



Roger Stoulenburgh D0631211

LAUNCHING THE L.I. STEM HUB

To Prepare Students for Careers in Science, Technology, Engineering, and Mathematics

About 250 educators, business representatives, and government officials attended the Long Island STEM Hub Summit at Farmingdale State College on December 6 to support the launch of a new initiative that will focus on preparing students to work in the Island's high-tech industries, which requires science, technology, engineering and mathematics (STEM) skills to support economic growth in the region.

One of 10 such programs being formed as part of the Empire State STEM Learning Network, the Long Island STEM Hub will develop a cohesive group of resources for local businesses, school districts, students, parents, teachers, universities, and worker-training operations to address STEM workforce needs in the region. The hub will support the coordination of local resources, including numerous partners who have already pledged their support for the initiative, to provide enhanced STEM learning opportunities and real-world STEM work experience training for students, teachers, and unemployed/underemployed or displaced workers, with the end

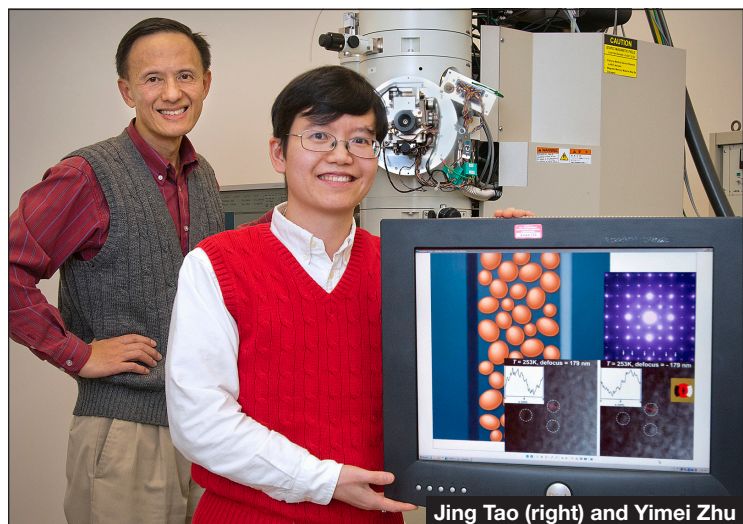
In the photo above: Some key Science, Technology, Engineering, and Mathematics (STEM) Hub partners are: (from left) Mark Grossman, Commissioner's Long Island Regional Representative, NYS Department of Labor; Mona Goldstein, Executive Director, LIRACHE (Long Island Regional Council on Higher Education); Ken White, Manager, BNL Office of Educational Programs; Cheryl Davidson, Executive Director, Long Island Works Coalition; Harriet Copel, Director, Long Island Museum of Science and Technology; Doon Gibbs, BNL Deputy Director for Science and Technology; Margaret Ashida, Director, Empire State STEM Learning Network; Joseph Cabral, Senior Vice President, Human Resources, North Shore-Long Island Jewish Health Systems; and Hubert Keen, President, Farmingdale State College.

goal of significantly boosting the Island's technical workforce.

BNL and Partners Lead STEM Hub Launch

BNL — in partnership with the Long Island Museum of Science and Technology (LIMSAT), the Long Island Works Coalition, and the Long Island Cradle of...

See *STEM Hub* on p. 2



Joseph Rubino D0631211

Colossal Conducting Variation At the Nanoscale

Colossal magnetoresistance phenomenon occurs when nanoclusters form at specific temperatures

Researchers at BNL and the Universidad San Francisco de Quito (USFQ) in Ecuador have found that, at just the right temperatures, nanoclusters form and improve the flow of electrical current through certain oxide materials. This work could be used in a number of industrial applications including spintronics, which exploit electrical and magnetic properties for use in solid-state electronics. The researchers' findings appeared in the *Proceedings of the National Academy of Sciences* during the week of December 12, 2011. The work completed at BNL was supported by DOE's Office of Science.

The unusually large varia-

tion in resistance to the flow of electricity in the presence of a magnetic field observed in some oxide materials is a phenomenon known as colossal magnetoresistance. The oxides involved in this research have a specific arrangement among the atoms that make up the material. The scientists found that, at particular temperatures in a magnetic field, nanoclusters about 10 atoms in size formed in these materials. These nanoclusters had electronic properties different from the material's whole and were essential to the emergence of colossal magnetoresistance.

See *Colossal Conducting* on p. 3

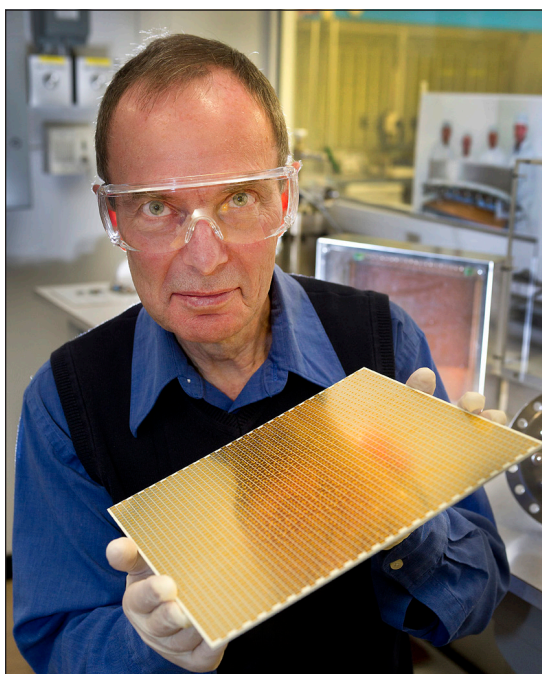
Graham Smith, Craig Woody Honored as IEEE Fellows

Graham Smith and Craig Woody, BNL physicists, have been named IEEE Fellows, effective January 1, 2012.

A worldwide organization with 385,000 members in 160 countries, the IEEE is a leading au-

thority on a wide variety of areas ranging from aerospace systems to consumer electronics. IEEE offers Fellowships to members of the organization who have an extraordinary record of accomplishments in any IEEE field of inter-

est. The total number of Fellows selected in any one year cannot exceed one-tenth of one percent of the total voting membership. Smith and Woody are among 329 individuals who have been chosen as Fellows for 2012.



