



Joseph Rubino CN10-20-01

NYS Assemblyman Thiele at BNL

During the BNL visit of New York State Assemblyman Fred Thiele (above) last Friday, October 5, the Chemistry Department's Joanna Fowler (above), discussed the Positron Emission Tomography (PET) imaging program, which she heads.

At the PET imaging laboratory, Fowler gave an overview of BNL's pioneering research on addiction and the role that imaging has played in the conceptualization of addiction as a medical illness. She also described the results of PET imaging studies of obesity, and cocaine, alcohol, tobacco, and solvent abuse, as well as new approaches to treating addiction.

The Assemblyman, who had come to the Lab at the invitation of DOE's Brookhaven Area Office Manager Michael Holland, first met with DOE Brookhaven Area Office and BNL staff to discuss elements of the environmental cleanup program.

Thiele's next stop, at the National Synchrotron Light Source (NSLS), gave NSLS Chair Steven Dierker an opportunity to describe the facility's attraction for industrial users — 223 researchers representing 61 U.S. companies used the Light Source in fiscal year 2000. Thiele also visited an experiment where researchers are exploring the applications of x-ray and infrared light in studies of such diseases as osteoarthritis and osteoporosis.

Then, at the Relativistic Heavy Ion Collider (RHIC), Thiele saw the immense STAR detector and learned about the RHIC program from BNL Physicist Timothy Hallman. Four detectors track the interactions of colliding heavy ions at RHIC, where scientists expect to recreate conditions of the very early universe.

Materials Science Department Formed David Welch Named Interim Chair

Under the Basic Energy Sciences (BES) Directorate, a new department — BNL's Materials Science Department (MSD) — has been created from the Materials & Chemical Sciences Division, previously in the Energy Sciences & Technology Department. David Welch has been appointed MSD Interim Chair.

Richard Osgood, Associate Laboratory Director for BES, commented: "The formation of the new department and Materials Center [see article, page 2] are vital for strengthening and unifying materials

research at BNL. Strong materials research is key to building new programs in the Basic Energy Sciences; Energy, Environment & National Security; and Life Sciences Directorates."

MSD has a staff of about 40 and a yearly operating budget of about \$8 million.

As Welch said: "Raising materials science research to the departmental level is a major step in increasing its importance and in providing more opportunities for growth. We will choose to work on projects that fit into our historical strengths and build on those."

Welch added that MSD has close links to and will continue to work closely with the Chemistry, Physics, and National Synchrotron Light Source (NSLS) Departments.

As Interim Chair, Welch also plans to form more collaborations with surrounding academic institutions, such as Stony Brook University and Columbia University.

Welch defines materials science as the study of the structure, composition, and behavior of materials, from the nanoscale level, a scale measured in billionths of meters, to the micrometer level. For their studies, MSD researchers use x-rays at the NSLS, atomic force microscopes, (continued on page 2)



Roger Stoutenburgh CN10-38-01

David Welch

BNL Is First DOE Lab With ISO 14001 On Environmental Management

A new sign at the main gate (right) announces BNL's achieving ISO 14001 registration for the entire site. BNL is the first national lab to obtain third-party registration to this globally recognized environmental standard.



