

BNL Scientists Discover Improved Formula For Long-Life Rechargeable Batteries

The new, BNL-developed alloy is inexpensive, relatively environmentally benign

If you are tired of cell phones and laptops that quickly lose their charge — or worse, their ability to be recharged — help may be on the way.

BNL scientist James Reilly, who is retired from the former Department of Applied Sciences; with Gordana Adzic, John Johnson, and James McBreen, all of the Energy Sciences & Technology Department, and Thomas Vogt of the Physics Department were awarded U.S. Patent No. 6,238,823 for developing a new metal alloy that could greatly improve the performance of rechargeable batteries for portable electronic devices and electric and hybrid electric cars.

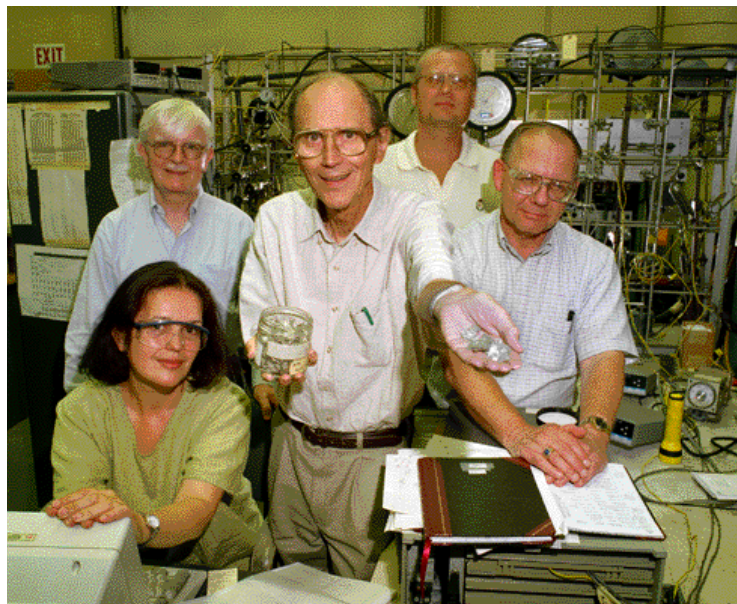
When used as an electrode in nickel/metal hydride (Ni/MHx) batteries — the most popular rechargeables — the new alloy has a high capacity for storing charge, a long-lasting ability to be charged and recharged, and good resistance to corrosion.

Furthermore, the alloy contains no cobalt, an expensive metal found in many Ni/MHx batteries, and no cadmium, a toxic metal found in nickel-cadmium rechargeables. Composed of lanthanum, nickel, and tin, "This new alloy is inexpensive and relatively environmentally benign," said Reilly, who led the development team.

Batteries now

The alloy is based on a classic formula used for Ni/MHx batteries, consisting of a cube-like lattice with lanthanum atoms on the corners and nickel on the inside. The electrode stores up hydrogen atoms from the electrolyte into the spaces between the atoms during charging, and releases them into the electrolyte during discharge.

But the added hydrogen atoms have an adverse effect: They



Holding a sample of the new BNL-developed alloy (U.S. Patent No. 6,238,823) is retiree James Reilly, with (clockwise from front, left) Gordana Adzic and James McBreen, both of the Environmental Sciences & Technology (ES&T) Department in the Energy, Environment & National Security Directorate; Thomas Vogt, Physics Department; and John Johnson, ES&T.

cause the crystal lattice to expand as the battery charges and then contract as it discharges.

"This expansion and contraction is repeated in each charge/discharge cycle of the battery," said Reilly, "pulverizing the alloy into small particles that are more susceptible to corrosion. That's why batteries don't recharge an infinite number of times. Eventually corrosion takes over."

Through trial and error, sci-

entists originally found that using a metal mixture, including cobalt, in place of nickel helps the electrode resist this tendency to break apart and corrode.

But even small amounts of cobalt can drive up the cost of batteries considerably. For batteries of the sizes needed in electric vehicles, the cost can be prohibitive. So, scientists have been trying to understand the role cobalt plays in the process and replace it.

A Message From Lab Director John Marburger

On Tuesday, September 11, after suspected terrorist attacks in New York, Washington, D.C., and Pennsylvania, the afternoon event planned for Laboratory Director John Marburger was canceled, and BNL was closed from 1 to 5 p.m.

In a Lab-wide message sent by e-mail at 6:41 p.m., Marburger expressed his deepest sympathy for all who had lost loved ones. He also commented:

"All our lives will be changed by these terrible and cruel events, but our mission of science and service to society will now assume even greater importance."

Society depends upon us for what we do best: the systematic and objective search for new knowledge and for solutions to vexing technical problems. Our success depends on broad cooperation with colleagues from other nations, and suffers from suspicion and prejudice."

I know the times ahead will be full of grief, anger, and a will for vengeance that will challenge our capacity for objectivity and thoughtfulness toward others. I ask particularly that we avoid stereotyping and take pains to understand the feelings of colleagues from other cultures who may be swept up in the generalizations that are bound to follow."

The full text of the message is on the BNL Web home page.