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Graham Smith

Smith was cited "for contributions to the advancement of detectors for x-rays, charged particles and thermal neutrons."

"I'm very honored to receive this designation from IEEE," Smith said. "Throughout my career, I have been fortunate to work with colleagues whose talents have helped in the development of a number of innovative detector concepts, ultimately resulting in better science."

Smith has made significant contributions to both the understanding and performance of these detectors, with particular emphasis on gas-filled proportional detectors. He has designed state-of-the-art devices that have been used in a wide range of scientific disciplines, including x-ray astronomy, synchrotron science, plasma physics, neutron science, and high energy and nuclear physics.

See *IEEE Fellow Smith* on p. 2



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Craig Woody

Woody was cited "for the development of radiation detectors for high energy and nuclear physics, and medical imaging."

"I have been involved with IEEE for most of my career, so it is very satisfying to be honored as a Fellow," Woody said. "I'm glad that my basic research has led to several significant applications in particle physics and nuclear medicine."

Many detectors in particle accelerators use inorganic scintillating crystals to convert high energy photons into ultraviolet or visible light. Woody studies how these crystals work and how radiation affects their performance in these detectors. He and his collaborators have worked on radiation damage studies on numerous types of crystals, including some that were planned to be used at the Superconducting Supercollider, which has...

See *IEEE Fellow Woody* on p. 2

First Analysis of Tumor-Suppressor Interactions With Whole Genome In Normal Human Cells Reveals Key Differences With Cancer Cells

Findings point at link between tumor suppressor protein functions and human epigenome

Scientists investigating the interactions, or binding patterns, of a major tumor-suppressor protein known as p53 with the entire genome in normal human cells have turned up key differences from those observed in cancer cells. The distinct binding patterns reflect differences in the chromatin (the way DNA is packed with proteins), which may be important for understanding the function of the tumor suppressor protein in cancer cells. The study was conducted by scientists at BNL and collaborators at Cold Spring Harbor Laboratory, and is published in the December 15 issue of the journal *Cell Cycle*.

"No other study has shown such a dramatic difference in a tumor suppressor protein binding to DNA between normal and cancer-derived cells," said BNL's Krassimira Botcheva of the Biology Department, lead author on the paper. "This research makes it clear that it is essential to study p53 functions in both types of cells in the



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context of chromatin to gain a correct understanding of how p53 tumor suppression is affected by global epigenetic changes — modifications to DNA or chromatin — associated with cancer development."

This research, which was funded by the DOE Office of Science, lays groundwork for further advancing the detailed understanding of radiation effects, including low-dose radiation effects, on the human genome.

The analysis required custom-designed software developed by BNL bioinformatics specialist Sean McCorkle. The research team also includes BNL's John Dunn and (now retired) Carl Anderson, and Richard McCombie of Cold Spring Harbor Laboratory, where the high-throughput Illumina sequencing was done.

— Karen McNulty Walsh
For the full story on this research, go to www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=1351.

Funding of SGRID³ And STEM Hub Proposals

December 8, 2011 Statement by Sam Aronson, Lab Director

On behalf of the researchers and staff at Brookhaven Lab, we are all very excited to hear that the BNL/ Stony Brook University Smarter Grid Research, Innovation, Development, Demonstration, Deployment Center (SGRID³) proposal and our STEM Hub proposal are two of several regional projects that will receive significant funding from NY State to help advance economic development on Long Island. The announced funding awards (<http://www.governor.ny.gov/press/12082011RegionalCouncils>) include \$5 million for the SGRID³ proposal and \$320,000 for the STEM Hub initiative.

Solutions to today's energy challenges — which are incredibly complex and include significant obstacles — are often beyond the capabilities of any one utility, company, or government entity to solve. These complex challenges can only be addressed by a team of stakeholders working closely together, and BNL and SBU, in partnership with the NY State Smart Grid Consortium, now have the ability to lead such a team to develop our next-generation power grid through the SGRID³ initiative.

Just as important to our future is our ability to prepare students for the Island's high-tech workforce, which requires science, technology, engineering and mathematics (STEM) skills to support economic growth in the region. Today's STEM proposal award will help us build on the momentum we generated earlier this week (see story, p.1) when the Long Island Regional STEM Hub was launched, and work toward our goal of significantly boosting the Island's technical workforce.

I applaud Governor Andrew Cuomo for having the vision to energize the best minds throughout the state to work together and compete in ways that would advance the state and attract and retain business. I also commend the hard work of Lt. Governor Bob Duffy for his efforts to coordinate the Governor's Councils around the state and the members of the Strategic Planning Committee for taking on the difficult task of choosing the best proposals from a very competitive process.

Congratulations also go to Long Island Association President Kevin Law and Hofstra University President Stuart Rabinowitz, who headed the Long Island Regional Council. Their personal leadership skills enabled the council — under a very tight deadline — to develop strategies that would bring jobs and economic development to Long Island. Each and every project submitted contained valuable ideas for our region.

I also thank NY State Senator Ken LaValle and the many elected officials and business leaders who took an interest in learning what our proposals could do for Long Island — and for providing their support.

Finally, I congratulate the teams of leaders and researchers who developed the two proposals. For the SGRID³ proposal, credit goes to SBU President Sam Stanley; BNL's Deputy Director for Operations Mike Bebon and Associate Lab Directors Jim Misewich (Basic Energy Sciences) and Gerry Stokes (Global and Regional Solutions); SBU's Dean of the College of Engineering and Applied Sciences and Vice President for Economic Development Yacov Shamash and Director of Economic Development Ann-Marie Scheidt; and NY State Smart Grid Consortium Chairman Bob Catell and

IEEE Fellow Woody from p. 1 ...since been cancelled, and others that are currently in use at the Compact Muon Solenoid detector at the LHC. Woody's work has helped identify crystals that can survive very high radiation environments in accelerators.

With collaborators from Stony Brook University and the Weizmann Institute of Science in Israel, Woody developed a high-performance gas Cherenkov detector for the PHENIX experiment at RHIC, which is important for physicists to detect electron pairs resulting from heavy ion collisions, a signature of the quark-gluon plasma that is believed to be the type of matter that existed at the beginning of the universe.

