almasy NSLS
Patricia M. Johnson Staff Svcs.

25 Years
Richard L. Greene NSLS
Christopher P. Lanni NSLS
Kenneth A. Rogers C-A
Paula L. Bennett Biology
Stephen M. O’Kula Plant Eng.

20 Years
Henry J. Biedenapp C-A
Ronald J. Angona .. Instrumentation
Terrence M. Sullivan Env. Sci.
Violet Bezler Physics
Christopher J. Gardner C-A
Susan E. Pepper NNS
Steven L. Hulbert NSLS
Florin A. Staicu NSLS
La Rosa Collins NNS
Rosa E. Palmore Diversity

10 Years
Marcus A. Babzien Physics
Robert F. Healy ITD

Interested in Pilates?

If so, then contact Christine Carter, Ext. 5090. If there is sufficient interest, then Carter will research the possibility of holding a 7 a.m. class on Fridays at the Lab.

Coming Up

Masaki Suenaga of the Materials Science Department will give the next Brookhaven Lecture, on Wednesday, January 28, at 4 p.m., in Berkner Hall. Suenaga will discuss recent developments in high-temperature superconductivity.

BWIS Holds High School Career Day

Female scientists and women working in related fields at BNL conveyed their enthusiasm for their work to about 50 female high school students at a recent career day at the Lab coordinated by Brookhaven Women in Science and funded by Brookhaven Science Associates. The students came from East Islip High School, the Hewlett School, and Smithtown High School. The students were also taken on a Lab tour, which included the National Synchrotron Light Source, to learn about the use of x-rays, ultraviolet light and infrared light to probe materials as diverse as computer chips and viruses; and the magnet factory, where superconducting magnets are built for particle accelerators all over the world. In addition, the students visited BNL’s science museum, where they had the opportunity to try out interactive exhibits.



Roger Stoutenburgh D1111103

Pointing to the Relativistic Heavy Ion Collider (RHIC) on the Laboratory site map, Carol Scarlett (right), Physics Department, explains the physics involved in RHIC experiments to (from left) students Ashley Demeo from East Islip High School, Allyson Cook from Smithtown High School, and Melissa Glock from the Hewlett School. Scarlett also gave a talk to all the students who attended the event about her career and her current project, the design of the KOPIO experiment, which will attempt to understand charge conjugation and parity-violation, a discovery at BNL in the 1960s that won physicists James Cronin and Val Fitch the 1980 Nobel Prize in physics.

Calendar

(continued)

— WEEK OF 1/19 —

Monday, 1/19

BNL Holiday
The Lab will be closed in observance of Martin Luther King Jr. Day. No Bulletin will be printed this week.

Friday, 1/23

Podiatry: Foot Screening, Consultation
9-11:45 a.m. in the Occupational Medicine Clinic, Bldg. 490. To add your name to the waiting list, e-mail Linda DiPierro at dipierro@bnl.gov.

— WEEK OF 1/26 —

Monday, 1/26

IBEW Meeting
6 p.m. Knights of Columbus Hall. Railroad Ave., Patchogue. 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.

Wednesday, 1/28

Brookhaven Lecture
4 p.m., Berkner Hall. Masaki Suenaga, Materials Science Department, will talk on recent developments in high-temperature superconductivity. All are welcome.

WEEK OF 2/2

Tuesday, February 3

Caring Friends Meet
Noon, Berkner Hall, Room D. An informal support group meets to serve as a resource for individuals experiencing grief and the many emotions following the loss of a loved one. Gatherings are on the first Tuesday of each month. All are welcome. For more information, call Pat Hein, Ext. 3962, or Gerry Van Derlaske, Ext. 3476.

— WEEK OF 2/16 —

Fri., 2/20 - Sun. 2/22

BERA Ski Weekend to Gore Mountain
Bus departs BNL on 2/20 at 5 p.m. and departs Lake George at 5 p.m. on 2/22. See notice on page 4.

Saturday, 2/21

Lion King on Broadway
\$76 per person. More information to follow. Christine Carter, Ext. 5090.

Note: This calendar is updated continuously and will appear in the Bulletin whenever space permits. Submissions must be received by the preceding Friday at noon to appear in the following week’s Bulletin. Please enter the information for each event in the order listed above (date, event name, description, and cost) and send it to bulletin@bnl.gov. Write “Bulletin Calendar” in the subject line.



