



Roger Stoutenburg 01680212

New Catalyst for Safe, Reversible Hydrogen Storage

Room-temperature reaction takes place in water; can switch from hydrogen storage to release by changing pH

Scientists at BNL and their collaborators have developed a new catalyst that reversibly converts hydrogen gas and carbon dioxide to a liquid under very mild conditions. The work — described in a paper published online March 18, 2012, in *Nature Chemistry* — could lead to efficient ways to safely store and transport hydrogen for use as an alternative fuel.

This research was funded by the DOE Office of Science, a Goldhaber Distinguished Fellowship, and by the Japanese Ministry of Economy, Trade, and Industry.

Hydrogen is seen as an attractive fuel because it can be converted to energy efficiently without producing toxic products or greenhouse gases. However, the

Photo above, from left: Scientists Etsuko Fujita, Jonathan Hull, and James Muckerman

storage and transportation of hydrogen remain more problematic than for liquid hydrocarbon fuels. The new work builds on earlier efforts to combine hydrogen with carbon dioxide to produce a liquid formic acid solution that can be transported using the same kind of infrastructure used to transport gasoline and oil.

“This is not the first catalyst capable of carrying out this reaction, but it is the first to work at room temperature, in an aqueous (water) solution, under atmospheric pressure, and capable of running the reaction in forward or reverse directions...”

See *Hydrogen Storage* on p. 2

The Hutches Are Coming

Spring brings anticipation about the arrival of hutches for the initial set of six beamlines at the National Synchrotron Light Source II. The new facility is now under construction at BNL (see aerial photo below, right).

As announced in September 2011, Global Partners in Shielding (GPS) is building 17 complete hutches. NSLS-II will produce extremely intense x-rays, used by scientific instruments to do experiments. To shield people from exposure to x-rays, the instruments must be contained in special enclosures, called hutches.

Installation of the first hutch, for beamline CSX, is expected to start in March. Hutch installation for beamline HXN will begin weeks later, with work for beamline XPD soon after. All seventeen hutches for the first six beamlines are presently scheduled to be installed by the end of calendar year 2012. When fully operational, NSLS-II will have up to 60 main beamlines, many of which will also have branch beamlines. Each main and branch beamline is built for a specific type of scientific research.

GPS, located in Passaic, New Jersey, is building two types of hutches: steel-encapsulated lead enclosures and all-steel en-

losures. As explained by Photon Sciences project engineer Ed Haas, who is the technical point of contact for GPS, lead is a better shield than steel for hard x-rays but the lead must be encapsulated by sheet metal to prevent personnel from contacting the lead. The steel also gives the hutches greater load-carrying capacity. The lead/steel hutches will be used in specific locations around the ring where more shielding is required.

Haas has been to GPS several times to check on their progress. He and quality assurance engineer Joe Zipper also visited Mayco Industries in Birmingham, Alabama, and Brakewell Steel Fabricators in Chester, New York. These companies are two major subcontractors that are making lead and steel details (respectively) from GPS' drawings.

“I'm impressed with the efforts put forth thus far by GPS,” said Haas. “They've hired several people, leased additional facility space, created a painting facility with a monorail system, and built specialized shipping and handling carts. Overall, GPS has been working diligently to accomplish the fabrication and installation work on schedule and according to our needs.” — Mona S. Rowe

Lab Focus on Sustainable Safety, Operational Excellence Is Showing Favorable Results

Labwide efforts on engagement, accountability, and role modeling important for long-term success

By Sam Aronson, Laboratory Director

We've identified an interesting trend at Brookhaven Lab: The more attention we devote to safety and operational excellence, the better we perform. But once our attention is diverted, we experience an increase in injuries and operational incidents. This results in the year-to-year ups and downs in performance that we have seen for a number of years. We clearly need to make sustainable improvements and keep a constant focus on operational performance if we want to minimize the number of us who get hurt at work.

During the last few weeks, the whole Lab has made a significant effort to increase the focus on our safety performance and operational excellence, to determine why our improvements aren't sustainable, and decide how we can fix this problem.

This increased attention had the now-expected result. In February and March, fewer of us were hurt at Brookhaven compared to prior months, and the injuries that have occurred have been generally less serious — and none resulted in a DART case, which is an injury or illness that causes someone to lose time away from work. I thank everyone in the Lab community for your improved focus on safety.

Solving the Sustainability Problem

Now that we've seen positive results, how do we make them last? It bears repeating from my last two Monday Memo messages. As we investigated prior incidents, three common themes emerged — engagement, accountability, and role modeling. These three actions from all of us, at all levels of the organization, can have a profoundly positive and sustainable result.

Engagement: Strong ownership of systems, tools, and processes; providing positive reinforcement; having 1-on-1 conversations; being a good listener and acknowledging concerns
Accountability: Holding ourselves responsible; aiming for excellence in our work; applying rules, requirements, and regulations to all; while disciplinary action is one element, it is a last resort (see related article below).

Role Modeling: Demonstrating a positive attitude; leading by example; reinforcing Lab priorities; rejecting noncompliance

The Lab's leadership team and I are gathering important feedback from you about how we can make our safety and operational improvements sustainable. One recent effort involved the directorate and division stand downs with all employees or targeted staff. This action, along with feedback from the quarterly safety surveys and upcoming supervisor lunches and focus group sessions to be scheduled, will help us identify issues and opportunities and also help us implement best management practices. Input to and ownership of operational excellence by all levels of the organization are vital.

All-Employee Meeting, 4/2

Sustainable safety and operational excellence will be a primary focus of my next All-Employee Meeting, on Monday, April 2, from 1:30 to 3 p.m. in Berkner Hall Auditorium. I'll also talk about the budget, accomplishments from the past few months, and the transition to our next Lab Director. This is an opportunity to tell me what's on your mind and ask questions, so I plan to devote plenty of time to questions and answers.

Accountability, Sustainable Safety, & Operational Excellence

In the aftermath of the scissor lift accident and other operations events at BNL, we've spoken a good deal about personal ownership for meeting performance expectations. Because almost all of these events involve some human performance issue or shortfall, we've described much of this in terms of accountability. We want to share with you our perspective on accountability, which we view as a challenge and opportunity for the entire Laboratory community — both staff and management alike.