In the medical field, Woody and his colleagues developed three patented technologies at BNL: the Compact Conscious Animal Positron Emission Tomography (PET) Scanner, named RatCAP, which can be attached directly to a rat's head for PET experiments, allowing the animal to be mobile and eliminating the need for anesthesia; a combined PET/MRI Scanner, which is being tested for possible use in breast cancer

IEEE Fellow Smith from p. 1

Among Smith's accomplishments is measuring the fundamental limits of gas-filled detectors, which enable synchrotron researchers to obtain the highest resolution images possible. He also developed cathode-readout designs that minimize the number of readout channels on detectors, thus reducing construction expense while retaining important experimental features needed in x-ray and neutron detectors, as well as in large particle detectors such as PHENIX at BNL's Relativistic Heavy Ion Collider (RHIC), and ATLAS at the Large Hadron Collider (LHC) at CERN. In addition, he has built complete x-ray detector systems for several synchrotrons, including BNL's National Synchrotron Light Source. He also

STEM Hub from p. 1

...Aviation, and many others — is the lead organization for launching the Long Island STEM Hub. Hubert Keen, president of Farmingdale State College, and Roger Tilles, a member of the New York State Board of Regents, welcomed participants attending the launch of this regional initiative. Joseph Cabral, senior vice president for human resources at North Shore Long Island Jewish Health Systems, discussed the challenges faced by the region's businesses in finding STEM workers and noted the need to prepare local youth for jobs on Long Island. Margaret Ashida, director of the Empire State STEM Learning Network, spoke of the importance of STEM capabilities and careers to the economic wellbeing of New

Executive Director David Manning. The team's vision for SGRID³ challenged our researchers to explore new ways of advancing energy research while creating jobs and producing economic development opportunities for Long Island and the region. BNL's Manager of Educational Programs Ken White and his staff are the driving force behind the STEM Hub proposal, in partnership with the Long Island Works Coalition.

detection and follow-up treatment; and a PET Wrist Scanner, which non-invasively measures the uptake of a radiotracer in a patient's blood while undergoing a PET scan.

After earning a B.A., M.A., and Ph.D. in physics at Johns Hopkins University in 1973, 1974, and 1978, respectively, Woody started his career as a postdoctoral research associate at the Stanford Linear Accelerator Center in 1978. A year later, he joined Brookhaven Lab as an assistant physicist. He was deputy group leader, then group leader, for the BNL PHENIX Group, from 1997 to 2001, and 2001 to 2008, respectively. He has been a senior physicist since 2001.

A senior member of IEEE, Woody has served on numerous committees and has held several posts in the organization, including president of the IEEE Nuclear and Plasma Sciences Society, from 2009 to 2010. Woody is also a Fellow of the American Physical Society, and he received an Outstanding Mentor Award from DOE's Science Undergraduate Laboratory Internship Program in 2009.

— Diane Greenberg

developed neutron detectors that are currently being used in major neutron research facilities in the U.S. and Australia.

Smith earned a B.Sc. in 1970 and Ph.D. in 1974, both in physics, from Durham University, England. Beginning in 1973, he was a research associate at the University of Leicester, England, before joining BNL in 1982 as an associate physicist in the Instrumentation Division. Currently a senior physicist with tenure, Smith received the Lab's Research & Development Award in 1996 and the IEEE's Long Island Regional Award for Contributions to High Energy Physics in 1998. Smith is a senior member of IEEE and has played major roles in the organization of annual IEEE conferences.

— Diane Greenberg

York State and the nation.

Ken White, manager of BNL's Office of Educational Programs, said, "Long Island has many businesses, as well as educational and scientific institutions, that need a technical workforce, but students are not pursuing studies in STEM, and young people are leaving Long Island when good jobs are available here. The goal of the STEM Hub is to create a pipeline of STEM-literate students who can compete in the local workplace. By making connections early on with business, students can identify career opportunities and help reverse the oft cited 'brain drain' taking place on Long Island." White then shared the draft goals and intent of the STEM Hub, noting that it is imperative to find a way to enable the business community to interact efficiently and effectively with academia and not-for-profit providers of STEM training.

'Portal to Discovery' at BNL

BNL Deputy Director for Science and Technology Doon Gibbs announced the formation of a science center serving families and schools called "Portal to Discovery" at the Lab. The Portal will initially consist of the Lab's existing science-learning

In Memoriam: Alan Raphael

Alan Raphael, a Project Engineer I in BNL's Modernization Project Office, died on November 21, 2011. He was 60.

Raphael joined the Lab on February 19, 1991 as Manager of Environmental Restoration in the Director's Office. In April of 1994, he moved to the Plant Engineering Division, then became part of the new Modernization Project Office on October 1, 2008.

Lanny Bates, Assistant Laboratory Director for Facility and Operations, said, "The loss of Alan was a shock and a surprise to all of us at BNL. Our hearts go out to his family and to all of those who were enriched by knowing him."

Raphael's supervisor was Richard Scheidet, Manager of the Modernization Project Office. "Alan was an exceptional civil engineer who was known for thinking out of the box," Scheidet said. "He was highly respected by all who worked with him, and his opinions on any project were always well worth getting. Major BNL projects that he has had a key role in include the Chilled Water Facility and, most recently, the Interdisciplinary Science Building, where he worked as Construction Manager with Project Manager Peggy Caradonna. This building incorporates special research facilities as well as being BNL's first "Gold" Leadership in Energy and Environmental Design effort, and Alan's knowledge and experience will be a real loss. He will be greatly missed."

In 2005, Raphael was honored with BNL's highest engineering award. To summarize his achievements and give an idea of how much he contributed to the Lab, the Bulletin reprints the award citation:

Alan Raphael, a project engineer in the Engineering and Construction Services Group of



Joseph Rubino 02641111

the Plant Engineering Division, is recognized for his record of performance on some of the most challenging civil engineering projects at BNL. He has been instrumental in completing numerous projects including the Central Steam System Improvements, Central Chilled Water Facility, Waste Management Facility, numerous environmental restoration projects, and storm water flooding issues at the Collider complex.

