size should this be required, and the internal walls can readily be removed without damage to the structure if a rearrangement of the rooms should prove desirable in the years to come.

The old building is being retained to house the administration and editorial and abstracting staffs, and one room is set apart for the pool of plant pathologists when they happen to be working in Great Britain.

OBITUARY

Dr. Bernard J. Flurscheim

DR. BERNARD J. FLURSCHHEIM, who died recently at his home in Fleet, was in his eighty-first year. So passes the last of the great pre-electronic builders of the theory of organic chemistry.

After a school education on classical lines at Baden and Bournemouth, Flurscheim made his first scientific studies in the University of Geneva; afterwards he worked with Werner in Zurich, and with Thiele in Strassburg. He took his Ph.D. degree in Heidelberg in 1901. In 1905 he set up his house in Fleet, in the garden of which he built the laboratory, where he worked, until other duties claimed him in the First World War. For the periods 1905-7 and 1925-28 he worked in the Royal Institution in London.

In his main scientific work, the provision of organic chemistry with a theoretical framework, Flurscheim was natural successor to both Werner and Thiele: he started from Werner's ideas of the divisibility of chemical affinity when discussing its distribution on molecules, and it ranks as a major and lasting discovery that his schemes of distribution involve a generalization of Thiele's theory of conjugation, as is to-day so readily appreciated in electronic terms.

Flurscheim's first paper of classical importance, published in the *Journal für praktische Chemie* in

1902, described the first rational explanation of orientation in aromatic substitution. In 1909-10 he published in the *Journal of the Chemical Society* two papers of like importance on the strengths of acids and bases. Here he was extending the application of his theory from the kinetic to the thermodynamic field, thereby showing that his valency redistributions apply not only to activated states but also to normal molecules. To-day, with the aid of the quantum theory, we re-express this, too, in electronic terms, and call the result mesomerism or resonance.

Flurscheim published many other papers of more limited importance. He never participated in the remoulding of his theories in conformity with the electronic theory of valency and quantum mechanics. However, the largely correct form of Flurscheim's theories made this task of recasting them a particularly easy one for others.

His discovery of tetranitroaniline, perhaps the most powerful of known explosives at the time of its discovery, was an accidental result of his work in the Fleet laboratory, directed as this was to the experimental control of his theoretical ideas. It was an accident that he sometimes regretted, inasmuch as it led him into commercial work, to which he was not well suited. However, it enabled him to render notable service during the First World War, when, on the request of the late Lord Moulton, he undertook supervision of the large-scale manufacture of this explosive in the United States. During the Second World War he worked as gas identification officer for the A.R.P. authorities.

Flurscheim did not make human contacts easily or treat them lightly. He was devoted to his family, and to a few firm friends. His chief personal hobbies were travel and climbing. In 1903 he visited New Zealand, where his father, Michael Flurscheim, lived, and there made acquaintance with the New Zealand Alps. He knew the Alps of Europe very well. He leaves a widow, a daughter and a son.

C. K. INGOLD

NEWS and VIEWS

Chemistry at University College, London:

Prof. D. P. Craig

A NEW chair of chemistry at University College, London, has been instituted, and Prof. D. P. Craig, of the University of Sydney, is to be its first occupant. He will take up the duties of the chair in 1956. Prof. Craig took his first degree with first-class honours in chemistry in 1940 in the University of Sydney, where he remained as Commonwealth Research Fellow until 1942. During 1942-44 he served with the rank of captain in the Australian military forces. In 1946 he was appointed lecturer in chemistry in the University of Sydney, and during 1946-50 he was Turner and Newall Fellow in the University of London, being appointed lecturer in chemistry at University College, London, in 1950; since 1952 he has been professor of physical chemistry in the University of Sydney. Prof. Craig's research career is that of an experimental physical chemist with deep knowledge of, and interest in, the theory of chemistry. He has published work on co-ordination compounds with particular reference to the nature of metal-ligand bonds, on aromatic character and the conditions for its appearance, on the excited states of un-

saturated and aromatic molecules, on the excited states of crystals, and on the relation between molecular and crystal states. He has also contributed to the methodology of quantum mechanics by introducing configuration interaction into molecular orbital theory, and clarifying the role of polar structures in valency-bond theory. The addition of so accomplished a theoretician to the Chemistry Department of University College, where co-ordination chemistry, molecular spectroscopy and crystal chemistry are all intensively studied, seems particularly appropriate.

Sir William Hamilton (1805-65)

ONE of the most brilliant mathematicians of modern times, William Rowan Hamilton was born in Dublin one hundred and fifty years ago, at midnight between August 3 and 4, 1805, of a Scottish family that had settled in Ireland. He was a precocious child, being able to read Hebrew at the age of seven; at twelve he had mastered Latin, Greek and the leading Continental languages, and had acquired some knowledge of Syriac, Persian, Arabic, Sanskrit, Hindustani and Malay. Quite early he showed his genius for mathematics, and in his