

For many years physiologists had taken Bernstein's membrane hypothesis of nervous conduction as highly probable, but in 1937 Hodgkin supplied convincing evidence of its central tenet, namely, that the change of potential at the active surface induced the activity of neighbouring regions. But two years later, Hodgkin and Huxley found that the change of potential at the active surface was too large to be explained by a general increase in permeability and implied a reversal of the selective permeability of the resting membrane. This new and important fact, found independently by Cole and Curtis in the United States, has now been established for excitable cells in general. It has led to a general attack on the biophysics of the cell membrane and on the differences in ionic concentration inside and outside the cell. After the War, Hodgkin returned to Cambridge to direct a research unit supported by the Rockefeller Foundation. He is a Fellow of Trinity College, Cambridge, and was elected to the Royal Society in 1948.

Wilhelm Homberg (1652-1715)

WILHELM HOMBERG, who was born in Batavia, Java, three hundred years ago, on January 8, 1652, has enriched chemistry with original observations and discoveries, some of which, despite their alchemical flavour, have stood the test of time. His father, who came from Quedlinburg in Germany, had joined the Dutch East India Company and had been appointed commandant of the Batavia arsenal. Wilhelm, the second of his four children, was intended for the army and was made a corporal at the age of four. When the family returned to Europe, he studied law in Jena and Leipzig, and in 1674 became an advocate in Magdeburg. It was Otto von Guericke who first aroused his interest in the natural sciences. Giving up the law, Homberg travelled extensively, studying medicine and botany in Padua, chemistry in Bologna and in England under Robert Boyle, and anatomy in Leyden. After taking the M.D. at Wittenberg, he practised medicine in Rome for five years. In 1691 he settled in Paris, becoming a member of the Academy of Sciences and director of its chemical laboratory, and later private physician to the Duke of Orleans. He died on September 24, 1715. Possessor of an insatiable curiosity, a lively mind, and dexterous hands, Homberg made many contributions to chemistry, astronomy, pharmacy and therapeutics. He was keenly interested in the phosphorescent substances, and popularized the use of 'phosphorus'—discovered, but kept a secret, by the Hamburg alchemist Brandt. For long, fused calcium chloride was known as 'Homberg's phosphorus'. In 1702 he discovered boric acid, which was called *sal sedativum Hombergi*. He also recorded observations on the green colour produced in flames by copper, on crystallization of common salt, and on the gain in weight of antimony when submitted to solar calcination. Much of his work was published in the *Recueil de l'Académie des Sciences* between 1692 and 1714. With the iatrochemist Nicolas Lémery, Homberg shares the distinction of having introduced chemistry into France.

New Satellite of Jupiter

ON September 29, 1951, Dr. Seth B. Nicholson, while examining a plate exposed earlier that night, discovered an object which he thought was a new satellite of Jupiter. No announcement was made until the object had been photographed later on three occasions with the 60-in. telescope at Mount Wilson

and also with the 100-in., with which Dr. Nicholson had made the first photograph. Although it was obviously moving with Jupiter, there was no certainty that it was a new satellite, and computations made by Dr. P. Musen of the Cincinnati Observatory indicated that it might be the tenth satellite of Jupiter; but this view was later shown to be incorrect. Harvard College Observatory Announcement Card 1160, dated November 21, 1951, gives approximate elements of the orbit of the object, which is now accepted as the twelfth satellite of Jupiter, from which it appears that its mean distance from the planet is almost 13 million miles, or about a million miles less than that of Jupiter XI. The eccentricity of the orbit is 0.13456 and its inclination to the ecliptic is $147^{\circ} 21'$, so that four of Jupiter's satellites have retrograde motion. The magnitude of the new satellite is 18.3, but this is only a provisional figure; its diameter has been estimated to be about 15 miles—the diameter of satellite X. Dr. Nicholson now ranks with Galileo as the only astronomer who has discovered four of Jupiter's satellites.

The Balliol-Trinity Laboratory and Science Library, Oxford

ON December 14, Sir Harold Hartley opened a new science library which has been constructed as part of the Balliol College War Memorial in the premises formerly occupied by the Balliol-Trinity Laboratories. The library is for the use of both Balliol and Trinity Colleges, and continues a long tradition of collaboration which has contributed much to the development of science in Oxford. This collaboration dates from 1879, when a joint scheme was set up for the teaching of science, and a door (known as the 'scientific frontier') was opened to give Trinity men access to the lecture room and laboratories in Balliol. The latter were situated in cellars, one of which had been in use as a chemical laboratory since 1851: it was used by Sir Benjamin Brodie (Waynflete professor of chemistry during 1855-73) for his work on ozone. The Laboratories soon acquired more premises in both Colleges, and although the accommodation was cramped and primitive, much valuable work was done both in teaching and research. Originally, the Laboratory was used to teach all branches of physics and chemistry to undergraduates of both Colleges; but most of the research done there was physico-chemical in nature, and during its latter years it provided most of the physical chemistry teaching for the whole of the University of Oxford. The Laboratories closed in 1941 on the completion of the University Physical Chemistry Laboratory they were almost the last of the College laboratories to survive in Oxford, being outlived only by the Sir Leoline Jenkins Laboratory in Jesus College. Among those who have worked in the Balliol-Trinity Laboratories are Sir Benjamin Brodie, Vernon Harcourt, Sir John Conroy, H. B. Dixon, H. B. Baker, D. H. Nagel, Sir Harold Hartley, H. G. J. Moseley and Sir Cyril Hinshelwood. His many friends will be glad to hear that the opening of the library was attended by James Warrell, who served as laboratory steward for more than fifty years.

Eighth International Congress on Theoretical and Applied Mechanics, Istanbul

THE Eighth International Congress on Theoretical and Applied Mechanics, which is sponsored by the International Committee for the Congresses of Applied Mechanics, will be held in the University of Istanbul