Tenure 2001

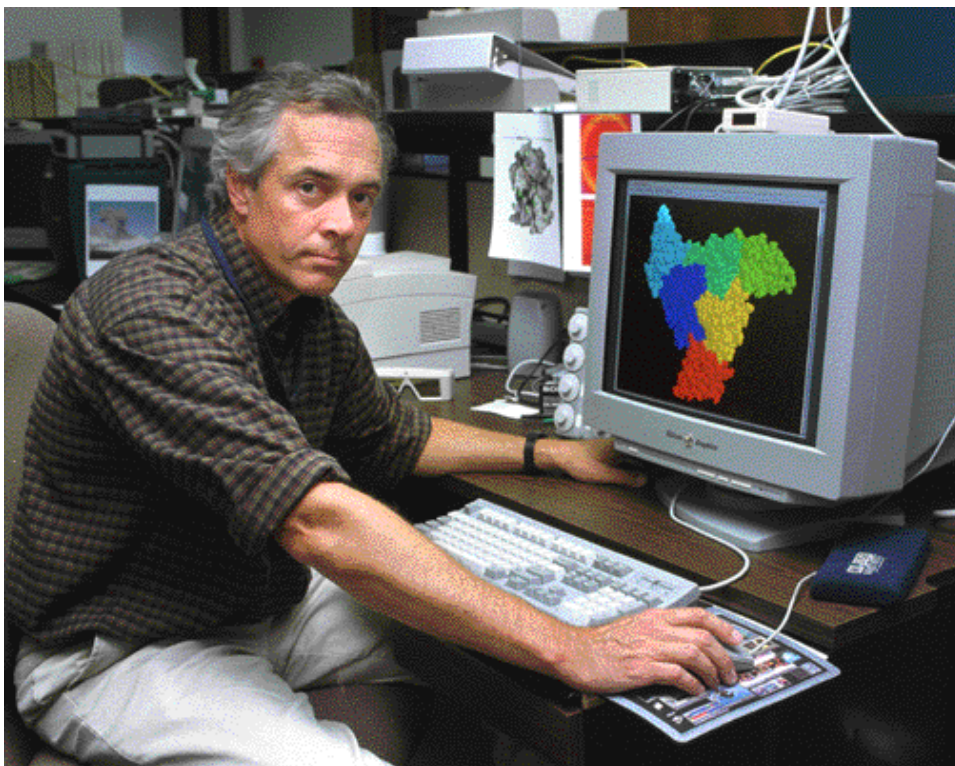
Paul Freimuth Is One of Six New Tenure Awardees

BSA has granted tenure to six BNL scientists this summer. They are: Radoslav Adzic, Energy Sciences & Technology Department; Milind Diwan, Physics Department; Paul Freimuth, Biology Department; John Haggerty, Physics; Robert Sweet, Biology; and Xijie Wang, National Synchrotron Light Source Department.

In making tenure decisions, the BSA Board is advised by members of the Brookhaven Council.

The Council members are tenured scientific staff, elected for three-year terms by the scientific staff of their respective departments and divisions.

In addition to providing advice and making recommendations to the Director on scientific staff policies, Brookhaven Council members conduct reviews and make recommendations to the Director concerning candidates that have been put forward for tenure by the Departments and Divisions of the Laboratory. (See also www.bnl.gov/bnlweb/council.html.)



Joseph Rubino CN9-154-01

Paul Freimuth

For his achievements in molecular virology, particularly his contributions to understanding

virus-host interactions, which have implications for improving human health, Biochemist Paul Freimuth was recommended for tenure by Biology Department

Chair Carl Anderson.

"Paul's adenovirus research elucidates how adenoviruses interact with the cell surface to attach and enter a host," explains Anderson. "After developing a clever genetic approach to identify the gene for the viral protein receptor on human cells, Paul and his collaborators determined the structures of this receptor complexed with the adenovirus attachment protein and with Cocksackievirus, another important virus."

"Paul's work with others in Biology and Medical will facilitate engineering adenoviruses for gene therapy, and tumor and brain imaging, as well as provide a model for understanding how other viruses infect humans," adds the Chair.

Paul Freimuth received his Ph.D. in microbiology from Columbia University in 1986. After two postdocs, he came to BNL in 1991 as an assistant biochemist. Promoted to Associate Biochemist in 1992, he was named Biochemist in 1995.

— Marsh Belford

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: BNL Gospel Choir
5:15-7 p.m. Rehearsals in Berkner auditorium. Seeking new members, all faiths. Frances Ligon, ligon@bnl.gov, Ext. 3709; Sydell Lamb, lamb@bnl.gov, Ext. 3389; www.bnl.gov/bera/activities/choir/.

Mondays: Arts & Crafts
1 p.m., Rec. Bldg. \$5 per month covers materials. "Make Your Own Necklace" begins Monday, October 15. Marcia Leite, Ext. 1040, mhsleite@hotmail.com.

Tuesdays: Welcome Coffee
10 to 11:30 a.m. Rec. Bldg. Come and meet friends. The first Tuesday of every month is special for Lab newcomers and leaving guests. Mimi Luccio, 821-1435.

