

T² I N S I D E



NIST Gets Sensitive, page 2

Los Alamos Eases e-Traffic, page 3



FLC Goals: Crystal Clear, page 5



T² F A C T

In 1830, American inventor Joseph Henry sent an electronic current over one mile of wire to activate an electromagnet. This activation caused a bell to ring on the other end of the wire. With this ring, the electric telegraph was born. Samuel F.B. Morse successfully turned Henry's invention into a commercial juggernaut.



T² E V E N T S

Western Conference and Exposition 2005
San Diego, Calif.
Feb. 1-3, 2005

AUTM Annual Meeting
Phoenix, Ariz.
Feb 3-5, 2005

National Design Engineering Show
Chicago, Ill.
March 7-10, 2005

World's Best Technologies 2005
Arlington, Texas
March 28-30, 2005

Mini-Conference on Human Factors in Complex
Atlantic City, N.J.
April 28-29, 2005

FLC National Meeting
Mission Driven Partnerships
Orlando, Fla.
May 1-6, 2005

NSTI Nanotech Conference and Trade Show
Anaheim, Calif.
May 8-12, 2005

Bio 2005
Philadelphia, Pa.
June 19-22, 2005

FPL Develops Tech to Solve Playground Problem

by George N. Couch, Forest Products Laboratory

Local governments, school districts, and other agencies responsible for tens of thousands of public playgrounds and recreational areas around the nation face a dilemma.

They need to make their recreational facilities, especially playgrounds, accessible to people who use wheelchairs or other mobility aids.

The dilemma arises because the areas around playground equipment, such as swings and slides, need to be soft enough to minimize injuries when children fall. But most commonly used materials, such as loose wood chips, pea gravel or sand, permit a wheelchair tire or the foot of a walker or cane to sink in, causing the chair or walker to get stuck or



FPL researcher Ted Laufenberg (center) shows Bob Zeager (kneeling left) and Ted Illjes, both of Zeager Bros., how the stabilized wood fiber can be used to create a wheelchair-friendly path.

even tip over. As a result, the U.S. Access Board (a federal agency focused on making public facilities more accessible) asked the USDA Forest Service's Forest Products Lab-

oratory (FPL) in Madison, Wis., to work on this problem.

FPL researchers began by looking at ways to stabilize the wood chips, called "engineered wood fiber," which are used by many playgrounds, often in a layer 10 to 12 inches thick.

Engineered wood fiber (EWF) is the technical name for a loose, mulch-like mixture of hardwood chips that meets certain specifications regarding size and shape of the chips, consistency, drainage, impact attenuation and other qualities. An American Society of Testing and Materials (ASTM) standard has been developed for EWF to assure consistency nationwide.

Besides the Access Board, the research involved a number of "partners," including the Wisconsin Dept. of Natural Resources, an accessibility-testing company called Beneficial Designs, and private manufacturers of EWF and playground surfacing systems.

Following field trials at two Wisconsin
See FPL's Playground Tech, page 4

FLC to Identify Techs for DOE's Office of Security

by Nancy Moore, FLC

The FLC will assist the Department of Energy's (DOE) Office of Security and Safety Performance Assurance's (SSA) new Accelerated Security Technology Deployment Program (ASTDP) by asking its members to identify technologies at their laboratories that could have a beneficial impact in meeting the security needs within the DOE complex.

To support the accelerated evaluation and implementation of security technologies, the SSA has established the Center of Excellence for Technology Deployment (CTD).

The CTD has been created to assure that existing technologies are rapidly deployed to serve as force multipliers, improving both the effectiveness and efficiency of the DOE's protection programs. The CTD implements a systematic process to identify and deploy technologies in a timely manner.

The CTD has asked the FLC to work directly with them to assist in securing the maximum participation among all federal laboratories.

The FLC's mission parallels the CTD's core mission to "identify technologies that are deployable today that will significantly enhance the robustness of our safeguard and security systems."