Accountability: What is it?

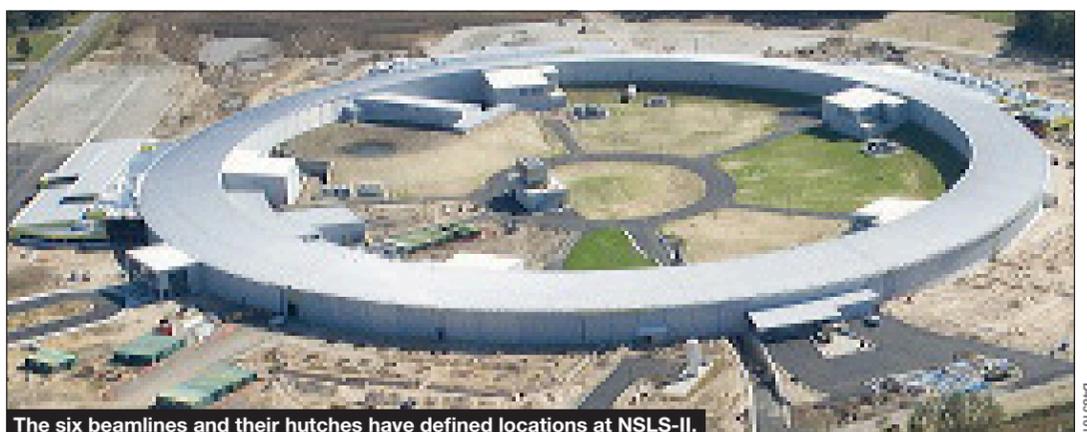
Accountability is doing the right thing at the right time and taking responsibility for your own and others' actions. When put properly into practice, it's a two-way street with the manager and employee committed to realizing the goals of the institution.

Commonly Held Misconceptions

BNL is not unique in sharing some common misconceptions about accountability in the workplace. There's a widespread view that accountability and disciplinary action are the same, the notion that punishment or fear of punishment will “motivate” employees to follow procedures and work safer. This is usually built on the belief that accountability is a one-way proposition that is bestowed or forced upon employees by management. This approach to fostering accountability does not work and, in fact, stymies performance improvement and exacerbates the problem.

True Accountability: Our Solution

Accountability's very definition implies something much deeper than can be achieved through discipline or management proclamation: It needs the employee half of this moral compact. This is where every BNL employee commits to accepting ownership of performance outcomes. It's difficult to foster accountability amidst confusion and instability over the Lab's direction and impossible in an environment steeped in fear. In that type of a setting, people..... See *Accountability* on p. 3



The six beamlines and their hutches have defined locations at NSLS-II.

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CALENDAR OF LABORATORY EVENTS

• The BERA Store in Berkner Hall is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347, or Christine Carter, Ext. 2873.

— REGULARLY —

Weekdays: Free English for Speakers Of Other Languages Classes

Beginner, Intermed., Adv. classes, various times. All welcome. Learn English, make friends. See <http://www.bnl.gov/esol/schedule.asp> for schedule. Jen Lynch, Ext. 4894.

Mondays: Yogalates

Noon–1 p.m. at the Rec Hall (Bldg. 317). Registration required, Ext. 2873.

Mon. & Thurs.: Kardio Kickboxing

\$5 per class. 12:15–1:15 p.m. in the gym (Bldg. 461). \$5 per class. Ext. 2873.

Mon., Tues., Thurs., & Fri.: Tai Chi

Noon–1 p.m., B'haven Cntr (Bldg. 30), N. Rm. Adam Rusek, Ext. 5830, rusek@bnl.gov.

Tuesdays: Hospitality Welcome Coffee

10:30 a.m.–noon at the Rec Hall (Bldg. 317). Meet over coffee. Children welcome. Ext. 2873.

Tuesdays: Pilates

Noon–1 p.m. at the Rec Hall (Bldg. 317). Registration required, Ext. 2873.

Tuesdays & Wednesdays: Zumba

Tuesdays: Noon–1 p.m., in gym (Bldg. 461). Wednesdays: 5:15–6:15 p.m., at the Rec Hall (Bldg. 317). Registration required, Ext. 2873.

Tuesdays: Toastmasters

Two monthly meetings: 1st & 3rd Tuesdays, 5:30 p.m., Bldg. 463, Room 160. Guests and visitors welcome. www.bnl.gov/bera/activities/toastmasters/.

Tuesdays & Thursdays: Aerobic Fitness

5:15–6:30 p.m. in the Rec. Hall (Bldg. 317). \$5 per class, or 10 classes for \$40. Kathy Schoenig, Ext. 2818.

Tuesday & Thursday: Aqua Aerobics

5:30–6:30 p.m., Pool (Bldg. 478). Registration required, Ext. 2873.

Wednesdays: Ballroom Dance

5:30, 6:30, 7:30 p.m., Brookhaven Center (Bldg. 30). Vinita Ghosh, Ext. 6226.

Wednesdays: Play Group

10 a.m.–noon at Rec Hall (Bldg. 317). Parents meet while infants/toddlers play. For events, see <http://www.meetup.com/BNL-Playgroup/>, or call Ext. 2873.

Wednesdays: Yoga

Noon–1 p.m., B'haven Center (Bldg. 30). Free. Ila Campbell, Ext. 2206, ila@bnl.gov.

1st Wednesday of month: LabVIEW

1:30–3 p.m., Bldg. 515, 2nd fl. Seminar Rm. Free technical assistance from LabVIEW consultants. Ext. 5304, or Terry Stratoudakis, (347) 228-7379.

Thursdays: BNL Cycletrons Club

5 p.m., Brookhaven Center. First Thurs. of month. Andy Mingino, Ext. 5786.

Thursdays: Reiki Healing Class

Noon–1 p.m., Call for location. Nicole Bernholz, Ext. 2027.