Tuesdays: Toastmasters
Meetings are on 1st & 3rd Tues. of each month at 5:30 p.m., on the 4th Tues. at 12:05 p.m. in Bldg. 463. Guests, visitors always welcome. See www.bnl.gov/bera/activities/toastmstrs/default.htm.

Wednesdays: On-Site Playgroup
9:30-11:30 a.m., Rec. Bldg. Free. Parents meet while the children play. Babies welcome too. Monique de la Beij, 399-7656.

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

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

Wednesdays: Yoga Practice
noon-1 p.m., Rec. Bldg. Free. Ila Campbell, Ext. 2206.

Wednesdays: Cooking Exchange
10 a.m., Rec. Bldg., every third Wednesday. \$1 per evening covers the cost of ingredients. Marcia Leite, Ext. 1040, mhsleite@hotmail.com.

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

Thursdays: Falun Dafa Class
12-1 p.m., Rec. Bldg. Free. FalunDafa refines the body and mind through exercises, meditation. www.falundafa.org.

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

Tues. & Thurs.: Aqua Aerobics
5:15 p.m. \$2 pool fee per class or pool pass. Mary Wood, Ext 5923.

Mon. & Thurs.: Cardio Kickboxing
\$5 per class. Mon. & Thurs. noon-1 p.m. Thursday 5:15-6:15 p.m. Tuesday classes are in the Gym. Thursday classes are in the Brookhaven Ctr. Registration is required. Mary Wood, Ext. 5923, or wood2@bnl.gov. Hispanic Heritage Celebration continues through October 15. For a complete list of scheduled events, see www.bnl.gov/bera/activities/hispanic

— TODAY —
Friday, 10/12

GLOBE Meeting
Brookhaven's Gay and Lesbian Club. For specific time and meeting location, contact Mike Loftus, Ext. 2960,

New Materials Center Directed by Doon Gibbs

Senior Physicist Doon Gibbs of the Physics Department has been named Director of BNL's new Materials Center (MC), which aims to promote communications and collaborations among various BNL divisions and departments, including the newly formed Materials Science Department (MSD) (see story, page 1).

The new center reports to Richard Osgood, Associate Laboratory Director for Basic Energy Sciences.

Osgood commented: "I am particularly pleased to appoint Doon Gibbs as Director of the new center. He has a distinguished research and leadership record in x-ray scattering and surface physics, and he has been active in building crucial materials synthesis capabilities at BNL. Doon has also been a leader in fostering greater interactions between condensed matter physics and the Materials & Chemical Sciences Division, now the Materials Science Department."

Specifically, MC will seek to establish interdisciplinary research projects in materials studies by coordinating research and communications among: MSD; the Center for Neutron Science; the Chemistry Department; the Solid State Physics Group in the Physics Department; the National Synchrotron Light Source Department; the Energy, Environment & National Security Directorate; and the Life Sciences Directorate.

"We are taking advantage of BNL's excellent research programs by forming interdisciplinary collaborations that are likely to bring about better funding opportunities," Gibbs said. "We are also starting some new initiatives that will expand and enhance materials research at BNL."

Collaborations will include universities, and, to help bring together collaborators from academia, Gibbs has appointed John Parisi, Professor of Geophysics at Stony Brook University, to be Co-Director of MC. In addition, an MC executive committee will soon be appointed.

According to Gibbs, MC will initially help promote new research at BNL in nanoscience and materials synthesis. Nanoscience is the study of the unique physics and chemistry of ultra small structures, on the scale of one-billionth of a meter. This research has possible future



Doon Gibbs

applications in molecular electronics, computer chips, and tiny electronic devices.

Another new area of study for BNL which could involve MC is soft condensed matter, including investigations of organic molecules and polymer systems. In addition, Gibbs hopes to build links to theorists among the groups of researchers who will be brought together under MC.

To enhance materials research and help seed MC collaborations, many principal investigators in the departments and divisions that interact with MC have already offered to contribute 10 to 15 percent of their beam time at the National Synchrotron Light Source and time for using other important research tools, such as the electron microscope and the scanning tunneling microscope.

"This is an important step, which I hope will get more people at BNL working together in this field," Gibbs said.

