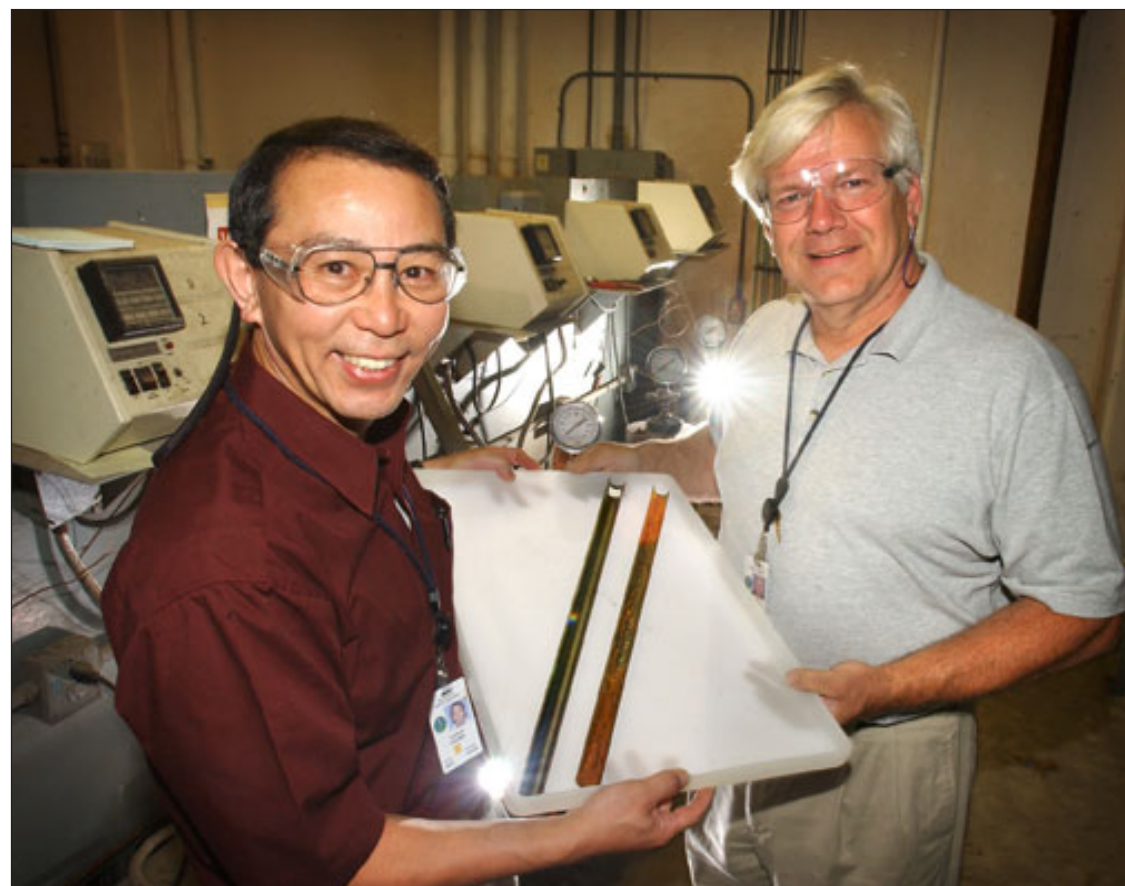


BNL, NREL, Industrial Partners Win R&D 100 Award for Coating

With this smart, high-performance coating, BNL's Sugama earns fourth R&D 100 award



Roger Stoutenburgh 01350702



Roger Stoutenburgh 01350702

The tube on the left has been treated with the R&D 100 Award-winning smart, high-performance polyphenylenesulfide coating system, while the rusted one on the right was not protected by the system.

Toshifumi Sugama (left), designer of the award-winning coating, and David Elling, designer of the apparatus for applying the coating, both of the Energy Sciences & Technology Department, display one coated (left) and one uncoated (right) heat-exchanger tube. See enlargement at left.

BNL and the National Renewable Energy Laboratory (NREL), with industrial partners Bob Curran & Sons and Ticona Corporation, have won a 2002 R&D 100 Award for developing a smart, high-performance coating. This polyphenylenesulfide (PPS) coating system is particularly suited for use in carbon-steel heat-exchanger tubes used in geothermal power plants.

R&D 100 Awards are given annually by *R&D Magazine* to the top 100 technological achievements of the year. Typi-

cally, these are innovations that transform basic science into useful products.

Now a four-time winner of the R&D 100 Award, Toshifumi Sugama of BNL's Energy Sciences & Technology Department (ES&T) thought of the new coating while doing research supported by DOE's Geothermal Materials Program (GMP).

It took about five years for Sugama to develop his idea. Then David Elling, also of ES&T, designed the apparatus for ap-

plying the coating to different materials. At that point, NREL, also supported by DOE's GMP, tested the coating before the technology was transferred to Curran & Sons, which uses PPS manufactured by Ticona Corporation of Summit, New Jersey.