To assist the CTD in meeting this vital mission, the FLC will focus on identifying members' technologies with security applications that are either deployable today or in later stages of development. All of the FLC's 570 member laboratories will be asked to contribute to this effort. CTD will be implementing pilot programs to test these technologies at selected DOE sites,



The DOE has requested that the FLC work with federal laboratories to identify technologies beneficial to meeting a host of security needs.

and assisting the deployment of technologies that prove to be effective and useful at
See FLC Identifies Techs, page 4

DC on T²

Presidential & Advisory Panel S&T Appointments Scrutinized

by Neil MacDonald,
Federal Technology Watch

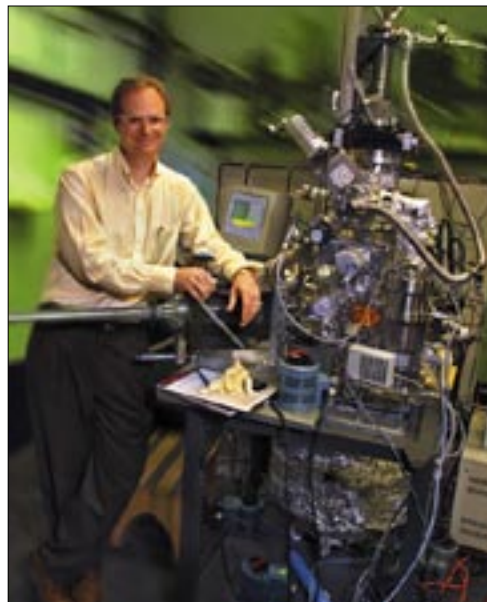
Failure to attract qualified candidates to high-level science and technology (s&t) positions in the federal government or misuse of the federal advisory committee system could compromise the government's effectiveness on important issues, the chairman of a blue-ribbon National Academies panel warned last week.

"To address the challenges of the 21st century, we need solid leadership and advice on scientific, medical and technical areas - and certainly well-grounded scientific and technical information," said John Porter, a former congressman who is now a partner at Hogan & Hartson, LLP.

His remarks came Nov. 17 at the release of Science and Technology in the National Interest: Ensuring the Best Presidential and
See DC on T², page 5

LBL, Nanosys Develop Hybrid Solar Cells

by Robin Johnston,
Lawrence Berkeley National Laboratory



Chemist Paul Alivisatos, director of LBNL's Molecular Foundry, in his laboratory, where he and his team developed a hybrid semiconductor and plastic solar cell.

Nano-generation solar cells invented at Lawrence Berkeley National Laboratory (LBNL) combine the best properties of inorganic and organic materials to lower the production costs of photovoltaics while offering high efficiencies and more creative applications.

Products based on the hybrid inorganic nanocrystal/organic polymer solar cells are being developed by Nanosys, an LBNL-MIT startup company that has garnered an investment of \$850,000 from the National Science Foundation and significant venture capital backing because of the technology's promise.

Within the next few years, Nanosys solar cells are expected to attain a conversion efficiency of 15% and to produce electricity at less than \$1 per watt—a cost that is competitive with conventional power generation.

Presently, photovoltaic energy costs be-
See LBNL, Nanosys, page 4

Fed Labs Flash: *Technology Transfer Notes*

International Research Foundation Orders Compact Generator

Lawrence Berkeley National Laboratory's (LBNL) Accelerator and Fusion Research Division (AFRD) is shipping a custom-made compact neutron generator to the International Foundation for Research in Experimental Medicine, or FIRMS, a consortium led by the University of Turin, Italy.

In Italy, the unique neutron generator, of a kind recently invented and developed by Ka-Ngo Leung and his colleagues in the Plasma and Ion Source Technology Group, will be used in tests to develop a treatment for brain and liver cancer based on boron neutron capture therapy (BNCT).

LBNL is supplying the 40 cm x 70 cm assembly comprising the ion source, target, and other components of the heart of the system.

The necessary shielding and moderators to enclose the generator will be provided by FIRMS.

For more about the story, visit www.lbl.gov/Publications/Currents/archive/#story5.

T² on the Web: Wealth of Information at Your Fingertips

This year, the USDA Forest Service officially launched TreeSearch, a one-stop gateway to publications authored by the agency's research and development scientists. The site—which can be searched by a variety of criteria, including keyword, author, and title—features links to full-text agency publications, as well as publications authored by Forest Service scientists but published in other outlets, such as journals and books. With more than 8,000 publications in its system—and more being added every day—TreeSearch is the largest freely available online collection of forestry research in the world. Visit www.treesearch.fs.fed.us to browse the collection.

T² on the Web: Innovative Stormwater Treatment Devices

The University of Massachusetts, in collaboration with Massachusetts state environmental agencies and the U.S. Environmental Protection Agency, is developing a publicly accessible database of performance characteristics of innovative stormwater treatment technologies. The site, under development, provides information on how to submit technology information. Visit the site at www.mastep.net.

NIST Gets Sensitive

A laser-based method for identifying a single atom or molecule hidden among 10 trillion others soon may find its way from the laboratory to the real world.