Gibbs hopes to hire post-doctoral researchers and graduate students to work on collaborative MC projects. In addition, a monthly lecture series featuring distinguished speakers with expertise in materials science will be initiated.

Doon Gibbs earned his B.S. in physics in 1977 from the University of Utah and his Ph.D. in physics in 1982 from the University of Illinois, Urbana. He joined BNL in 1983 as an assistant physicist in the Physics Department. He was promoted to Associate Physicist in 1984, Physicist in 1986, and to Senior Physicist in 2000. He was named Associate Chair of the Physics Department in January 2000 and Deputy Physics Chair in June 2001, a position he continues to hold. He served as Acting Physics Chair from July until early October 2001.

— Diane Greenberg

BNL Community Gives Generously To September 11 Relief Effort

The Brookhaven community has contributed a generous \$119,558.10 to the fund being administered by United Way and New York Community Trust on behalf of victims of the September 11 terrorist attacks.

BSA launched this charitable effort on September 13, with a promise of \$50,000 in matching funds. Two weeks later, when all the checks were totaled, employees, retirees, and subcontractors had donated \$69,558.10.

Donors have directed their contribution to be distributed as follows: \$33,680.99 for New York and \$150 for Washington, D.C., with the remainder unspecified.

With the cooperation of the Long Island branch of United Way, BNL is able to earmark this money to help Long Islanders directly affected by the September 11 tragedy. As promised by United Way, no dollars will be taken out to cover administrative costs. In addition, donor distribution specifications will be honored.

New Materials Science Department (cont'd.)

and advanced electron microscopes as probes, as well as tools for measuring electrical, magnetic, and electrochemical properties.

MSD includes four major areas of investigation: superconducting and magnetic materials, nanoscale structure of advanced materials, molecular materials, and electrochemical sciences.

The materials scientist is interested in the relationship of the structure of imperfect superconducting materials to their properties, with an eye on performance.

In addition, MSD researchers are interested in the characteristics and synthesis of superconducting materials that can carry very large amounts of electric current. They also study advanced magnetic materials, whose characteristics depend on their structure at the nanoscale level.

In the nanoscale structure group, MSD researchers use an advanced electron microscope to characterize materials on the nanoscale level. Probing a material with electrons can provide information on its structure, its electronic charge and its chemical composition.

Advanced nanoscale materials are of great interest to scientists because they can be manipulated so that new properties emerge which have many potential applications, from tiny medical probes to electronic devices. If a proposed Center for Nanotechnology is built at BNL, then scientists from MSD would be an integral part of it.

The molecular materials group studies carbon nanotubes and porphyrins, catalysts that are used in chemical and biochemical reactions.

For example, porphyrins are catalysts in solar energy transduction and photodynamic therapy, a cancer treatment. The development of molecular electronics and biomaterials is a goal of this research area, and scientists in molecular materials often interact with the Biology and Medical Departments.

Electrochemical sciences MSD research focuses on three main areas: investigating electrocatalysis in fuel cells; studying and fabricating materials for lithium ion batteries; and learning about corrosion, with the goal of developing corrosion-free materials.

David Welch earned a bachelor's degree in metallurgical engineering from the University of Tennessee in 1960, a master's in physical metallurgy from the Massachusetts Institute of Technology in 1962, and a Ph.D. in theoretical physical metallurgy from the University of Pennsylvania in 1964.

In 1965, Welch became a NATO postdoctoral fellow for the Atomic Energy Research Establishment in Harwell, England. From 1966 to 1971, he was Assistant Professor of solid-state sciences at Princeton University.

Welch joined BNL in 1972 as an associate physicist. He rose to the rank of Physicist in 1975, and Senior Physicist in 1990. From 1990 to 1992, and from 1996 until June 2001, he served as Division Head of the Materials & Chemical Sciences Division under the Energy Sciences & Technology Department.

— Diane Greenberg

Healthfest 2001 Starts Monday: Your Participation Counts!

Healthfest 2001 — the Lab's 9th annual celebration of personal health, fitness and safety — will kick off this Monday, October 15, with a 2-mile Fitness Walk, preceded by an aerobic stretch.