Award-Winning Pianist Vlaeva Plays Liszt, Scarlatti, Grieg

All are welcome to the next BSA Noon Recital, when award-winning pianist Nadejda Vlaeva will be playing works by Liszt, Scarlatti, and Grieg, on Wednesday, January 14, in Berkner Hall. Vlaeva's playing has been acclaimed by many, including Hans Graf of the Calgary Philharmonic, who observed, "Her musicality and the depth of her interpretation amazed me. Her strong and healthy technique was both natural and flawless." Arnold Steinhardt, leader of the Guarneri String Quartet, eulogized Vlaeva as "one of those people of extraordinary ability whom we hope for, but rarely see."

Included among Vlaeva's major awards are the first prize and gold medal at the Liszt competition in Lucca, Italy, 1989; the third Prize at the international Liszt competition in Budapest, 1996; and the Yamaha Award for the best interpretation of Brahms, in Weimar, 1998. Her award-winning CD, piano music of Liszt, was released in 2001 on the Musicians Showcase label, MS-1063.

Noon recitals are free and open to the public. Visitors age 16 and over must carry a photo ID.



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 employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present 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; call the JOBSITE, Ext. 7744 (344-7744), for a list of all job openings; use a TDD system to access job information by calling (631) 344-6018; or access current job openings on the World Wide Web at www.bnl.gov/HR/jobs/default.htm.

OPEN RECRUITMENT – Opportunities for Lab employees and outside candidates.

WH4091. DEPUTY DIRECTOR OF OPERATIONS (DDO) - This position reports to the Laboratory Director and is a senior member of the Laboratory's leadership team. The DDO provides the leadership and vision for the management of construction, facilities operations, and maintenance, environmental safety and health services, including a multi-year environmental remediation project, security, fire protection and emergency planning, administrative services, fabrication, and procurement services at the Laboratory. The scope of responsibility includes a \$103 million annual operating budget, a \$17 million construction and capital budget, and 658 employees. The DDO develops and implements the Laboratory's performance-based management system and is the principal interface with the Department of Energy (DOE) and the BSA Board on Laboratory goal-setting and performance measurement and assessment. The DDO also serves as the Laboratory's emergency manager and spokesperson as required. Qualified candidates will possess an MBA or a relevant technical degree, and 15

years of progressively responsible leadership and financial management experience in a complex organizational setting. Five years' experience within the DOE complex or other federal organizations is required. Experience managing operations in scientific research institutions; familiarity with media interaction, and experience managing organized labor employees and contractors is highly desirable. The DDO will be an individual of integrity with high personal and professional ethics, strong written and oral communication/presentation skills, and a demonstrated commitment to teamwork, innovation, collaborative decision-making, community outreach and diversity. Candidates must be able to obtain and maintain a DOE "Q" security clearance. Director's Office.

MK4068. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in structural biology, biochemistry, and/or crystallography. Experience in protein crystallography is required as is the ability to work independently. A strong background in computational crystallography is preferred. Research program involves high throughput structure determination of macromolecules. The Biology Department has excellent facilities for structural biology and state of the art x-ray diffraction data collection facilities are available at the NSLS. Under the direction of S. Swaminathan, Biology Department.

MK2592. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. and several years' experience in the field of either high-energy or relativistic heavy-ion physics. In addition, knowledge of offline software at the infrastructure and application software levels for modern physics detectors and experience with detector calibration procedures are required. Position is with STAR, a large collider experiment at the Relativistic Heavy Ion Collider (RHIC), which will search and study a new state of matter thought to have existed shortly after the creation of the universe. Will actively participate in the STAR scientific program and help support the study of open charm production, support time-of-flight software and calibration, and participate in ongoing R&D activities with focus on GEM technology. Under the direction of T. Hallman, Physics Department.

TB3144. PRINCIPAL TECHNICIAN (TW-4) – Requires an AAS degree or equivalent plus two years' related experience. In addition, requires the following skills: 1) familiarity with materials preparation and processing techniques and knowledge of standard electronic materials characterization techniques; 2) familiarity with maintenance of electronic databases and creation of simple computer graphics; 3) excellent in-

terpersonal skills to interact with CFN users and ensure their training and safety; 4) administrative skills to initiate, monitor, and close out paperwork related to lab activities including purchase orders, intra laboratory requisitions, etc. Center for Functional Nanomaterials.

Motor Vehicles & Supplies

00 CHEVY SILVERADO - V8, white/gray leather int., Bose am/fm/cass/cd, crew cab, 39K mi., \$20,000 neg. Ext. 3084.

00 MAZDA B-2500 - a/t, a/c, p/s, p/b, bed liner, rear cover, fog lights, cc, am/fm disc, 29K mi., \$8,000. Chuck, 821-1525.

