News

Argonne NATIONAL LABORATORY

February 11, 2008 Volume 61, No. 3

Breakthrough may revolutionize ethylene production

Jared Sagoff

A new environmentally friendly technology created by scientists at Argonne may revolutionize the production of the world's most commonly produced organic compound, ethylene.

An Argonne research team led by senior ceramist Balu Balachandran (ES) devised a high-temperature membrane that can produce ethylene from an ethane stream by removing pure hydrogen. "This is a clean, energy-efficient way of producing a chemical that before required methods that were expensive and wasteful and also emitted a great deal of pollution," Balachandran said.

Ethylene has a vast number of uses in all aspects of industry. Farmers and horticulturists use it as a plant hormone to promote flowering and ripening, especially in bananas. Doctors and surgeons have long used ethylene as an anesthetic, while ethylene-based polymers can be found in everything from freezer bags to fiberglass.

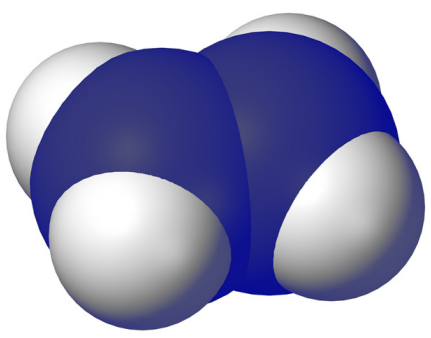
Because the new membrane lets only hydrogen pass through it, the ethane stream does not come into contact with atmospheric oxygen and nitrogen, preventing the creation of a miasma of greenhouse gases — nitrogen oxide, carbon dioxide and carbon monoxide — associated with the traditional production of ethylene by pyrolysis, in which ethane is exposed to jets of hot steam. The world's ethylene producers manufacture more than 75 million metric tons of ethylene per year, causing millions of metric tons' worth of greenhouse gas emissions. Unlike pyrolysis, which requires the constant input of heat, the hydrogen transport membrane (HTM) produces the fuel needed in order to drive the reaction. By using air on one side of the membrane, the already-transported hydrogen can react with oxygen to provide energy. "By using this membrane, we essentially enable the reaction to feed itself," Balachandran said. "The heat is produced where it is needed."

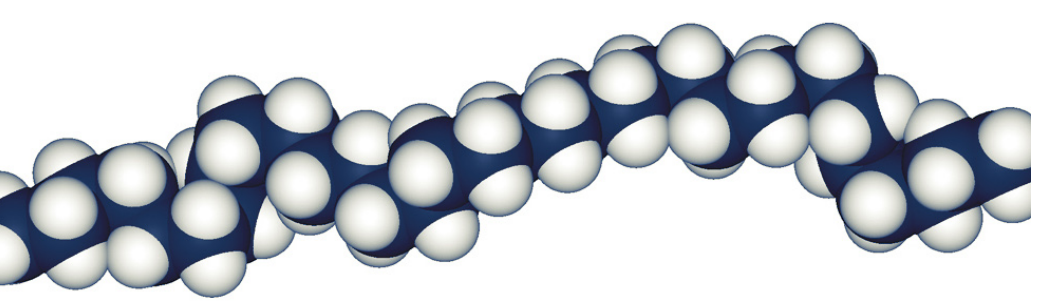
The new membrane reactor also performs an additional chemical trick: by constantly removing hydrogen from the stream, the membrane alters the ratio of reactants to products, enabling the reaction to make more ethylene that it theoretically could have before reaching equilibrium. "We are essentially confusing or cheating the thermodynamic limit," Balachandran said. "The membrane reactor thinks: 'hey, I haven't reached equilibrium yet, let me take this reaction forward.'"

While Balachandran's team, which included chemists Stephen Dorris (ES), Tae Lee (ES), Chris Marshall (CSE) and Charles Scouton, designed this experiment merely to prove the membrane's capability to produce ethylene, he hopes to extend the project by pairing with an industrial partner who would produce the membranes commercially.

Because the membrane reduces the number of steps required to produce ethylene, the technology could enable the chemical to be produced more cheaply, he said.