As an invaluable resource, Raphael is often specifically requested by departments to resolve critical civil engineering issues. He also serves as Chair of the BNL Site Development Committee, which makes full use of his knowledge, sound judgment, and expertise in deciding appropriate use and development of the BNL site. His many accomplishments have included three landfill caps, a railroad extension, several soil and tank removal projects, and two groundwater treatment systems.

Raphael has been challenged countless times with civil engineering problems on high value, high visibility projects. In each case, he demonstrated expertise and sound judgment in finding creative, cost-effective, and lasting solutions.

A resident of Blue Point, Alan Raphael is survived by his wife Suzanne, daughter Pamela, and son Christopher. — Liz Seubert

Science Learning Center Gift Sale Today, 12/6

Today, December 16, from noon to 2 p.m., a gift sale will be held at the Science Learning Center (in Bldg. 935), which is managed by the Lab's Office of Educational Programs. You'll find unique gifts and fun toys for all ages.

facilities and a partnership with the Long Island Museum of Science and Technology (LIMSAT), a not-for-profit institution dedicated to STEM education. BNL recently signed a Memorandum of Understanding with LIMSAT to collaborate on bringing more science-based programming to Long Island students, and to then work together to realize a prominent science center on Long Island. The Portal to Discovery will be an extension of the Lab's numerous educational programs that have been inspiring students to pursue careers in science and related fields for decades.

Grants, Checks Awarded

The partnership's first efforts are already yielding successful results. The Long Island Community Foundation (LICF) recently awarded a \$45,000 grant to LIMSAT, BNL, and the Long Island Works Coalition to support the STEM Hub and to provide programs for local underrepresented students and teachers. LICF recognized the potential for the STEM Hub and has chosen to seed its start with this funding, with a desire to see other funding sources also support the effort.

Gibbs named White as the founding director of the Portal

to Discovery, and introduced Harriet Copel, LIMSAT's executive director, both of whom are committed to bringing the Portal to Discovery to fruition.

Prior to closing the event, Gibbs awarded \$5,000 checks to the Paul J. Gelinas Junior High School and Smithtown East High School on behalf of Battelle Memorial Institute.

The Empire State STEM Learning Network initiative is part of a six-state consortium, supported by the Bill & Melinda Gates Foundation, Battelle, and the AT&T Foundation. The initiative aims to build the capacity of local communities to create and institute innovative and sustainable STEM schools, policies, programs, platforms, and partnerships to improve the college- and career-readiness of all students. Through its collaboration with the statewide network, Long Island will benefit from the experiences of other STEM Hubs in New York and other states.

For more information about the STEM Hub Summit, including a list of STEM Hub partners, see: www.bnl.gov/stemhub.

See SGRID³ story at left as well. — Diane Greenberg



Pictured together with Alfred P. Sloan officials and winners of other 2011 Sloan Awards at a November ceremony, Benefits Manager Denise DiMeglio (third from right) represented BNL to receive the 2011 Alfred P. Sloan Award for Business Excellence in Workplace Flexibility in Long Island.

BNL Recognized for Workplace Flexibility For Third Consecutive Year

BNL was selected by the When Work Works national team and its regional partner, the National Association of Mothers’ Centers (NAMC), as a recipient of the 2011 Alfred P. Sloan Award for Business Excellence in Workplace Flexibility in Long Island. The award places the winning organizations in the top 20 percent of employers nationally in terms of programs, policies and culture for creating an effective and flexible workplace, an assessment that is affirmed by the opinions of randomly selected employees during the selection process.

Denise DiMeglio, Benefits Manager in the Human Resources & Occupational Medicine Division (HROM), accepted the award on behalf of the Lab at the 16th Annual Work/Life Conference held on November 5.

“This is the third consecutive year that BNL has been selected for this award,” DiMeglio said. “Balancing work and family life is important to us at BNL, and the Lab offers benefits and flexible work options to staff that help make this ideal possible. HROM staff are committed to helping BNLers do their work while over-

coming unusual circumstances. We also welcome new ideas for workplace policies that may expand flexibility while retaining productivity.”

Lab employees have available several programs that support and encourage a balance of work and family, such as flexible schedules and telecommuting options that may be arranged with supervisory approval, quality day-care for employees’ infants and preschool children at an on-site Child Development Center, and an on-site summer camp open to children in the BNL community.

Employee benefits include programs for employee assistance, wellness, tuition assistance, adoption assistance, scholarships for employees’ children, and numerous possibilities for on-site recreation, including a gymnasium, tennis courts, and an Olympic-sized swimming pool. Most recently, the Lab has added a vacation donation program to assist employees who face a serious health condition for themselves or a family member when little paid time off is otherwise available.

BNL also offers on-site free financial counseling and retirement planning by qualified financial advisors, financial help for employees who are first-time home buyers, and on-the-job opportunities to help others in the community, including giving to the United Way, a food drive, a pet supplies drive, a school supplies drive, a blood drive, a toy drive, and the Adopt-a-Platoon program.

The When Work Works project is an initiative of the Families and Work Institute, a nonprofit, nonpartisan research organization that studies the changing workforce, family and community; the Institute for a Competitive Workforce, an affiliate of the U.S. Chamber of Commerce; and the Twiga Foundation, which promotes a family consciousness at home, in the workplace and in the community. Applicants for the awards are evaluated in a two-step process, which first compares the application with nationally representative data. If the applicant places in the top 20 percent, the institute proceeds to the next step, an employee survey to corroborate the employer responses.

Colossal Conducting from p. 1

“Until now, scientists could only speculate that nanoclusters play a critical role in colossal magnetoresistance. Our work pinpointing the nanoclusters with improved conductivity is a big step in understanding this phenomenon and the fundamental laws of materials,” said BNL physicist Jing Tao of the Condensed Matter Physics & Materials Science Department (CMPMS). She is lead author on the paper.

Other authors include Qing Jie, Marvin A. Schofield, LiJun Wu, Qiang Li, and Electron Microscopy & Nanostructure Group Leader Yimei Zhu, all from BNL, as well as Dario Niebieskikwiat, USFQ. Additional scanning experiments were conducted at the University of Illinois.

“As we cooled samples from room temperature to about 250 Kelvin (-23 degrees Celsius), we found that colossal magnetoresistance emerged as nanoclusters formed and became most dense,” Jing explained. “We saw the nanoclusters form and connect a path in the crystal, and the whole material became conducting.”