BNL Ranks First in U.S., in Top Five In Environmental Research Impact

BNL has been ranked among the top five major institutions worldwide in terms of the impact of its environmental research, according to a study by *The Guardian*, a British newspaper.

One measure of the value of a research publication is how often it is cited in papers written by other scientists. As the primary measure of the group's impact, *The Guardian* used the average number of citations per paper produced by each environmental research group from 1994 to 1998.

With 256 publications cited 1,953 times, and an average of 7.63 citations per paper, BNL ranked fourth in the study worldwide, and first in the U.S.

The other top institutions, ranked in descending order, from first to third, are: Brunel University, Britain, with 67 journal articles cited 707 times; the Max Planck Institute for Meteorology, Germany, with 231 articles cited 1,893 times; and the Max Plank Institute for Chemistry, Germany, with 438 articles cited 3,486 times. Columbia University came in fifth, with 879 articles cited 6,541 times.

The Institute for Information, a Philadelphia-based company, supplied the data for the study. The analysis covered the world's four leading countries in terms of the number of

With an average of 7.63 citations per paper, BNL ranked fourth in the study worldwide.

scientific papers published: Canada, Germany, the United Kingdom, and the U.S. Researchers in these countries produced almost 10 million research articles of international value in all fields of science over the last 20 years, and these articles were cited over 100 million times.

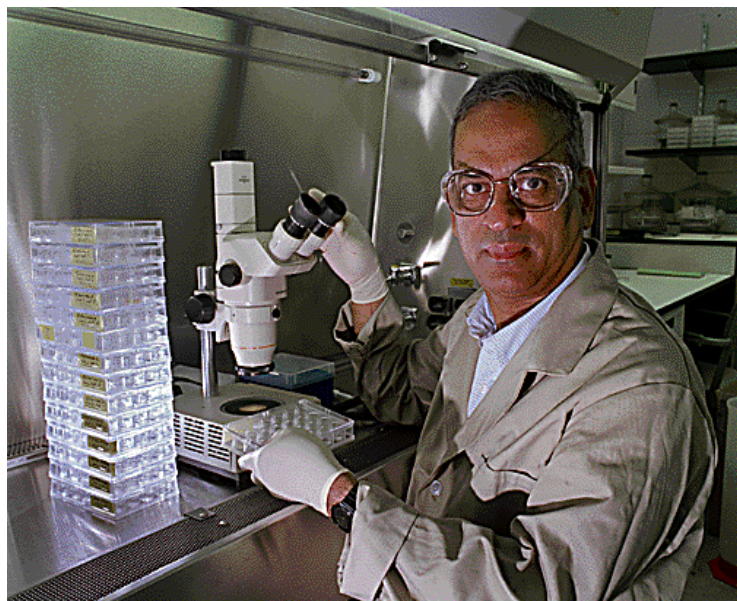
"Brookhaven Lab has a long history of distinguished environmental research," said Creighton Wirick, Chair of BNL's Environmental Sciences (ES) Department, in which most of the cited research is done. "We have only 80 people in our department, but they are all extremely versatile and productive, working on a variety of environmental issues, with funding primarily from DOE."

"Some other research institutions produce higher numbers of publications per scientist, and more publications in total because they have larger faculties than we do," said George Hendrey, ES's Earth Systems Sciences Division Head. "This rating, however, is an indication that the quality of our papers is very high and ranks with the best in the world."

ES scientists study atmospheric pollutants and the effect of aerosols on global climate; perform research aimed at understanding the effects of increasing carbon dioxide in the atmosphere and its impact on the biosphere and on Earth's

(continued on page 2)

366th Brookhaven Lecture Investigating Bacterial Neurotoxins



Subramanyam Swaminathan of the Biology Department investigates the structure and function of neurotoxins.

A single drop of a deadly toxin produced by *Clostridium botulinum* bacteria can kill a person who ingests it. By paralyzing the body, including the muscles needed for breathing, the toxin causes death by asphyxiation. Yet, administered correctly in minuscule doses, botulinum toxin can temporarily stop involuntary movement disorders such as face twitching.

To describe pioneering research at the National Synchrotron Light Source on the structure and function of these neurotoxins, Subramanyam

Swaminathan of the Biology Department will give the 366th Brookhaven Lecture on Wednesday, September 19. His talk on "Investigating Bacterial Neurotoxins" will begin at 4 p.m. in Berkner Hall.

In the lecture, Swaminathan will discuss his and colleagues' research that has resulted in their deciphering the structure of one of the botulinum toxins and discovering how it binds to the nerve cells it attacks.

As he will explain, understanding this interaction at the molecular level may lead to the design of vaccines or therapeutic

drugs to use against botulinum food poisoning or to counter the threat of biological weapons. Drugs to treat muscular spasms might also be improved, and truncated mutants of the toxin could also be developed as a carrier in other oral vaccines.

Swaminathan earned his Ph.D. in physics at the University of Madras, India. Before joining BNL, he worked as a scientist in Veterans Administration Medical Center, Pittsburgh, where he studied the structure-function relationships of staphylococcal enterotoxins and tetanus neurotoxin.