00 VOLKSWAGON PASSAT WAGON - a/t, a/c, p/s, p/b, p/w, V6, loaded, mint cond., 48K mi., \$18,500. Raymond, 718-225-5783.

99 SATURN SL2 - 4 dr. a/t, p/w, p/l, sun-roof, spoiler, new brakes, great cond., 98K mi., orig. owner, ask., \$5,700. Lisa, Ext. 7524.

96 CHEVROLET CUSTOM VAN - Mark III, a/t, a/c, p/s, p/b, p/w, dealer maint., excel. cond., 100K mi., \$11,000. JoAnn, 878-8263.

95 CHEVY CORSICA - 26.5K orig. mi., some minor damage, \$1,600. Mike, Ext. 7941.

95 SATURN SL2 - all power, new tires, dealer maint., high mi., gd. cond., \$1,500. Celeste, Ext. 4980.

95 TOYOTA CAMRY - a/t, a/c, p/s, p/b, p/w, cd, gd. cond., 35K mi. on new eng. w/guar., \$4,200. Maryann, Ext. 4705 or 929-4978.

94 CHEVROLET CAMARO - 5 spd., a/c, p/s, p/b, fully maint., garaged, like new, 32K orig. mi./owner, \$6,000. Tony, Ext. 3344.

94 MAZDA 626 - a/t, a/c, p/s, p/b, p/w, s/roof, new tires, brakes, tmg. belt, 110K mi., \$3,250/o. Jim, w/dy, 344-5018, w/end, 335-9007.

93 CHRYSLER VAN T&C - 6 cyl, leather, new tires & brakes, gd. cond., \$3,000/neg. Richard, Ext. 924-6751.

93 FORD E-250 CARGO VAN - orig. owner, runs well, looks gd., high mi. \$1,900. Jane, Ext. 2531 or 369-2719.

93 MERC. GR. MARQUIS LS - all pwr., V8, lthr., tract. cntrl., ABS, keyless, Fla. car. 85K mi., \$3,975. Michael, Ext. 2960 or 281-2414.

93 NISSAN QUEST - a/t, a/c, p/s, p/b, p/w, many new parts, runs well, seats 8, 127K mi., \$3,500. Najeh, 344-1001.

92 HONDA ACCORD EX - gd. cond., \$2,500/o. Zizhong, Ext. 7161 or 744-0703.

92 TOYOTA CAMRY LE - a/t, a/c, p/s, p/b, p/w, new tires, runs well, 115K mi., \$3,300. Ping, Ext. 5970 or 914-433-3056.

91 HONDA ACCORD - a/t, a/c, p/s, p/b, p/w, 5 spd., a/c, p/s, p/b, p/w, v. gd. cond., 107K mi., \$2,500. Ken, 281-5565.

91 TOYOTA CAMRY - a/t, a/c, p/s, p/b, p/w, new timing belt, v. clean, runs well, 148K mi., \$2,500. Adnan, Ext. 2379 or 807-3560.

90 SUBARU LOYALE WAGON - 4WD, 5 spd., a/c, p/s, p/b, 175K mi., \$1,000. Steve, Ext. 5323 or 744-3902.

89 JAGUAR - red, gold leather int., 4dr., am/fm radio/cass. player. \$3,500 neg. Cynthia, Ext. 3084.

89 MAZDA MPV - a/t, a/c, V6, 7 pass., new tires, brakes, struts & shocks, orig owner, excel. cond., 149K mi., \$1,800. Al, Ext. 7262.

88 MERCURY GRAND MARQUIS - a/t, V8, 4-dr., reliable, high mi., \$500. Ron, Ext. 6068.

86 PONTIAC TRANS AM - maroon/gray inter. clean, high performance eng., 138K mi., \$9,500. Ken or Dave, 948-5277.

TIRES -four, never used, P265/70R16 Firestone Wilderness M&S mounted on -'02 GMC Yukon alloy rims. Bill, 331-6983.

TRAILER HITCH - class-III receiver, fits all Ford trucks. Bridget, 484-1644.

TRAILER HITCH - fits Chevy Blazer, Jimmy type, v. gd. cond., will fit 2" receiver, cost, \$250, ask., \$125. Lou, Ext. 4312.

Boats

22' CAMPER - '99 Nomad, clean, ready to go. \$9,500. Ken, 948-5277.

13' BOSTON WHALER - 72 Bluehull, short shaft, Teleflex steering, 40hp Mercury, 4 ch/2 carb., w/trlr. \$6,500/firm. Sue, Ext. 4931.

