crux of my collapse, my 'surrender' ['*Lebens-Muedigkeit*']." And he asks them to keep an eye on and mentor his older son: "From you in particular, I am not asking for any material support for the children. But I do ask you, through a loose organization of all of you, to promote especially Pawlik's healthy, strong development." (Pawlik became a cosmic-ray physicist and was later killed in an avalanche.)

In his final letter, Ehrenfest writes that Pawlik will give Burgers correspondence about Jewish German intellectuals, and he makes a request: "Please arrange, together with [Adriaan] Fokker, that at least some of the cases are handled." From the time Hitler came to power, explains Martin Klein, who wrote a biography of the first part of Ehrenfest's life, "Ehrenfest was very active in trying to rescue German Jews—in particular he used his influence to find jobs for physicists." Ehrenfest, who was Jewish, felt guilty about "occupying a principal chair in Europe and being unproductive, especially with all the Jewish physicists being dismissed from their jobs," Klein adds.

Ehrenfest wrote a letter similar to the one foreshadowing his suicide, but with a different tone, to Albert Einstein, Niels Bohr, Abram Ioffe, and other contemporaries, according to Klein, who refers to page 408 of Abraham Pais's book, *Niels Bohr's Times* (Oxford Clarendon Press, 1991). "I don't think [those letters] were sent," says Klein. "I can't imagine that if [they] had been sent, that there wouldn't have been a recorded and visible reaction from some if not all of the recipients." The group letter is the only typed one among the four newly found letters.

In autobiographical notes published posthumously last year by the J. M. Burgers Centre in the Netherlands and the University of Maryland at College Park, where Burgers was on the physics faculty, Burgers wrote,

> Sometimes it looked . . . as if he [Ehrenfest] gave away everything he had found or observed, without building up a reserve, a kind of stronghold, within himself. . . . His analytical mind stirred up everything. . . . On the long run this pushed his students somewhat away from him and I have also experienced this effect. There were things which we did not like to have analyzed. It may look as if this betrays a lack of intellectual interest, but in several cases it was an instinctive protective reaction from our side.

About a 1918 meeting for physics teachers that Ehrenfest arranged, Burgers wrote,

> This meeting naturally gave him great pleasure, but what was strange to us was that he said it had given him more pleasure than the birth of his youngest child in that same year. . . . I spoke with [physicist Hendrik] Lorentz and asked him whether he could talk with Ehrenfest, and help him find a way back to feelings which looked more normal to us. . . . While we perceived that Ehrenfest's self-analysis could take dangerous forms and lead to utter despair, we could not help him.

Toni Feder

Lockheed Martin seeds Rice center

Lockheed Martin Corp and Rice University announced in April the creation of a new center that will pursue applications of nanotechnology relevant to the advanced-technologies defense contractor. The Lockheed Martin Advanced Nanotechnology Center of Excellence at Rice University, or LANCER, will be based at the university's Richard E. Smalley Institute for Nanoscale Science and Technology and will initially be funded by the company at $3 million over three years. "Areas we expect to explore include supersensitive detection devices with space-based applications, fast communications systems, and greatly improved devices for energy generation and storage," says Lockheed Martin's director of advanced technology Sharon Smith.

The new center grew out of the relationships that formed between Rice researchers and Lockheed Martin engineers in a summer nanotechnology short course that the Smalley Institute has offered the company every year since 2005. "The folks in the labs are the ones who came to [their managers] and said, 'Make it easier for us to work together,' " says Smalley Institute director Wade Adams. "We have labs across Lockheed Martin," says Smith, "but one of the many benefits we see to participating in LANCER is access to some of the equipment we need for fundamental nanotechnology research."

Most of the LANCER seed money will go toward research that is of potential business value to Lockheed Martin, with little for overhead, says LANCER's inaugural director Daniel Mittleman, who hopes to attract funds from other corporate investors and the federal government to continue the center after the third year.

Jermey N. A. Matthews

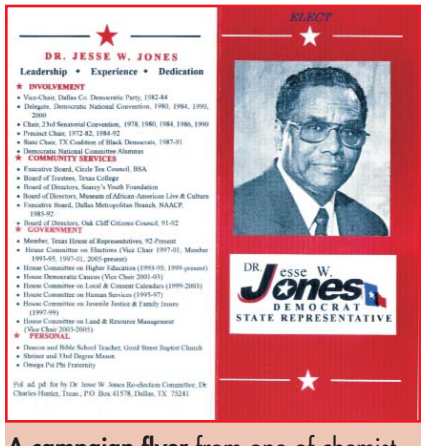
JEFF FITLOW/RICE UNIVERSITY

Daniel Mittleman will lead a Lockheed Martin–Rice University partnership to pursue nanotechnology applications in aerospace, security, and energy.

From school board to state senate: Running for office

Ever considered running for the school board? City council? State legislature? Some 70 scientists and engineers attended a workshop last month to learn about campaigning for local office. The 10 May event was held at Georgetown University and was sponsored by 10 professional organizations, including the American Physical Society and the American Institute of Physics (AIP).