Developed by physicists at the National Institute of Standards and Technology (NIST), the technique is believed to be more than 1,000 times more sensitive than conventional methods.

Vescent Photonics of Denver, Colo., hopes to commercialize the method as an "optical nose" for atmospheric monitoring.

The portable sensors would rapidly identify chemicals in a gas sample based on the frequencies of light they absorb.

Other applications eventually may include detection of chemical weapons and land mines, patient breath analysis for medical diagnosis or monitoring, and industrial detection of leaks. Vescent recently signed a Cooperative Research and Development Agreement with NIST. The company will work with NIST physicist Jun Ye, co-developer of the technology.



Jun Ye

NNSA Awards Inventors, Staff

BWXT-Y-12, which operates the Y-12 National Security Complex for the National Nuclear Security Administration, recently celebrated the accomplishments of 34 inventors and 4 technical support staff with technology transfer awards.

During the last five years, the 34 award winners have generated 35 invention disclosures from which patents can stem.



Winners of the BWXT-12 T2 Awards

Because of some of their innovative "what-if" musings, electronic mail now can be safeguarded against disclosing sensitive information.

Computers apply "human intelligence" as they rapidly analyze documents, battlefield soldiers receive instant emergency care, and metal can be melted in a microwave.

Thirteen of the awards involved microwave research, and the subject of microwave technologies was named Technology of the Year.

Other inventions represented advances in nanotechnology, beryllium-oxide particulate reduction, soldering, electroplating, moisture blending, chemical processing, hydrogen removal, metal casting, and radiation detection.

The award recipients were Elaine Allen, Barbara Beckerman, Mike Bell, Gene Bird, Steve Blasingame, Lee Bzorgi, Dave Cecala, Hal Clift, Joe Cochran, Amy DeMint, Gerald Devault, Dametria Douglas, Jack Gooch, Russell Hallman, Frank Hammitt, Tim Hickerson, Sam Lariviere, Ken Lewis, Robert McGaffey, Art Miller, Alan Moore, Jonathan Morrell, Melissa Portwood, Ed Ripley, Karen Rogers, Greg Schaaff, Roland Seals, Joel Shor, Ron Simandl, Bill Simpson, Huston Singletary, Donna Stokes, Ken Thompson, Lisa Thompson, Bill Tindal, Ray Waldrop, Brian Warren, and David Zimmerman.

NREL, DuPont Sign CRADA for Corn Fuel

from the National Renewable Laboratory Office of Technology Transfer



Corn stover (stalks, cobs and leaves of corn plants) is an important feedstock material for various NREL biomass conversion programs involving the production of alcohol fuels, chemicals, materials, and electricity. Understanding the genetic system of corn can give insights into producing high grain, high quality crops for biomass conversion processes.



A \$7.7 million Cooperative Research and Development Agreement has brought together the National Renewable Energy Laboratory (NREL) and DuPont to collaboratively develop, build, and test a bio-refinery pilot process that will make fuels and chemicals from the entire corn plant—including the fibrous material in the stalks, husks, leaves and the starchy material in the kernels.

The agreement is part of the larger \$38 million DuPont-led consortium known as the Integrated Corn-Based Bio-products Refinery (ICBR) project.

The ICBR project—which includes DuPont, NREL, Diversa Corporation, Michigan State, and Deere & Co.—was awarded \$19 million in matching funds from the DOE to design and demonstrate the feasibility and practicality of alternative energy and renewable resource technology.

This technology initiative will develop the world's first fully integrated bio-refinery, which will be capable of producing a range of products from a variety of plant-material feedstocks.

Several bio-refineries currently produce a range of products mainly from starch-rich or protein-rich biomass, while other bio-refineries start with a variety of vegetable oils.

Operating like a conventional refinery, the ICBR will make use of the entire corn plant.

Purified sugars from the corn kernel will be the primary source of value-added chemicals, while the remainder of the corn plant—commonly called the "stover"—will be converted into fuel-grade ethanol and electrical power.

Another anticipated resulting produced chemical could be 1,3 propanediol (PDO), the key building block for DuPont Sorona®—the company's newest polymer platform—which can be used in applications such as textile apparel, carpeting, and packaging.

The project will take several years to evolve, but has the potential to enable our nation to produce many of the transportation fuels and chemical stocks we require from domestically grown corn and energy crops, as well as agricultural and forestry residues.