"In developing this new system, my colleagues and I have taken a giant leap forward in the technology of coating steel surfaces for use in hostile, corrosive environments," Sugama said. "We estimate that the PPS coating system will have a useful life

of 20 years in geothermal environments before service is needed. Other coating systems that we tested needed service after six months or less."

Although the PPS coating system is currently being used in geothermal power plants and in the refinery industry in various countries around the world, it has other potential applications. Any facility with a harsh, hot, corrosive environment, such as chemical, power-generation, seawater-desalination, water-treatment, and air-condi-

tioning facilities, may benefit from use of the coating, which can be used on a range of components.

Commercialized under the trade name CurraLon®, the PPS coating lessens the damage done to machinery by geothermal fluid used to drive electricity-generating turbines in geothermal power plants. As the fluid is pumped from the earth's core through hundreds of carbon-steel heat-exchanger tubes, the hot, wet environment can

(continued on page 2)

Yongjae Lee Wins Award for High-Pressure Research

Yongjae Lee, a postdoctoral fellow in the Physics Department, has won the 2002 Alvin Van Valkenburg Award for his work on a newly discovered class of materials that expand under pressure.

This award is given every second year in the name of physicist Alvin Van Valkenburg, co-inventor of the diamond anvil cell, to honor a young scientist who uses this device in his or her scientific research.

Lee was presented with a prize from the Alvin Van Valkenburg Memorial Fund

and gave a short talk on his work at a June 26 awards ceremony hosted by William Bassett, Cornell University, during the biannual Gordon Conference on "Research at High Pressure" in Meriden, New Hampshire, June 23-28. The award news will also be featured in the upcoming issue of *Physics Today*.

"I am very honored to win this international young scientist award in high-pressure sciences," said Lee. "Most of the discoveries and results would not have been possible without support and creative input from my many mentors and collabo-

rators and the optimal instrumentation available at Brookhaven Lab."

Funded by DOE's Division of Materials Sciences and Division of Chemical Sciences, as well as partially by BNL's Laboratory Directed Research & Development, Lee's research is on the pressure-induced swelling of zeolites. The phenomenon was discovered by an international collaboration between BNL and the School of Chemical Sciences at England's University of Birmingham.

When subjected to great pressures in a

diamond anvil cell, these zeolites expand as fluid from the surrounding medium is squeezed into their tiny pores.

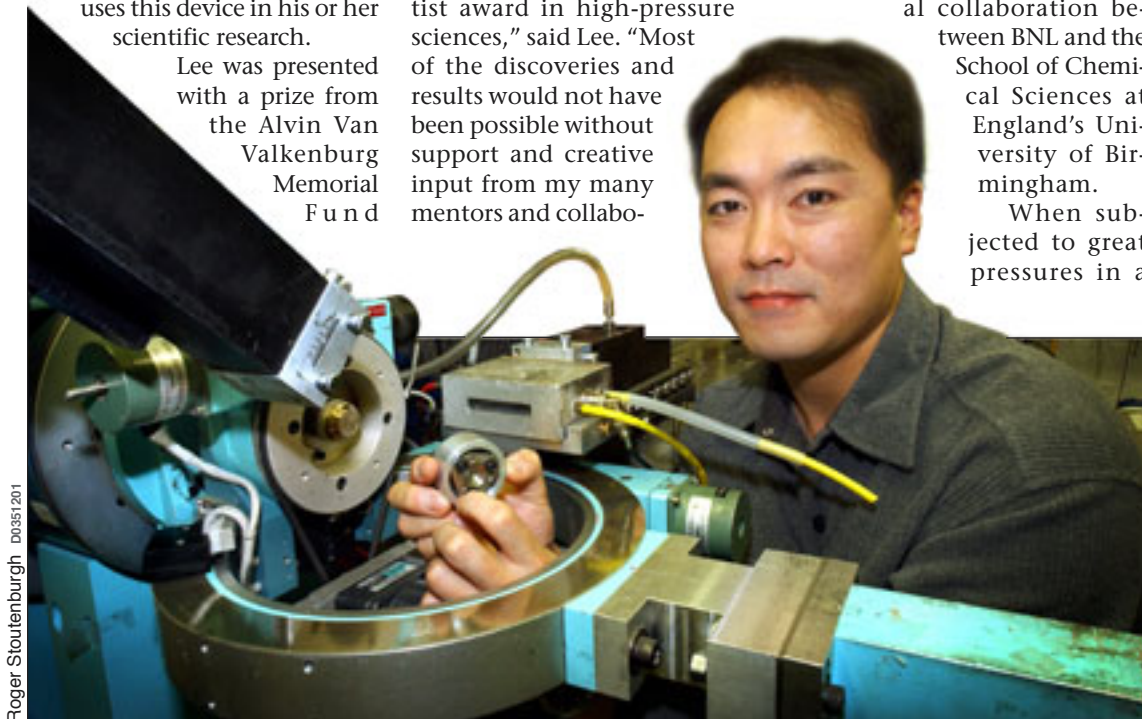
This unusual result may lead to applications for these materials as "molecular sponges" for soaking up chemical pollutants or even radioactive waste because, when the pressure is released and the material contracts, the fluid and possibly larger molecules or atoms could be trapped inside.

