under the auspices of the Medical Research Council. When the last-named body decided to discontinue this line of work, Cohen really did retire, and he and his wife left Leeds and went to live at their country cottage near Coniston Lake. It was there amidst the beautiful surroundings which he loved that he passed away on June 14, after a few weeks' illness. He was then seventy-six years of age.

Cohen taught by example rather than precept. His research students will always retain ineffaceably in their minds a picture of his amazing industry, his high technical standards, his almost woman-like gentleness in dealing with their early errors, his reticent smile at anything which amused him and his abhorrence of anything which savoured of showmanship or attaining ends by any but transparently honest means. Those who came less closely into touch with him will remember his clarity as a lecturer, his great interest in the welfare of students and especially foreign students of the University, the Working Men's Club which he founded and personally conducted in one of the least attractive parts of Leeds, and not least his attempts by direct investigation to show the great evils wrought by the smoke-laden atmosphere of our industrial towns.

Cohen was an artist to his finger tips. A lover of music, he was no mean performer on the violin. He and his wife often gave delightful musical evenings to their friends both in the University and outside it. He painted well in water-colour and got great enjoyment in trying to put on paper in this medium his impressions of many parts of his beloved Lake District. With such a temperament his likes and dislikes were often very clear cut. They were sometimes an enigma to those who did not know him, but never to his friends. Few men are so honest and live their lives with such simplicity and dutiful routine as Julius Cohen did, and none can have tried more faithfully or wholeheartedly than he to serve his fellow men.

As a chemist Cohen did a considerable amount of valuable and fundamental work, but he did not make the kind of outstanding discoveries that open up new fields of activity. He was, however, very versatile, and from the titles of his published papers it may be seen that he covered a wide field. He was one of the old school of organic chemists who were mainly interested in the structure of carbon compounds and its influence on their properties and reactions—what may be called molecular architecture and its significance. The principal province of his work was that of aromatic substitution, especially of benzene compounds, and the laws which govern it. But he was also intensely interested in the problems of optical activity, and almost the last paper he ever wrote was on "Asymmetry and Life".

It was this mystery of the optical activity of naturally-occurring organic compounds, together with his great appreciation of the work of Pasteur, that probably directed Cohen's attention to the wide scope for chemical investigation provided by the activities of living organisms. This led him to advise many of his research students—the first being H. D. Dakin—to take up the study of what was then called physiological chemistry and is now named biochemistry. None who were so advised can have regretted their choice, and the enormous development of biochemistry during this present century proves how right Cohen was in his appreciation of the contributions that the chemist could make in the biological field.

Organic chemists owe a great debt to Cohen because of his books. The smallest of these was probably the most important—his little "Practical Organic Chemistry". There was no book anything like as satisfactory when it was first published, and it has guided innumerable students in their first steps in the subject. Indeed it is still widely used. His greatest production was the three-volume "Advanced Organic Chemistry", and it is a tribute to his industry and wide reading that he could write such a book and yet carry out his normal day's work at his bench in the laboratory. Organic chemistry is now almost getting beyond the compass of a one-man book, but this "big Cohen" is still one of the books which are highly valued by advanced students in Great Britain. To many, Cohen's books will be his most lasting memorial, but those who had the privilege of his friendship will always in addition be grateful for the virtue they derived from the man himself.

H. S. R.

Prof. Max Cremer

On May 22, a few weeks only after celebrating his seventieth birthday, Max Cremer, emeritus professor of physiology in the University of Berlin and formerly head of the Physiological Institute of the Veterinary College, Berlin, died in Munich. He was one of the last representatives of the classical German school of physiologists who mastered both biochemistry and biophysics.

Cremer started his scientific career as a pupil of Carl Voit and Soxhlet by investigating animal metabolism, particularly the formation and utilisation of carbohydrate in the body. He succeeded in proving that the organism is able to synthesise glucose and glycogen from certain breakdown products of organic matter, for example from glycerine. Although he maintained a fruitful interest in these problems, he soon turned his main activities to electrobiology, a field very congenial to his talents in mathematics and physics. In 1906, he discovered the existence of considerable potential differences between suitable watery electrolytes separated by a phase immiscible with water (glass, nitrobenzene). This fact formed the basis of the present view of electrical phenomena in living matter, and on the practical side, of the use of the glass electrode for hydrogen ion measurements.

