photographic plate is moved normally to the slit, then the undiffracted primary beam is marked as a sharp dark line, and the diffracted beams appear on both sides of this line. This permits the investigation of the diffraction pattern as a function of time. If oxidation, for instance, or a change in structure due to temperature changes or other changes in the material takes place, this can be made visible at once.

This method, which was first described by Boettcher, is now described in detail by R. Thun, [*Umschau* **56**, 660 (1 Nov. 1956); **56**, 688 (15 Nov. 1956)]. As an example, the behavior of a cobalt layer which has been evaporated is studied as a function of temperature; as the temperature is increased it shows first a strongly disturbed lattice, then an unstable intermediate state, the beginning of the hexagonal phase, and finally the beginning of the cubic phase.

By evaporating a layer of copper and antimony it is possible to follow as a function of temperature and time the transformation of the superposition of the copper and antimony lattice into a lattice of Cu_2Sb. In a similar way, by using a magnesium layer it is possible to investigate the changes which take place under oxidation and which show first only the reflections of magnesium and then the reflections due to the newly developed magnesium oxide lattice. This method, therefore, while extremely simple, has great possibilities for the practicing metallurgist.—K. L.-H.

News Briefs

■ The United Kingdom now expects to produce more than twice as much electricity from nuclear reactors by 1965 as was estimated prior to the starting of the first reactor at Calder Hall. The greater part of the gain in output is expected to be derived from improvements in the design of reactors of the gas-cooled, graphite-moderated type such as that at Calder Hall. The Central Electric Authority is reported to be considering further increase by building 15 new nuclear power stations instead of 12 as originally planned. The twelve stations planned at first were expected to have an output of 1.5 to 2 million kilowatts; design improvements lead to estimates of 3 to 4 million kilowatts.

■ Exploration for uranium in Mexico will get under way in 1957 under the auspices of the Mexican Government, according to the National Nuclear Energy Commission. The search will be under the direction of government geologists who have studied uranium mining techniques in Colorado and Europe. It will begin in the northwestern state of Chihuahua and in the southern state of Oaxaca, where radioactive rocks have previously been noted.

Whether a commercial concentration of uranium exists is not yet known, but the potential participation of foreign capital already is a big issue. A law reserving all uranium found in Mexico for national ownership has been passed. However, the National Nuclear Energy Commission is studying the possible use of private capital, and presumably foreign capital, under government contracts.

■ According to a press report, Nikolai Semyonov, director of the Institute of Chemistry of the Soviet Academy of Science, and Nobel laureate in chemistry jointly with Sir Cyril Hinshelwood, stated, when he was in Stockholm to receive the Nobel prize, that the death of Stalin had meant the liberation of Soviet science. He further said that Soviet scientists were no longer compelled to follow a dogmatic line.

Scientists in the News

The semimonthly journal *Modern Medicine* has announced its 1957 awards for distinguished achievement. The 10 American physicians and research scientists honored are as follows:

JEROME W. CONN, professor of internal medicine and director of endocrinology and metabolism, University of Michigan Medical School, for "furthering the knowledge of endocrinology and elucidating the clinical significance of aldosterone in health and disease."

MICHAEL E. DEBAKEY, Judson L. Taylor professor of surgery and chairman of the surgery department, Baylor University College of Medicine, for "making aortic resection a safe procedure and for his work on replacement of vascular defects with homografts and plastic bridges."

VINCENT DU VIGNEAUD, professor and head of biochemistry, Cornell University Medical College, for "continuous and brilliant studies of the structure of biologically active sulfur-bearing organic compounds and for his synthesis of oxytocin."

JULIUS LEMPERT, surgical director of Lempert Institute of Otology in New York, research professor of otology at Tufts College Medical School, and visiting lecturer in otolaryngology at the University of Pennsylvania Graduate School of Medicine, for "clinical investigations leading to relief of deafness and to the advancement of otology."

CHARLES W. MAYO, head of a section of surgery in the Mayo Clinic and professor of surgery at the University of Minnesota Mayo Foundation Graduate School, for "service to Medicine and mankind through leadership and distinguished statesmanship in the councils of the United Nations."