These nanoclusters were thought to only act as insulators with different magnetic properties, Jing added. This work shows that these properties are temperature dependent. In the presence of a magnetic field and at the

proper temperature, the nanoclusters become conductive and ferromagnetic to allow colossal magnetoresistance to occur.

For this research, scientists at the Universidad San Francisco de Quito in Ecuador grew crystals of manganite — manganese oxide doped with varying quantities of calcium and the rare-earth metal lanthanum. Scientists at BNL then bombarded the crystals with beams of high-powered, negatively charged electrons using the Lab’s Transmission Electron Microscope to study their properties. As the electrons passed through the crystal, the scientists analyzed their paths and energy levels to determine properties such as structure and magnetism, as well as the nanoclusters’ role in the emergence of colossal magnetoresistance.

“Thanks to the unique instruments at Brookhaven, we also found a new level of complexity in the material with colossal magnetoresistance,” said Tao. “We know now that these nanoclusters form and enable colossal magnetoresistance at certain temperatures, but we don’t yet know why or how they interact with the material as a whole.

“In the future, when we learn more about the nanoclusters — for example, the details of their structure and whether they are charged — we can begin to improve the electrical performance of these materials.” — Joe Gettler

Ballroom Dance Lessons: New Series Starts 1/4

The BNL Ballroom Dance Club will start a new series of six lessons on Wednesday, January 4, in the North Ballroom at the Brookhaven Center.

- 5.30 p.m. Beginner Cha-Cha
- 6.30 p.m. Intermediate Mambo
- 7.30 p.m. Intermediate Foxtrot

The cost is \$45/person for the six-week series. Classes are on Jan. 4, 11, 18, 25, and Feb. 1 and 8.

For registration information contact Vinita Ghosh, Ext. 6226, ghoshvj@bnl.gov; Arup Ghosh Ext. 3974, aghosh@bnl.gov; Mike Hanson, Ext. 2947, hanson@bnl.gov; or John Millener, Ext. 3853, millener@bnl.gov, or go to www.bnl.gov/bera/activities/dance/default.asp.

Classified Ads: from p.4.

Happenings

SHEN YUN PERFORMING ARTS – Jan.11-15, Lincoln Center. Experience world’s premier classical Chinese dance and music, shenyun-performingarts.org. georgewei@bnl.gov.

For Rent

- CALVERTON – 1 bdrm bsmt apt all new, sep ent, basic cable, utils incl. \$800/mo neg. 516-903-4783.
- CENTEREACH – 1 Lg BR avail. in 3 BR house. 2 full baths, office, l/r, granite kit, dw, w/d, backyard. All utils incl. except cable/i/net. 20 mins to BNL. \$800/mo. 646-326-7911.
- MANORVILLE – brand new 1 bdrm apt, kitch, l/r combo w/ceramic tile throughout, no smkg/pets, 1 mo rent/sec deposit inclcs util/cable. \$1,100/mo. 827-3516.
- MASTIC – 1 bdrm, kit l/r combo, priv.full bath, priv ent, quiet, own t/stat, util incl, nr LIRR, no smkg/pets, walk to shop, 7 min to Lab. One mo sec. \$750/mo neg. 339-3444.
- MIDDLE ISLAND – Lg. 1-bdrm bsmt apt, pvt ent, phone, cable, i/net, no pet/smkg, quiet, all incl, nr Lab., BNL/Stony Brook Univ. employee only. 1 mo. sec. \$850/mo. 672-2451.
- MIDDLE ISLAND - Artistlake Dr, 10 min drive to Lab, 1 big bdrm, UP flr, 900 SF. new appliance/decoration. \$900/m, no pets. 516-225-3848.
- NESCONSET – lg 1/full br apt w/wic, w/tub/full kit, d/r, 2nd flr, v/clean, closets/rec painted/laminate wood flrs, inclcs all utils/ off st prkg. \$1,250/mo. 516-330-7833.

BERA Fitness Classes

Please register in advance — paid registration is needed to secure instructors. Make checks payable to BERA and mail to the Recreation Office in Bldg. 400A. Classes cannot be prorated.

Aqua Aerobics: Tuesdays and Thursdays from 5:30 - 6:30 p.m. at the pool (Bldg. 478). Nine-week session starts on January 3, ends March 1. Once/week: \$36, twice/week: \$70

Pilates: Tuesdays from noon until 1 p.m. in the Rec Hall (Bldg. 317). Nine-week session starts on January 3, ends February 28. \$45

Yogalates: Mondays from noon until 1 p.m. in the Rec Hall (Bldg. 317). Ten-week session starts on January 9, ends March 26. \$50

Zumba: Tuesdays from noon until 1 p.m. in the gym (Bldg. 461) and Wednesdays from 5:15 p.m. until 6:15 in the Rec Hall (Bldg. 317). Nine-week session starts on January 3, ends February 29. Once/week: \$45, twice/week: \$80

BERA News

Holiday Party at the Crowne Plaza in Holtsville, Friday, 12/16, 7-midnight. \$60pp includes: open bar 7-11 p.m., hors d’oeuvres, dinner buffet, dessert, DJ, raffle prizes! Bonus! Want to stay at the Plaza? Special \$79 + tax rate with breakfast.

Toy Drive in Progress!

See bins in 400 & 488. Bring new unwrapped toys for tots, kids, who won’t have any without you.

Stocking Stuffers. The BERA store carries discount movie tickets to a variety of local theatres, discounted admission to Atlantis Marine World, greeting cards, and lots of fun toys & souvenirs. Stop in! (NOTE: The store will close Friday, 12/23, and reopen Tuesday, 1/3.)

CALENDAR

Today, Friday, 12/16

*Science Learning Center Gift Sale
Noon-2 p.m. See notice.

— WEEK OF 12/19 —

Monday, 12/19

Holiday Party With Santa
5 p.m. Recreation Hall.

Friday, 12/23

Christmas Eve Observed.
Lab Half Holiday.

— WEEK OF 12/26 —

Monday, 12/26

Christmas Day Observed.
Lab Holiday.

No Bulletin this week.

— WEEK OF 1/2 —

Monday, 1/2/2012

New Year’s Day Observed,
Lab Holiday

No Bulletin this week.