Thursdays: Postdoc Social Night

6:30 p.m. ASAP Lounge (Bldg. 462). www.bnl.gov/asap.

Thursday: Judo Class

7:30 p.m. Gym (Bldg. 461). Tom Baldwin, Ext. 4556.

Fridays: Family Swim Night

5–8 p.m. Pool (Bldg. 478). \$5/family. Ext. 2873.



Photos by Roger Stoutenburgh

BNL VIPs: Service Anniversaries Celebrated

Lab Director Sam Aronson welcomed the BNL VIPs who have provided long-term service to the Lab at the annual Service Anniversary Celebration held in Berkner Hall lobby on January 25. The 248 VIPs who had been invited — including employees who were celebrating the 25th, 30th, 35th, 40th, or greater anniversaries of service — were not all able to attend, but a goodly number enjoyed meeting and chatting with old friends and acquaintances over a hot buffet and refreshments. Aronson warmly expressed his appreciation for the loyalty and varied expertise that these durable members of the Lab workforce had committed to Brookhaven, and read out the names of the superstars who had reached 45 or more years of service in 2011. These “VIPs Extraordinary” were:

52nd anniversary: Nicolas Samios, Director’s Office

51st anniversary: Arnold Aronson, Nuclear Science & Technology Department (NST); Joseph (Woody) Glenn III, Collider-Accelerator Department (C-AD); Harald Hahn, C-AD; and Robert Palmer, Physics Department,

50th anniversary: Katherine Conkling, Radiological Control Division; and John Dabrowski, Photon Sciences Directorate

49th anniversary: Russell Dietz, Environmental Sciences Department (ESD); Richard Hogue of Physics, and Bill Sampson of the Superconducting Magnet Division

48th anniversary: Keith Jones of ESD and Robert Scheetz of Physics
47th anniversary: Robert Lockey, C-AD; Veljko Radeka, Instrumentation Division; Mark Sakitt, Facilities & Operations Directorate; F. William Studier, Biology Department; and Peter Thieberger, C-AD

46th anniversary: Kenneth Asselta, Physics; Charles Carlson, C-AD; Ruth Merker, Information Technology Division (ITD); Wayne Rasmussen, Photon Sciences; and Raymond Zaharatos, C-AD

45th anniversary: Robert Barone, Business Operations Division; Richard Horowitz, ITD; Lillian Kouchinsky, Director’s Office; and Hans Ludewig, NST

In addition, six VIP BNLers had celebrated 40 years of service, 44 more had 35 years to remember, another 35 had been at the Lab for 30 years, and 45 comparative newcomers could look back on their first 25 years at BNL.

To see many photos of the stars at the celebration, go to www.bnl.gov/today/story.asp?ITEM_NO=2856.

Hydrogen Storage from p. 1

...depending on the acidity of the solution,” said BNL chemist Etsuko Fujita, who oversaw the Lab’s contributions to this research.

“When the release of hydrogen is desired for use in fuel cells or other applications, one can simply flip the ‘pH switch’ on the catalyst to run the reaction in reverse,” said BNL chemist James Muckerman, a co-author on the study. He noted that the liquid formic acid might also be used directly in a formic-acid fuel cell.

Collaborator Yuichiro Himeda of the National Institute of Advanced Industrial Science & Technology (AIST) of Japan had been making substantial progress toward the goal of developing this type of catalyst for a number of years. He used iridium metal complexes containing aromatic diimine ligands (groups of atoms bound to the metal) with pendent, peripheral hydroxyl (OH) groups that can serve as acidic sites that release protons to become pendent bases.

Himeda recently entered into

collaboration — via the U.S.-Japan Collaboration on Clean Energy Technology program — with Fujita, Muckerman, and Jonathan Hull, a BNL Goldhaber Fellow working on Fujita’s team. The BNL group carried out coordinated experimental and theoretical studies to understand the sequence of chemical steps by which these catalysts converted H₂ and CO₂ into formic acid. Their goal was to design new catalysts with improved performance.

The BNL team’s key idea came from nature: “We were inspired by the way hydrogen bonds and bases relay protons in the active sites of some enzymes,” Hull said.

“Good catalysts efficiently move protons and electrons around, taking them from some molecules and placing them onto others to produce the desired product,” he explained. “Nature has many ways of doing this. Under the right conditions, the hydroxyl groups on the diimine ligand of the catalyst help hydrogen react with carbon dioxide, which is difficult to do. We thought we

“This is a wonderful example of how fundamental research can lead to the understanding and control of factors that contribute to the solution of technologically important problems.”

— James Muckerman

could improve the reactivity by placing the pendent bases near the metal centers, rather than in peripheral positions.”

Once the BNL team understood how Himeda’s catalysts worked, Hull realized that a novel ligand that had been synthesized by collaborators Brian Hashiguchi and Roy Periana of The Scripps Research Institute for an entirely different purpose would possibly be ideal for accomplishing this goal. The BNL group designed a new iridium metal catalyst incorporating this new ligand.

Collaborator David Szalda of Baruch College, City University of New York, determined the atomic level crystal structure of the new catalyst to “see” how the

arrangement of its atoms might explain its function.

Tests of the new catalyst revealed superior catalytic performance for storing and releasing H₂ under very mild reaction conditions. For the reaction combining CO₂ with H₂, the scientists observed high turnovers at room temperature and ambient pressure; for the catalytic decomposition of formic acid to release hydrogen, the catalytic rate was faster than in any previous report.

“We were able to convert a 1:1 mixture of H₂ and CO₂ to formate (the deprotonated form of formic acid) at room temperature, successfully regenerate H₂, and then repeat the cycle. It’s a design principle we are very fortunate to

have found,” said Hull.

The regenerated high-pressure gas mixture (hydrogen and carbon dioxide) is quite pure; importantly, no carbon monoxide (CO) — an impurity that can ‘poison’ fuel cells and thus reduce their lifetime — was detected. Therefore, this method of storing and regenerating hydrogen might have a use in hydrogen fuel cells.

Further efforts to optimize the hydrogen storage process are ongoing using several catalysts with the same design principle.

