he remained until he became professor emeritus in 1945. During his last 3 years at Northwestern he was chairman of the department.

Doc was not one who retires easily. The following year he was with the U.S. Army University in France and England. He then became professor of chemistry at Loyola University in Chicago, from which institution he acquired his second title of professor emeritus, in 1956.

Between 1920 and 1942, Doc published about 20 scientific papers. The most important of these dealt with electrochemical studies of the structure of Grignard reagents. These papers are basic to the subject and are frequently referred to. A subject which occupied him in less formal ways was explosions. He became interested in these during a period with the Army during World War I. He was concerned with explosions, either as a member of committees or as a legal expert, until his death.

He was active in the affairs of the American Chemical Society. He was chairman of the Chicago Section for a year and a director and councilor of the section for many years. He also served a term as chairman of the Division of Physical and Inorganic Chemistry.

Small, wiry, and hardy, Doc was of the type who looks older than his age when young and younger when old. He was extremely shrewd in his judgment of facts, of men, and of fish. Shrewdness in the first two items stood him in good stead in the classroom and on the witness stand. His disarming manner and casual appearance (his hats were a Northwestern tradition, and one former student swears that he wore the same necktie every day for an entire year) led a number of opposing lawyers seriously to underestimate him, to their mortification when Doc finally sprang his bear trap. Shrewdness with regard to fish was developed in over 70 years' practice of his favorite sport on the lower stretches of the Susquehanna, where he fished as a boy and later had a summer home.

He was an unusually effective teacher and one whom students never forgot. If he took a particular interest in the brilliant students, he also took an almost desperate interest in the academic salvation of the backward. In teaching freshman chemistry, he held that one must first get the student's interest. To this end, he was a master of the functional use of the anecdote, of the vivid expression, and of the demonstration. He also held that a lecturer should be heard in the back row. In fact, his lectures could be heard in the next building. In teaching physical chemistry he aimed at the inculcation of exact thinking in that subject. He believed in assigning large numbers of difficult problems. With these rather different approaches, he was unusually successful in both courses.

Doc was active and prominent in university councils. He particularly enjoyed, and was very effective in, his dealing with students. For many years he was on the Northwestern University athletic committee and chairman of the committee dealing with the undergraduate publications.

ROBERT L. BURWELL, JR.
Northwestern University

News of Science

Nobel Prizes

The Karolinska Institutet, Stockholm, Sweden, has announced that Daniel Bovet, 50, head of the department of pharmacology at the Istituto Superiore di Sanità in Rome, has been awarded the 1957 Nobel Prize in physiology and medicine for work that has led to the development of sulfa drugs, antihistamines, and muscle relaxants. Bovet was born in Switzerland but became a naturalized Italian citizen in 1947. He is the first Italian to win the Nobel Prize in medicine and physiology since 1906. (Enrico Fermi won the physics prize in 1938).

While Bovet was working at the Pasteur Institute in Paris in 1932, Germany's Gerhard Domagk reported that prontosil, a dye product, could be used to kill bacteria that cause common infections. Bovet and his colleagues immediately set about breaking down prontosil, a complex chemical, and eventually isolated sulfanilamide, first of the modern antibiotic drugs. In the next few years Bovet synthesized many related compounds.

Then in 1937, with a Swiss colleague, Bovet produced the first antihistamine. In the next 4 years he conducted some 3000 experiments to work out the chemical formulas that are the basis for most of the antihistamines now widely prescribed for hay fever, eczema, asthma, and other allergies.

Next he turned his attention to a study of curare and the mechanism by which it paralyzes the muscles. It took him 8 years to isolate the essential ingredients from the impure mixtures used by South American Indians to poison darts. He developed a series of synthetic curare drugs that are now considered landmarks in the history of anesthetics—for example, succinylcholine, which is now in general use as a muscle relaxant during surgery on the chest and abdomen. Bovet, who is not listed in either the international or the Italian *Who's Who,* has never taken out a patent in his own name and has never benefited financially from the commercial exploitation of his findings.

This year's Nobel Prize in physics has been awarded by the Swedish Royal Academy of Sciences to two Chinese-born investigators, Tsung Dao Lee, 31, the youngest full professor at Columbia University, and Chen Ning Yang, 27, of the Institute for Advanced Study at Princeton, N.J. Neither is a United States citizen, but both are permanent residents. The two men were cited "for their penetrating investigation of the so-called parity laws which has led to important discoveries regarding elementary particles" [*Science* **123**, 185 (1 February 1957)]. Lee and Yang destroyed experimentally the long accepted "Principle of the Conservation of Parity."

The 1957 Nobel Prize in chemistry, also awarded by the Swedish Academy, will go to Sir Alexander Todd, 50, professor of organic chemistry at Cambridge University since 1944, and chairman of the British Advisory Council on Scientific Policy. He is being honored for his work on nucleotide coenzymes, which has been in progress for nearly 15 years. In an interview with the press, Sir Alexander explained that the contribution by him and his research team was the determination of the fundamental chemical structure of nucleic acids. He described the acids as the genic material that passes on genetic characteristics from the

mother cell to the offspring, and commented "When you know the structure of these things (the genes contained in the chromosomes in cell nuclei) you can begin to find out how they pass on characteristics. If you do that, you've gone a long way toward finding out what life is."