A Chemistry Department research collaborator from 1981 to 1983, Swaminathan then returned in 1995 for a year as a guest scientist, moving to the Biology Department in 1996.

In May, 1997, Swaminathan joined the Biology staff as a scientist. His research interests focus on the structure-function relationship in macromolecules. In addition to his work on bacterial toxins, he is involved in Biology's structural genomics and Lyme disease projects.

Refreshments will be offered before and after the lecture. Those who would like to accompany the lecturer to dinner after the talk at a restaurant off site may call Gloria Ganci, Ext. 3673, by 2 p.m. on September 19.

— Liz Seubert

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 M. Kay Dellimore, 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. Bldg.) 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: Arts & Crafts

2-3 p.m. Rec. Bldg. \$5 per month covers materials. "Make Your Own Teddy Bear!" runs through September 24. Marcia Leite, Ext. 1040, mhsleite@hotmail.com.

Tuesdays: Welcome Coffee
10-11:30 a.m. Rec. Bldg. Newcomers meet friends. Mimi Luccio, 821-1435.

Wednesdays: BNL Ballroom, Latin & Swing Dance Club: beginner to advanced lessons
Evenings, North Ballroom, Brookhaven Center. Marsha Belford, belford@bnl.gov, Ext. 5053; Ron Ondrovic, ondrovic@bnl.gov, Ext. 4553; Sue Perino, perino@bnl.gov, Ext. 2483.

Wednesdays: Cooking Exchange
2-3 p.m. Rec. Bldg. \$1 per session covers the cost of ingredients. Marcia Leite, Ext. 1040, mhsleite@hotmail.com.

Wednesdays: Weight Watchers
noon-1 p.m., Brookhaven Center South Room, Mary Wood, Ext. 5923.

Wednesdays: Yoga Practice Sessions
12-1 p.m., Recreation Bldg. Free. Ila Campbell, Ext. 2206.

Mon., & Thurs.: Cardio Kickboxing
\$5 per class. Mon. & Thurs. noon-1 p.m. in the Gym. Thursday evenings from 5:15 to 6:15 p.m. in the Brookhaven Ctr. Registration required. Mary Wood, Ext. 5923, or wood2@bnl.gov.

September is Hispanic Heritage Month. See 9/19, and other upcoming events to be announced.

— THISWEEKEND —
Friday, 9/14

GLOBE Meeting
For more information about today's meeting of the Lab's gay and lesbian club, contact Mike Loftus, Ext. 2960, or Chris Gardner, Ext. 4537.

Saturday, 9/15
Hospitality Bronx Zoo Trip
The trip has been cancelled.

— NEXT WEEK —
Tuesday, 9/18

Voicestream Wireless Demo
10 a.m. - 2:30 p.m., Berkner Hall. Special rates will be presented to BNLeers on Voicestream's wireless network. Richard Goll, (516) 343-5900.

BNL Toastmasters Meeting
5:30 p.m. Biology Bldg. 463, Conf. Room near parking lot. Visitors welcome. Margaret Conover, mcon@optonline.net; www.bnl.gov/bera/activities/toastmstrsdefault.htm.



Joseph Rubino CNE-025-01

Ralph James (second from left), Associate Laboratory Director for Energy, Environment & National Security (EENS), recently conducted his initial All-Hands Meeting with the EENS Directorate staff. James shared his vision and plans for EENS, which included expanding interactions with universities and increasing the number of patents and licensing opportunities. He also recognized the outstanding efforts and achievements of EENS staff members: Jay Adams, Radoslav Adzic, Ali Azarm, Debbie Bauer, Marita Berndt, John Boccio, Biays Bowerman, Tom Butcher, John Carew, Pat Carr, Carl Czajkowski, Rich Davis, Kara DeCastro, Giuliano DeGrassi, Marco Donno, Rob Doty, David Dougherty, Mark Fuhrmann, George Hendrey, Paul Kalb, Peter Kohut, Mow Lin, Jean Madaia, Jim McBreen, Roger McDonald, Mark Miller, W. Trevor Pratt, Michele Rabatin, Greg Slovik, Ron Webster, Jimin Xu, Yimei Zhu, and all members of the Nuclear Energy & Infrastructure Systems Division.

Inside Information

James McBreen, Energy Sciences & Technology Department, has been named Fellow of the Electrochemical Society (ECS) "for his sustained important contributions to the understanding of electrodes and electrode materials for both aqueous and non-aqueous batteries, and for his outstanding service to the ECS."

McBreen joined BNL in 1977 and his research has included work on large-scale energy storage, fuel cell electrocatalysts, and zinc electrodes; and applications of x-ray absorption spectroscopy and x-ray diffraction techniques to in situ studies of battery and fuel cell materials. He has authored and coauthored more than 140 technical papers, 11 book chapters, and seven patents. In 1974 he received the ECS Battery Division Research Award for work on zinc electrodes. (See also battery story, page 1, and photo caption above).