The results of the research are expected to be presented at the 2008 Clean Technology conference in Boston in June. The work was funded by the Department of Energy's Industrial Technology Program, which resides within its Office of Energy Efficiency and Renewable Energy.





Ethylene is extremely important in industry and even has a role in biology as a hormone. Ethylene is the most produced organic compound in the world. Chains of ethylene molecules can form polyethylene, a thermoplastic heavily used in consumer products. More than 60 million tons of the material are produced worldwide each year.

Pressure reveals clues to magnetism

Scientists have discovered that the magnetic strength of magnetite — the most abundant magnetic mineral on Earth — declines drastically when put under pressure.

Researchers from the Carnegie Institution's Geophysical Laboratory, together with colleagues at Argonne's Advanced Photon Source, have found that when magnetite is subjected to pressures between 120,000 and 160,000 times atmospheric pressure its magnetic strength declines by half. They discovered that the change is due to what is called electron spin pairing.

Magnetism comes from unpaired electrons in magnetic materials. The strength of a magnet is a result of the spin of unpaired electrons and how the spins of different electrons are aligned with one another. This research showed that the drop in magnetism was due to a decrease in the number of unpaired electrons.

"Magnetite is found in small quantities in certain bacteria, in brains of some birds and insects, and even in humans," commented Yang Ding, the study's lead author with the Carnegie-led High-Pressure Synergetic Consortium. "Early navigators used it to find the magnetic North Pole and birds use it for their navigation. And now it is used in nanotechnology. There is intense scientific interest in its properties. Understanding the behavior of magnetite is difficult because the strong interaction among its electrons complicates its electronic structure and magnetic properties."

To study the mineral, the researchers developed and applied a novel technique, called X-ray Magnetic Circular Dichroism (XMCD) at the Advanced Photon Source. The technique uses high-brilliance circularly polarized X-rays to probe the magnetic state of magnetite as a diamond anvil cell subjects a sample to many hundreds of thousands of atmospheres of pressure. The researchers combined their experimental results with theoretical calculations by collaborators to pinpoint why the magnetic strength changes. The study, to be published in February in Physical Review Letters, reveals the electron-spin configuration in the iron sites of the mineral to be the origin of the phenomenon.

This discovery not only shows the profound effects of pressure on magnetism, it also discloses, for the first time,

See "Magnetism" on page 2

Lab makes significant organizational structure, personnel changes

Robert Rosner, Argonne Director

I write today to announce a significant reorganization of laboratory management and programmatic structure, and to explain to you the genesis of these changes as well as their impact.

Over the past two years, we have all worked closely together toward a strategic vision wherein Argonne is the place "where scientists and engineers come together to open up new possibilities for the future."

As we all know, achieving this vision requires greater integration of our research programs and administrative functions as well as increasingly strong collaborative external relations. We have made significant strides in these areas and will continue to do so.

In addition, Argonne is now facing greater operational, financial and compliance challenges, including the budget impact of the recent funding bill passed by Congress. To address this effectively over both the short and long term, I have asked Don Joyce to assume a new role focused on major sponsor relations, effective immediately.

As we continue to develop our Laboratory Management System, we have recognized many ways to be more accountable, effective and transparent. Foremost is the consolidation of all operational responsibilities under a single deputy laboratory director for operations/chief operating officer position.

Therefore I am taking the following actions, effective Jan. 29, to consolidate:

• Steve Richardson, vice president of federal programs for Jacobs Engineering,

will serve as acting deputy laboratory

See "Lab organization" on page 2

UChicago Argonne LLC

Office of Science U.S. DEPARTMENT OF ENERGY

ARGONNE NATIONAL LABORATORY IS MANAGED BY UCHICAGO ARGONNE, LLC FOR THE U.S. DEPARTMENT OF ENERGY

Lab organization

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director for operations and chief operating officer. William "Bo" Arnold, current associate laboratory director for operations and business management, will become deputy COO and assist Steve as he transitions into his new role. Finally, Steve's oversight of the Operations and Business Management organization will be expanded to include the Office of Technology Transfer and the Legal Department.