“This is a wonderful example of how fundamental research can lead to the understanding and control of factors that contribute to the solution of technologically important problems,” Muckerman concluded.

DOE’s Office of Science is the single largest supporter of basic research in the physical sciences in the United States, and is working to address some of the most pressing challenges of our time. See also science.energy.gov.

— Karen McNulty Walsh

Accountability *from p. 1*

...will wait to be told what to do or won't question the *status quo* and that's anything but accountability.

Accountability only starts when you see, understand, and acknowledge the Lab's directions. While there are many theories of organizational behavior and accountability in the workplace, the Lab Values that we created a little more than a year ago do a good job of capturing the most essential of these and describing them in our own way. And we're going to build on this as we strive to make the fundamental tenets of true accountability a way of life at BNL. Just a few of these include:

- Our employees need to understand the Lab's direction and performance expectations — This can only happen if Laboratory managers and supervisors demonstrate them through their actions all of the time.
- We tend to take own-

ership when we've been involved or had the opportunity in charting our direction — Listening to Lab employees and demonstrating this through our actions needs to become our norm.

- Manager and supervisor engagement is essential — Lab leaders need to know about our barriers to success and be timely and visible in facilitating their removal.

- We can and need to do much more to recognize and celebrate successes. There are a great many of these that happen every day, and behind each, there are heroes among us, stepping up to make a difference.

You could write a long list of attributes and behaviors before you ever even get to discipline. Yes, that too is part of the accountability equation. However, if we're to be successful, it will need to be the smallest part. And when we use this tool, we need to do so fairly and with consistency.

Dark Matter, Dark Energy, The Large Synoptic Survey Telescope, and Its Camera

By Paul O'Connor, Instrumentation Division

Last week, I joined with nearly 70 collaborators for a workshop at Brookhaven Lab to continue planning and designing the world's biggest-ever digital camera for the future Large Synoptic Survey Telescope (LSST).

Some of the most perplexing observations in the cosmos include determining the abundance of unseen "dark" matter and a recent discovery that the Universe is expanding at an accelerating rate because of a force called "dark energy" that counteracts all matter's mutual gravitational attraction. These observations, among others, have led scientists to determine that dark energy and dark matter dominate dynamics of the universe, yet neither can be explained within the framework of existing physical theory.

The LSST is a public-private partnership with collaborators from institutions including Brookhaven and other national laboratories, foundations, private companies, and universities. The Department of Energy's Office of Science and the National Science Foundation support experimental research at the cosmic frontier, because physicists use this frontier as a laboratory to explore new fundamental phenomena.

The heart of the LSST project is a telescope eight meters in diameter connected to the LSSTCam — a 3,200-megapixel digital camera — for a next-generation survey of the sky. Today, professional photographers' cameras contain up to about 30 megapixels, so the LSSTCam will be more than 100 times more powerful.

If all goes according to



Rendering of the LSST

Learn about Brookhaven's role in the LSST collaboration from the Lab's newly launched website:

www.bnl.gov/LSST/

plan, these tools will begin operations by the end of the decade atop the 2,700-meter peak Cerro Pachon in northern Chile. The LSST will take rapid-fire surveys of the entire visible sky twice a week for 10 years to create a movie-like map of the cosmos with unprecedented detail to explore frontiers of space, dark matter, and dark energy, as well as a wide variety of astrophysical investigations.

The LSSTCam working group is developing an entirely new generation of image sensor technologies and electronics to accomplish this task. Much of what we discussed during last week's workshop focused on interfaces between the subsystems and advancing the design to the next stage.

The next big meeting for LSST collaborators will be an all-hands meeting this August in Tucson, Arizona. I have no doubt that it will be hot, but I will be there and I look forward to it.



Joseph Rubino CNR-4-01

Dr. Mow Shiah Lin Scholarship Call for applications by BNL's Asian Pacific American Association

Applications are now being accepted for the eighth Dr. Mow Shiah Lin Scholarship sponsored by the Asian Pacific American Association (APAA) at BNL. The annual \$1,000 scholarship was initiated to honor the late Brookhaven Lab scientist for whom it is named.

In memory of Lin's distinguished research, achievements, and inventions, the scholarship is granted each year to an Asian immigrant with a student visa who is matriculating toward a doctorate in environmental & energy technology, biology, or chemistry at an accredited institution of higher education on Long Island, including Brooklyn and Queens.

Brookhaven Lab scientists and members of APAA choose the winner. The selection criteria include academic records, references, career goals, and other factors deemed appropriate by the selection committee. The scholarship is granted independent of financial need. Applications and more information can be obtained by calling Brookhaven Lab's Diversity Office at 631 344-6253, or by sending an e-mail to sge@bnl.gov,

or by visiting the APAA website, www.bnl.gov/bera/activities/APAA/default.asp. The application deadline is May 31, 2012.

Mow Shiah Lin began his career at BNL in 1975 as a postdoctoral fellow, and he advanced to co-lead a research team working with an environmental remediation company to use selected bacteria to convert toxic oil wastes, such as used motor oils, into useful products.

In 2001, Lin shared an R&D 100 Award, given by *R&D Magazine* to honor the top 100 technological achievements of the year, for a technology to recover silica from geothermal brine. In 2003, he was posthumously nominated for the Lemelson-MIT Lifetime Achievement Award, which recognizes outstanding individuals whose pioneering spirit and inventiveness throughout their careers have improved society and inspired others.

Lin died suddenly due to a brain aneurysm at the height of his career in 2003, and his fellow employees, friends, and family contributed funds to establish the scholarship.

Book the Dates: Book Fair, 4/3, 4/4

BERA will sponsor a Book Fair on Tuesday and Wednesday, April 3 and 4, in Berkner Hall lobby, from 10 a.m. to 2 p.m. Choose among some best-selling authors, children's books and games, and selected gifts, all at discounted prices.

TIAA-CREF One-on-One Retirement Counseling

A TIAA-CREF consultant will visit BNL on April 3, April 18, May 9, and May 29 to answer employees' questions about their financial matters. The consultant will help you: understand the importance of protecting your assets against inflation, find the right allocation mix, learn about TIAA-CREF retirement income flexibility, and compare life-time income vs. cash withdrawal options.