Using a technique called powder diffraction at BNL's National Synchrotron Light Source (NSLS), Lee and his collaborators were the first to decipher one such zeolite's molecular structure last year. Their findings, published in the *Journal of the American Chemical Society*, for the first time explained the material's unusual ability to absorb excess fluid, and showed where the extra liquid goes.

Lee came to BNL in 2001 as a postdoctoral fellow in the powder diffraction group led by Thomas Vogt of the Physics

(continued on page 2)

Yongjae Lee is seen with the diamond anvil cell that he used during the experiments on zeolites that expand at high pressure.



Roger Stoutenburgh 00351201

Remembering 9/11

To commemorate the one-year anniversary of the national tragedies that followed the September 11 terrorist attacks, The Bulletin will publish reflections on 9/11 and its aftermath written by members of the Lab community.

Therefore, employees, guests, facility-users, and retirees from all parts of the Lab are encouraged to set their comments on paper for possible inclusion in the Bulletin of September 13. Entries are to be limited to 200 words, which may be edited. If you require assistance in expressing your thoughts, you are welcome to call Liz Seubert, Ext. 2346, or John Galvin, Ext. 3505, for help.

Send in your 9/11 reflection by Tuesday, September 3, electronically by using the "In Appreciation" ad form available at www.bnl.gov/bnlweb/pubaf/bulletin/ads/bb_ad_appreciation.htm; by fax to Ext. 3368, attn. Liz Seubert; or by intra-Lab mail or regular mail to Liz Seubert, The Bulletin, Bldg. 134, BNL, P.O. Box 5000, Upton, NY 11973-5000.

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. 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 —

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. Mary Wood, Ext. 5923, or wood2@bnl.gov.

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

Noon-12:45 p.m., Rec. Bldg. Scott Bradley, Ext. 5745, bradley@bnl.gov.

Tuesdays: Aqua Aerobics

5:15-6:15 p.m. \$2 pool fee per class or use pool pass. Mary Wood, Ext. 5923.

Tuesdays: BNL Music Club

Noon, North Room, Brookhaven Center. Come hear live music. Joe Vignola, Ext. 3846.

Tuesdays: Welcome Coffee

10-11:30 a.m. Rec. Bldg. 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: Toastmasters

Meetings are 1st and 3rd Tuesday of each month at 5:30 p.m. in 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. Bldg. Pat Flood, Ext. 7886.

Wednesdays: On-Site Play Group

9:30-11:30 a.m., Meet at the playground in the apartment area. Parents meet while children play. Monique de la Beij, 399-7656.

Wednesdays: Farmer's Market

11:30 a.m.-1:30 p.m., Berkner Hall parking lot

Wednesdays: Hispanic Heritage Club

11:30 a.m., Berkner Hall, Room D. All are welcome. Carmen Narvaez, Ext. 3254, or www.bnl.gov/bera/activities/hispanic.

Wednesdays: Weight Watchers

Noon-1 p.m., Brookhaven Center South Room. Mary Wood, Ext. 5923, wood2@bnl.gov.

Wednesdays: Yoga Practice

Noon-1 p.m., Brookhaven Ctr. Free. Ila Campbell, Ext. 2206.

Wednesdays: Stretch

5:15-6:15 p.m., \$4 per class. Rec. Bldg. Pat Flood, Ext. 7886.

Wednesdays: BNL Ballroom, Latin & Swing Dance Club Lessons

5-9 p.m. North Ballroom, Brookhaven Center. Marsha Belford, belford@bnl.gov or Ext. 5053, or www.bnl.gov/bera/activities/dance.

Thursdays: Science Discussion Group

12:30-1:30 p.m., Berkner Hall, Room A or D. Patrice Pages, Ext. 3270, pages@bnl.gov.

Thursdays: Falun Dafa Class

Noon-1 p.m., Free. Rec. Bldg. Falun Dafa refines the body and mind through exercises, meditation. www.falundafa.org.

Fridays: BNL Social & Cultural Club

7-11:30 p.m., Brookhaven Ctr., social. Rudy Alforque, Ext. 4733, rudy@bnl.gov.

Fridays: Science Museum Tours

11 a.m.-2 p.m. BNLers are invited to a free tour of the BNL Science Museum. No reservations are needed. Gail Donoghue, Ext. 2838.

— THIS WEEKEND —

Saturday, 8/24

Brnx Zoo Trip

\$32 per adult, \$28 per child. Includes bus transportation and 2-hour entrance ticket. Leave Brookhaven Center at 8:30 a.m. and returns at approximately 3 p.m. Andrea Dehler, Ext. 3347.

— WEEK OF 8/26 —

Monday, 8/26

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.

Thursday, 8/29

VoiceStream Wireless Demo

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

Sugama Wins Fourth R&D 100 Award (cont'd.)

corrode, oxidize and foul the carbon-steel tubes. In addition, mineral deposits reduce heat transfer through the tube walls.