• Renee Carder, who had been deputy to the laboratory director, will fill the new position of chief of staff. In this capacity, Renee will work with the laboratory director, chief scientist and deputy for operations to ensure the coordination of the laboratory's institutional strategy with its execution. Renee's responsibilities include oversight of Government Affairs and Communications & Public Affairs, which encompasses internal and external communications, media relations and community partnerships.

• Stuart Meredith, former associate director for performance assurance and reporting, is appointed director, compliance and oversight. Stuart will report directly to the laboratory director.

• Bill Beach, former interim head of the Nuclear Operations Division, will become special assistant to the director, assume responsibility for ESH&Q and Performance Assurance, and continue his oversight of Nuclear Operations. Bill will continue to report to the laboratory director in his new role and over time will appropriately transition oversight of these functions to the deputy for operations/chief operating officer. Bob McCook will report to Bill Beach.

The four current programmatic associate laboratory directorships will be re-aligned to reflect our strategic intention. All ALDships will report to the laboratory director. The new structure is as follows:

• The Fundamental Physics Directorate will be under the acting leadership of Michael Turner while a search is launched. Michael will also continue in the role of chief scientist and director of strategic planning. This directorate currently encompasses two activities, Nuclear Physics and High Energy Physics, in which Argonne has a tremendous record of accomplishment and a bright future. Both Nuclear Physics and High Energy Physics are strengthening their alignment with the U.S. Department of Energy by broadening their portfolios to include astrophysics. Nuclear Physics is also preparing to compete for the Rare Isotope Beam Facility.

• The Energy Sciences and Engineering Directorate will be headed by Associate Laboratory Director Al Sattelberger. This directorate is strategically focused on bringing Argonne's full capabilities in basic and applied science to bear on the nation's energy and national security problems, and spans the continuum of research, development, and deployment. A search for a deputy with a strong background in engineering and technology will be launched immediately.

• The Computing, Environment and Life Science Directorate will include the Environmental Science Division and the Atmospheric Radiation Measurement program from the Decision and Information Sciences Division. These organizational moves will strengthen Argonne's capability to develop strategic programs in climate research and develop new methods and computational technology for environmental assessment, planning and policy development.

• The Institute for Genomics and Systems Biology and the Computation Institute will report directly to the Computational, Environmental and Life Sciences Directorate under the leadership of Associate Laboratory Director Rick Stevens.

• Associate Laboratory Director Murray Gibson will continue to head the Scientific User Facilities ALDship. Budget cuts to the IPNS and APS will require his exceptional leadership.

• Michael Bartos will step down as chief financial officer. Elizabeth O'Connor, currently assistant chief financial officer, has agreed to accept additional responsibilities as our new acting chief financial officer.

• William Luck has been reassigned to a different role in the Legal Office, and Lynn Miller has agreed to accept additional responsibilities as Argonne's acting chief counsel.

National searches will be launched immediately to fill permanent positions for deputy laboratory director for operations/chief operating officer, chief counsel, chief financial officer, associate laboratory director for fundamental physics, and deputy associate laboratory director for energy sciences and engineering. I anticipate these searches will be concluded by the end of the calendar year. In the interim, I am confident that this team can lead us through what will be a critical transition.

A copy of the updated organization chart is available online.

I want to thank my senior management team for their leadership and dedicated service to Argonne. Under their collective leadership we successfully competed for the new contract to manage the lab; strengthened our relationships with key partners; developed a vision for Argonne's future that builds on our scientific strengths; and took important steps toward implementing our strategic goals. They have guided us through a challenging time, and I thank them for their contributions to Argonne's continued success.

www.ipd.anl.gov/anl_org_chart/

Magnetism

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that pressure induced a spin pairing transition that results in changes in the electron mobility and structure.

"The discovery is important," Ding said. "It advances our understanding of the correlation of magnetism, electron transport and structural stability in materials with strong electron interactions, like magnetite."