For the complete list of athletic events and health-fair offerings, see the Bulletins of the preceding two weeks or the blue Healthfest flyers mailed to everyone on site. Or go to <http://www.bnl.gov/OCCMED/hpp/healthfest.htm>.

Everyone's participation in Healthfest is encouraged, and the department or division with the highest percentage participation will earn the second annual Healthfest Participation Award. Therefore, participants are asked to sign in at each and every Healthfest event that they attend.

For more information, contact Health Promotion Specialist Mary Wood, Ext. 5923.

Water Quality Booth at Healthfest 2001 Taste 'Brands' of Water; Test Your Own

At Healthfest's two-day fair, BNLeers again may not only participate in a drinking-water taste test — which sets BNL drinking water in competition with three other "brands" of drinking water — but they may also have samples of their home tap water tested for four parameters.

To participate, come to the BNL Water Quality Booth at 11 a.m.-2 p.m. on Wednesday and Thursday, October 17 & 18.

For the taste test, bring a thirst for drinking water and have an opinion about which is best and why. To have your water tested, bring a sample in a clean glass container about the size of a Mason jar.

Participants in both events will be asked to sign in. From each participant list, the name of one person will be randomly selected to win a water quality-related raffle prize.



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.

TB8246. ADMINISTRATIVE SECRETARY (A-2) – Requires a minimum of five years pertinent experience, a high level of proficiency in performing secretarial tasks, and comprehensive knowledge of Laboratory practices, policies and procedures. Will maintain confidential administrative records and reports; develop reports on spreadsheet, database, or file management software programs, and efficiently operate word processing and Lab-wide administrative computer systems. Will arrange conferences and meetings, travel (domestic and foreign), arrange appointments, services and be responsible for information gathering. Will provide administrative and secretarial support to the Group Leader, Systems Engineering & Safety Analysis Group, Nuclear Energy & Infrastructures Division. Energy Sciences & Technology Department.

TB8273. ADMINISTRATIVE ASSISTANT (A-4) – Requires an AAS in secretarial science or equivalent experience, extensive knowledge of Laboratory practices and procedures, excellent oral and written communication skills, and proficiency with MS Word, PowerPoint, Excel, IPAP, PeopleSoft, Credit Card System, GIS System, creating HTML files and working with databases. In addition, demonstrated initiative to develop and implement new approaches to work assignments, showing advanced skill levels, with proven ability to work independently, prioritize work load, exercise discretion and good judgement and be a team player, is required. Will provide administrative and secretarial support to the Head of the National Nuclear Data Center and all members of the Center, coordinating and directing all administrative functions of the Center, and when necessary, creating or modifying office procedures to implement changes and upgrades. Responsible to research and respond to programmatic queries from internal and external organizations, both national and international. Responsible for arranging and managing large national and international conferences using web technology. Will arrange and process domestic and foreign travel, maintain files and handle confidential matters. Energy Sciences & Technology Department.

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates.

MK2097. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in organic chemistry or closely related field and skills in analytical methods (PLC, NMR, FI-IR). Experience in radiochemistry and radiolabeling, knowledge of inorganic/coordination chemistry and experience with small animal experimentation desirable. Research will involve the development of tin-117m based radiopharmaceuticals for targeting estrogen receptors for breast cancer therapy. Under the direction of K. Kolsky, Medical Department.

MK2251. POSTDOCTORAL RESEARCH ASSOCIATES (Two positions) – Requires a Ph.D. and several years' experience in the field of either high energy or relativistic heavy ion physics. Knowledge of offline and online software at the infrastructure and application software levels for modern physics detectors or experience with silicon detectors is preferred. Position is with STAR, a large collider detector experiment at the Relativistic Heavy Ion Collider. Work will involve the search for a new state of matter thought to have existed shortly after the creation of the universe and individual will help support the STAR software infrastructure and the operation of the STAR Silicon Vertex Tracker, help to support the operation of the STAR detector, and play a strong role in the STAR scientific program. Under the direction of T. Hallman, Physics Department.