BNL's Environmental Research (cont'd.)

biogeochemical cycles; build and deploy instrument systems for research on physical processes relating to climate change; consolidate scientific efforts to understand and characterize waste containing radionuclides, toxic metals, and/or chemicals; and provide scientific and technical support to several of DOE's global change programs.

To view *The Guardian* article on the methods used for the study and a listing of how the institutions fared according to the newspaper's ranking system, go to this Web site: <http://education.guardian.co.uk/higher/research/story/0,9865,503412,00.html>. — Diane Greenberg

BNL Scientists Discover Improved Formula for Long-Life Rechargeable Batteries (cont'd.)

BNL discovery

The BNL scientists were investigating several relatively simple, cobalt-free alloys. They found a combination of lanthanum, nickel, and tin with a very high storage capacity that did not decay over many charge/discharge cycles.

This surprised the scientists because usually, combinations of these atoms in the classic ratio of one lanthanum atom to five other atoms decay rather quickly.

As it turned out, there was a mistake. Accidentally, the researchers had added a bit more of the nickel/tin combo, so that the ratio of atoms was no longer 1 lanthanum to 5 nickel or tin, but 1 to 5.157. That small difference in the ratio of the ingredients made a big difference in performance.

The superior performance was then confirmed in a further series of experiments, carried out by Adzic and Johnson, with other 1 lanthanum/5+ nickel/tin combinations.

Just checking

Vogt then studied the lattice structure at the National Synchrotron Light Source to figure out where the extra atoms went.

By beaming high-intensity x-rays at the samples of the material and looking at how the beam scattered, he determined that "dumbbells" made of two nickel atoms were replacing some of the lanthanum atoms on the cube corners.

These nickel dumbbells make the structure more compact, said Vogt. To some extent, this decreases its ability to store hydrogen, and, therefore, its initial charge capacity relative to the classic 1 to 5 formula.

However, it also decreases the alloy's tendency to corrode, therefore increasing its life-span.

The result is that the long-term energy-storage capacity of this new alloy exceeds that of cobalt alloys used in commercial batteries.

— Karen McNulty Walsh

Medical Benefits to Change on January 1, 2002

Starting on January 1, 2002, employees and retirees will see changes in their medical benefits.

According to Bill Hempfling, Director of the Human Resources Division (HR), the Lab's medical benefit costs increased by 15 percent in the past year.

"This is a nationwide problem that is not expected to go away," said Hempfling. "Doctor and hospital fees are increasing. We have access to better and more expensive diagnostic tools. Our population is aging. And the costs of prescription drugs are skyrocketing."

Employers cannot continue to absorb such significant increases while conducting business as usual, Hempfling said. "We have to modify our current medical benefit plans to cut costs."

To ensure that BNL employees and retirees have advanced notice about the changes, HR has planned the following:

- Direct mailing to employees and retirees at the end of September.
- Employee information sessions during October (dates to be announced).
- Information distributed during Healthfest week, on Wednesday and Thursday, October 17 and 18.
- Information available at the end of September at HR and on the Web at: www.bnl.gov/hr

The changes are highlighted below. All are effective January 1, 2002, which is the start of a new plan year. These changes do not affect members of the IBEW union.

Office Visit Co-Pays: Office visit co-pays will increase to \$15.

Prescription Drug Co-Pays: Co-payments for prescription medicines will increase to a three-tier system: one co-payment for generic drugs, a slightly higher co-pay for drugs on the carriers' brand-name formulary lists, and another higher co-pay for brand-name non-formulary.

The schedules of co-payments for 30-day supplies at participating pharmacies will be as follows:

- CIGNA: \$5 generic/ \$15 brand-name formulary/ \$30 brand-name non-formulary

- Vytra: \$5 generic/ \$12 brand-name formulary/ \$35 brand-name non-formulary
- Aetna: \$5 generic/ \$10 brand-name formulary/ \$25 brand-name non-formulary
- HIP: \$5 generic/ \$10 brand-name formulary/ \$35 brand-name non-formulary

Ninety-day supplies of mail-order prescription drugs will be sold at twice the above-indicated costs for 30-day supplies.

Employee Contributions: Monthly contributions will increase by 10 percent. At present, contributions are on a sliding scale that is based on salary, and the highest salary level on that scale is for those earning \$60,000 and over per year. The Lab will institute another pay level for employees earning \$80,000 and over per year, who will pay a higher contribution.

Dual Coverage: Dual coverage will be discontinued in the future for employee couples that may have qualified for it. Employees who now have dual coverage will not be affected.

Retiree Medical Coverage: The CIGNA Indemnity Plan will be replaced by the CIGNA-PPO for retirees. All current and future retirees will be required to join either the CIGNA-PPO or an HMO.

There will be NO change in contributions required by current retirees. Pre-1995 retirees are not required to contribute toward their medical plans, while those who had retired on or after January 1, 1995, will continue to make a contribution.

Those employees who retire on or after January 1, 2002, will be required to make whatever employee contribution the Laboratory may require after that date.

Dental Coverage (employees only): In addition to the CIGNA-DMO and the EBS indemnity plans, employees will have a third dental option: a CIGNA-PPO for dental. The schedule of benefits will be higher than the EBS program and less than the DMO program. The new option will provide benefits for both in- and out-of-network dentists. The employee premiums for this coverage are going to be slightly higher.