— WEEK OF 1/9 —

Wednesday, 1/11

BSA Noon Recital, String Quartet
Noon. Berkner Hall. The Voxare String Quartet will play music of Soviet-era Russian composers. All are welcome to this free public concert, sponsored by Brookhaven Science Associates.

— WEEK OF 1/16 —

Monday, 1/16

Martin Luther King Jr. Day,
Floating Holiday: Lab Closed

Wednesday, 1/18

474th Brookhaven Lecture
4 p.m. Berkner Hall. Oleg Gang of the Center for Functional Nanomaterials will speak on a topic to be announced. All are welcome to this free lecture, open to the public.

NOTE: No IBEW Meeting in December 2011. Date for January 2012 meeting to be announced.

United Way Pledge Forms Due 1/6/12

Arrivals & Departures

— Arrivals —

Caitlin Harper..... C-AD
Russell Sullivan..... PPM

— Departures —

Stephanus Axnanda.....Chemistry
Daniel Orsatti.....ITD
Alexandra Pulecio CEGPA

SBU-BNL Research Seed Grants 2012

The SBU-BNL Seed Grant program serves to foster and build collaborative efforts between Stony Brook University (SBU) and BNL. For this 14th year, a pool of approximately \$150,000 will be distributed to proposals submitted jointly by SBU and BNL scientists. BNL matching funds may be available for proposals of special interest to the Lab. Typical awarded budgets range between \$10,000 and \$50,000 per project.

Current strategic initiatives are in Energy (Smart Grid, Energy Storage), High-Performance Computing, the Joint Photon Science Institute, and Bio-Imaging. Proposals that enhance other BNL-SBU collaborations are also welcome. More information is available at: www.stonybrook.edu/commcms/bnl/seedgrants.html.

Deadline for proposal submissions: 5 p.m. (EST), Friday, March 2, 2012

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 benefits-eligible employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present benefits-eligible 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. Access current job openings on the World Wide Web at www.bnl.gov/HR/jobs/.

To apply for a position, go to www.bnl.gov. Select "Job Opportunities," then "Search Job List."

LABORATORY RECRUITMENT - Opportunities for Laboratory employees only.

ELECTRICIAN POSITIONS (TEMPORARY) - Under minimum supervision lays out, constructs, installs, maintains, repairs and operates (in accordance with the national electrical codes, or as other wise directed) electrical systems, equipment, controls and related devices. May be required to perform similar duties on other than maintenance division equipment and facilities. Site Resources Division. Apply to Job ID # 15970

PLUMBER POSITIONS (TEMPORARY) - Under minimum supervision lays out, constructs or installs, repairs, and maintains water and gas distribution systems, related facilities and auxiliary equipment and equipment utilizing water, gas and heat distribution services. Site Resources Division. Apply to Job ID # 15971.

OPEN RECRUITMENT - Opportunities for Lab employees and outside candidates.

RIGGER /MASTER RIGGER POSITIONS (LG-7/LG-8) (TEMPORARY) - Requires CDL "A" license with Hazmat and Tank endorsements. Must successfully pass a physical exam which includes at-hire and random drug and alcohol screening. Must be able to relocate heavy machinery/equipment by attaching rigging to move, lift and/or hoist with cranes and/or forklifts. Control movement of heavy equipment through narrow openings or confined spaces, using chain falls, pallet jacks, vault jacks, air mats or other equipment. Dismantle, inspect and store rigging equipment after use. Manipulate rigging lines, hoists, and pulling gear to move or support materials. Select gear such as slings, pulleys, and winches, according to load weights and sizes. Signal or verbally direct workers engaged in hoisting and moving loads, in order to ensure safety of workers and materials. Tilt and turn suspended loads to maneuver over, under or around obstacles, using multi-point suspension techniques. Use hand signals and other means to direct crane operators and help guide the objects into place. Must be comfortable working in all weather conditions, at heights and available to work overtime. Must be available for snow removal duties when and as required. Must have:

- Knowledge of rigging tools, their capacities and their limitations, in every lifting operation from routine to complex, i.e., slings, come-alongs, shackles, eyebolts, chain falls, cranes, rope, jacks etc.
- The ability to assess and implement proper rigging techniques used while moving or transporting an object of substantial weight or fragile composition is mandatory.
- Education: High School Diploma required with courses in advanced mathematics and blue print reading highly desired
- Must have a minimum of ten years' documented rigging experience
- General Rigger Certification from nationally recognized accredited organization a plus. Will be placed at the LG-7 or LG-8 level depending on depth, breadth of relevant knowledge, skills and certification." Site Resources Division. Apply to Job ID # 15972 .

Motor Vehicles & Supplies

07 CADILLAC DTS - 37.85K mi. MINT cond. White w black leather int. See kbb.com for equipment. \$16,500. 754-0422.
07 VW GTI - 48K mi. 2007 GTI - black, four door, new tires, great condition. \$14,000 neg. Vera, Ext. 5843, 922-1664.
03 NISSAN ALTIMA SL - 118K mi. a/t, all pwr, heated seats, keyless ent, Bose syst, s/roof, more. \$6,500 neg. 831-2348.
97 FORD TAURUS G - 170K mi. 6 cyl, 2nd owner, gd runng cond, moving must sell. \$1,400 neg. Rubi, 344-2309.
97 MAZDA 626 - 72K mi. Fully loaded, leather, pwr m/roof, alloy wheels, new brakes, tune up,. \$4,200 neg. 681-9800.
96 NISSAN ALTIMA GXE - 147K mi. gd cond, 4cyl, 4dr, a/t, a/c, p/b, l/s, new p/s pump/steor/brakes, gd tires. \$1,700 neg. 929-6571.
CHROME RIMS - 20" Universal Chrome rims, gd cond w/gd tires, \$575/neg. Ext. 7216.
TOOL BOX - Weather Guard Steel for truck bed, pd/\$700, \$300/neg, 18 1/2h, 20 1/4w, 62/L, pics 255-7443.



The F&O team members who received certification are holding wooden placards, from left: Brian Hobson, Sania Thomas, Eric Dalen, Andrew Trent, Barbara Calle, Mike Millardi, Vincent Rodowicz, Lenny Tyre, Tom Pope, Mel Bonanno, Tina Trotman, Ulysses Tapley, and Susan White.