Compared to competitive coatings, the PPS coating system shows dramatic improvements in bonding durability, resistance to wear and abrasion, and service lifetime and cost.

Three-Layer System

The PPS coating system is applied to heat-exchanger tubes in three layers. The first layer is a zinc phosphate ceramic primer, which strongly binds to the steel and prevents corrosion. The second layer, a tough, anti-corrosive carbon-fiber/PPS matrix, dramatically enhances heat conductivity.

The final layer, a calcium bialuminate (CBA)-filled PPS/Teflon-blend alloy, makes the coating system “smart” by giving it self-healing properties.

The CBA filler repairs damage to the PPS/Teflon matrix by filling in micro- and nano-sized cracks generated by physical

wear and impacts. While “nano-sized” cracks are the size of one-billionth of a meter, micro cracks, still tiny, are a thousand times larger.

Sugama's Winning Research


Sugama's last R&D 100 win, in 2000, also evolved from his research in geothermal conditions. At that time, he was awarded for a high-performance cement particularly suited for use in geothermal wells.

Previously, he had won the award in 1999 and in 1988. In 1999, as a member of the BNL research team, Sugama had worked with W.R. Grace to develop and test an asbestos-digesting foam. In 1988, with BNLers Lawrence Kukacka and Neal Carciello, he had won for developing an economical zinc-phosphate coating system that reduces corrosion of steel surfaces.

Sugama will be presented with his latest R&D 100 Award in Chicago on October 16.

— Diane Greenberg

An Evening of Indian Classical Dance, 9/7



Join the BERA Indo-American Association on Saturday, September 7, from 4:30 to 7:30 p.m. in Berkner Hall for an evening of classical and folk dances from India. Gargi Chattopadhyay, founder and director of the Omna Ancient Art Institute, a nonprofit organization dedicated to the Indian performing arts, will present a variety of dances from numerous geographical regions in India.

Tickets, which cost \$7 for adults and \$5 for children from 5 to 12 years old, may be bought (cash only) from: Achyut Topé, Ext. 5672, tope@bnl.gov; Kumi Pandya, Ext. 7734, pandya@sun2.bnl.gov; Abhay Deshpande, Ext. 8783, abhay@bnl.gov; or Sharadha Sambasivan, Ext. 4862, sharadha@bnl.gov. Snacks are included in the price of the ticket.

Seating is limited, so advance reservations are recommended. All visitors age 16 and over who enter the Lab must have a photo ID. For more information, call 631 344-5672.

Yongjae Lee Awarded (cont'd.)

Department after completing his doctoral studies in geosciences at Stony Brook University. Lee had received a master's degree in geosciences from Stony Brook in 1998 and a bachelor's degree in earth system sciences from Yonsei University in Seoul, Korea (1996).


Among other honors, Lee has been awarded a Certificate of Excellence from the BNL Interim Director during the 2002

NSLS Annual Users' Meeting, a Sigma Xi Award for Excellence in Research at Stony Brook in 2001, and the Pauling Prize at the 2000 American Crystallographic Association Meeting.

— Karen McNulty Walsh

Note: for more information about the experiment Lee worked on, go to www.bnl.gov/bnlweb/pubaf/pr/2002/bnlpr062702.htm and <http://neutrons.phy.bnl.gov/-powder/>.

ITD Partners With New Horizons To Offer Open-Enrollment Training



Discussing future training plans with New Horizons Account Executive Jodi Newfield (third from left) are: (from left) Information Technology Training Manager Pam Mansfield of the Information Technology Division (ITD), and ITD administrative assistants Christine Herbst and Eileen Papa.

On October 1, the Information Technology Division (ITD) will launch a re-engineered training program, by offering a much wider variety of courses to BNL staff without their having to wait for a specified number of other trainees to join the class.

To achieve this, explains the Lab's Information Technology Training Manager, Pam Mansfield, ITD has partnered with New Horizons (NH) Computer Learning Centers. In the business of computer training for more than 20 years, NH operates worldwide and is a Microsoft-certified partner and technical education center. NH is also CompTIA-certified for A+ and Net+, as well as a certified Internet Webmaster facility.

“There have been so many different courses that BNL employees needed at so many different levels, that, in the past, it has been difficult to provide timely training,” says Mansfield. She explains that, now, employees will have the option of taking classes in desktop applications at BNL or taking desktop application and technical classes at the NH training facility located in Commack. Class schedules will be published on the ITD Web page every three months. Classes will include, but are not limited to:

- Microsoft desktop applications on Macs and PCs
- Classes leading to: Microsoft Windows 2000 certification
- Cisco certification
- A+ certification
- Internet Webmaster certification

From August 26, employees will be able to register on line or, for those who require it, registration forms will be made available.

Those who complete training in desktop applications will receive: 60 days of help-desk support provided by New Horizons, 24 hours a day, 7 days a week; course-repeat privileges; and, for the class taken, six months of the Web-based training program called on-line anytime learning supplement, at no additional charge. Employees completing technical training will receive course-repeat privileges and the on-line anytime learning supplement at no additional charge.