The idea, says APS associate executive officer Alan Chodos, "is to give



A campaign flyer from one of chemist Jesse Jones's runs for the Texas House of Representatives.

BRIAN M. MOSLEY, AMERICAN PHYSICAL SOCIETY

Scientists who have successfully campaigned for elected office served on a panel at a recent workshop. From left are Louis Lanzerotti, David Westerling, APS director of public affairs and panel moderator Michael Lubell, Jesse Jones, and Nancy Cline.

practical information to practicing scientists and engineers who might be interested in running for local office. That, plus [give them] the feeling there is a community of people who will support them as they go ahead."

"My presentation was about the steps to put a campaign together," says Dean Levitan of the consulting firm MSHC Partners. "The mechanics of a campaign include raising money and communications—advertising, websites, blogging, town hall meetings, door to door. It's 98% elbow grease, 2% creativity." Other presenters included Kevan Chapman, communications director for physicist and Representative Vernon Ehlers (R-MI), and Joe Trippi, who ran Howard Dean's and John Edwards's presidential campaigns.

"Scientists and engineers have a lot to contribute, with their logical thinking, seeking of facts, analysis, and ability to make decisions once the facts are known," says AIP governing board chair Louis Lanzerotti, who since 1994 has been a member of the township committee where he lives in New Jersey and is currently the mayor. On a panel at the workshop, he says, "I cited cases where bringing fact-finding to an issue was important. For example, here in my township we are looking at issues related to the possible installation of athletic fields. There is a lot of controversy over artificial turf—lead content, runoff, is it healthy for young children to rub it. . . . There are all kinds of questions that involve looking at data."

Another panelist was Baylor University chemist Jesse Jones, who served seven terms in the Texas House of Representatives until he was defeated two years ago. "It's important to have a prior interest in politics, or to have some burning issues that would kind of propel you into it," he says. "You can't apply the scientific method [to legislation], but there is an attitude that is common among scientists, and it does give us an edge."

"I don't know if I'll run for any office. But [the workshop] did make me want to be more politically active," says Griselda Zuccarino-Catania, a graduate student in immunology at Yale University and president of her student chapter of Scientists and Engineers for America, one of the organizations that sponsored the workshop. **Toni Feder**

news notes

Nuclear forensics. Responding to recommendations issued earlier this year by a joint working group of the American Physical Society and the American Association for the Advancement of Science, a Senate committee in April authorized $25 million to establish a nuclear forensics program in the US Department of Energy. The Committee on Armed Services included another $5 million for fellowships to train scientists how to trace the origins of captured nuclear materials and to analyze radioactive debris after a nuclear attack. The provisions were included in the annual bill that authorizes the Department of Defense and DOE nuclear weapons programs. On the House side, the defense bill approved by an Armed Services subcommittee included just $5 million for nuclear forensics. But when the full House takes up the bill, newly elected Representative Bill Foster (D-IL), a former Fermilab physicist, is expected to offer an amendment to raise the amount to the Senate level. Appropriators generally adhere closely to funding levels specified in defense authorization bills.

In its report, the APS–AAAS working group said that the ability to trace weapons materials to the originating reactor or enrichment facility could well deter both states and weapons scientists from supplying the materials to terrorists. At least three to four people with PhDs in relevant disciplines are needed each year over the next decade to replace experts who are nearing retirement, the report said. In addition, specialized, automated, field-deployable equipment for measuring radiation near the sites of a nuclear incident must be developed and manufactured. **DK**

Yucca Mountain license. The US Department of Energy expects to submit an application this month for a license to construct and operate the long-stalled Yucca Mountain nuclear waste repository, but the schedule for completion of the facility will slip again, according to the pro-

web watch

To suggest topics or sites for Web Watch, please visit http://www.physicstoday.org/suggestwebwatch.html. Compiled and edited by Charles Day

http://nanomediafinder.net

Nano Media Finder aims to collect educational material on the topic of nanoscale science and engineering. Produced by the Museum of Science, Boston, the online collection offers animations, podcasts, lecture videos, and other nonprint media. The curators of Nano Media Finder welcome contributions from the physics community.

http://computingnow.computer.org

Computing Now is the newly launched website of the Institute of Electrical and Electronics Engineers Computer Society. Much of the site's content comes from the 14 magazines published by IEEECS, including *Security and Privacy*, *Computer Graphics and Applications*, and *Computing in Science and Engineering*.

http://www.quantum-physics.polytechnique.fr
http://www.quantum-physics.polytechnique.fr/physics

Manuel Joffre of the École Polytechnique and his collaborators Jean-Louis Basdevant, Jean Dalibard, and Jean-Paul Foing have created two sets of online tutorials, **Quantum Physics Online** and **Classical Physics Online**. Both feature java applets and are available in English and French.