"It is not surprising to see that a new phenomenon has been triggered by pressure in the oldest magnet," said Ho-kwang Mao, the director of the High-Pressure Synergetic Consortium and the High-Pressure Collaborative Access Team. "Pressure can directly change electron-electron interactions by squeezing the spacing between them. In the future, the integration of high pressure with novel synchrotron techniques will no doubt lead to more new discoveries."

Collaborators are at the Kirensky Institute of Physics (Russia). Other authors in the paper are Daniel Haskel, Sergei G. Ovchinnikov, Jonathan C. Lang, Yuan-Chieh Tseng, and Yuri S. Orlov.

This work was supported by the U.S. Department of Energy (Basic Energy Sciences and NNSA), the National Science Foundation, the W.M. Keck Foundation and the Carnegie Institution.

The Carnegie Institution has been a pioneering force in basic scientific research since 1902. It is a private, nonprofit organization with six research departments throughout the United States. Carnegie scientists are leaders in plant biology, developmental biology, astronomy, materials science, global ecology, and Earth and planetary science.

Postdoc Office creates alumni Web site, asks for submissions

The Postdoctoral Office is creating an Argonne postdoctoral alumni Web page as part of the mentoring program Anyone who held a postdoctoral appointment at Argonne who wishes to participate in this important project should send the following information to Giselle Sandi (DEP), postdoctoral programs coordinator:

• Name

• Current picture

• Argonne past affiliation (Division, postdoc tenure, supervisor)

• A research highlight of Argonne efforts

• Current affiliation and contact information (company or institution, e-mail, phone number, Web site if any)

• A short paragraph summarizing new endeavors

Contact information for former postdocs is also needed.

Table tennis players wanted

The Argonne Table Tennis Club would like to invite new members for 2008. Membership in the Argonne Table Tennis Club is open to all employees or retirees of Argonne, the Chicago operations office and all family members and friends of these employees or retirees.

The main purpose of this club is to promote a healthful activity in which people of differing talent, physical build, age and gender can participate. The club has organized a regular schedule of meetings to play table tennis, normally each Tuesday and Thursday evening from 5:30 to 8:30 p.m. in Building 362.

The skill level of the members ranges from novice to advanced. Contact Dave Peterson at ext. 2-3924 to join the club or for additional information.

Tax season presents opportunities for identity theft

Whether you prepare taxes or hire a professional, extra precautions should be taken to make sure personal information is not compromised. Here are some tips:

• Many choose to prepare and file taxes using software. Returns can be prepared offline or online. Either way, choose a familiar company. The Internal Revenue Service offers online tools and electronic alternatives to filing paper returns online.

• When using an online tax service, read the posted security and privacy policy. Also verify the Web site is secure by checking the Web address. It should begin with "https," not "http."

• If filing a return by mail, send it from a locked mailbox or take it to the post office. Don't leave outgoing mail in a personal curbside mailbox where it can be stolen. Be sure to check your mailbox every day for W-2 forms; these contain information coveted by identity thieves.

• If you choose to hire a professional accountant or service, conduct research to ensure the individual or firm is reputable. Verify that the preparer does not share your information or sell it to any third parties.

• Keep all personal documents in one secure location, and shred documents that are no longer needed.

For more information about Argonne's Operations Security Program, call Pat Berglund (SCD) at ext. 2-2946.

Argonne NATIONAL LABORATORY

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Strategic Laboratory Leadership Program's second group is forming

Each year, 15 Argonne employees are selected by Argonne Director Robert Rosner to participate in the Strategic Laboratory Leadership Program. The Strategic Laboratory Leadership Program provides a great opportunity for Argonne to develop future leaders who can continue to move the laboratory forward and establish Argonne as a leading U.S. Department of Energy laboratory.

The first cohort group began in September 2007 and has nearly completed the program. The second cohort group is now forming.

NOMINATION PROCESS

Employees who are interested in this development opportunity should contact their division directors. Employees must be full-time, exempt and may not have received an Executive MBA from the University of Chicago or Northwestern University. The first cohort group members are also available to discuss their experiences with interested employees.