The training fee for these classes is as follows:

Classes at BNL:

- \$151 per day for desktop applications

Open enrollment classes at the New Horizon facility:

- \$113 per day for desktop applications
- \$338 per day for technical classes


For more information go to the training site at: www.bnl.gov/itd/training or contact Pam Mansfield, Ext. 7286 or pam@bnl.gov.

— Jane Koropsak

BERA Hispanic Heritage Club Presents Concert, 9/21

Spanish Flamenco Music, Dance

The BERA Hispanic Heritage Club will present a Spanish Classical and Flamenco Concert at Berkner Hall on Saturday, September 21, at 7 p.m., featuring the Sol y Sombra Spanish Dance Company. This group of nationally recognized Spanish dancers and musicians portray the gypsy flamenco of Andalusia, which mixes the rich traditions of Spain's



Arabic, Moorish, and Hebrew past with South American and indigenous Spanish music to create this exciting and dramatic art form.

Buy advance tickets at \$10 for adults, and \$5 for children under 12, at the BERA Sales Office in Berkner Hall, 9 a.m.-3 p.m. At the door, tickets for adults will cost \$12. For more information about the concert, call Ext. 3347.

Volunteers Wanted
For ‘Sons to Work’ Day

Volunteers are needed to form a committee to plan for this year’s “Take Our Sons to Work” day, which will be on Columbus Day, Monday, October 14. Volunteers will also be needed to act as substitute “parents” for a group of boys from Little Flower School who will be joining in the day’s activities as guests of BNL. Contact the event’s coordinator, Employee Relations Manager Susan Foster of the Human Resources Division, Ext. 2888 or foster2@bnl.gov.

Arrivals & Departures

Arrivals

Tameka Carter Info. Tech.
Sanbao Zheng C-A

Departures

Thomas Kerner C-A
Line Sandager Biology

Retirement Counseling

A TIAA-CREF representative will visit BNL on Thursday and Friday, September 26 & 27, to answer employee’s questions regarding the TIAA-CREF retirement plan. You might ask about:

- TIAA and CREF Differences
- allocating funds between TIAA and CREF
- options, flexibilities with TIAA/CREF
- retirement options

To arrange a 45-minute appointment, call Duane Walden, (800) 842-2733, Ext. 7289 (not the on-site Ext. 7289).

Fishing Trip, 9/14

Join BERA for fishing on the *Capt. Bob*, off Mattituck, on Saturday, September 14. The cost of \$49 per person includes: the boat, bait, tackle, fishing rods, and the initial tip for the mate. The boat will leave the dock at 8 a.m. and return at 3 p.m. Buy tickets from Andrea Dehler, Ext. 3347, at the BERA Sales Office.

BNL Science Museum
Open Lunchtime Today

For the last time this summer, today, Friday, August 23, 11 a.m.-2 p.m., is open house at the BNL Science Museum, Bldg. 935, Railroad St. and East Fifth Ave. The Lab community is invited to find out what makes the museum such a popular stop for more than 13,000 elementary school children each year. Visitors can experience hair-raising activities in electricity, explore magnetism, and check out other scientific wonders. Children under 14 must be accompanied by an adult.

In Memoriam

Edward Dexter, who had come to BNL as an associate electrical engineer on July 21, 1949, died on March 13, 2002, at the age of 79. After 35 years at the Lab, he had retired from the Alternating Gradient Synchrotron Department on October 31, 1984, as a senior electrical engineer.

Ernest Lindenvald, who had joined the Central Shops Division as a welder on February 7, 1966, and had retired as a master welder group leader on March 18, 1994, died on May 12, 2002. He was 67.

Camping’s a Breeze at the Softball Fields



Join in as the
BNL Camping Club
plans events for fall

Joseph Rubino D062002

This summer, evidence of the BERA Camping Club was apparent to anyone driving past the gazebo, where recreational vehicles and tents peppered the landscape and the familiar aroma of burgers sizzling on a charcoal grill filled the air.

According to Gerry Van Der Laske, the Camping Club’s President, twelve BNL families settled down by the gazebo during the summer.

“It’s nice for the camping enthusiasts around the Lab to have a place to relax, set up camp, and enjoy the natural landscape,” said Van Der Laske.

The BNL camp site is not just a “home away from home” for current BNL employees — retirees are enjoying the Lab camping experience as well. Len and Audrey Kalmar, both BNL retirees living in Tucson, Arizona, have joined other BNLers at the site this summer with their fifth-wheel camper.

“The atmosphere is relaxed, yet there’s so much to do here at the Lab and in the surrounding area,” said Len. “The pool and ball fields are great, and shopping and the beach are just down the road.”

According to Van Der Laske, the Club has preliminary plans for several off-site trips, including a venture to the Montauk Lighthouse some time after Labor Day, and a Columbus Day weekend trip up the east coast to view the fall foliage.

The Club is also planning a Halloween campout at the BNL campground where “kids and adults can dress up, decorate their rigs, and ‘trick-or-treat’ at the camping units,” said Van Der Laske.

