Cornell engineers have reported the details of their new process for producing thin films of high-temperature superconductors at lower cost. The new technique is reported in the November 26, 1988, issue of Applied Physics Letters.

The new method, called "high-pressure reactive evaporation," is a significant step toward making practical superconducting films for microelectronic applications. It was developed by John McDermott of the Department of Electrical Engineering; Michael J. Kastner of the Department of Chemistry; Daniel K. Lathrop and Stephen E. Russek of the Department of Applied Physics; and Robert A. Buhrman, professor of applied and engineering physics who heads the Superconducting Thin Film Group.

Last month, scientists at the University of Rochester reported using thin films produced by the new process to conduct electrical pulses as short as 10 to 15 trillionths of a second—smaller even than the time it takes for a single light wave to travel the diameter of a human hair. The pulses were produced with less danger of heat or distortion and at very high levels of current.

This discovery showed that superconducting ceramic films could be produced on computer chips to become the basis for faster computers; too, because they could transmit data among components at far higher speeds than current metal connections and with no electrical resistance. Researchers on strontium titanate. Also, previous superconducting films were produced at higher temperatures of about 850 degrees Centigrade.

"These results show that it is possible to grow high-temperature superconducting ceramic on substrates whose crystal structure does not exactly match that of the film," Buhrman said. "Although we expect to improve these films considerably as we optimize the process, it's already clear that these growth procedures are a particularly promising approach to the rapid development of a successful superconductor thin-film technology." — Dennis Meredith

Cornell Chronicle

Law faculty, staff help co-worker through surgery

A year ago, Carolyn Lynn, a secretary at the Law School, told her supervisor she would have to take medical leave to undergo spinal surgery. That started a 12-month sequence of actions by Law School faculty and staff that sent her far beyond sending the traditional potted plant to a hospitalized co-worker.

Shortly after Lynn's announcement, Law School Dean Peter Martin stopped by her desk to tell her he was sorry that she was facing major surgery. "Don't worry," he told her, "when you come back, your job will still be here." The assurance helped her and her family beyond words. Lynn said.

When the time came to leave for the hospital, more than 100 people surprised Lynn with a going-away party and gave her a "Cornell teddy bear. "Believe it or not, I still chuckle over one professor, who called theLaw School, told her supervisor she would have to take medical leave to undergo spinal surgery. That started a 12-month sequence of actions by Law School faculty and staff that sent her far beyond sending the traditional potted plant to a hospitalized co-worker.

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The procedure "her toes wiggle!" was posted on the board outside the dean's office shortly after the operation. Law School Dean Peter Martin stopped by her desk to tell her she was facing major surgery. "Don't worry," he told her. "When you come back, your job will still be here." The assurance helped her and her family beyond words. Lynn said.

When the time came to leave for the hospital, more than 100 people surprised Lynn with a going-away party and gave her a "Cornell teddy bear. "Believe it or not, I still chuckle over one professor, who called her toes wiggle!" because of her dazed responses.

During Lynn's 10-month recuperation at home—much of it in a body cast—her supervisor, Mary Ella Christie, visited her and drove her to and from the Law School area are truly fortunate to have people like those at the Law School living and working in our community. The Lynn family will always be grateful," he wrote. The letter was signed separately by Dick Tracy, and Dagan Lynn.

In his reply, Rhodes expressed his pleasure that Carolyn Lynn had made a good recovery and was able to return to her secretarial job at the Law School. "I am so happy to know of the fine encouragement and support that she received from Dean Lynn and many other colleagues in the Law School," the president wrote. "It is this kind of friendly relationship that makes Cornell such a special institution. Thank you very much for your thoughtfulness in writing to me."

"Mr. Rhodes was very touched by the letter," said Marcia Parks, executive staff assistant in the president's office. "He receives perhaps half a dozen spontaneous letters like that a year."

— Joe Lanning

Law School Dean Peter Martin congratulates Carolyn Lynn on her recovery from spinal surgery and return to her job. She spent ten months at home in a body cast.

where she had arranged "juice and brownie" sessions in Lynn's honor during weekly staff meetings.

A touching letter

This fall, after she had returned to work, Carolyn Lynn's husband, Richard, who is not a Cornell employee, wrote President Frank H.T. Rhodes to tell him about the support she had received from her colleagues before and after surgery.

"Cornell University and the entire Ithaca area are truly fortunate to have people like those at the Law School living and working in our community. The Lynn family will always be grateful," he wrote. The letter was signed separately by Dick Tracy, and Dagan Lynn.

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Graduate Bulletin

Fellowships for Wellesley Alumnae: Fellowships valued at up to $14,000 available. Deadline is Dec. 1. See Fellowship Office, 116 Sage Graduate Center for details.

Charlotte Newcombe Doctoral Dissertation Fellowship: Fellowship is for $10,000 for first four years writing year. Deadline is Dec. 11.

CLINICO now has the Fellowship Notification that 150 of the 200 fellowships for graduate students in science, engineering, medicine, women, foreign students, minority students, study overseas and general. Full financial supports, amount of award, deadline and address for application information is included. No information is available at the Fellowship Office, 116 Sage Graduate.

The first person to run one mile in less than four minutes will deliver the keynote address at the upcoming meeting of Management holds in Third Annual European Reunion in London March 18-20.

Sir Roger Bannister will speak on "Science, Sport and Medicine" at the reunion banquet on March 19 in the fun on the Park at Hamilton Place, Park Lane. Ban- nister, a medical doctor, is master of Pen- brooke College, Oxford University. In 1954, he was clocked at 3:59.4, becoming the first man to break the four-minute barrier.

Curtis W. Tart, dean of the Management School, will lead a group of faculty who will fly to London to conduct seminars and meet with alumni who work in Europe.

These reunions enable the Johnson School to share with its overseas alumni the latest research in business management, and they help us keep in touch with graduates who occupy important positions in international trade and finance," Tart said. "Our first two reunions were held in Brussels and Paris, and we were well attended. We are planning two reunions in 1989, one in Tokyo for alumini in Asian nations and another in Europe."

Participating in the seminars will be Thomas R. Dyckman, associate dean for academic affairs; Harold Bierman, Jr., a professor of business, and Richard H. Thaler, a professor of economics.

Other scheduled panels include Jean- Delke Demirce, a Ford Foundation finance professor; Joseph A. Los, finance director of the American Management Association; J. Roger O'Neil, chairman of Mobil Oil Co., Ltd., U.S.A. and England; Dermo St. John McDermott and Dominic E. Collier, Belgian business executives; and Karel Vink, a Belgian business executive.

"Jacques Andriessen, vice president of Johnson Wax Consumer Products-Europe, will fly to London to conduct seminars and give a talk at London's 202 Pembroke College.

Four-minute mile to address JGSN reunion

Members of the Cornell community can purchase reduced round-trip air tickets to London arranged for the Johnson Graduate School of Management's Third Annual European Reunion without participating in the reunion.

Reservations must be made before Jan. 3 for the special $510 fare on British Airways. The flight will leave New York City on March 16, and the return trip can be made anytime after March 20. For further information, telephone Jolen Becker in Cornell's Travel Office, 255-4284.

Seminar topics will deal with European financial markets, flexible financing and pitfalls in international trade and finance. — Albert E. Kaff

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