FISHING ROD & REEL - Pen 9/0 Senator Reel & matching Rod, Big Fish, mint cond. \$125. Annamarie, 878-8967.

U-LINE ICEMAKER - 24x14x14, \$300. Mike, Ext. 6090.

Audio, Video & Computers

COMPUTER SCANNER - Visioneer One Touch 58XX, new cond., \$40. Donna, Ext. 4599.

DVD/LEGALLY BLONDE II - red, white & blue, prev. viewed, \$10. Angela, Ext. 5322.

Furnishings & Appliances

CHANGING TABLE & DRESSER COMBO. Mike, Ext. 7410.

CHINA CABINET - & table, oak, lighted cabin, perf. cond. e-mail pics avail., ask. \$1,000; table w/4 chairs, \$200/o. Donna, Ext. 2826.

DEHUMIDIFIER - \$60. Joe, Ext. 3783 or 929-8321.

ENTERTAINMENT CENTER - blk., holds 27" TV, glass drs., shelves, 68"Lx38"Hx19"W, \$250/o. Barbara, Ext. 6047 or 730-6132.

FREEZER - Imperial upright, 15-18 yrs. old, works well, great for bsmt. or garage, \$100. Stephen, Ext. 2575 or 924-3944.

MATTRESS - Futon, for double bed, 6" thick, used 6 mos. Darcy, Ext. 3362 or 286-8523.

Attn: All Drivers

Single-Lane Traffic In Leaving BNL Site

For security reasons, vehicles that leave BNL site may be searched, screened, and have their license plates recorded.

Therefore, before exiting past the security booth at the main gate, traffic in the right westbound lane must merge left. Also, beginning at 8 p.m., any vehicle may be stopped while its license plate is recorded. Cones, a traffic light, and temporary signs are in place near the booth to warn drivers that they may be required to stop. However, all drivers are urged to reduce speed, merge carefully, and exercise caution when approaching the security booth.

The Traffic Safety Committee is reviewing this operation and may recommend modifications.

On-Site SCCC Supervision Course for Spring Semester

The following course will satisfy requirements for most Suffolk County Community College degrees. Class will be on Tuesday evenings, and a minimum of 12 students is needed. BNL offers employees tuition advances or reimbursements at 75 percent for undergraduate courses. Contact Starr Munson, Ext. 7631, munson@bnl.gov.

BA29 - Supervision: Concepts and Practices. Study of supervisory functions from viewpoint of the first-line supervisor. Gives students actual practice through discussions of case problems arising from work situations. No prerequisite, 3 credit hours.

Adult Swimming Classes Begin, 1/28

Classes begin on Wednesday, January 28, at a cost of \$60 for eight weeks, and are held from 7:30 to 8:30 p.m. at the BNL swimming pool. Make checks payable to BERA and send to Christine Carter, Bldg. 179B.

BERA Ski Weekend, 2/20-22

Join BERA for a Ski Weekend to Gore Mountain, Lake George, NY, from Friday, February 20, to Sunday, February 22. The bus departs BNL on 2/20 at 5 p.m. and leaves Lake George at 5 p.m. on 2/22 for the trip home. Ski all day with transfers to Gore Mountain. Tickets include deluxe motor coach and two nights hotel, welcome refreshments, several buffet-style meals, and parties scheduled for Friday, Saturday, and Sunday. Buy tickets at the BERA Sales Office in Berkner Hall at \$195 pp-quad, \$215 pp-triple, \$225 pp-double. For more information, see www.adventureunlimited.com.

OFFICE DESKS - oak, 48"Wx30"D, 11 pcs., \$80/ea.; partition walls, fabric, 60"H, 48"W, 4 pcs., \$40/ea., all v/g. cond. Gail, 929-3700.

OVEN, MICROWAVE/CONVECTION - ID 14"x14", excel. cond., \$60. Joe, Ext. 3783.

REFRIGERATOR - GE profile, frostfree, 23.7 cu. ft., excel. cond., \$250. Celeste, 878-4356.

STEREO STAND - Emerson, 24"x42", 5 shelves, wheels, \$45; GE True Temp digital, white wall oven, b/o. Barbara, Ext. 2585.

STOVE - apt. size electric range, 4 top elements & oven, \$50. Stephen, Ext. 2575 or 924-3944.

STOVE - 30" Caloric nat. gas w/infrared broiler, gd. cond., \$150; top load washer, gd. cond., \$100. Paul, Ext. 4689.

TABLE - oak w/4 chairs, \$200/o. Donna, Ext. 2826.