Associate laboratory directors will nominate candidates to the Argonne director by March 27. Successful candidates will have demonstrated:

- Exceptional work in a key mission area
- Formal or informal leadership abilities
- Capability to work collaboratively
- Ability to work effectively across traditional laboratory boundaries
- Innovation and creativity in problem solving.

On April 4, Rosner will select the 15 Argonne attendees—representative of the ALD population—who will participate in SLLP Cohort 2.

COHORT TWO DATES

Faculty from the University of Chicago Graduate School of Business (GSB) will conduct three intensive sessions at the university's Gleacher Center on the following topics:

- Effective Leadership – May 27-30
- Strategic Thinking – September 4-5
- Change and Innovation – Nov. 13-14

Attendees will participate in interim activities and may also attend one of the Chicago GSB Executive Education's open enrollment courses.

UChicago Argonne, LLC sponsors the Strategic Laboratory Leadership Program for programmatic and operations staff of Argonne and Fermilab. The highly rated University of Chicago Graduate School of Business developed this non-degree executive education leadership program. The university has committed to providing this program for five years beginning September 2007 as part of the contract to manage the laboratory.

More information is available on Inside Argonne. The Strategic Laboratory Leadership Program is coordinated by HR/Performance Development.

Argonne garners two STC-International Awards

Two of Argonne's entries to the Society for Technical Communication's (STC) 2007 international competition have been recognized as winning entries. The society's competition recognizes excellence in creating technical art and publications.

The first winning entry, "Murdock Groundwater Cleanup Project: Signage and Visitor's Guide," by TSD's Michele M. Nelson, Karen Haugen and Patricia Weikersheimer, is a set of outdoor informational signs and an informational booklet for park visitors. This entry won the only distinguished award in the Informational Materials Design category, and it was one of only three winners at the Distinguished level in the Technical Art Competition.

The purpose of the interpretive signs and trail guide brochure is to give visitors the information they need to understand how a phytoremediation plantation and a constructed wetlands area are cleaning up carbon tetrachloride contamination in the aquifer under the town of Murdock, Neb. The communication objectives were to explain the cleanup project accurately without resorting to technical jargon and with minimal reliance on text and maximum use of effective graphics.

The second winning entry, "Argonne's 2006 R&D 100 Award Winners," by TSD's Cheryl G. Drugan and Sana Ann Sandler and OTT's Mary L. Kmak, is a set of five posters celebrating Argonne's five winning technologies in 2006's R&D 100 competition. This entry won a merit award, one of five awards granted in the Promotional Materials category of the Technical Publications Competition.

This set of 2' x 3' posters was created for display at the competition's Black Tie Awards Gala in the Grand Ballroom of Chicago's Navy Pier on Oct. 19, 2006. The challenge was to create posters that were striking yet met Argonne's newly instituted branding guidelines. The posters needed to sport a uniform look and feel, while spotlighting a range of diverse technologies. The text had to succinctly describe highly technical accomplishments in layman's terms and recognize the developers as well as the sponsors of the winning technologies. By fulfilling these goals, the posters successfully raised the visibility of Argonne's scientific achievements and tech transfer efforts to peers in key research, industry and academic circles, as well as the general public.

STC is a membership organization dedicated to advancing the arts and sciences of technical communication. Its 14,000 members include many professions such as technical writers and editors, content developers, documentation specialists, technical illustrators, instructional designers, academics, information architects, usability and human factors professionals, visual designers, Web designers and developers, and translators—anyone whose work makes technical information available to those who need it.

Guest House transformed into elegant club for Jazz Social

A sellout crowd of almost 150 Argonne employees, their friends and family members enjoyed an evening of music and conversation Jan. 25 at the Argonne Music Club's Jazz Social, held in the Argonne Guest House restaurant.

House lights were dimmed in a specially decorated section, transforming the dining room into an elegant jazz club for the evening. The Nuclear Jazz Quarktet performed while guests enjoyed complimentary appetizers and beverages from the cash bar.