For an appointment, call 1-800-732-8353 or go on-line at www.tiaa-cref.org/bnl and select "set up a meeting."

Get Fit and Track Your Progress With 'Spring Into Motion'

By Michael Thorn, Manager, Health Promotion Program

Spring is here and so it's time to enjoy the great outdoors and get moving! The BNL community enjoys access to many healthy activities and opportunities — baseball, running, tennis, and more. This spring season, the Lab's Health Promotion Program introduces another opportunity for workplace health and fitness.

"Spring Into Motion" started on March 26. This eight-week innovative program that encourages healthy activity is open to all employees of Brookhaven Science Associates and the DOE Brookhaven Site Office.

You access the program online from any work or non-work computer. It provides your activity statistics, fitness articles, and recipes and menus for healthy eating. You can even form teams with your Lab colleagues to select goals and track progress together — to make it a One Lab, One Team fitness journey.

Choose the physical activities you like. Your goal is to accumulate 40 or more "springers" — online icons that help you track your activity during the program. You pick a challenging target and then develop exercise habits to help you reach your goal. The program encourages consistency for beginners and offers challenges for even the most fit among us.

You'll want to sign up quickly, since space is limited to the first 200 registrants. All participants get a free pedometer upon registration. To learn more about the program and register, visit the Lab's Spring Into Motion website, springintomotiontoday.com.

CALENDAR

Friday, March 30

BERA Board Voting Ends 2 p.m.

See the BERA homepage, <http://www.bnl.gov/bera/> for details.

— WEEK OF 4/2 —

Monday, 4/2

*All-Employee Meeting

1:30-3 p.m. Berkner Hall. Lab Director Sam Aronson will discuss safety, operational excellence, budget, accomplishments, more. See p.1.

Tuesday, 4/3

*Book Fair

10 a.m.-2 p.m. Berkner Hall lobby. See notice below, left.

Costco Membership Drive

11 a.m.-2 p.m. Berkner Hall lobby. Representatives from Costco will discuss membership advantages.

Wednesday, 4/4

*Book Fair

10 a.m.-2 p.m. Berkner Hall lobby. See notice below, left.

Sam's Club Membership Drive

11 a.m.-2 p.m. Berkner Hall lobby. Representatives from Sam's will discuss membership advantages.

*Talk on Retirement Planning

Noon. Berkner Hall, Room B. Craig Ferrantino of the Foundation for Personal Financial Education will lead a talk for employees, titled "Passport to Retirement — First Class or Coach." To attend, RSVP by contacting Barbara Soeyadi, Ext. 7516, or see <https://intranet.bnl.gov/eventreg>.

Thursday, 4/5

BJ's Membership Drive

11 a.m.-2 p.m. Berkner Hall lobby. Representatives from BJ's will discuss membership advantages.

— WEEK OF 4/9 —

Wednesday, 4/11

Webinar on Substance Abuse

1 p.m. A "Seminar on the Web" Webinar on "Substance Use and Young Adults" will be hosted online by Magellan Health Services, sponsored by the Employee Assistance Program. To obtain the link, email nlosimmo@bnl.gov.

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. Enter 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.

Arrivals & Departures

— Arrivals —

Deokie Himaya..... Medical

— Departures —

Rubi Gul.....NNS

Xianbo Shi..... Photon Scis

Kwinten Van Weverberg... Env Scis

More Sushi Lessons

Want to wow your guests and family with a beautiful presentation of healthy food? Try sushi lessons.

Those who attended the class on basic Sushi preparation held by Sushi Chef David on March 8 had fun and learned a lot. Many people have asked for more classes, and if enough interest is shown, this can be arranged. The cost of \$25 per person includes a one-hour course and fresh sushi dinner, as well as a sushi mat so you can practice your new skills.

If you are interested in joining another class, please RSVP to the BNL Conferences Office, Ext. 3545, or rcomas@bnl.gov or dbulcock@bnl.gov.



At the table above is one of the many groups of old friends and former colleagues who met and chatted at last year's retiree luncheon. Join in, come with friends or solo for this summer's get-together!

BREA Annual Luncheon — June 7

The annual BNL retiree luncheon will be on Thursday, June 7, when the Brookhaven Retired Employees Association (BREA) will celebrate its long-awaited annual social get-together. The Bellport Country Club will host BREA members and guests for an afternoon of good food, good company, and good fun — a perfect occasion to reunite with old friends and former colleagues.

The menu will feature appetizers, followed by a four-course meal with starter, salad, choice of entrée, dessert, coffee or tea, and unlimited wine, beer, and soda, all for \$40. The luncheon is open to BREA members and their spouse or guest(s). If you no longer live on Long Island, this is a great reason to come for a visit and see former associates.

To make a reservation, send a note to BREA, BNL, Bldg. 421, Upton, NY 11973-5000, with a check made out to BREA for \$40 per person. Please include your name and the name of your spouse or guest(s), and your address, telephone number, and e-mail address (if applicable). Also, note any special requests, such as help needed with transportation. For more information, please contact Ken Mohring at 631-929-6744 or kenwadingriver@gmail.com.

Reminder From the Benefits Office

Deadline to Submit 2011 Claims For Flexible Spending Account, 3/31

March 31 is the last day to submit claims for 2011 reimbursement accounts. Instructions for how to submit claims to PayFlex, the company that manages employees' flexible spending accounts, are available online: www.bnl.gov/hr/Benefits/ReimbursementAccounts.asp.

Great Trips Ahead Through BERA

Buy (nonrefundable) tickets from the BERA Store in Berkner Hall, weekdays, 9 a.m.-3 p.m. For more information on BERA, including summer camp and swim lessons for children, see www.bnl.gov/bera. **Saturday, April 7.** NY International Auto Show at Javits Center. \$20/person includes coach, entry, driver tip. Depart BNL 9 a.m. and depart from Javits at 4:30 p.m. www.autoshowny.com.