Gerlach Receives Navy’s Meritorious Service Medal Honored for 31-Year Commitment to the Navy

Louis Gerlach, a technician in BNL’s Energy Sciences & Technology Department and a Command Master Chief in the U.S. Naval Reserves, was presented with the Navy’s Meritorious Service Medal this past May at an awards ceremony held at the Navy and Marine Corps Reserve Center in Amityville. Gerlach was selected for this commendation as the culmination of a seven-month review process by various commanding officers in the Navy, including the Chief of Naval Operations, who sits on the Pentagon’s Joint Chiefs of Staff.

The Navy awarded the Meritorious Service Medal to Gerlach to commemorate his 31-year commitment to Naval duty. As his award citation reads, “Gerlach performed his demanding duties in an exemplary and highly professional manner.”

After enlisting at the age of 17, Gerlach served for four years of active Naval duty from 1970 to 1974, and subsequently as a reservist. As an operations specialist, he has obtained numerous other medals during his tenure in the reserves, including the Navy Commendation Medal, two Navy Achievement Medals, two Armed Force Reserve Medals, two National Defense Service Medals, and various unit awards.

Qualified in both surface and air warfare, Gerlach obtained his air-warfare qualification by repeatedly training aboard the *USS Enterprise* over a period of three years. In 1994, Gerlach was the only reservist selected by the Reserve Force Master Chief to participate in the nine-week, active-duty Senior Enlisted Academy in Newport, Rhode Island.

Gerlach has over 400 people under his command at the reserve center in Amityville and has



Roger Stoulenburgh CNY-181-01

served on two Naval reserve force policy boards and on four selection boards.

Said Commander Waite of the Amityville Reserve Center, “Gerlach’s leadership and professionalism have been directly responsible for the improvement of the Reserve Center during his tour as Command Master Chief. His unrelenting perseverance, determination, professional expertise, and steadfast devotion to duty resulted in tremendous improvements in the Reserve Center’s effectiveness, which directly benefited the attached units, and the Navy as a whole.” — John Galvin

‘Take Sons to Work’ October 8

Helpers are needed to organize the next “Take Our Sons to Work Day,” which will be held on Monday, October 8. Interested parents should contact Susan Foster, Employee Relations Manager, foster@bnl.gov, Ext. 2888.

Arrivals & Departures

Arrivals

David Adams	Physics
Christine Aidala	Physics
Elisabeth Caparelli	Medical
Vladimir Dioumaev	Chemistry
Patricia Fachini	Physics
Patrice Pages	CIGPA
Sasa Prelovsek Komelj	Physics
Line Sandager	Biology
Safiyh Taghavi	Biology
Dardo Tomasi	Medical
Hyungje Woo	Physics
Oleg Yakovlev	Physics

Departures

Tolulope Akinfeleye	Medical
John Boehle	Physics
John Boger	Chemistry
Bryce Breitenstein Jr. ..	Occ. Med. Clin.
Evelyn Cruz	Physics
Lisa Kelly	Bus. Systems
Seth LeGrand	C-A
Dawei Lin	Biology
Dimitrios Nikas	Physics
William Sandhoff Jr.	Physics
Stephen Vance	Physics

Start Aqua Aerobics

On Tuesdays and/or Thursdays, from 5:15-6:15 p.m., improve your health by joining a water aerobics group at the swimming pool. The pool fee is \$2, or you may use a monthly or season pool pass; the aerobics class is free. To register, call Mary Wood, Ext. 5923 or Ext. 6251.

Swimming Pool News

• Pool fees are as follows:

Daily Admissions

employees, visitors, facility users, family members	\$2
guests	\$3

Season Tickets

Individual	\$50
Family	\$60

Pro-Rated Monthly Tickets

Individual	\$20
Family	*\$30

*The family pro-rated monthly ticket is \$30, not \$25 as was previously announced.

• On Monday through Friday, the pool is open to employees, guests, retirees and their families from 4:30 p.m. to 8:30 p.m. However, on Tuesdays and Thursdays, 5:15-6:15 p.m., the pool is reserved for a water aerobics class. (To register, call Mary Wood, Ext. 5923 or Ext. 6251.)

• Swimmers may enter the pool until shortly before it closes, however, if they do, they must also exit the pool and dress very quickly so that the lifeguards may close the building on time.

Defensive Driving

A defensive driving course will be offered on Saturday, October 6, 9 a.m.-3:30 p.m., in Berkner Hall, Room B. To register, send a check for \$23 per person to Empire Safety Council, care of Scott Zambelli, P.O. Box 670, Mount Sinai, NY 11766. All checks must be received by September 28. Include your phone number on your check. For more information, call Zambelli at (631) 582-6544, Ext. 5877.

Tai Chi Classes, 10/1

Tai Chi is a gentle, flowing martial art promoting physical and mental health, longevity, and stamina.

BNL’s Tai Chi Club starts a new ten-week session of classes on Monday, October 1.