EDWIN E. OSGOOD, professor of medicine and head of the division of experimental medicine, University of Oregon Medical School, for "outstanding achievements in hematology and for excellent work in the use of radiophosphorus in the treatment of leukemia."

TOM D. SPIES, professor of nutrition and metabolism and chairman of the department, Northwestern University Medical School, for "pioneering in the management of deficiency diseases and for his untiring investigations in the wide field of clinical nutrition."

BENJAMIN SPOCK, professor of child development, Western Reserve University, for "inspiration and aid he has given to the mothers of America in developing and expounding a sensible approach to child development and child psychology."

EUGENE A. STEAD, JR., professor of medicine at Duke University School of Medicine, for "distinction as a stimulating teacher and as an investigator of the mechanisms of heart failure and of water and salt balance."

DONALD D. VAN SLYKE, research chemist with Brookhaven National Laboratory, Upton, N.Y., for "creation of methods of chemical analysis in the service of medicine and for the profound influence his work has had on diagnosis and treatment."

JOHN VON NEUMANN has received the American Meteorological Society's award for extraordinary scientific accomplishment. He was honored "for his farsighted contribution to the science of meteorology and the national interests in developing the modern, high-speed electronic computer with meteorological application as an ultimate aim, and for his support and encouragement in organizing the world's first research group in numerical weather prediction."

THORNDIKE SAVILLE, dean of the College of Engineering at New York University, will retire at the beginning of the autumn term in 1957. Saville became professor of hydraulic and sanitary engineering at N.Y.U. in 1932 and was made dean in 1935. After retirement he plans to act as a consultant in hydrology and coastal engineering.

ERNEST OPIK of Armagh Observatory, Armagh, Northern Ireland, has an appointment as visiting research professor in the physics department at the University of Maryland for the academic year 1956–57. HIROOMI UMEZAWA of the University of Tokyo is serving as visiting lecturer in the same department through the first 3 months of 1957.

CHARLES KITTEL, professor of physics at the University of California, Berkeley, has been awarded this year's $1000 Oliver Buckley solid-state physics prize for his applications of magnetic resonance methods to investigations of the electronic solids. The award, which is administered by the American Physical Society, was established by the Bell Telephone Laboratories in honor of one of its last presidents.

ALWIN M. PAPPENHEIMER, JR., who has been on the staff of New York University College of Medicine since 1941, has been appointed professor and chairman of the department of microbiology of that institution. He succeeds COLIN M. MACLEOD, who has become John Herr Musser professor of research medicine and chairman of the department of research medicine at the University of Pennsylvania School of Medicine.

ALLAN B. CRUNDEN, JR., of Montclair, N.J., has been appointed editor-in-chief of the *Journal of Astronautics*, official organ of the American Astronautical Society, 516 Fifth Ave., New York 36, N.Y.

GREGORIO OCLANDER, a pediatrician, has joined the medical research cooperation division of Eli Lilly and Company. He will participate in Lilly's export program related to the areas of pediatric medicine, vitamins, and nutritional factors; he also will contribute to Lilly's Latin American publications. A native of Argentina, Oclander was head of pediatrics and subdirector of Moron's Hospital in Buenos Aires before coming to the United States in 1953.

EVELYN L. OGINSKY, formerly research associate at the Merck Institute for Therapeutic Research, Rahway, N.J., has joined the University of Oregon's Medical School as associate professor of bacteriology.

Recent Deaths

EDWIN P. ADAMS, Walpole, Mass.; 78; emeritus professor and former chairman of the physics department at Princeton University; 31 Dec.

OLIVER L. DAVIS, Morristown, N.J.; 60; retired chemist; 27 Dec.

ROBERT ELMAN, St. Louis, Mo.; 57; professor of clinical surgery at Washington University; 23 Dec.

HENRY V. B. ERBEN, Schenectady, N.Y.; 58; retired executive vice president of the General Electric Company; 26 Dec.

FRED S. FRANKFURTER, White Plains, N.Y.; 76; retired pharmacist and trustee emeritus of the College of Pharmacy of Columbia University; 1 Jan.

WILLIAM B. GERY, Norwalk, Conn.; 60; technical director of the Dorr-Oliver Company; 1 Jan.

