A national center of science, however, should be capable of progressive adjustment to changing needs, and we ought to be able to make new admissions, on a varying scale of allotment, to the central community of societies.

What, then, should we be doing to deal with the situation? Actions and decisions long past have imposed it upon us, and regrets and repinings over an opportunity lost more than seventy years ago will not help us to-day. We must admit, too, that our present quarters, with all their defects of elasticity, have provided a combination of central position with freedom from noise of traffic which might be hard to find again. Let me say, then, that the Royal Society's officers, having consulted with the officers of other societies here, and particularly of those whose needs are urgent or whose interests might be directly concerned, have not yet abandoned the attempt to find a solution which would not involve the removal of any from the Burlington House estate. If we fail in that direction—and there is no ground for optimism—the problem will remain, and the time is not one for neglect or postponement of action. On all hands we hear talk of reconstruction and see plans for the rebuilding of London. We can not expect another Christopher Wren—one of our original fellows and a leader in the science of his day; London missed that opportunity. It is natural and proper for the plans now being presented to make spacious and impressive provision in the new London for opera, drama, music and all the fine arts; and we shall surely join in a general welcome to any practicable scheme which can open the doors more widely to such cultural privileges, and enhance their dignity and worth in the eyes of London and of the nation. But I do not think that we must stand by and allow the claims of science again to go by default. A fear of overstatement, a passion for critical accuracy which is a part of the very spirit of science, may make us reluctant advocates. If necessary, however, we must be ready to remind all who may be concerned of the part which the British scientific effort has played, in making it possible now to plan at all, with confidence, for our own civic and national reconstruction. But for science, we may remind them, the very different plans which our enemies were so recently making for our future might already be taking effect. I have no doubt that the claim will be handsomely admitted; but we ought not to be too easily appeased with compliments and oratorical bouquets. The nation's opportunity, when peace returns, of enjoying the arts and the amenities of life will be dependent on its standards of health and prosperity, and these, in turn, ever more directly on science and its applications, as certainly as these are still needed to secure our national survival and victory in this war.

This ancient Royal Society of London, and those societies which have grown from it and round it in later years, constitute a scientific organism which is a national and imperial heritage, second to none in the world's esteem. Here are the roots of the spreading tree of science and technology, which should form a major component of our national contribution to the new world now in the making. Seventy years ago these roots were given only enough soil for the replanting then undertaken; they have long been badly pot-bound, and some parts of the root systems are threatened with strangulation, while others have appeared outside the pot. We can properly claim, I think, that the progressive needs of our scientific societies shall be given early consideration, in any new allotment which plans for reconstruction may allow. We ought to have a scientific center permitting them to coordinate their activities with economy, and giving room for change, expansion and organic growth by budding and division, in accordance with nature's law. I think that we have the further right to expect that the home of science in this capital city will have a dignity symbolizing its value to the nation and the empire, and enabling us to hold up our heads in the company of other countries, whose scientific academies, not more famous than ours, have so long been housed more worthily, and with a more generous recognition of their due place in an enlightened people's scale of cultural values.

OBITUARY

LEO HENDRIK BAEKELAND

WHEN Leo Hendrik Baekeland, honorary professor of chemical engineering, died on February 23, 1944, the faculties of Columbia University lost one of their most distinguished members; and the world lost one of its most eminent industrial chemists.