Regarding the electric change in nerve as the essential factor concerned in the origin and propagation of the impulse, Cremer combined physicochemical and physiological terms in an ingenious manner which culminated in a formula for the velocity of the impulse and in a mathematical expression for the processes preceding excitation. He also promoted the technique of recording the rapid

potential changes occurring in tissues (the invention of a string electrometer; the first physiological application of the cathode ray tube and the loop oscillograph in 1907 and 1912).

Although Cremer was extremely critical and even sarcastic in the scientific sphere, he was humorous and cheerful in ordinary life. This mixture in his imposing personality was very manifest in speech and discussion, and will not be forgotten by his pupils and friends. H. ROSENBERG.

WE regret to announce the following deaths:

Mr. C. T. Kingzett, one of the founders of the Institute of Chemistry, and author of the "Chemical Encyclopædia", and other books on chemistry, on July 29, aged eighty-two years.

Prof. W. R. Sorley, Knightsbridge professor of moral philosophy in the University of Cambridge, author of many well-known works on ethics, on July 28, aged seventy-nine years.

Mr. C. E. Stromeyer, chief engineer of the Manchester Steam Users' Association, president of the Manchester Literary and Philosophical Society in 1929–31, on July 23, aged seventy-nine years.

Prof. F. A. F. C. Went, For.Mem.R.S., extraordinary professor of botany in the University of Leyden, and emeritus professor of botany in the University of Utrecht, on July 24, aged seventy-one years.

News and Views

Dr. Griffith Evans

WE extend our congratulations to Dr. Griffith Evans, who will attain his hundredth birthday on August 7. Dr. Evans was a pioneer in the study of protozoology in connexion with infections, and the first man to associate trypanosomes with the production of disease. He was born at Tymawr, near Towyn, Merionethshire. After studying medicine for a short time with a medical practitioner at Towyn and Aberdovey, he entered the Royal Veterinary College, London, where he qualified as M.R.C.V.S. In 1877, he was sent to India in the Army Service Corps. It was there that his great work on blood parasites was carried out. On arrival in India, he was appointed to investigate an endemic disease which for many years had been fatal to cavalry and artillery horses; by microscopic examination of the blood, which revealed the specific bacillus in the blood of every patient, Evans at once proved the disease to be anthrax fever.

IN 1880, Dr. Griffith Evans's work on surra began; and upon studying the reports which had already been made upon the disease he at once reached the opinion that it was due to some parasite of the blood. His first act was to examine microscopically the blood of a surra patient: it was swarming with parasites. Though Koch had not yet made his classical postulates, and though Evans was ignorant of the nature of the microbes revealed to him, he immediately associated them with the production of the disease. They were the parasites which, at first called *Trichomonas evansi*, are now known as *Trypanosoma evansi*. Official opinion was strongly against him, but the Government printed his reports, and he had the gratification of knowing that his statements spurred on a number of younger men to continue investigations along lines which he had laid down. He returned to England in 1885, and after further work in Crookshank's laboratory, King's College, London, retired from the army in 1890. In 1917 he was awarded the Mary Kingsley Medal by the Liverpool School of Tropical Medicine, in recognition of his distinguished scientific work, and on that occasion he wrote a short autobiographical memoir, which was published in vol. 12 of the *Annals of Tropical Medicine and Parasitology*.

Alcohol and Road Accidents

EARLY this year, the Minister of Transport asked the British Medical Association whether it could usefully make any observations on the place of alcohol in the causes of road accidents, in the light of existing knowledge and experience. The Association thereupon appointed a special committee to consider the subject and the report of this committee has just been published (*Brit. Med. J.*, Suppl. July 27, 1935; p. 57). The committee confined itself to an examination of the scientific evidence on the effect of the consumption of alcohol on the functioning of the body, especially of amounts insufficient to produce the state commonly recognised as drunkenness. The Alcohol Committee of the Medical Research Council concluded that the direct effect of alcohol upon the nervous system is, in all stages and upon all parts of the system, to depress or suspend its functions; it is, in short, simply a narcotic drug. The earliest effects are an impairment of the faculties of judgment, concentration, self-criticism and the power of estimating risk, which are often accompanied by a sense of well-being and of self-satisfaction. At the same time, the power of making movements dependent on rapid and accurate co-ordination is adversely affected; the rapidity and accuracy of neuro-muscular co-ordination are diminished. The report reviews the experimental evidence on which the above statements are based, and points out that as little as three ounces of whisky produces these effects. The experiments were of course made in other connexions to determine the effects of alcohol upon the nervous and neuro-muscular systems; but