Three of the five members of the Quarktet are employees of Argonne's Physics Division: Cary Davids, trumpet; Ken Teh, piano; and Alex Deriy, drums. Fred Filipiak played bass and Al Miller performed on alto and tenor saxophone, clarinet and flute. The group plays jazz standards, Latin music, jazz waltzes and up-tempo bebop tunes, including some arrangements and compositions by band members.

"This was the music club's first big event," said club president George Joch (TSD). "We had a great turnout and the band responded with a wonderful performance. The Guest House staff outdid themselves with decoration and the appetizers."

Nuclear Jazz Quarktet member Al Miller plays the saxophone as guests of the Music Club's jazz Social listen and enjoy the ambience created at the Guest House restaurant.

The music club's next event will be a variety show, set for Friday, April 11. The show will feature the talents of Argonne, DOE and University of Chicago employees, family and friends — magicians, singers, dancers, instrumentalists, comedians and other artists. More information will appear in upcoming issues of *Argonne News* and *Argonne Today*.

The club's open mic nights are held the third Thursday of each month in the Building 617 Lower Level from 5:30 to 8 p.m.

Service Awards

40 Years
Ronald E. Frass (FMS), Robert C. Haglund (NE)

35 Years
Pascal J. Colainni (FMS)

30 Years
Kenneth M. Bertram (DIS), Catherine M. Dial (AIP)

25 Years
John T. Davis (EQO), Hussein S. Khalil (NE)

20 Years
Shabbir Ahmed (CSE), Cary N. Bloyd (DIS), Mark T. Boehlen (FMS), Denice DiGiacomo (CIS), Margaret M. Vaught (HR)

15 Years
Timothy Jonsasson (ASD), Kevin Knoerzer (AES), Robert Mahoney (FMS), Kristine Miestner (AES), Daniel J. Vanlannen (TSD)

10 Years
Khalil Amine (CSE), Paul L. Hewett, Jr. (ASD), Fran Perri (HR), Giselle Sandi-Tapia (DEP), Mark G. Staszak (CIS)

5 Years
Daniel R. McGuire (FMS), Jerzy Osipiuk (BIO), Norman L. Rendon (OCF), Kevin E. Seme (FMS), Andrew Siegel (MCS), Karen J. Walker (AES), Gordon L. Wantroba (FMS)

Submit classified ads online at www.anl.gov/Media_Center/Argonne_News/Classified_Ads. Deadline for all materials is 5 p.m. Friday. Argonne National Laboratory is managed by UChicago Argonne, LLC for the U.S. Department of Energy.

In Memoriam:
Met Lab researcher, distinguished Senior Scientist Emeritus Joseph Katz


Katz

Joseph J. Katz, Distinguished Senior Scientist Emeritus, died Jan. 28, 2008, in Montgomery Place Assisted Living Center, Hyde Park. He was 95. Burial was at Oak Woods Cemetery, Chicago. Katz received his Ph.D. at the University of Chicago in organic chemistry and was hired to research on the newlydiscovered transuranium elements by Glenn Seaborg at the university's Metallurgical Laboratory, part of the Manhattan Project during World War II.

He joined the chemistry division of Argonne at its inception and maintained an active research program first in actinide chemistry, then in chemistry of nonaqueous solvents and finally photosynthesis.

He was editor of the *Journal of Inorganic and Nuclear Chemistry* for more than 25 years. He was coauthor of texts on uranium chemistry and edited volumes in the National Nuclear Energy Series. He coauthored two editions of "The Chemistry of the Actinide Elements with Seaborg." Katz became the first Argonne staff member to be elected to the prestigious National Academy of Sciences in 1973.

Longtime friend and collaborator Dieter Gruen had known Katz for more than 60 years. He said Katz was helpful to many people in developing their careers and was a truly creative scientist interested in many fields of study.

"He was probably the smartest man I ever met in my life," Gruen said.

Gruen and Katz first worked together developing a process to extract hafnium from zirconium to be used in creating the first nuclear submarine. Gruen described Katz as a voracious reader with a marvelous sense of humor.

"He was a remarkable, remarkable person," Gruen said.