The potential benefits to DuPont and the nation are enormous, and include increased energy security, reduced balance-of-trade deficits, a strengthened agricultural sector, and lower energy prices.

More info: Dave Christensen, 303-275-3015, or visit www.nrel.gov/technologytransfer

FLC NEWSLINK

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Tech Watch: Laboratory Techs Ready for Transfer

LLNL's Low-Cost, High-Speed Modulator

Lawrence Livermore National Laboratory (LLNL), operated by the University of California under contract with the Department of Energy (DOE), seeks to license this technology to industry.

Commercially available digital intermediate frequency (IF) QAM modulators use sine/cosine ROMs or Coordinate Rotation Digital Computer (CORDIC) and/or a number of multipliers to generate IF modulated waveforms. LLNL researchers have developed a digital IF modulator that applies to various modulation types and offers a simple, low-cost method to implement high-speed digital IF modulator.

The architecture eliminates multipliers and sequential processing. The digital parallel processing allows the low-speed FPGA to be used to generate a high carrier frequency output.

Another aspect of the invention is the programmability of the digital IF modulator's carrier frequency and modulation types.

Existing commercial wireless or wire systems such as GSM, CDMA, and XDSL that use digital IF modulation of any types can benefit from this technology.

More info: www.llnl.gov/IPandC



Visit the FLC at:
www.federallabs.org

ORNL's VIPAR Takes On Info



Oak Ridge National Laboratory's (ORNL) Virtual Information Processing Agent Research (VIPAR) software is capable of information integration, management, and discovery.

This approach enables information from a number of open sources to be integrated so combined data can be rapidly searched, clustered, analyzed, and presented to the analyst visually.

VIPAR uses information agents to automatically gather information from Internet newspapers. These information agents are directed by an ontology developed using the Resource Description Framework (RDF) tag language.

ORNL believes that this is the first use of RDF as an ontology. This ontology is further used to define the format of individual web pages, and to direct how these pages are read and the news articles formatted.

Classification agents then work with the retrieved articles to organize and classify this information.

These software agents use a vector space model, entropy weighting, and a cosine measure to represent and cluster textual information.

ORNL extended this capability by allowing the vector space to be dynamically built so that new documents can be added without completely rebuilding the space.

Potential areas of application include cyber security; market analysis; document comparison; and hospital, physician, and law records.

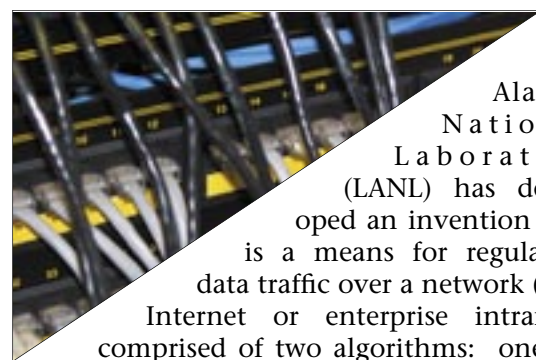
The primary advantage of the invention is that it provides a fast process that is not a memory hog, and the visualization component makes interpretation of information easy.

A prototype currently exists for document analysis, cyber security applications, and image analysis with product development still required.

ORNL seeks licensees and/or research and development partners for specific fields of use.

More info: Robert Quinn, Commercialization Manager, ORNL, 865-576-1051

Los Alamos Eases e-Traffic



Los Alamos National Laboratory (LANL) has developed an invention that is a means for regulating data traffic over a network (e.g., Internet or enterprise intranet), comprised of two algorithms: one for generating synthetic data traffic based on certain variables and a second for regulating that traffic to impose a desired optimal flow of traffic.

The invention will efficiently improve real-time viewing of videos and full-duplex videoconferencing and workgrouping by assigning priority to bandwidth-intensive/time-delay-sensitive Internet services. Less time-sensitive, lower priority data such as e-mail can be routed to underutilized portions of the network.

The invention would enable service providers to provide guaranteed levels of quality for such applications, while simultaneously making efficient use of bandwidth while not requiring additional capital expenditure on hardware. The algorithm can be used with commercially available software such as OPNET Technologies or MathWorks (MATLAB).

Additionally, these algorithms could be used for vehicle traffic control by transportation departments throughout the country to ensure smooth flows of traffic and provide guarantees of travel times on roadways.

The invention has only been conceptually reduced to practice in simulation. Inventors have some funds and plan to implement on the LANL local area network (LAN).

This technology is available for licensing both exclusively and nonexclusively.