Dr. Baekeland was born on November 14, 1863, in the old city of Ghent in Belgium. After completing his studies in the Municipal Technical School in that city; he entered the University of Ghent in 1880, where he specialized in the study of chemistry. He immediately demonstrated a superior intellectual ability that enabled him to complete the requirements for the degree of bachelor of science in two years. This was followed by studies for the degree of doctor of science which was awarded maxima cum laude in 1884

at the age of 21, just four years after entering the university. In recognition of his genius, his alma mater immediately appointed him to an assistant professorship and two years later advanced him to associate professor of chemistry. In 1887 in a competition among the alumni of the four Belgian universities, he won first prize which gave him the title, Laureate in Chemistry, a gold medal and a traveling fellowship which changed the whole course of his career. In 1889, after visiting the principal universities of France, Germany, England and Scotland, the fellowship brought him to the United States, where he met Charles Frederick Chandler, professor of chemistry at Columbia University. Professor Chandler's keen judgment of human ability quickly recognized evidence of genius and determination in the young Belgian's charming personality. It was largely through Professor Chandler's influence that Dr. Baekeland decided to resign from his position on the faculty at the University of Ghent and begin a career in applied chemistry in the new world, that was to place him in the front rank of humanity's most distinguished benefactors. From this time unitl his death, more than a half century, Columbia was a source of inspiration to his restless mind and its well-being the continuous object of his concern.

Almost from the time he landed on the shores of his adopted country, his inventive genius, bolstered by an unusual grasp of the principles of the basic sciences, began to produce results that have revolutionized several great branches of applied science and which have touched the daily lives and raised the standards of living of scores of millions of people all over the world. His invention of Velox photographic paper put photography into the hands of common people everywhere. In the field of electrochemistry, his development and perfection of electrolytic cells then in use for the production of chlorine and caustic soda led to the establishment of the Hooker Electrochemical Company and the erection at Niagara Falls of one of the largest and best equipped electrochemical plants in the world. This achievement gave the United States a firmly established world position in the production of these basic chemicals.

His crowning work, however, was the solving of the mysteries involved in the action of formaldehyde upon phenols, giving to the world the new material "bakelite" and establishing a new industry in the field of structural materials, the synthetic plastics industry. This is one of the most beautiful and masterly scientific studies ever recorded and one of the great inventions of all time.

The world was quick to recognize his scientific ability and his inventive genius. The highest honors at the disposal of nations; of universities of almost every country; of scientific, philosophical and professional societies and of world organizations for the promotion of education, science and industry were gladly conferred upon him. Columbia University honored him with the first Chandler Medal Award in 1914 and the first Chandler Lectureship on the occasion of the fiftieth anniversary of the School of Mines and the honorary degree of doctor of science in 1929. In 1917 he was appointed honorary professor of chemical engineering to advise and assist the university in developing that branch of engineering education which was rapidly advancing to a foremost place in the engineering schools of the country. For more than a quarter of a century, his wise counsel and brilliant lectures, which were enriched by a vast scientific knowledge and an almost limitless industrial experience, brought to the university a high quality of inspiring instruction and sound research enthusiasm that had much to do with giving Columbia the high reputation it has in chemical and chemical engineering education and research throughout the world.

Like all truly great men, Leo Baekeland had high ideals. They guided him in everything he did. He had a rare genius for making them practical. They made him one of the most successful administrators of big business enterprise in modern times. His companies, which operated plants in the principal countries of the world, were models of industrial organization. They were energized by his remarkably vibrant spirit. As a leader of men in the field of scientific endeavor, he was an outstanding figure of his day. Like most successful men, he had strong convictions which were based on wide experience and on an unusually accurate understanding of human nature. He firmly believed that the scientific method, if practically applied, could be used successfully to solve most of the social, economic and political problems that bedevil mankind.

He loved truth and beauty and sincerity wherever he found them. He loved his fellowmen and all who knew him loved him. He loved his adopted country passionately and served it in high places for many years without compensation. He loved science and its methods. They were the principal motivating factors of his life. He loved Columbia. In its halls, lecture rooms and laboratories where he came to talk and work with members of the faculty and student body, he found an intellectual and spiritual atmosphere that seemed to him to be unusually wholesome, satisfying and unique in universities.

He prized true friendship above almost everything else. His delightful sense of humor, his love of peo-

ple, his engaging informality, his generous nature and charming personality made his company and friends an international legion. To be a guest in his home or to accompany him on his yacht was one of life's choice experiences. No man knew better how to live usefully, triumphantly and beautifully than did Leo Baekeland.