The Camping Club meets at the gazebo on the third Tuesday of each month during the camping season — Easter to Veterans’ Day — and is eager for new members and suggestions for future camping trips. It is not necessary to have a mobile camping unit to join in the Club’s outdoor fun, said Van Der Laske. Tent campers are always welcome.

Membership information, plans for future camping trips, and other information about the BNL Camping Club can be found at www.bnl.gov/bera/activities/camping/. — John Galvin

Do You Wanna
DANCE?



If so, then join the
BNL DANCE CLUB
8 weeks of lessons start
Wednesday
September 18th

North Ballroom, Brookhaven Center

Register now for

- 5-6 p.m. quick-start LINDY & SWING: beginners, 20 people max, 1 instructor, \$40/person
- 6-7 p.m. introductory CHA CHA, FOX TROT, MERENGUE & MAMBO: beginners, 50 people max, 3 instructors, \$30/person
- 7-8 p.m. syllabus PEABODY & QUICKSTEP REVIEW I&II: advanced beginners, 50 people max, 3 instructors, \$30/person
- 8-9 p.m. syllabus TANGO & BOLERO IV: intermediates, 44 people max, 3 instructors, \$35/person

Beginner classes fill quickly, so sign up ASAP

Make checks payable to the BNL Dance Club and send to: Marsha Belford, Bldg. 134.

For more information, contact:

- Marsha Belford, belford@bnl.gov or Ext. 5053
- Sue Perino, perino@bnl.gov or Ext. 2483.

Come Cruisin’ on Port Jeff Ferry, 8/28

Save Wednesday, August 28, to take a sunset “Cruise to Nowhere” on the Port Jeff Ferry, 6-9 p.m. The ferryboat will cruise to Bridgeport, Connecticut, and return at sunset.

Pack a picnic dinner or buy snacks and drinks on board to enjoy with the scenery and the lively music of Banjo Bob and Crazy Henry.

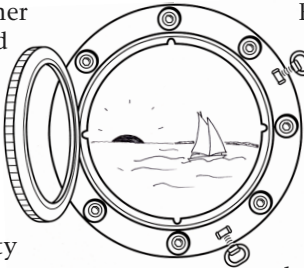
The Hospitality Committee has arranged special rates for all BNL community members and their families: adults, \$10; children 6-12, \$6; and children of age 5 and under, free. Buy tickets on the boat. Hospitality members will meet group members at the pier to give out BNL nametags. Be sure to arrive by

5:45 p.m. to board the ship.

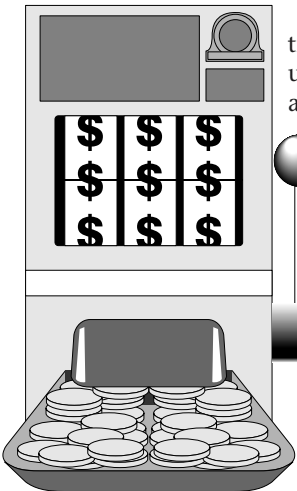
Getting there: Car-pooling is encouraged. If you do not have a ride, call Michelle Herman, 344-8481 — she will try to arrange a ride for you.

From the Lab, go north on William Floyd Parkway, then west (left) on Rte. 25A to Rte. 112. Go north on 112, which becomes Main Street in Port Jefferson and leads to the ferry dock.

Parking is free in the lot west of the ferry with proof of Brookhaven township residency on driver’s license or car sticker, or behind the Gap store on the east side of Main Street, and behind the shops on the west side of Main Street. Questions? Call Herman, 344-8481.



Atlantic City Trip 9/21



Join the next BERA-sponsored, one-day trip to Atlantic City, which will be on Saturday, September 21, to the Hilton Resort and Casino on the Boardwalk. The cost is \$25 per person (18 and older only), with a \$9 coin return.

The bus will leave the Brookhaven Center at 8 a.m. As usual, there will be free movies, games, and rolls or donuts on board; bring your own juice and coffee. After a seven-hour stay in Atlantic City, the bus will return around 11:30 p.m.

Buy tickets now at the BERA Sales Office in Berkner Hall, 9 a.m. to 3 p.m. For more information, call Andrea Dehler, Ext. 3347, or Chris Carter, Ext. 2873.

Calendar

(continued)

— WEEK OF 9/2 —

Monday, 9/2

Labor Day, Lab Holiday

No Bulletin will be issued this week.

Tuesday, 9/3

U.S. Open Tennis Trip

\$64 per person as of 8 a.m. from the Lab to the U.S. Open Tennis Center parking lot at 8:30 a.m. and back to the LLE exit 63 Park & Rte. No seats remain.

Saturday, 9/7

*An Evening of Indian Classical Dance

4:30-7:30 p.m., Berkner Hall. Join the BERA Indo-American Association for an evening of Indian classical dance presented by Gargi Chattopadhyay, founder and director of the Omna Ancient Art Institute. Tickets cost \$7 for adults and \$5 for children. Buy them from: Achyut Topé, Ext. 5672, tope@bnl.gov; Kumi Pandya, Ext. 7734, pandya@sun2.bnl.gov; Abhay Deshpande, Ext. 8783, abhay@bnl.gov; or Sharadha Sambasivan, Ext. 4862, sharadha@bnl.gov.