More Info: John Russell, Licensing Executive, Technology Transfer Division, LANL, 505-665-3941, or jrussell@lanl.gov

FLC 2005

Federal Laboratory Consortium for Technology Transfer
Orlando, Florida May 1-6, 2005



Mission Driven Partnerships
Innovations • Strategies • Solutions

FLC Awards
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Successful Scientists
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CRADAs
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T² Experts
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Licensing Executives, Venture Capitalists, ORTAs,
Business Development Managers, Scientists,
Students, Industry Executives, Any and All T² Pros!

For more information, contact the FLC Management Support Office at 856-667-7727 or visit www.federallabs.org.



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for the 2005 edition.
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FLC T² Desk Reference

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FLC Identifies Techs, from page 1

appropriate DOE sites.

The CTD specifically searches for technologies that can assist our protective forces and security professionals in their mission to be more effective and efficient in protecting our critical national assets.

The outcome of this effort will be a comprehensive catalog of all appropriate technologies within the federal laboratory system.

The categories of interest are:

- Chemical defense
- Explosives & contraband protection
- Delay
- Communications
- Modeling & simulation
- Access control
- Intrusion detection
- Response
- Alarm display & control.

Each FLC laboratory will be asked to fill out a short questionnaire on every technology they feel meets the needs of the DOE's ASTDP. The basic information includes the technology title, categories, supplier, costs, and a brief description of the technology itself. The levels of maturity are:

- Technology commercially available and in use at DOE site, benefits proven
- Technology commercially available and in use at other S&S sites, benefits proven
- Technology commercially available, benefits substantiated
- Technology demonstrated at DOE site, not commercially available, benefits substantiated
- Technology demonstrated at S&S site, not commercially available, benefits substantiated
- Technology demonstrated, not commercially available
- Technology under development.

Nancy Moore, the FLC's Recording Secretary, is collecting all FLC inputs and coordinating with individual laboratories and contributors. Nancy can be reached at nancy.moore@pnl.gov or at 509-372-4299.

Nanotech Briefs
Engineering Breakthroughs in Nanotechnology & MEMS

Nanotech Briefs Announces Call for Nominations for Nano 50 Awards!

Nanotech Briefs magazine has announced a Call for Nominations for its first annual Nano 50 Awards competition. The Nano 50 will recognize the top 50 technologies, innovators and products with the greatest potential to advance the commercialization of nanotechnology.

No Cost to Submit!

Award Categories

Technology
Product
Innovator

Submission Deadline

February 1, 2005

Rules and Nomination Forms
www.nanotechbriefs.com/nano50

FPL's Playground Tech, from page 1

state parks last year, lead researcher Ted Laufenberg determined that a formulation using polyurethane adhesive mixed with the top 1½ to 2½ inches of wood chips resulted in a surface with both the desired stability and shock absorbency.

This year, the first commercial installation of stabilized EWF (SEWF) was installed in a Prince George's County (Md.) public school playground.

School district maintenance staff prepared the surface under the guidance of FPL's Laufenberg and representatives of Zeager Bros. of Middletown, Pa., who supplied the EWF and had worked with Laufenberg in measuring resilience characteristics of earlier trial surfaces.

Laufenberg will host a workshop for playground designers at the Maryland installation, and it will become a demonstration site for showing representatives from other school districts and local governments how the surface performs.

A similar demonstration playground is planned

for installation in Berkeley, Calif. Because the EWF and polyurethane adhesive are commercially available, volunteers or playground maintenance staff would be able to install the surface by following fairly simple instructions.

Directions for installing a wheelchair-friendly SEWF surface are being published by FPL and will be available for downloading from FPL's web site.

Interest in the surfacing material is widespread because of the need to comply with the Americans with Disabilities Act and the low cost (\$2 to \$3 per square foot) compared to most existing systems (\$10 to \$20 per square foot).

More info: George N. Couch, Public Affairs Specialist, Forest Products Laboratory, gcouch@fs.fed.us; or Ted Laufenberg, tlaufenberg@fs.fed.us

FLC
From Technology Transfer

LBNL, Nanosys, from page 1

tween \$5 and \$30 per watt.

The LBNL hybrid solar cell technology offers the excellent, well-established electronic properties of inorganic semiconducting materials with the less expensive production costs and the flexibility of conducting plastics, which can be fashioned into virtually any size or shape on virtually any material, including glass, plastic, and clothing. These hybrid devices have higher efficiencies than photovoltaics made only with polymers, yet are much less expensive and easier to manufacture than their semiconductor counterparts.