A \$40-per-person fee is due at the first class. Classes will be held on Mondays, Wednesdays, and Thursdays, 12:15-12:45 p.m., by the Recreation Bldg. in the apartment area.

For more information, contact: Dejun Xue, Ext. 6358, xue@bnl.gov; Ivan So, Ext. 7026, e-mail so@bnl.gov; or Jerry Tanguy, Ext. 2198, e-mail tan guay@bnl.gov.

Start Aerobics — Dance, Stretch

On Tuesday, September 18, the BERA Aerobic Dance & Stretch Club will start again in the Recreation Building in the apartment area. All are welcome: no prior experience is necessary. Come, see how you like it — the first class is free for evaluation.

Aerobic dance classes will be held on Tuesdays and Thursdays at 5:15 p.m.; stretch classes will be held on Wednesdays at 5:15 p.m. The cost is \$4 per class, or \$35 for any ten classes, with one make-up class. For more information, call Pat Flood, Ext. 7886; or Sue Monteleone, Ext. 7235.

Calling All Volleyball Players From Beginners to Experts



Roger Stoulenburgh CNY-35-01

On Mondays after 5 p.m., Travis Shrey runs a volleyball clinic in the gym. Everyone is welcome, especially beginners.

Join in now to, have fun, work out, and make new friends by joining a volleyball team. The BERA Volleyball League hopes to get many new players this season, and Travis Shrey is running a volleyball clinic on Monday evenings right until the season starts in the third week in October. People of all levels of skill are welcome, from beginners to experts, so here’s your chance to start learning a new sport or brush up on your old high-school expertise.

To ask questions or to join, contact Shrey, shrey@bnl.gov; Gene Van Buren, gene@bnl.gov; or Frank Crescenzo, crescenzo@bnl.gov.

Captains’ Meeting

A captain’s meeting will be held on Wednesday, September 19, at noon in Berkner Hall, Room C, when teams will be formed.

Calendar

(continued)

Wednesday, 9/19

Hispanic Heritage: South American Musicians Perform

11:30 a.m.-1 p.m., outside Berkner Hall. A South American group will play Hispanic music.

BWIS General Membership Brown Bag Lunch Meeting

Noon, Berkner Hall, Room A. Agenda includes elections for the FY2001 Executive Board and a report on the meeting with the Women Engineers’ Network. Stephanie LaMontagne, Ext. 7141.

*Volleyball Captains’ Meeting

Noon, Berkner Hall, Room C. Teams will be made up. Frank Crescenzo, crescenzo@bnl.gov.

*Brookhaven Lecture

4 p.m., Berkner Hall. Subramanyam Swaminathan, Biology, on “Investigating Bacterial Neurotoxins..”

Thursday, 9/20

Verizon Wireless Demo

11 a.m. -2 p.m., Berkner Hall. A representative will present BNLers with special rates on wireless service.

Brookhaven Advocacy Council Meeting

Open Session, 12:30-1 p.m., Berkner Hall, Room D. Nancy Warren, Ext. 7548.

College Funding Seminar

The “College Funding Options” seminar is cancelled.

—WEEK OF 9/24—

Monday, 9/24

IBEW Meeting

6 p.m., Knights of Columbus Hall, Railroad Ave., Patchogue. 3 p.m. in the union office.

Wednesday, 9/26

Safety Shoe Office Closed

Will re-open next week.

Divorced & Separated Support Group

noon-1 p.m., Berkner Hall, Room D. Mary Campbell, Ext. 4776, maryc@bnl.gov.

Fri. - Sun., 9/28-30

Gauley River Rafting Trip

Bus leaves 6 a.m. on Friday. Wally Hughes, Ext. 4180; Bozie Sing, Ext. 5350.

Friday, 9/28

Softball Party

5:30 p.m., Brookhaven Center. All softball players, families, and friends are invited. Tickets, \$12, include buffet dinner, 2 drink coupons, coffee, cake, DJ music. Cash bar. Bring cash or send check to BERA Softball, c/o Andrea Eppe, Bldg. 51M; Sue Cataldo, Bldg. 801; or Laurie Pearl, Bldg. 549, by today, 9/14. E-mail softball@bnl.gov.

—WEEK OF 10/1—

Wednesday, 10/3

Divorced & Separated Support Group

noon-1 p.m., Berkner Hall, Room D. Mary Campbell, Ext. 4776.

Thurs. & Fri., 10/4&5

Pine Barrens Research Forum

Berkner Hall. Details to follow. For more information, contact Tim Green, Ext. 3091, tgreen@bnl.gov.

Note: This calendar is updated continuously. Send submissions to bulletin@bnl.gov. Write “Bulletin Calendar” in the subject line.

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 JOBLINE, 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/JOBS/jobs.html.