— WEEK OF 9/9 —

Wednesday, 9/11

Rifle & Pistol Club Meeting

Noon, Conference Room, Bldg. 535. The use and availability of on-site ranges will be discussed as well as membership activities. Jim Durnan, Ext. 5993, Otto Jacobi, Ext. 2710, or www.bnl.gov/bera/activities/rpc/.

Thursday, 9/12

BNL Blood Drive

9:30 a.m.-3 p.m., Brookhaven Center. BNLers from 17 to 75 years of age, in good health, and weighing over 110 lbs. are welcome. All donors should have photo identification and know their social security number. Susan Foster, Ext. 2888, donateblood@bnl.gov.

Fidelity Investment Advice

A Fidelity Investment Representative will be at the Lab to hold individual sessions with employees interested in learning more about their retirement-savings and investment options. To schedule one of the 45-minute appointments, call (800) 642-7131.

Friday, 9/13

Yankee Baseball Game

\$55 per person, includes ticket and bus transportation. Bus leaves the Brookhaven Center at 4 p.m. for the 7 p.m. Yankees vs. White Sox game. Prepaid reservations can be made at the BERA Sales Office in Berkner Hall on weekdays from 9 a.m. to 3 p.m.

— WEEK OF 9/16 —

Wednesday, 9/18

*Ballroom, Latin & Swing Dance Club: 2002-03 Wednesday lessons start

First 8-week series of lessons begins. See notice on page 3, at left.

Registration: Marsha Belford, Ext. 5053 or belford@bnl.gov; Sue Perino, Ext. 2483 or perino@bnl.gov.

Saturday, 9/21

Atlantic City Bus Trip

Bus leaves the Brookhaven Center at 8 a.m. and returns at approximately 11:30 p.m. The hotel/casino and coin return will be announced. All BNLers age 18 and older are welcome. Tickets cost \$25 and can be purchased at the BERA Sales Office, Berkner Hall, 9 a.m.-3 p.m. Andrea Dehler, Ext. 3347, Chris Carter, Ext. 2873.

*Spanish and Flamenco Music & Dance Concert

7 p.m., Berkner Hall. Tickets at \$10, children under 12, \$5. See notice on page 2.

— WEEK OF 9/23 —

Monday, 9/23

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.

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.

Free Summer Sundays

BROOKHAVEN
NATIONAL LABORATORY

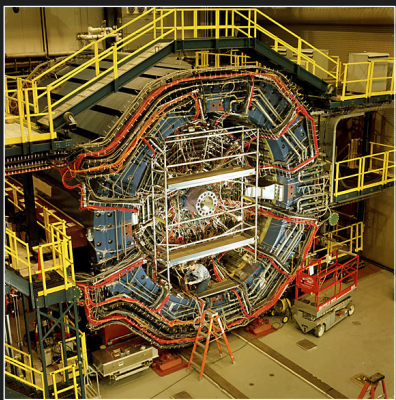
This Sunday, August 25, tour BNL's Relativistic Heavy Ion Collider.

This Sunday, August 25, visitors to the Lab will tour BNL's Relativistic Heavy Ion Collider (RHIC). RHIC replicates conditions thought to have existed immediately following the Big Bang, so that scientists can study subatomic particles and their interactions as well as how the universe evolved. RHIC is made up of two superconducting accelerator rings, each 2.4 miles in circumference. Visitors will be able to take a bus tour of the outside of the tunnel containing the rings. They will also be shown the BRAHMS and STAR detectors, which gather data from the heavy-ion collisions that take place at ring intersections.

In addition to the RHIC tour, a new hands-on exhibit called "Brain Teasers," a collection of 20 puzzles ranging from giant jigsaws to rope tricks, will challenge both children and adults alike. Also, local high school students will demonstrate the robots that they built. Plus, the "Whiz Bang Science Show" — popular with both adults and children — will be shown at 10:30 a.m., noon, 1:30 p.m.

Tour hours are between 10 a.m. and 3 p.m. Admission is free and no reservations are needed, but, to be admitted on site, all visitors age 16 and over must bring a photo ID.

Last tour of this summer is this Sunday



STAR detector experimental hall at BNL's Relativistic Heavy Ion Collider

Roger Stoutenburgh CNS-13-01



BRAHMS' experimental hall.

Roger Stoutenburgh CNS-196-01

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/HR/jobs/default.htm.

OPEN RECRUITMENT — Opportunities for Laboratory employees and outside candidates.

MK8825. ASSISTANT SCIENTIST — Requires a Ph.D. with the ability to obtain a Department of Energy security clearance desirable. In addition, numerical modeling and nuclear power plant or fossil fuel application experience is desirable. Will work on projects involving combined heat transfer and fluid flow phenomena. Experimental work will involve laser instrumentation and other advanced sensors. Under the direction of M. Todosow, Energy Sciences & Technology Department.