High efficiency solar cells on the market today are inorganic and require complex engineering, clean room processing, and baking inside a vacuum chamber, making them prohibitively expensive for many applications.

The thick bulk films necessary to achieve high efficiencies also lack mechanical flexibility. At the other extreme, flexible organic solar cells that use polymers are low-cost alternatives because they can be prepared in a beaker. However, the efficiency of these organic devices seems to have plateaued at 2.5%.

Paul Alivisatos, Wendy Huynh, and Janke Dittmer of LBNL used inorganic nanorods, which have

a high solubility in various common solvents, and conducting polymers to make the solar cells using low-cost processing techniques such as spin coating, blade casting, and screen printing on substrates of various flexibility, including plastic. The solar cells do not require

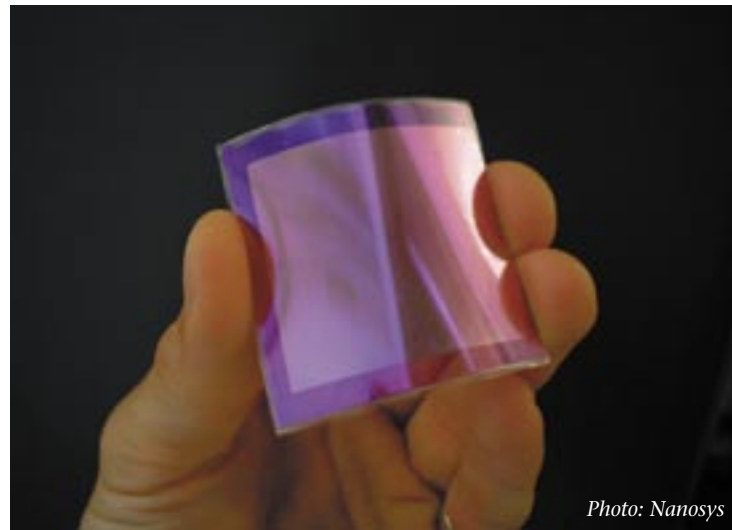
a clean room, a vacuum chamber, or high temperatures for fabrication; and, the electrode and nanorod/polymer layers of the solar cell can be applied in separate coats for ease of production.

By adjusting the diameter of the nanorods, Alivisatos' lab tuned the solar

cell's absorption spectrum to have as large an overlap with the solar energy spectrum as possible, enabling them to collect more light than typical plastic solar cells.

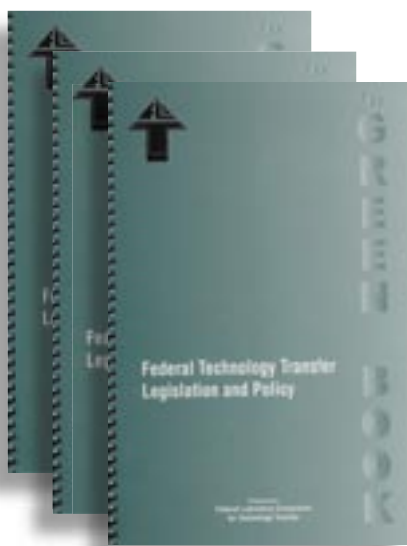
This tuning enables the fabrication of nanocrystal/polymer/nanoparticle combinations that absorb different wavelengths of light more efficiently. Multiple layers of varied composition can then be stacked on top of one another to form a more efficient cell.

More info: Robin Johnston, Technology Transfer Department, Lawrence Berkeley National Laboratory, (510) 486-5947, rjohnston@lbl.gov



Nanosys's flexible solar cells based on LBNL technology.

The FLC Green Book



Federal Technology Transfer Legislation and Policy provides the principal statutory and presidential executive order policies that constitute the framework of federal T².

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Inside the FLC

Evaluation of FLC 2004 Training Sessions

For the third year, the revitalized FLC Education and Training Committee has been responsible for coordinating the training day prior to the start of the FLC national meeting.

The committee congratulates the 109 individuals who availed themselves of this year's training classes. It was the largest group ever, and 14 attendees also received Montana State University CEU credits for the experience.

To enable the committee to continue to improve its offerings, each participant was asked to fill out an evaluation form specific to the training received.

The highest, or "best," score that a speaker or topic can receive is 5.0, while the lowest is 1.0. A review of the evaluation results from the fundamentals training session revealed that 47 of 66 (66%) participants responded and rated the overall education value of the session as 4.2.