WASHER - Whirlpool extra lg. cap., gd. cond., ask. \$250; 2 oak cabinets, 30"x24" x12", excel., \$225. Justin, 516-796-1485.

Tools, House & Garden

AIR COMPRESSOR, Cambell Hausfield, 4.5hp, 20 gal. heavy duty cast iron tank, 110/220V, hardly used, \$300. Bill, Ext. 3783.

ARM SAW - Craftsman 10" radial, complete w/base, tabletop & blade, \$250. Rolf, Ext. 2305.

MOTOR CYCLE/ATV LIFT - Sears, brand new, never used. New, \$99, sell for \$60. Mark, Ext. 2599.

SHREDDER CHIPPER - for branches/leaves, \$125. Joe, Ext. 3783 or 929-8321.

Lost & Found

LOST - case w/jewelry, etc., very precious sentimental value, Patricia, Ext. 7192 or send to: P.O. Box 528, Upton.

Sports, Hobbies, & Pets

AIR HOCKEY TABLE - almost new, you pick up. \$220; Golden Retriever puppy, w/papers, \$500. Warren, Ext. 2080 or 751-5245.

AQUARIUM - brand new 20 gal., glass w/lid, perfect for sm. animals, reptiles or fish, \$20. Sue, Ext. 4931.

GUINEA-PIG CAGE - w/water bottle & bowl, \$10. Gary, Ext. 2576.

STEPPER EXERCISE MACHINE - fan resistive w/tension adjust, electronics monitoring, \$50. Stephen, Ext. 2575 or 924-3944.

TENNIS BALL MACHINE - battery operated tennis tutor, holds 150 balls, new \$900, ask. \$450. Tom, 744-1439.

SNOWBOARD - 160cm w/bindings, \$110. Mike, Ext. 7410.

SNOWBOARD - 48", boot size 3, gd. for beginner; Elan skis, 175cm, bindings incl., both \$75/ea. Darcy, Ext. 3362 or 286-8523.

TICKETS - lift tickets good at any AmSki Corp. area till 12/24, \$25. Eugene, 286-6858.

TREADMILL - Proform 740CS, many computerized features, folds up, 2 yrs. old, excel. \$450. Maria, Ext. 5483 or 744-0790.

Miscellaneous

GUITAR LESSONS - need immed. beginner guitar lessons for my 14 yr. old nephew. Mamta, Ext. 2176.

ISLANDER TICKETS - 2, Islanders vs. Sabers, Jan. 17th @ 7pm, section 313, \$55 ea. Ken, Ext. 2563.

Car Pools

CAR POOL - looking to join from the North Fork of Eastern L.I., (Greenport/Southold/Mattituck). Ed, Ext. 5360 or 477-8117.

CAR POOL - established, meets in Westbury & Plainview for 8 a.m.-4:30 p.m. shift. Ron, Ext. 6068.

Wanted

SHOTGUN - Remington 1100, 410Ga. Joe, Ext. 3783 or 929-8321.

SKIERS - 2-21 Hunter Mountain, \$52 for bus & lift; 2-28, Belleayre, \$30 for bus & lift, send pymt. to Augie Hoffman, Bldg. 510A; Ext. 3884.

TANKS - Aquariums of all sizes desperately needed, 10-125 gal. for turtle hatchings. Phil, 874-5829.

TOY TRAINS - Lionel, Amer. flyer & others, cast metal toys, high cash pd., set also for sale. Bruce, 924-4097.

VACUUM TUBE & GEARS - old/new electron vacuum tubes & equipment, radios, tuners, test gear, etc. Jonathan, Ext. 5335.

RESEARCH VOLUNTEERS - men & women ages 20 & over, especially smokers, needed for PET study, Strictly Confidential, fee provided. Millard, 344-5015.

RESEARCH VOLUNTEERS - men and women, ages 18 and over, are needed for MRI study. Strictly confidential, fee provided. 344-2773.

In Appreciation

Many thanks to all who attended my lovely Retirement Luncheon. Thank you so much for my beautiful gift. I will think of all of you when I wear it. I've enjoyed working at BNL and have some wonderful memories of the past 24 years. You've been very special to me, and I will miss you. — Barbara Fridrich

On behalf of the families at Thee Island Inn Soup Kitchen in Middle Island, I would like to thank every person who donated food, coats, quilts, clothing, money and toys. You definitely made their holidays a little brighter. Your generosity and kindness is greatly appreciated! — Barbara Royce

I would like to give special thanks to my BNL friends and former co-workers for all of the prayers, kindness and support during my recent illness. I'm getting stronger each day. God bless you all. — Mabel Evans