Saturday, April 14. Foods of NY Tours leads three-hour walking tour of central Greenwich Village & SoHo. \$65/person includes coach transportation, guides, food tastings, tips. About two hours remain for shopping, browsing on your own. Recommended for children 10 and over, and not for those with food restrictions. Depart BNL 9:30 a.m. and leave NYC at 5 p.m.

Saturday, April 21. Two-hour tour of Historic Grand Central Terminal at Park Ave. and 42nd St. \$25/person includes coach transportation, guides, tip. After the tour, check out 68 shops, 35 places to eat! About four hours remain for shopping, lunch, browsing. Depart BNL at 8 a.m., depart NYC at 4 p.m.

Saturday, May 5. Midtown Manhattan Do-As-You-Please bus trip, \$15/person. Children under two years old are free if they sit on your lap. Depart BNL 10 a.m., depart NYC, 7 p.m.

Saturday, May 5. Atlantic City, NJ. Casino and incentive to be announced. \$30/person of 21 and older only, photo ID required at casino. Depart 9 a.m., leave casino at 8 p.m.

Friday, June 1. Trip to Englishtown, NJ, to watch the racing at NHRA Toyota Supersnationals. \$55/person includes reserved seat in Section 3 (starting line/pit side), coach, driver tip. Depart 11 a.m., depart race 9 p.m. BNLers must use an approved vacation day. Not suggested for young children.



Coming Soon...

Classified Advertisements

Current job openings and a statement of job placement policy at BNL are available on the homepage at www.bnl.gov/HR/careers/. To apply for a position, go to www.bnl.gov and select "Search Job List." For more information, call Ext. 2882.

Motor Vehicles & Supplies

11 DODGE NITRO HEAT 4.0 — 24.8K mi. excel, a/t, p/l, p/s, p/w, abs, cd, c/c, full airbgs, alarm, alloy wheels, fog lights, s/m/roof, tinted gl. \$21,500 neg. 790-1442.
07 CHRYSLER CROSSFIRE LTD ROADSTER - Convertible, 51K mi. 100,000 b-to-bmprr warr until 7/20/14, new tires, silver w/black top, excel cond. 827-0116.
04 JEEP GRAND CHEROKEE LAREDO — 128K mi. gray metallic, 4wd, 4.0L 6cyl, a/t, p/w, p/l, c/c, 19mpg hwy, well maint, new tires, alarm, pwr drvr st. \$7,500 neg. 591-1611.
03 TOYOTA COROLLA LE — 20K mi. a/t, a/c, 4cyl, p/s, p/w, keys entr, single am/fm/cd, mtallic blk, well maint, excel cond, freebies incl. \$8,500 neg. 418-6922.
03 HYUNDAI SANTA FE — 170K mi. LX, runs v.well, 2.7 L V6, awd 1 owner 4spd, a/t w/o dr + man shift, a/t, s/roof, a/c, fog lamps, new tires. \$4,200. Ext. 4202, 516-449-8924.
03 CHEVY CORVETTE — 20.9K mi. a/t, new Michelin run flat tires, R5 rating! 50th anniv, convertible, heads-up display, electr blue w/blk rag-top. \$24,500 neg. Ciro, Ext. 3687.
01 FORD ESCAPE — 103K mi. mint V6 4wd, clean in/out, new starter/exhaust/tune-up/belts. \$4,500. Charlie, 681-9800.
00 HARLEY-DAVIDSON HERITAGE SOFTAIL — 14K mi. pearl/white/extras, mint cond. \$9,700. bill, 312-2535.
00 TOYOTA SIENNA — 182K mi. 7 pass, air bags, abs, a/c, V6, runs well. \$3,300. 334-1594.
99 FORD ESCORT SE — 120K mi. 4-cyl, a/t, a/c, p/w, p/l, p/s, dual air bags, ABS, smart key, new timing belt, Lu, eric20070422@gmail.com. \$2,500 neg. Ext. 2458.
TIRES — 2, Riken Raptor ZR, 225/40R18, 92w, #82151, pics avail, \$100. Caitlin, Ext. 7432 or cscholl@bnl.gov.
TRUCK TIRES — 4 Continental Contitrac LT 275/70R18, plenty of life left, \$100/obo. 404-8109.
WIND DEFLECTOR for HYUNDAI — new s/roof deflector for 2010 Hyundai Sonata, in orig pkg, never mounted, \$30. 834-0215.

Boats

25' SEARAY SUNDANCER — '98, excel, 5.0 Bravo III MerCruiser Eng, new '03, Bimini Top/ Camper Canvas/Cockpit Cover, pic. \$19,500 neg. 495-1184, maescam@optonline.net.
21' SEASWEARL STIPER 21 DOUL CON. — 2000 w/150 johnson doul wheel ventura trailer, all in great shape, ready to go in water ask. \$9,200 neg. Russell, Ext. 3745.
20' CENTURY #2001SV — 08 Century center console, Model #2001SV 150 4-stroke Yamaha outbird motor w/118 hrs, Four-star trailer incl, extras. \$24,900 neg. 255-7443.
19' 2005 SEARAY BOW RIDER SPORT — 3.0L TKS MerCruiser, 135 hp, V/O, 33.8hrs, cust. Trailer, Bimini Top, Bow, Mooring Cvr, full gauges, carpeting, \$10,995 neg. 738-5345.