There are three areas in which Katz had a large and long-term effect on the state of both physical and biological sciences. He was among the first scientists to realize the potential value of fluorine and fluorine-containing compounds in meeting some the chemical problems encountered in atomic energy field, and was the originator of the fluoride volatility process for uranium and plutonium recovery.

In the early post-war era he initiated research on the halogen fluorides as reagents in uranium processing, guided much of the development of fluorine chemistry research at Argonne, and strongly influenced the course of fluorine chemistry in the United States and throughout the world.

He directed work that led to the successful culture of fully deuterated microorganisms and the application of this breakthrough to a wide variety of chemical and biological problems. Deuteration allowed sophisticated spectroscopic probes to follow for the first time chemical processes in living organisms.

His work in the area of chlorophyll chemistry contributed importantly to the scientific understanding of how chlorophyll converts light to chemical energy. This work has done much to stimulate and orient the work of others in this field.

"The versatility and drive of Dr. Katz led to important advances on the direction of science," said Chemistry Division Director Al Wagner. "Through his outstanding ability to communicate his work and his views to others, he attracted outstanding talent to Argonne and had a major influence on the research of others."

Employees' input sought on performance appraisal process

Argonne Director Robert Rosner has asked that the PEP (Performance Evaluation Process) Committee re-evaluate the current performance evaluation process and make recommendations for improving the process to the Directorate by May 2008. The 2008 PEP Committee began meeting Jan. 3 and is soliciting input from employees.

The PEP committee is holding a series of town hall meetings for each associate laboratory directorship to share information about the process and to hear input:

• Computing, Environment & Life Science took place Feb. 4

• Energy Sciences & Engineering / Fundamental Physics: Monday, Feb. 18; from 11 a.m.- noon in the Building 362 Auditorium

• Scientific User Facilities: To be determined

• Operations / Office of the Directorate: Thursday, Feb. 22, from 11 a.m. - noon in the Building 362 Auditorium

The Performance Evaluation Process (PEP) Committee has a Web site on Inside Argonne to keep employees informed. Employees are also welcome to send comments and suggestions via e-mail.

The Performance Evaluation Process (PEP) Committee has been in place at the laboratory since 2002. Its original charge has been to evaluate the performance evaluation process and implementation, to identify issues and recommend changes to improve the efficiency and effectiveness of the evaluation process.

Members of the 2008 Committee are:

• Murray Gibson, SUF – Chair
• Steve Ban, OTT
• Ed Daniels, ES
• Seth Darling, CNM
• Rusty Lusk, MCS
• John Mitchell, MSD
• Yvette Woell, TSD
• Don Schmitt, HR, Ex-Officio Member
• Geralyn Becker, HR, Executive Secretary

Running Club collecting shoes for less fortunate

The Argonne Running Club invites employees to clean out their closets and help provide shoes for two local charities: Share Your Soles and Nike Grind.

Almost any type of shoe except high heels can be donated, including athletic, casual or dress shoes, boots and sandals. Shoes that still have some life left in them will be sent to less fortunate individuals. Athletic shoes that can longer be worn will be shredded and recycled as running track surfaces.

Useable shoes will be collected at the Running Club's February Fun Run Thursday, Feb. 14, in the Building 200 Lobby, from 11 a.m. to 1 p.m. Worn-out athletic shoes may be dropped in the collection box in the Building 201 Lobby or at the February Fun Run.

The club asks for a $2 donation per pair of usable shoes to help cover the cost of cleaning, disinfection, packaging, and shipping. For more information, contact Ron Kmak (NE) at ext. 2-4645.

www.argonneclub.anl.gov/ARC

Classified ads

MISCELLANEOUS

OPERA TICKETS - Two tickets to Lyric Opera's Eugene Onegin, Sunday, March 30 at 2 p.m. Lower balcony, Aisle 4 (center), row M. Box office price $87. $71 per ticket. Susan Berger. (630) 670-8959.

BED LINENS - Electric blanket for double bed, light blue. $15. Comforter cover (duvet) for double bed and pillow cases, Swiss-made. $10. Mike Strrauss. (630) 964-3744 before 9 p.m.