The noble and flaming spirit which characterized our beloved colleague's life and works will illuminate the pathways of thoughtful men in the fields of science and engineering for countless generations.

ARTHUR W. THOMAS
STEPHEN P. BURKE
COLIN G. FINK
WM. D. TURNER
ARTHUR W. HIXSON, *Chairman*

COLUMBIA UNIVERSITY

RECENT DEATHS

ACCORDING to reports in the daily press, Edwin G. Woodward, dean and director of the College of Agriculture of the University of Connecticut, died in the Hartford fire. He was fifty-four years old.

DR. WALTER ALBERT JESSUP, president of the Carnegie Foundation for the Advancement of Teaching since 1934; president of the Carnegie Corporation of New York since 1941, died on July 7 at the age of sixty-six years.

FRED C. PEDERSON, state forester of Virginia, member of the Council of the Society of American Foresters, died on June 25.

WILLIAM H. BARTON, JR., chairman and curator of the Hayden Planetarium of the American Museum of Natural History, died on July 7 at the age of fifty-one years.

THE death at the age of eighty years is announced of Sir Thomas Robert John Ward, first president of the Institution of Engineers of India, fellow of the Royal Geological Society. He was a member of the American Society of Civil Engineers.

ALEXANDER E. CONRADY, professor of optical design at the Imperial College of Science and Technology, London, from 1917 until his retirement in 1931, previously for sixteen years optical designer for the firm of W. Watson and Sons, Ltd., of London, manufacturers of microscopes and other optical apparatus, died on June 16 at the age of seventy-eight years.

SCIENTIFIC EVENTS

PROPOSED MEMORIAL TO SIR HORACE DARWIN

THE letter given below, written by Dr. H. H. Dale, president of the Royal Society, was printed in the issue of June 3 of *The Times*, London.

The Royal Society has received from a generous donor, who wishes to remain anonymous, an offer of the sum of £2,000 to initiate a fund which it is desired to associate with the memory of the late Sir Horace Darwin, F.R.S., whose scientific vision and enterprise have had such important influence on the instrumental equipment of scientific research and its applications. Appropriately to that commemoration, the object named for the proposed fund is the provision of apparatus and materials for restoring the equipment of laboratories and institutions for scientific research in countries now occupied by our enemies. Such restoration must play a vital part in enabling allied countries, now so long the victims of aggression, to create anew their scientific and economic life.

The Royal Society, being in full sympathy with the objects thus indicated, has agreed to create the "Horace Darwin Fund" for their furtherance, and has accepted the contribution offered for its initiation. It can not be doubted that the allied countries which the enemy has occupied and despoiled will need such help on a very large scale; and the offer of it from this country would certainly strengthen the bonds of collaboration with our own scientific community, and contribute to the promotion and maintenance of the ultimate European settlement. The fund will be held by the Royal Society, for application to this purpose as soon and as rapidly as the liberation of the occupied countries, and the facilities for obtaining the required equipment, make effective action possible.

Contributions to the "Horace Darwin Fund" should be sent to the treasurer of the Royal Society, Burlington House, W.1, London.

THE RESEARCH COUNCIL OF RUTGERS UNIVERSITY

BASED upon the concept that a university exists to advance the frontiers of knowledge through study and research as well as to impart knowledge through instruction, Rutgers University has established a Research Council to strengthen the research program of the university. Its aims are to expand existing research programs; to encourage and facilitate the development of research in departments where none is now under way; to reduce to the minimum unnecessary duplication of effort; to encourage cooperative research between departments and between the university and organizations outside of the university; and to make available to scholars and the general public the results of research done in the university. The council will cooperate closely with deans, other administrative officers and department heads in strengthening the undergraduate and graduate programs of instruction and research. Attempts will be made to adjust the teaching load of those members of the fac-