Prepared for Hazardous Work: F&O Team Gets Chainsaw Certification

The week following the 14th annual New York Wildfire Academy at BNL, Academy Coordinator Chuck Hamilton returned with his team of instructors to train and certify a group of Facility & Operations (F&O) employees in chainsaw use.

"Before this training, some of the workers had never even started a chainsaw," Hamilton said. "Now they're like steely-eyed veterans."

Hamilton noted that even before the training, the entire F&O team demonstrated their commitment to safety.

"My instructors and I were definitely impressed," he said. "Their focus was on safety — and not just their own personal safety, but the safety of their co-workers, too."

Barbara Calle was one of the F&O team members who had never started up a chainsaw be-

"The training was very thorough. We learned it the right way, the safe way. For me, this was an opportunity to add to my skills, to advance."

— Barbara Calle
F&O Site Services

fore, let alone felled a tree. Now she's prepared to use this tool and she's armed with the knowledge to do the job right.

Calle is on the team that clears snow and salts the Lab's roads after winter storms, so she's no stranger to sometimes

hazardous outdoor work.

"The training was very thorough. We learned it the right way, the safe way. For me, this was an opportunity to add to my skills, to advance. And now I can do even more here in my job at the Lab. The training was great — I just wish it lasted longer," she said. "And when the Academy team comes back, I'll take the next training, absolutely."

Tom Lambertson, Site Services Division Manager, said his overall goal is to have a safe workforce. When he saw the work being done during the Wildfire Academy, he knew he wanted that same type of expert knowledge and experience in the hands of his team.

"All the folks who took this will be able to work safely with chainsaws," Lambertson said. "Chuck and his team are expert instructors. No student goes through this training without becoming a safety expert him or herself."

To that end, the newly-certified F&O employees received their certificates in a unique way: on personalized wood slabs they themselves had cut earlier in the training.

"Each class, I try to do something different," Hamilton said. "And for this class, for their dedication and commitment to safety, we knew something special was in order."

— Will Safer

Safety makes science possible
at Brookhaven National Laboratory
<http://intranet.bnl.gov/safety>

TRAILER - 4 ft by 8 ft storable fold up trailer, w/spare tire & side rails - \$200 or best offer. Pat, 922-1664, pzoccoli@bnl.gov.

Boats

9' DYER DHOW - '68 full sailing rig, 2pc aluminum mast boom, new sail, '06 2HP Honda outbrd. \$1,000 neg. Fred, 681-3015.

Audio, Video & Computers

2 TVS - 26" esa/\$25; 15" Sharp/\$15. Lynda, Ext. 7235 or fitz@bnl.gov.
ACER WINDOWS 7 DESKTOP - 4gb Ram, 120gb HD, Win 7 64-bit, Office 2007 suite, anti-virus software. Ask \$200. Ext. 2122.
GATEWAY 556GE - desktop tower only, P4 3Ghz, new 250GB HD, 1GB ram, fresh load Windows XP/\$75. Ext. 3970.
NIKON D300 - incl spare batt./\$850; tokin 11-16mm w/ oya uv filter/\$600, both like new in box, SB600 flash/\$175. Ext. 3970.
TOMTOM VIA 1405 GPS - unopened, map coverage of U.S., Canada, Mexico. 7 million+ pnts of int. \$120. aabeykoon@bnl.gov.
TOSHIBA 24 - old but in gd working cond/\$30; TV stand/\$10. Rubi, 229-7464.
USB TO PARALLEL PRINTER CABLE - unused, Sabrent USB 2.0 to Parallel Printer Cable, 6' \$5. Scott, Ext. 2991.

Furnishings & Appliances

AIR CONDITIONERS - 4 Frigidaire, excel. cond., used 2 seasons, 2/8,000, 2/6,000 btu, \$60 & \$50 ea. Ext. 2347 or 929-6442.
BEDROOM SET - Girl's bedroom set w/ twin trundle bed, dresser, desk, chair. White Oak. Ask \$500. Laurie, 419-6854.
BROYHILL WALL UNIT - 3 pc entertainment cntr, lighted cntr curio, glass shelves. 90W x 75.5H x18D. Ask \$650. Pickup only. Ext. 5037.
CAPTAIN'S BED - twin w/6 drawers, dk wood, \$75. Ext. 3461 or salwen@bnl.gov.
CHILDREN'S BEDROOM SET - head/footboard, nightstand, dresser & trunk, light oak, excel cond, pics. \$350. 553-0522.
COMPUTER DESK/HUTCH COMBO - cherry finish, 54w x 24d, orig/\$250, ask/\$75/ea, 8-10pcs avail, excel cond. 804-6262.
DINING SET - Table, 2/leaves, pads, 109", 2 arm, 6 side chrs, china cab w/glass, lighting, \$1650, \$890/table, \$890/cabinet. 767-5205.
DINING SET, BED SET - 7pc Marble/brwn,

tbl, lthr chrs, \$650, q/bdrm set w/hd brd, side closets/ \$350 friendly_being@hotmail.com.
MICROWAVE - purchased 6/mos ago, need to move, selling it less than half, \$30. Rubi, 344-2309 or gul@bnl.gov.
OUTDOOR TEAK SHOWER - All Teak Hot/Cold w/soap dish, rainfall shower head. Never used. \$150. Sam, Ext. 2410.
PAPASON CHAIR - aprox 4ft round, \$30 obo. Blue/wht cushion, free, w/chair frame. pics: lauren.nash@noaa.gov, 816-739-1012.
PLATFORM BED - White formica, fits qu/ full mattress, storage hdbd. \$50. 645-1349.
WALNUT BEDRM - Danish Modern American, all wood, excel cond, 2/dressers, mirror, 2/night tables pics, \$500. 804-2785.