LABORATORY RECRUITMENT – Opportunities for Laboratory employees

DD2096. ADMINISTRATIVE SERVICES ASSISTANT (A-2 – term appointment) - Requires an AAS degree in secretarial science and several years' relevant experience. Excellent organization and communication skills also required, as is a demonstrated proficiency in the use of Word and Excel. Must have the ability to work independently within established procedures, function effectively as a team member and exercise initiative and good judgement in a climate of changing priorities and be able to communicate effectively within and outside the research group. Will perform various tasks associated with the operation and administration of the Medical Physics program in the Medical Department, including but not limited to preparing correspondence, procedures, reports, and presentations, organizing meetings, filing and processing of travel requests and reimbursements. Will provide other administrative support as required to support the programs needs. Medical Department.

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates.

MK2095. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in organic chemistry with expertise in the design and synthesis of small molecules. Experience in the syntheses of macrocycles such as porphyrins would be beneficial as would experience with carboranes and/or boron hydrides. In addition, some knowledge in drug formulation or pharmacology is desirable but not essential. Work will require basic synthetic and analytical skills including HPLC, NMR, FT-IR, and optical spectroscopies and will synthesize compounds in the 50-mg – 1 g quantities for biodistribution and toxicological preclinical studies in boron neutron-capture therapy. Under the direction of M. Miura. Medical Department.

MK2234. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in crystallography or structural biology with at least 2-3 years' experience in macromolecular structure determination by x-ray diffraction. Strong background in chemistry/protein chemistry and/or molecular biology is preferred. Must have demonstrated ability to determine macromolecular structures independently and will work on high-throughput structure determination of proteins. Under the direction of S. Swaminathan. Biology Department.

NS8564. MANAGER, OCCUPATIONAL MEDICINE CLINIC (M-4) - A NYS medical license is required. Certification by the American Board of Preventive Medicine in Occupational Medicine, MRO certification, experience in the management of occupational medicine programs and Department of Energy program experience are preferred. Will be responsible for directing the operation of the OMC, including program development and administration, budgetary and personnel resources, and all aspects of medical care rendered at the OMC, including emergency response medicine, Health Promotion/Disease Prevention Program and the Employee Assistance Program. Occupational Medicine Clinic/ESH & Quality Directorate.

NS8055. TECHNOLOGY ENGINEER (I-6) – Requires a bachelor's degree or equivalent experience, and significant telecommunications service experience which should include a strong background in Siemens and Lucent switching technology, Octel voicemail systems, and SQL-based billing systems. Will be responsible for all administrative and technical management of the Octel voicemail system; the management of all telecom moves/adds and changes (MAC's); ensuring that end user voicemail functionality is maintained at all times; coordination with vendors to ensure that telecom engineering changes/upgrades are executed smoothly across all platforms; managing and executing all voice network engineering changes in support of the help desk call center; and maintaining ISI Infortel NT billing system. Information Technology Division.

NS9083. APPLICATIONS ENGINEER (reposting, I-6) – Requires BS in computer science or related field with at least 3 years'

experience in real time software development and HW/SW integration. Experience in C and C++ programming required; VxWorks experience highly desirable; Java experience a plus. Applicant should have demonstrated skills in problem solving, software design, hardware/software system integration techniques and debugging of networked systems. Will participate in designing and developing embedded software for real-time systems in the AGS/RHIC control system. Will work closely with hardware specialists in the system integration process and will be expected to provide support for new and existing systems. Collider-Accelerator Department. (ERAP eligible- \$1K)

NS2012. PROJECT ENGINEER I (P-9) – Requires a BS in engineering/science or equivalent, excellent communication skills; ability to work with all levels of management, DOE and outside regulators; a strong background in facility safety issues and knowledge of DOE Orders, OSHA, federal and state regulations, including Price Anderson Amendments Act 10 CFR 830 and 10 CFR 820. Ability to conduct engineering analysis of complex radioactive nuclide qualifications, release fractions and dose consequences is necessary. Advanced degree and safety certification is highly desirable; industrial safety expertise and background/experience with nuclear, accelerator and radiological facility operations and management are desirable. Will serve as the Facility Safety Subject Matter expert for BNL's programmatic compliance with all facility safety requirements. Will be responsible for facility hazard classification determinations, facility safety analysis, and operating safety limit process, including conducting engineering analysis for hazard minimization and/or mitigation. Safety & Health Services Division. (ERAP eligible - \$1K)

NS9065. PROJECT ENGINEER II (P-7) – Requires a BS in engineering with a minimum of 7 years' experience, or an MS in engineering with 3-5 years' experience. Experience in HPR class of insurance, excellent communication skills, and qualification for membership grade in the SFPE is required. PE license in Fire Protection preferred. Will participate in developing and implementing fire protection programs and procedures to eliminate personal injury, property damage, interruptions to programs and damage to the environment in accordance with BNL and OSHA, NFPA and DOE requirements. Job tasks include: surveying of facilities to determine potential hazards, recommending corrective action; reviewing construction plans, fire systems and safety procedures to determine appropriate fire safety measures and participate in all facets of fire investigations. Emergency Services Division.