Furnishings & Appliances

ANTIQUES — Primitive furniture, quilts, tinware, yellowware, wood bowls, tin lamps, old dress, kitchen items, trunks, etc. 235-0656.
BOOKCASE — 5-shelf, blk oak finish, like new, 71x30x12, easy assemble packaged, pic up onsite, \$10. alel.mlist@gmail.com.
DECK FURNITURE — glass top rectangle decorative metal table w/matching 6 chrs 2 rotating/4 stationary, orig/\$1250 ask/\$400. Sue, Ext. 2483.
DINING TABLE & CD PLAYER — Must sell, dining table/\$70 CD player for kids/\$20/obo. Pics at: <http://tinyurl.com/tz-table>. Tomer, 398-8468 or zidkit@bnl.gov.
GLIDER ROCKER — white w/green cushions, excel, \$40. Ext. 7918, difilip@bnl.gov.
KEURIG COFFEE MAKER — B31 MINI PLUS, like new cond, brews in under 2 mins, w/instr, 60 Keurig cups/holder, new \$160, ask/\$85. Ext. 5669, harringt@bnl.gov.
LIVING RM FURNITURE — pine, Entertainment Center hides TV w/2 mtching side bkcase/storage, sofa/coffee & side tbls, pic. Mary, Ext. 3328, beach_gur10@yahoo.com.
MATTRESS — Q/size for sofa hide-a-bed, 72"x60"x5.5", brand new, still in plastic, \$205. Bill, Ext. 2378, 793-9111.
PROJECTION TV — 64", Samsung PCL5415R, remove & owner instructns; works well; must pic-up in Ridge, \$500/obo. 404-8109.
QUEEN SIZE BED — mattress + spring box, new mattress cover, still under warr, v/gd/cond \$400. 344-7808 or jpereiro@bnl.gov.
SHOWER KIT — Kohler-Sterling Accord 48x36x77H, white; new, still in carton w/v/ slight dent @ top of one wall, ask/\$300. Ext. 2198, 909-7080, lysik@bnl.gov.
SOFA-BED — wooden frame, gd cond, sofa changes into q/size bed, \$150. Juan, 344-7808 or jpereiro@bnl.gov.

Audio, Video & Computers

ACER NETBOOK — Acer Aspire One 532h-2742 Netbook w/Intel N450 Atom CPU, upgraded w/2GB RAM, WinX, excel cond, \$200. Ext. 2635, misawa@bnl.gov.
ADOBE PHOTOSHOP CS5 — Windows version, sealed in the factory box, never opened, orig/\$699, ask/\$450. 504-1989.



Roger Stoutenburgh DE230002

HP DESK JET 9800 PRINTER — wide format, used, excel cond, \$75. 929-3388.
HP OFFICE JET 7500 PRINTER — wide format; 4-in-1: print, copy, scan, fax, brand new, still in orig box, \$165. Mary, 929-3388 or phraner@bnl.gov.
SAMSUNG 20 — SyncMaster 2053BW 20" LCD Monitor/\$100, <http://tinyurl.com/6lqyall>. Ext. 2122, jmontalto@bnl.gov.
SPEAKER CABINET — loaded w/two 10" Celestion G10 Vintage 60W spkrs/\$195, MINT cond, call for details/pics. 264-2421.
TURBOTAX 2011 — Home & Business ed, Federal & NY returns, works w/Windows & MAC, \$35/obo. Tony, Ext. 8450, tony@bnl.gov.
XION COMPUTER CASE — great for PC gaming, cool, case only, similar to <http://tinyurl.com/7khjh5>, ask/\$30. Jesse, Ext. 2122.

Sports, Hobbies & Pets

2003 KODIAK SCAMPER CAMPER — 23' camper, slide out, stove, oven, frig/frzr, microwave, b/r/shower, awning, excel cond, sleeps 6, \$8500. Mark, Ext. 7978.
AQUARIUM/IRON STAND — 10 gal w/blck stand, screen lid, for sm critters/hermit crabs/reptiles/amphibs w/wood/rock decors. if wrnted, ask/\$15. sbrnson@bnl.gov.
CAMERA BATTERIES — spare rechargeable for Canon S95/\$10/ea or 2/\$15, batt# BP-6L. Sue, Ext. 2483, susiespix@aol.com.
COLLECTIBLES — "JUST THE RIGHT SHOE" by Raine, Blush #25020; Rising Star #25043 w/cert, both retired styles, like new, in box, \$8/ea. 775-6243.
FENDER VIBRO CHAMP GUITAR AMP — 5w, Class A tube, 8" spkr, 16 amp models, 16 DSP effects, like new, <http://tinyurl.com/797ohnr>, \$100. Jesse, Ext. 2122.
GOLF CLUBS — Touredge pitching wedge thru 7 iron...graphite shafts/\$50, other clubs also avail. Ken, Ext. 3124.
PROFORM TREADMILL — XP 550S model, 0-10mph, 0-10 incline, iFit system, heart rate monitor, built in fan, 18x55" running surface, excel shape, \$300. shrey@bnl.gov.
WEIDER PRO 310 — weight bench w/ adjustable incline, ask/\$40; Everlast wall mount punching bag, ask/\$20. Wayne, Ext. 2284 or rambo@bnl.gov.
WET SUIT — size sm-med, barely used, never in saltwater, 7mm, incl 2-pc suit, mask, boots, fins, photo avail, \$100. hughes@bnl.gov.

Tools, House & Garden

GREENLEE PIPE BENDER 882CB — for 1.25-1.5-2" pipe, new, never used, in steel box, sells for \$4,500 ask/\$3,000/obo. Russell, Ext. 3745.
SNOWBLOWER — Craftsman, 9HP 28" path, two stage, elect/pull start, headlight, 6 spd fwd/2 rev, p/s, 3-4 yrs old, orig/\$1500, ask/\$600. Frank, 775-6636.
USED FIXED SKYLIGHTS — 2, Dome, gd shape, \$50/ea or \$80/both. 404-8109.
YARD TRACTOR/MOWER — Sears Craftsman, frt axle needs/new batt, flat tires, gd shape otherwise, gd Briggs & Stratton eng, ask/\$300. sbrnson@bnl.gov.

Community Involvement

BREAKFAST WITH EASTER BUNNY — 4/1, 8a-12p \$8/pp, under 3 free, pancakes/sausage/bacon/coffee/juice, pic w/the Easter bunny incld, 780 Horseblock Rd Farmingville FD Eng. Ext. 7627.
EASTER DUCK EGG HUNT — Easter Egg Hunt at The Big Duck. Games, prizes, free refreshments. Ages: 2-5/6-9. 10:30AM Saturday, 3/31. Info: 727-5342, franniegirl23@yahoo.com. Ext. 8962.