Sports, Hobbies & Pets

8' POOL TABLE - mahogany, w/leather pockets, excel cond. w/wall rack. Moving, must sell. Orig \$5K, Sacrif. \$900. 767-5205.
ADOPT 6 YR OLD MALE AKITA - Akita Rescue placing beautiful 6 yr old male. Prefer home without other small pets. 661-4892.
BIKE, GIRL'S - 10 speed, cute, pink. Needs tune-up. Robin, 744-3902.
BIKE TIRES, TUBES - pr 700x35 Forté Metro-K tires fr Performance Bike & 4 tubes, like new; perf. for hybrid bikes, \$25/all. Ext. 5669.
DECORATIVE PAINTING - wood bowls, boxes, sleds, benches, etc. for painting, have pic. Rich, Ext. 7013 or derocher@bnl.gov.
FENDER BLUES DELUXE AMP - Fender Blues Deluxe Reissue, 40w Tube, 1x12, 2 channels, Footswitch & cover, \$375. Ext. 8186.
FENDER STRATOCASTER - Olympic White, Maple Neck,Upgrades> Big Steel Trem block, more, case, Excel Cond. \$375. Rich, Ext. 8186.
GUITAR - Jackson "V" w/hard case, Randy Rhodes Ed, metallic blue w/chrome hware, owned since new, b/o or trade. 816-3554.
MOUNTAIN BIKE - next powerclimber, womans', pink, great cond/\$50. Sam, Ext. 2410 or dharkins@bnl.gov.
OLD SKIS & WAKE BOARD - Obrian Bonzai w/board. \$25. Adult Rossignal/strato skis, kids' Volki/presto skis, \$40. Sam, Ext. 2410.
POOL TABLE - Mizerak Pool Table, Space saver,w/balls, rack, cover, 1 stick. Legs remove \$75. Rich, Ext. 8186.
SKIS - Cross Country Skis 190cm and Boots size 6. all \$25. Robert, Ext. 4637.

SNOWBOARDS - (162,142), clothing, Mens 9&9.5 Burton boots, Ext. 7410.
SNOWBOARD - 149 cm, Technine bindings, \$200, Vans boots w. sz 9.5, \$50, Air-walk boots m sz 8, \$40, Burton travel bag, \$30, Boeri helmet child size, \$30. 929-6189.
SPORTS MEMORABILIA - whole collection, valuable, collectible stuff, Mickey Mantles, Dimaggios, etc, up till 90's. 816-3554.
WET SUIT - 3mm, full, 1/pc, teen sz, \$50. Bill, Ext. 2906, 929-6189.

Tools, House & Garden

OIL BURNER HEAD - Rlello 40F5/used, working when taken out of service, gd to refurbish or for parts. Howard, Ext. 3198.
THERMOSTATS - 3 Honeywell, hot/cold, 2 programmable, \$35, \$30, \$20. Ext. 2347.
DOOR - SmoothStar ThermoTru 4 Panel Door Entry Syst (3'x6'8" w/2 Sidelights 14"X6'8"). Needs reframing. \$500. 516-662-0967.
U.S. ARMY GENERATOR - on trailer, gas, 5kw, 110v's & 220v's w/cord, PTO attachmnt, runs, needs work. Mil-Spec w/labels. 816-3554.

Miscellaneous

BABY STROLLER - Folding stroller with hood, cushioned seat, sturdy with swivel wheels. \$25. Ext. 5080, 766-7701.
BASEBALL CARDS - Hundreds of 1970-80's baseball cards for sale. Excel cond. \$250 or best offer. Townsend, Ext. 4248.
BASINETT - BLUE TOILE/CREAM - Like New Cond \$40 obo. 6 basinett sheets - also like new. Ext. 7007 or luhrs@bnl.gov.
CHRISTMAS TREE DECORATOR - let a professional decorate your real/fake tree. av. cost is \$55. 384-2467.
CHRISTMAS TREE NECKLACES - 2 avail, glass trees w/red velvet-like cord/\$5/ea. Kathleen, Ext. 7114.
DEPT 56 DICKENS VILLAGE - More than 65 major houses, accessories, plus Ho Train sets. Reasonable. 871-3533.
GRISWOLD CAST IRON FRYING PANS - No. 3, 6"/dia, \$25, No. 10, 11 1/2" dia. \$55. Cindy, Ext. 3461 or salwen@bnl.gov.
MAPLE SYRUP - from my family's farm in Vermont, \$20/qt, \$58/gal. 744-1112.
THANK YOU - to all who generously provided donations for the "2011 United Way Holiday Boutique."Alexa, Ext. 5555.

VEGETABLE DISH - divided, Franciscan Desert Rose/\$10. Steven, 744-3902.

Free

2012 SHEN YUN DESK CALENDAR - of classical Chinese dancer, please contact me if you like one. georgewei@bnl.gov.
FISH TANK - Hexagon-shaped, about 1ft x 1ft. w/supplies: food, filters, rocks, more. Ext. 4731 or pizzulli@bnl.gov.

Wanted

ADOPT-A-PLATOON - Monetary donations gratefully accepted towards mailing shipments to our platoon stationed overseas and to send goodie packages to BNL family members. Thank you. Joanne, Ext. 8481.
BNL FAMILY MEMBERS IN MILITARY - If you have a family member deployed overseas, please contact Adopt-a-Platoon so we may send them a goodie package. Thank you. Joanne, Ext. 8481.
COMPUTER MONITOR - flat, LCD, blk, no dead pixels. Sandy, Ext. 2922 or fosters@bnl.gov.
EXTERIOR HOUSE PAINT - any color. slattuca@bnl.gov.
MATTRESS - q/box spring/headboard if you have one); Appreciate it! Rick, Ext. 3005 or rbuono@bnl.gov.
NEW/GENTLY USED WINTER CLOTHES - Thee Island INN Soup Kitchen needs new or gently used winter coats, hats, gloves, scarves, sweaters & blankets for our guests in Middle Island & local surrounding communities. Barbara, royce@bnl.gov.
STAKE TRUCK - sm/used, reasonably priced, sell outright or trade for '03 GMC Savana work van. Peter, Ext. 7657.

Lost & Found

EYE GLASSES - Lost my glasses w/black plastic frame. Ext. 2984, hossain@bnl.gov.
GOLD HOOP EARING - w/red & green stones, lost around bldg 134 area, sentimental value. Denise, Ext. 5873.
LOST WALLET - Monday 12/5, ITD/BCF/BIOL area, if found, please call! 680-5118.

The classified ads are continued on p. 3.