Topics included an overview of technology transfer (3.0), background on the FLC (4.3), discussion of assistance that the Technology Locator could provide (4.2), and a CRADA and



An FLC fundamentals training student takes notes in the foreground as patent expert Jesse Erlich of Perkins, Smith, and Cohen discusses technology commercialization.

other T2 mechanisms session (4.3). Issues involving intellectual property (4.4) and marketing of intellectual property (4.0) were also presented.

Training cost was \$115, with an additional \$25 fee for a CEU. The value of these costs was rated 4.0. The facilities, meeting rooms, and overall logistics received "high fives."

Comments of a more critical nature focused on the length of the presentations, complexity of the material presented, and the need for more breaks to provide some down time to assimilate the mass of material.

A number of participants questioned the additional costs for training and suggested that costs for FLC meetings were substantial enough that training costs should be waived for individuals paying the full registration fee.

Advanced training topics concentrated on building negotiation profiles (3.0), negotiating with inventors (4.1), negotiating

See FLC Training Evaluation, page 6

FLC Goals: Crystal Clear

The FLC Executive Board met November 9-10 in Crystal City, Va., to discuss the recent successes and immediate plans of the organization.

The board, led by FLC Chair Ed Linsenmeyer, reported to the organization's agency representatives how the activities of the FLC assist the process of federal technology transfer.

FLC Education and Training Committee Chair Lynn Murray discussed the committee's successful T² training program, which now includes fundamental, intermediate, and advanced training. Murray also reported on the launching of the FLC T² Training Resource Database. This promising project "is an excellent resource to locate and facilitate the delivery of training to anyone involved in the technology commercialization process," said Murray.

Al Jordan, chair of the communications arm of the FLC, reported on marketing and public relations activities. Highlighted programs included the development of the 2005 edition of *Federal Technology Transfer*, and the rebuilding and redesigning of the FLC web site. The new site, which includes a more intuitive infrastructure, a T² news ticker and interactive elements, is

See FLC Executive Board Meeting, page 6



FLC Program Committee Chair Sharon Borland discusses the upcoming FLC national meeting during an FLC Executive Board Meeting, November 9, 2004.

DC on T², from page 1

Federal Advisory Committee Science & Technology Appointments, third in a series of reports by the National Academies since 1992 on the presidential s&t appointment process.

The scope of the 208-page report has been expanded to examine the membership selection procedures for federal advisory committees dealing with s&t issues, a subject that has been of concern due to recent claims of increased politicization of the process. Porter and two other members of the National Academies' ad hoc committee for the study—Carnegie Institution president Richard Meserve and Washington Advisory Group, LLC principal Frank Press—gave summaries of the main findings during an hour-long presentation to reporters and s&t community staff.

Major recommendations in the new study are:

- The president or president-elect should identify a candidate for the post of Assistant to the President for S&T (APST) shortly after the election; after the inauguration, this person should be promptly appointed as APST with the intention that he or she also be nominated for the post of Director of the White House Office of S&T Policy (OSTP).
- The president and Senate should streamline and accelerate the appointment process for all key personnel (but especially s&t) to reduce the personal and financial burdens placed on nominees.
- Congress and the Office of Government Ethics (OGE) need to "consolidate and simplify" the appointment policies and procedures to cut financial and vocational barriers to government service.
- APST and other senior administration officials should "actively seek input from accomplished and recognized s&t leaders," and from broad, diverse constituencies when seeking candidates for s&t appointments.
- When a federal advisory committee needs scientific or technical expertise, persons nominated to provide such input should be selected on the basis of their s&t knowledge, credentials, and professional and personal integrity. Asking them to provide information such as voting record, political party affiliation or position on particular issues is inappropriate.
- Presidential administrations should make the process for nominating and appointing people to federal advisory committees more explicit, and visible, and should examine the current Federal Advisory Committee Act

(FACA) categories to see if they are sufficient to meet the nation's needs.

- To build confidence in the federal advisory committee system and increase the willingness of scientists and engineers to serve on them, department and agency heads should create an appointment process, supported by explicit policies and procedures, and hold the staff accountable for its implementation.

The General Services Administration believes that 1,000 federal advisory panels exist under FACA.



The report also has salary comparisons with some near-equivalent industry and academic positions, and lists of top federal s&t positions and key s&t policy-related posts. Committee chairman Porter had briefed OSTP officials and leading congressional figures on the report's findings earlier in the week.