GWENDOLEN S. JONES, New York, N.Y.; 53; instructor in medicine at Columbia University; 30 Dec.

ROY L. LANGDON, Philadelphia, Pa.; 64; associate professor of medicine at Temple University; 22 Dec.

EDWIN F. LOWRY, Danvers, Mass.; 65; manager of the research engineering laboratories of the lighting division of Sylvania Electric Products; 2 Jan.

WILLIAM B. MELDRUM, Haverford, Pa.; 69; professor emeritus of chemistry and former chairman of the department at Haverford College; 31 Dec.

RANDOLPH G. PACK, Greenwich, Conn.; 66; forest conservationist and president of the Charles Lathrop Pack Forestry Foundation; 25 Dec.

ARTHUR PARRETT, New York, N.Y.; 60; vice president and director of research for Rayonier, Inc.; 28 Dec.

SAMUEL SHIENERNAN-SHARON, New York, N.Y.; 58; vice president of the Ions Exchange and Chemical Corporation of New York; 31 Dec.

JOZSEF VARGA, Budapest, Hungary; 66; professor of technical sciences in the Universities of Budapest and Veszprem; announced in Budapest on 29 Dec.

Education

■ A course of study to train science and fiscal writers is now under consideration at the Columbia University Graduate School of Journalism, according to Edward W. Barrett. Adding a second year to the curriculum, the course would be designed for the writer "who has already moved along in his profession" and would help meet the present "severe shortage" of newspapermen qualified to write on science, business, and finance. Some provision for financial assistance to students would be made.

Students would be protected from aimless sampling, Barrett said. "Rather, under the guidance of a senior scholar and a mature journalist, each would be assisted in applying himself to a single field, doing so in a journalistic context, and producing finally a work of journalistic merit—be it a major magazine article, a script for a television series, or a small book.

Also under consideration is a course designed to introduce the principles of journalism and the American way of life to foreign newspaper students who expect to return abroad, Barrett added. At present, few foreigners attend the School of Journalism because the curriculum heavily emphasizes English-language writing. "The proposed curriculum would involve some courses taken jointly with American students, plus studies in American civilization, economy and the ethics and principles of free journalism," Barrett said.

■ A research training program to increase scientific manpower for clinical and nonclinical cancer research has been established by the National Cancer Institute, Bethesda, Md., with $1.2 million appropriated for the program by Congress. The first group of grants, amounting to $819,067, will be awarded to 14 institutions whose applications were recommended by the National Advisory Cancer Council.

The program extends and supplements but does not replace the research training opportunities available through regular research fellowships and through employment on research projects. Under the new program the institutions receiving funds select and appoint the individuals to be trained and determine the stipends they are to be paid.

Slightly more than half of the $1.2 million was appropriated especially for training in fields of chemotherapy and steroid hormones. The research fields represented by the current awards are cancer chemotherapy, steroid biochemistry, research medicine, pharmacology, biochemistry, immunology, research surgery, histochemistry, electron microscopy, genetics, cytology, radiobiology, and cancer biology.

The following grants for training in chemotherapy and steroid horomones were announced: University of Utah, $74,145; Clark University, $97,761; Columbia University, $52,812; Yale University, $37,800; Sloan-Kettering Institute for Cancer Research, $100,000; Roswell Park Memorial Institute, $32,616.

Other research training grants have been awarded to: University of Wisconsin, $45,792; University of Minnesota, two grants of $50,000 each; University of Kansas, $38,802; Brown University, $52,380; Stanford University, $50,000; Washington University, $11,577; Roscoe B. Jackson Memorial Laboratory, $75,000; Massachusetts General Hospital, $50,382. Requests for information concerning this program should be addressed to the Research Grants and Fellowships Branch, National Cancer Institute, Bethesda 14, Md.

■ The University of Michigan has tentatively accepted gifts of 210 acres and $6.5 million from the Ford Motor Company and the Ford Motor Company Fund to be used in establishing a Dearborn Center of the university, which has a projected enrollment of more than 2700 students. Acceptance depends on appropriation by the state legislature of the necessary operating funds. The combined