All the Nobel laureates are to receive their awards—a recognition certificate, a gold medal, and $40,000—in a ceremony that will take place in Stockholm on 10 December. The King of Sweden, Gustaf VI Adolf, will make the presentation.

NAS Congratulates Soviet Academy

Detlev W. Bronk, president of the U.S. National Academy of Sciences, sent the following congratulatory letter to A. N. Nesmeyanov, president of the U.S.S.R. Academy of Sciences, on 6 October, two days after the launching of Sputnik I.

"On behalf of the National Academy of Sciences of the USA, I wish to congratulate you and your Academy of Science of the USSR for the great achievement of placing an earth satellite in orbit. This is a brilliant contribution to the furtherance of science for which scientists everywhere will be grateful. I had the privilege of conveying in person these congratulations to Academician Blagonravov in Washington on Saturday morning, and will do so again tomorrow to Academician Bardin."

Physicist Denied Passport

The U.S. Court of Appeals for the District of Columbia has ruled in the case of Weldon B. Dayton, physicist of Corning, N.Y., that the Secretary of State may use confidential information in denying passports to people believed to be going abroad to advance the Communist movement. Dayton was accused of being active in Communist-front activities, associating with Communists, and wanting to go abroad "to engage in activities which will advance the Communist movement." It is reported that Dayton wanted to go to India to conduct research with Bernard Peters, a physicist who renounced his American citizenship and left the country to work at the Tata Institute for Fundamental Research in Bombay.

Dayton held that he had the right to confront witnesses who gave information against him. The State Department eventually told him the substance of the charges but would not reveal the identity of the informants, saying that this would compromise investigative sources and endanger national security.

In a 2-to-1 decision, this view was approved by Judge E. Barrett Prettyman and Judge Wilbur K. Miller. Prettyman wrote in his majority opinion that "the community interest makes [the decision] necessary." In a dissent, Judge Charles Fahy stated: "A finding that the denial is in the 'national interest' is too broad when the particular national interest is not broken down to come within the governing criteria." Dayton's attorney, Harry I. Rand, intends to appeal to the Supreme Court.

The appellate court's ruling was just the opposite of that taken in another passport case in November 1955 by District Court Judge Luther Youngdahl. In the case of Leonard Boudin, Youngdahl ruled out the use of secret evidence by the State Department in acting on passport applications. The Government appealed Youngdahl's ruling, but later avoided the issue and granted Boudin a passport when the case was rejected by the Court of Appeals because of a legal technicality.

Kabul Archeology Exhibit

The Museum of Kabul in Afghanistan is to be reorganized with the aid of a mission established by the United Nations Educational, Scientific and Cultural Organization. The museum contains archeological collections considered of first importance in the study of the art and civilizations of Asia.

The UNESCO mission will consist of a specialist from Switzerland, a specialist from France, and a specialist from Syria. It will be headed by M. Jean Gabus of Neuchatel, Switzerland, who is director of the Institute of Ethnology at the University of Neuchatel.

The President Names Killian

James R. Killian, president of Massachusetts Institute of Technology, has been named by President Eisenhower to the newly created post of special assistant to the President for science and technology. He is to take office immediately. The President said:

"This man, who will be aided by a staff of scientists and a strong advisory group of outstanding experts reporting to him and to me, will have the active responsibility of helping me follow through on the program that I am . . . outlining. . . . Through him, I intend to be assured that the entire program is carried forward in closely integrated fashion, and that such things as alleged interservice competition or insufficient use of overtime shall not be allowed to create . . . harm to our scientific and development program.

"Moreover, Dr. Killian will see to it that those projects which experts judge have the highest potential shall advance with the utmost possible speed. He will make sure that our best talent and the full necessary resources are applied on certain high-priority top-secret items. . . ."

In the television address on 7 November in which he announced Killian's appointment, the President discussed the U.S. missiles program and reported that this country had solved the problem of bringing a missile back from outer space. He also announced changes in the Defense Department to give missile development priority and to assure that "any new missile program . . . will, whenever practicable, be put under a single manager and administered without regard to the separate services." In conclusion, the President said:

"Although for tonight's purpose I stress the influence of science on defense, I am not forgetting that there is much more to science than its function in strengthening our defense, and much more to our defense than the part played by science. The peaceful contributions of science . . . are the most important products of the conquest of nature's secrets." . . .

U.S.–U.K. Conference on Controlled Thermonuclear Research

Major phases of research in the field of controlled thermonuclear reactions in the United Kingdom and the United States were reported upon and discussed recently in a joint conference of representatives of the two nations at Princeton University. The conference was arranged by the U.S. Atomic Energy Commission and the U.K. Atomic Energy Authority.

Several essentially distinct approaches to solving the problems of controlled thermonuclear reactions are being pursued in each of the two countries. Some of the experimental devices utilized have, for some months, been yielding substantial numbers of neutrons from the interior gas; in other machines there has been confinement of very hot gases for a small fraction of a second.

There are two main conditions necessary for the attainment of power-producing thermonuclear reactions. First, heavy hydrogen must be heated to a temperature of at least 100 million degrees centigrade. Second, this hot gas must be confined within a container for an appreciable fraction of a second. When the temperature reaches several million degrees centigrade, neutrons will be emitted in large numbers.

At this lower temperature, it is a delicate and difficult matter to distinguish