"We welcome the report ... as an important and useful guide to improving the federal appointment process," presidential science advisor and OSTP Director John Marburger said Nov. 17. "We look forward to reviewing and taking into consideration the recommendations made in the report."

The Bush administration, he said, was "committed to pursuing those policies and procedures that ensure s&t appointments at all levels of government are made based on subject matter and technical expertise, proper qualifications and credentials, and personal and professional integrity."

Capitol Hill reaction to the report was difficult to gauge because the Senate and the House were busy trying to clear appropriation and intelligence overhaul legislation during last week's lame duck session. Staff of senior Republicans in both chambers were contacted by *Federal Technology Watch* (FTW) but passed on a response. "I'm grateful to the academies for their report on s&t appointments in the federal government," Rep. Bart Gordon told FTW. "The report contains many useful recommendations. I'm particularly happy to see the academy support the position that it's wrong to have political litmus tests for scientific federal advisory panel members. People should be asked to serve the nation based on their knowledge and expertise, not their political connections or party registration."

But the Tennessee congressman—the House Science Committee's ranking Democrat—is unsure what action will be taken on the recommendations. "We need to have a process that holds the administration accountable for actually undertaking the practical steps laid out by the academies," he said last week. "I look forward to working with my colleagues and the academies in developing such a process."

Off the Hill, the report also got good marks. "Based on the [National Academies] press release, the proposals appear sound," said Ross Armbricht, president of the Industrial Research Institute. "Certainly, accelerating the appointment process has real value to the nominee and the nation [and] avoiding politicization of the [federal advisory] committees is very important," he told FTW last week.

"Appropriately, decisions based on deliberations of these committees will reflect the politics of elected or appointed officials, but the input to those decisions must be balanced and fact-based," he added.

The Union of Concerned Scientists (UCS) also welcomed the National Academies study. "The report echoes the concerns voiced this year by more than 6,000 scientists that nominees for science advisory panels should be judged only on their expertise and professional qualifications," said UCS chairman Kurt Gottfried.

He believes Congress should "move forward" to strengthen and enforce rules governing appointments to scientific advisory panels, and forbid improper lines of questioning.

Prepared by an ad hoc committee of the National Academies Committee on Science, Engineering, and Public Policy (COSEPUP), with Deborah Stine as study director, the full report is at <www.nationalacademies.org/cosepup>.

FLC Training Evaluation, from page 5

vis-à-vis government rights (4.0), and development of the anatomy of a license (4.0). Overall speaker ratings were 4.3 and quality for value 4.1. Fifty-five percent (24 of 43) of the participants completed the evaluation questionnaire.

A basic fundamentals curriculum is currently being developed in an online format. If this course can be delivered prior to the annual meeting, individually or at group sites, it would open up the training day for courses on an intermediate level. Your input on topics to be addressed is essential if we are to satisfy your needs.

Some topics that have surfaced include broader discussions of T2 mechanisms and how they have been used most effectively, and how to effectively utilize the many online marketing research databases currently available. "Best practices" addressed through case studies is also a topic of interest.

More info: Lynn Murray, FLC E&T Committee Chair, murrayl@volpe.dot.gov

FLC Executive Board Meeting, from page 5



FLC Midwest Regional Coordinator Cynthia Wesolowski looks on during the November 9 FLC Executive Board meeting.

discussed current government study groups and the development of the World's Best Technologies 2005 showcase.

Program Committee Chair Sharon Borland reported on the development of the 2005 FLC national

scheduled for activation January 1, 2005.

FLC Washington, DC Representative Dave Appler discussed activities associated with the identification and transfer of assistive technologies. Appler also

meeting, *Mission Driven Partnerships*, which will take place May 1-6, 2005 in Orlando, Fla. Borland stated that the 2005 meeting will include additional training events, sessions on peripheral technology transfer activities, and a Sunday seminar offered by the National Association of Seed and Venture Funds (NASVF).

State and Local Government Committee Chair jennelle Derrickson discussed the FLC's sponsorship and involvement in the State Science and Technology Institute's (SSTI) 7th annual conference and committee member recruitment. "The committee is currently working to increase participation in organizations that address state and local government science and technology needs," said Derrickson.

The next FLC Executive Board meeting is scheduled for March 2005 in Arlington, Texas.

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Federal Laboratory Consortium for Technology Transfer
Orlando, Florida May 1-6, 2005

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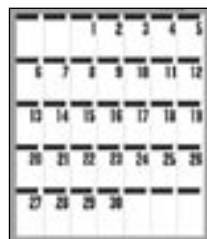
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