NS2398. PROJECT ENGINEER II (P-7) – Requires a bachelor's degree in engineering or equivalent experience and 4-6 years' pertinent experience. Experience with both chemical and radiological contamination is desirable. Will be responsible for planning, preparing documents, budgeting, scheduling, coordinating and performing field engineering work associated with groundwater remediation programs. Resolution of complex problems such as conflicting design requirements, land access, regulatory issues, unsuitability of conventional systems, and difficult coordination requirements will be necessary. Will also be responsible for oversight of drilling, sampling and groundwater treatment systems construction; coordination of field activities and other field engineers; and supervision of Laboratory and contracted engineers, drafters, and technicians. Environmental Management Directorate. (ERAP Eligible - \$1K)

NS2453. HUMAN RESOURCES REPRESENTATIVE (A-4) - Requires a bachelor's degree, or the equivalent, knowledge of Word and Excel, and 3-7 years' experience which should include health insurance benefits administration, extensive knowledge of benefits claims, medical programs, and COBRA requirements. Previous extensive customer service experience is necessary. Knowledge of PeopleSoft highly desirable. Under minimum supervision will manage simultaneous tasks under constantly changing priorities and deadlines and make independent decisions with regard to medical claims and questions. Duties include enrolling employees for benefits, resolving benefits issues, interacting with insurance carriers, administering COBRA, preparing monthly bills for insurance carriers and maintaining computer databases. Human Resources Division. (ERAP eligible - \$1K)

DD2429. SR. ADMINISTRATIVE SERVICES ASSISTANT (A-3) – Responsible for performing a variety of specialized, complex duties within the EM Directorate head project office. May act as primary contact in assigned administrative functions and direct the work of other support personnel. Will work independently and handle non-routine office matters on a daily basis. Requires specialized training or equivalent experience plus significant relevant experience. Must possess the ability to work under pressure, balance priorities and perform multiple tasks. Will have a wide variety of high-level contacts within and outside the Laboratory, including regulatory agencies and the community. A comprehensive knowledge of one or more specific areas of Laboratory operations, policies, and procedures, and demonstrated proficiency in assigned administrative functions is highly desired. Must possess a high level of competence in MS Word, Power Point and Excel. Experience working

Employee Referral Award Program

On September 1, BNL started a new program: the Employee Referral Award Program (ERAP). ERAP rewards employees who refer successful candidates for employment. For certain, specified jobs, BNL employees may recommend applicants to the Human Resources (HR) Division and subsequently receive a monetary reward if the referral is hired.

Procedure

When a new job is generated that the hiring department or division and HR decides is suited to ERAP, The Bulletin will advertise the position as one that will pay a referral award, including the amount of the potential award (see several jobs on this page).

For currently available ERAP positions only, the referring employee must complete an ERAP form, attach it to the candidate's resumé or application, and forward it to HR. The referring employee must be the first to recommend the candidate to HR. If the candidate's name is initially received from, for example, a recruitment firm, or in response to an advertisement, the referring employee will be ineligible.

Eligibility

Those eligible for an award must be current full-time or eligible, part-time BNL employees and must be employed or on an authorized leave of absence at the time the award is given. Management-schedule employees, the specific hiring manager or supervisor for the opening, and exempt-level HR employees are not eligible. Current employees or retirees may not be referred. Former employees may be referred if they have left BNL for at least one year before the referral. The following types of jobs are not eligible for awards: scientific staff, temporary, contract labor, and student positions. Referrals for positions with term restrictions will be eligible if the duration of the term is one year or longer.

Award Levels, Payment

An award of \$1,000 will be made for referral and hire for an exempt-level position; \$500 for referral and hire for a nonexempt position. Payment will be made after the referred candidate has completed 90 days of employment. Funds for the award will come from the recruiting budget of the department or division involved.

For answers to questions regarding ERAP, contact Nancy Sobrito, Ext. 7996, sobrito@bnl.gov; or Terence Buck, Ext. 8715, tbuck@bnl.gov.

in the environmental management field and knowledge of Access, ATS and CCTS a plus. Environmental Management Directorate.

TB 2011. SENIOR DATA SERVICES ASSISTANT (CW-3 – part-time 50%) - Requires an AAS degree or equivalent. Duties include working with the staff of the Chemical Management System (CMS) and Industrial Hygiene Group maintaining records. Will maintain the Material Safety Data Sheets (MSDS) database, input new MSDS, and respond to inquiries for MSDSs. Additional responsibilities are to support the CMS program with database entry, bar-coding of chemical containers, and entering and maintaining the Worker's Compensation Records. Knowledge in Access database entry, structure development, and scanning of text documents is a plus. Must be able to work independently within established procedures, concentrate on detail, and handle non-routine office matters. Work in shipping and chemical use areas are required. Safety & Health Services Division. (ERAP eligible - \$500)

TB2233. BIOLOGY ASSOCIATE III (P-3 - term appointment) Requires an MS in a biochemistry related field or a BS with 3 years' laboratory experience. Must have good communication skills in a group setting, extensive experience in DNA manipulation and protein purification, and the ability to use modern computerized instruments. Major responsibilities include performing experiments to express and purify recombinant proteins. Additional responsibilities will include maintaining lab instruments and managing purchases of materials and supplies. Under the direction of Dax Fu, Biology Department. (ERAP eligible - \$1K)