MK2114. POSTDOCTORAL RESEARCH ASSOCIATE — Requires a Ph.D. in physics or electrical engineering and experience with short pulse solid-state lasers and Pockell's cells. Experience with RF systems highly desirable. Research will involve the development, improvement, and operation of a suite of particle accelerators used to carry out the program of accelerator-based experiments at the Laboratory. The next major upgrade of the RHIC collider will be based on electron cooling of the stored beams. The electron-cooler source will be a laser-photocathode RF electron gun driven by a solid-state laser running at 5 W average power, 30 ps pulse length, 10 MHz repetition rate and 532 nm wavelength. The expected photocathode current is 100 mA. Will be responsible for either modifying an 80 MHz solid state laser or constructing a new laser to generate the above laser beam and participate in the development of the laser photocathode RF guns. Under the direction of I. Ben-Zvi, Collider-Accelerator Department.

MK3053. POSTDOCTORAL RESEARCH ASSOCIATE — Requires a Ph.D. in chemistry or materials science with a strong background in setting up and performing sol-gel synthesis as well as relevant characterization techniques (TGA, powder diffraction). Experience in pulsed laser deposition, impedance and infrared spectroscopy is desired. Research will involve exploratory sol-gel synthesis to make nano dots and rods of metal oxides. Under the direction of T. Vogt, Physics Department.

MK3054. POSTDOCTORAL RESEARCH ASSOCIATES (two positions) — Requires a Ph.D. in physics, chemistry or materials science and experience working with soft condensed matter; expertise with synchrotron radiation is desirable. Research will involve the study of the effects of nanoscale templated surfaces on the physical behavior of liquids and soft-matter. Will work with an interdisciplinary team of scientists to develop chemically and physically templated surfaces using polymer self-assembly, AFM, and e-beam techniques; and to explore the structure of liquids, complex fluids and liquid crystals in the vicinity of these templated surfaces using synchrotron x-ray (NSLS and APS) scattering and microscopy, scanning probe, and optical techniques. Templated surfaces will be utilized to study nanoscale aspects of wetting phenomena, liquid crystals under confinement, and biomineralization. This program complements the BNL Nanoscience

Center. Under the direction of B. Ocko and R. Pindak, Physics Department.

MK3056. POSTDOCTORAL RESEARCH ASSOCIATE — Requires a Ph.D. in physics, chemistry, materials science or a related field with a strong background in synthesis and characterization of novel inorganic molecules and nanocomposites. Must be able to collaborate with other experimentalists and theorists. Experience with inorganic (polyoxomolybdate-based or related) synthesis, crystal growth, synchrotron x-ray diffraction and scattering techniques is highly desirable. The aims of the research include: looking for new synthetic routes for creating giant inorganic molecules, studying their novel physical properties and exploring possible new applications. Emphasis will be placed on the synthesis and properties of novel polyoxomolybdate-based giant molecules, including their electronic, magnetic, and colloidal properties, as well as their surface patterning. Under the direction of T. Liu, Physics Department.

NS2296. LIBRARY ASSISTANT (A-2, term appointment, 50%/part-time, Hours 3-7 p.m.) — Requires excellent written and oral communication skills; demonstrated skills in one or more library functions; specialized training or equivalent experience and basic knowledge of library and information science operations, standards and procedures. Will work independently, handle routine library and information science inquiries and have frequent contact with resource personnel within and outside the Laboratory to obtain essential information for researchers. Information Services Division.

NS7919. ADVANCED APPLICATIONS ENGINEER (I-7, reposting, term appointment) — Requires a BS in computer science, atmospheric science, or meteorology, with five years' technical experience of which at least three years should be in web-based applications and relational databases. Experience in at least four of these technologies: Java, JSP, XML, Sybase, Perl, Apache is necessary. Responsibilities will include the design and implementation of scientific and administrative databases with web-based queries and input forms. External Data Center of the Atmospheric Radiation Measurement Program/Environmental Sciences Department.

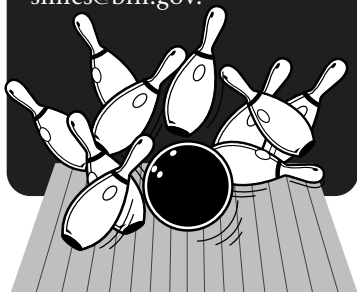
Call For Bowlers

Bowlers are needed for the Thursday night mixed league in Shirley, which begins play on Thursday, September 5, at 6:30 p.m.

All interested BNL employees, retirees, family, and friends, ages 18 and over, are eligible to participate. Applications are available from Fern Simes, Bldg. 510.

A captains' meeting will be held on Thursday, September 5, at 6 p.m.

For more information, contact Simms at Ext. 3969, simes@bnl.gov.



the Bulletin

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On the World Wide Web, the Bulletin is located at www.pubaf.bnl.gov/bulletin.html. A Weekly Calendar listing scientific and technical seminars and lectures is found at www.pubaf.bnl.gov/calendar.html.

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