ENTERTAINMENT CENTER - Solid Oak Entertainment Center 74"(H) x 41.5"(W) x 20"(D) pocket doors, crown molding, raised panel doors. $315 o.b.o. Fred Moszur. (630) 963-1176.

GENERATOR - Generac, Model 4000XL, Extended Life, 4000 watt, 7.8 HP, 120 & 240 volt, 12 volt charger, low oil pressure shutdown, low hours, excellent condition. $375. Don Sandberg. (815) 725-4378.

VINYL CAGE - 2' By 3' By 6' High Cage-Vinyl Covered Mesh With A Galvanized Slide Out Tray. Designed For Iguanas Or Other Small Animals. $50. Janice Sejut. (630)-963-2351.

COUCH - Slightly worn couch, 7 feet long, perfect for basement or playroom, Pick up only. $100 or best offer. Jennifer Palasik. (773) 732-0652.

ENTERTAINMENT CENTER – Medium oak, 59"W x 51"H, excellent condition. $50 obo. Maggie Gurka. (630) 271-0037.

CONCERT TICKETS – Two tickets, Bon Jovi, United Center, Tuesday, Feb. 26, 7:30 p.m., seats are in section 104, Row 19, seats 21 and 22. Tickets are $230 for both (price includes $99.50 per ticket plus Ticketmaster fees). Pam Rapcan. (815) 741-1025.

CEMETERY LOTS – Two lots at Bohemian National Cemetery. All maintenance fees are paid. $1,300 each. Ralph Niemann. (630) 985-5745.

AUTOMOBILES

1999 HONDA – Civic LX, 4-dr, black, manual, 112k miles, new timing belt, exceptional condition, dealer maintained, 1st owner. $5200. Michael Hu. (630) 375-0638 or myhu_yh@yahoo.com

2006 TOYOTA – Camry, silver, excellent condition, 22k miles, AT, dealer warranty up to 10.2008. $15,000. obo. Ying Chen. cutebobo152@yahoo.com.tw or (630) 854-8126.

1999 DODGE - Grand Caravan S.E. L.W.B., Island Teal Blue, 7 Passenger, 92,000 Miles, Newer Tires and Brakes, Good Condition - No Rust. $4900. Diane Ansah. (630) 435-0371.

1999 TOYOTA - Camry LE sedan, Dark blue color, Automatic, 75k miles, cruise, MP3 CDP, excellent condition. $5000 OBO. DK Kwon. (630) 778-0463.

1994 DODGE - Dakota, Hunter Green, Automatic Trans. 2-Door longbed, A/C, Power locks and windows. Needs minor body work. Approx. 178,000 miles. $1,000 OBO. Kristina Becker. (219) 506-2305.

HOUSING

ROOM/RENT - Close to the lab, fully furnished, private bath, utilities included, $450/month. Rose Lee Pausche. (630) 739-0126.

CONDO/SALE - Downers Grove. Immaculate, updated 2 bedroom, 2 bath condo, first floor end unit in Fairview Commons. Condo walks out to a quiet courtyard with mature trees. Pool, tennis, reserved parking, etc. $150,000. Lori Swift. (708) 579-9513.

ROOM/RENT - I have a 2 Bed, 1.5 Bath Apartment in Naperville (Bailey Rd and Naper Blvd) and looking for a roommate to share the apartment. Rent for the whole apartment is $950. Salil Arora. (517) 214-7062.

HOUSE/RENT - 2 bedroom house for rent in Lockport Township. Updated kitchen and bath and plenty of storage in unfinished basement. $800 per month plus security. Tracey Stancik. (815) 588-1972.

TO BE GIVEN AWAY

RIMS - 1997 Toyota Camry Aluminum rims 195/70-14 qty. 4 1989 Pontiac Grand Prix Aluminum rims 195/70-15 qty. 4 one rim sand blasted. Michael Anthony. (630) 243-9341.

LOST AND FOUND

Found - digital camera, Building 203 parking lot. Gregg Kulma. (630) 810-0270.