Happenings

DINNER SHOW OUTING — to see Jonah at Sight n Sound Theatre in PA on Sat., Oct. 13, 2012. Deposits by May 30, Details: Kim, Ext. 2896, 399-3098 or khayes@bnl.gov.
NORTHWINDS CONCERT APRIL 1 — 3pm, Symphonic Band, guest artist Barbara Hill, Principal Horn Hartford Symphony Orchestra, N. Shore HS Theater, Glen Head, NY. Free Admissions. Ext. 2485.
SHEN YUN PERFORMING ARTS — Reviving 5,000 Years of Civilization April 18-22, Lincoln Center, World's premier classical Chinese dance & music shenyunperformingarts.org. George, georgewei@bnl.gov.
SPRING FLING, APRIL 20 — Join us @ The Flaming Hearth, Farmingville, 6pm-Until, DJ Alex Petway, appetizers, 50/50 raffle, cash Bar, \$10/advance, \$15/door. Charles Gardner, 631-219-2884. chuckg@bnl.gov.

Free

SHEN YUN BOOKLET — 2012 Shen Yun Performing Arts Booklet, the classical Chinese dance booklet. georgewei@bnl.gov.

Miscellaneous

FIREWOOD — approx 4 split cords/\$400, up-pic-up. Daniel, Ext. 7658, aheard@bnl.gov.
GLOW /DARK AIR HOCKEY TABLE — \$80. dmcarthur@bnl.gov.
GRACO — baby stroller and matching car seat, pink/beige, excel cond/\$100. Ext. 7007 or luhrs@bnl.gov.
HIGH CHAIR — Chico, v/gd cond, ask/\$60. Scott, sbrnson@bnl.gov.
INFANT CAR SEAT, STROLLER — <http://tinyurl.com/dg22co> Chicco Keyfit 30-MIRO w/ Snap N Go stroller, V. lightweight, lightly used, ask/\$100/both/obo, pic avail. Yue, Ext. 3694.
STEP2 SANDBOX — plastic, sandstone color, boulder texter, lid w/ sun design, 51"x37"x15.5", never filled w/sand, ask/\$30. Scott, sbrnson@bnl.gov.
TOYS — Smartcycle w/2 games/\$30, 12" Toy Story Bicycle/\$15, Parachute/\$10, Handy Manny Workbench & Tools/\$40, Deal or No Deal Board Game/\$5. Ext. 7918.

Wanted

APPLE DISPLAY ADAPTER — ADC to DVI video display adapter to connect an old Studio display to my laptop. Peter, Ext. 2824 or takacs@bnl.gov.
GROCERY STORE GIFT CARDS — Seeking gift cards (\$5, \$10, \$25, etc) from Stop & Shop and/or King Kullen for families/guests at Thee Island INN for Easter. Greatly appreciated! Send to B. Royce at Bldg 460. Barbara, royce@bnl.gov.
LAWNMOWER/BICYCLE REPAIRS — ride on mower repair for season, willing to buy parts and pay for labor, Also, children bike tuneups and repair needed. 252-3356.
MATTRESS — full or queen, thanks v/ much! Rick, Ext. 3005 or rbuono@bnl.gov.
REFRIGERATOR & GAS RANGE — to buy, clean, in gd working cond. xhyu@bnl.gov.

Lost & Found

FOUND — Lia Sophia hoop earring in 400 Lobby and a zip drive, pls describe. Ext. 5090 or ccarter@bnl.gov.

For Rent

SPRING HILL, FL — priv ranch on Gulf, 70m Orlando, 45m Tampa, fly Islip direct, near beach/tennis/park, SW architecture, 3/bdrm, 2/bath, d/r, f/p, 2gar, ipp in lanai, fruit trees, see review.oktane.net/HouseTour. \$450/wk. OR SALE: \$125,000 neg. 344-5537.
LAKE GEORGE, NY — Lakefront cottage, fully furnd, 3 bdrm, 1 bath, 2 decks, gas grill, screend prch, outdr f/p, dock, canoe, Huletts Landing, avail, 8/11-9/1. \$1,850/wk. 518-747-7821.
MASTIC BEACH — 4 bdrm ranch, newly renov, full bath, quiet st. \$1,500/mo. Daniel, Ext. 7658, 495-2596 or aheard@bnl.gov.
MIDDLE ISLAND — sublet 2/bdrm upstairs apt, l/r, club hse worth \$100/free, 1/mo free rent, incl a/c, water/gas, pay elect, furn optional. \$1,250/mo. 418-6922.
MIDDLE ISLAND — "NEW" bsmt apt, 4 mi to Lab, 1 bdrm, kitch/lr, cac, priv ent, off-st prkg, no smkg/pets, 1/mo sec req'd, incl all util, phone, cable, use of w/d. \$925/mo. 205-9252.
MIDDLE ISLAND — 1 bdrm apt, balcony, 960SF, 10 min to Lab, new util, facing south, security gate, near library/UPS/Walmart, no pets. \$1,100/mo. 516-637-1088.
RIVERHEAD — 3bdrm, 2 full ba, Ranch, d/w, l/r, d/r, w/d & gar, new wndws, furnace; quiet, l/p ty on cds, no smkg/pets, refs & cc reqd, 1/ mo sec-util. \$2,250/mo. 512-6470.
RONKONKOMA — 15 mins to Lab, 1 bdrm, bsmt apt, lg l/r, kitch, b/r, sep ent, wireless int, rent w/ky/\$200 or monthly, utils incl. \$800/mo. 901-4302.
SHIRLEY — 2 bdrm, 2 bath, ranch, fend yd, pets ok, 1/mo sec + util. \$1,400/mo. 742-3010.
SHOREHAM — 1 bdrm, furn/unfurn, new garden apt, grnd flr, indep, ent/drwy/prkg, full bath, kit, l/r, cac, no smkg/pets, 1 mo sec, all utils incl. \$1,100/mo. 566-8261.

For Sale

SHOREHAM — 3 bdrm, 1.5 bath, Colonial on cul-de-sac, updated bath & kitch w/ ss appls, new w/d, den w/fpl, lg deck, lg wood shed, 10 min to Lab. \$349,000. Andrea, Ext. 3347, 744-8793.