NS2013. PROJECT ENGINEER II/QA/QC CHEMIST (P-7, term appointment) Requires a bachelor's degree in chemistry or a related field, and a minimum of ten years' pertinent experience, including working at an environmental analytical laboratory. Knowledge of Oracle, GIS/Key, Excel and Word are necessary; experience with US EPA National and US EPA Region II data validation procedures, as well as US EPA and NYSDEC analytical and sampling methodologies is required. Knowledge of radiological analytical and validation methodologies is also desirable. Will be responsible for the verification/validation of environmental sampling data, providing technical expertise on environmental data QA/QC issues, and serving as the primary contact for contractor laboratory analytical issues with environmental analytical laboratories. Environmental Services Division.

NS2309. ADVANCED TECHNOLOGY ENGINEER (I-7) – Requires a bachelor's degree in information technology, physics or closely related field and at least five years experience with computing in support of large scale scientific computing. Knowledge of and experience with LINUX and Solaris system support and administration including networked file systems and other distributed computing tools and utilities also required; experience optimizing for reliability, availability, performance and/or security of computer systems is highly desirable. An advanced degree and experience in HEP/NP computing are also highly desirable as is programming experience using modern programming techniques and languages such as C++ and/or Java and experience with O-O databases, Object Brokers, Hierarchical Storage Managers (particularly HPSS), and robotic tape systems. Will participate in the analysis of HEP/NP user community requirements and the design, development and operation of computing facilities and infrastructure software intended to satisfy those requirements. If selected candidate possesses a Ph.D. in physics, this position may be filled as an ASSISTANT SCIENTIST (S-1). Physics Department.

TB2014. TECHNICAL SPECIALIST (T-2) – Requires high school diploma or GED. Ability to be respirator qualified is essential and fully qualified Radiological Control Technician (RCT) required. Must have or be capable of attaining 40-hr. HAZWOPER training. Will perform, document, and post radiological surveys and perform routine contamination and exposure surveys. Will provide field support in the area of ES&H services primarily in health physics specialty. Radiological Control Division (ERAP Eligible - \$1K).

TB2235. PRINCIPAL TECHNICIAN (TW-4, term appointment) - Requires an AAS degree (BS degree highly desirable) in a physical science (physics, chemistry, or engineering) or equivalent experience. Experience in the operation of UNIX computer operating systems, electromechanical debugging, troubleshooting, and excellent communication skills is desirable. Must have the ability to learn to operate complex apparatus and computer software. Under minimum supervision will assist users of the NSLS in the execution of x-ray diffraction experiments. Responsibilities include the maintenance and repair of apparatus, as well as the performance of routine computer operations. Biology Department. (ERAP Eligible - \$500)

Wanted: BNL Art and Crafts for Fall Show

BNL artists, sculptors, and crafters — your most beautiful, eye-catching work is needed for the BNL Art Society's upcoming Art and Crafts Exhibit to be held at Berkner Hall from Monday to Wednesday, November 19-21, 11:30 a.m. -1 p.m. An evening reception with refreshments will also be held on Monday, November 19, from 5 to 7:30 p.m.

BNL employees, retirees, facility users, guests of BNL, and family members 15 years and older may all contribute. More than one piece may be entered by an exhibitor, to be shown as space permits. This is the first year that art and crafts will be displayed in the same show, so make it a great occasion — bring your finest skilled and creative works for the Lab community to enjoy.

Exhibits for the show must be brought to Room D, Berkner Hall, the afternoon of Friday, November 16. To be included in the catalog, complete two forms for each work entered and return them by Thursday, November 8, to Robert Chrien, Bldg. 510A. More forms are at the BERA Store, Berkner Hall. Copies are acceptable.

Entry Form

BNL Art & Craft Exhibit, November 19-21, 2001

Name: _____ Home phone: _____
Name of BNL contact: _____ BNL extension: _____
Type of art/craft: (*painting, sculpture, photo, pottery, quilting, etc.*) _____

Title of work if there is one: _____
Description: (*medium/material, size*) _____

PLEASE PRINT CLEARLY AND RETURN TO ROBERT CHRIEN, BLDG. 510A, BY NOVEMBER 8TH

Happenings

Open 2 hour self-defense seminar hosted by East Coast Black Belt Academy. Friday October 19, 2001 7-9 p.m., \$25/person, 12 years and older, to benefit the Colin Gooley Fund. 924-2900.