

obituary

Kasimir Fajans was born in Warsaw, Poland, May 27, 1887, and died in Ann Arbor, May 18, 1975. He went to school in Warsaw, to university in Leipzig, and then to Heidelberg where he did his Ph.D. work, and also won the Victor Meyer Prize (1909). He spent the next two years as a postdoctoral student at the Technische Hochschule in Zurich, where he became acquainted with Albert Einstein, and at the University of Manchester, where he worked with Lord Ernest Rutherford. After six years at the Technische Hochschule at Karlsruhe, he moved to Munich, and became the director of the Institute for Physical Chemistry in 1932. He first visited the United States in 1930 as the Baker Lecturer at Cornell University, and returned in 1936 as Professor of General and Physical Chemistry at the University of Michigan, where he remained for the rest of his career.

His major work was on radioisotopes, where he discovered the branching of radium transformation series in 1911, established the radioactive displacement laws in 1913, found the first isotope of the 91st element in the Periodic Table and discovered the precipitation rule of radio elements. Less well known, but equally fruitful, was his prolific research on other topics in chemistry. A partial list would have to include: the heat of hydration of gaseous ions, thermo-chemistry, chemical binding, volumetric analysis by adsorption indicators, theory of glasses, and the partial separation of D- and L-stereo-chemical isomers by asymmetrical catalysts. He was the author of five scientific books, and remained active long after his formal retirement, the last of many awards given to him, the Gold Award for 1975 of the Affiliate Council of the Engineering Society of Detroit, was bestowed only a few months before his death.

Professor Fajans married Salomea Kaplan, in 1910. She survives him together with their two sons Edgar W. and Stefan S., four grandchildren and two great grandchildren.

Thomas M. Dunn

Like many men of modest physical stature, **Hamilton Hartridge** who died on January 13, 1976, at the age of 89, was a dynamo. He used to produce

ideas at the rate of a normal person's heart-beat, a faculty which dove-tailed with his nineteenth century many-sidedness, but ultimately led to his professional evaporation.

After completing his medical studies he stayed at King's College Cambridge till 1926. It was there that he did his best scientific work. He collaborated with Roughton in the classical analysis of the composition of blood in relation to various levels of oxygenation: the study was furthered by Hartridge's ingenious invention of the reversion spectroscopy, suitable for an estimation of the movement of haemoglobin bands. He suspended silk threads from the ceiling of his room at distances just greater than a bat's wing-span, and showed that, though the bats flew around, not a single thread was torn. He provided an optical system enabling Rutherford and Geiger to get on with their experiments counting α -particles. Later he buttressed Helmholtz' theory of hearing. He applied physical principles to the theory of visual resolution in the early twenties, was elected to the Royal Society and appointed subsequently—if not consequently—to the chair in physiology at Barts in 1927. This he occupied till 1947.

Paradoxically, his name is best known in the world of vision undoubtedly because of his literary rather than his scientific output. His crucial experiment on accommodation in the cat is forgotten. But his quixotic attacks on the validity of Young's trichromatic theory of colour vision raised enough dust for even some present-day authors deeming it necessary to flick a duster. Hartridge's lively brushes at the Physiological Society and the Colour Group of the Physical Society (as it then was) intrigued even laypersons.

Explicitly presented in a volume of Transactions of the Royal Society, affectionately known as the Yellow Peril, his polychromatic theory is alien to British sensory physiology in being unquantified and therefore untestable. The Medical Research Council set up a Vision Research Unit in 1947 under Hartridge's direction so that he might have a chance to prove his ideas. He failed. Yet he managed to attract a handful of people who have directly and indirectly stimulated vision research in the last thirty years both in this country and abroad. This should not be forgotten even though it is unlikely to be engraved on any stone.

R. A. Weale

Dr R. W. B. Nurse, a former Head of the Materials Division at the Building Research Station and a world authority on cement chemistry, died on November 13, 1975, aged 62. He received his degree in Physics from London University in 1934 and began at the BRS, which he joined in 1932, his fundamental work on inorganic building materials including the thermodynamics of multicomponent systems. Early in his career he invented with F. M. Lea (later Sir Frederick Lea) the Lea-Nurse apparatus for determining the specific surface of powders by an air-permeability method. He made major contributions to Portland and slag cement chemistry, for which he was awarded the D.Sc. London, in 1954, and contributed principal papers to the 4th, 5th and 6th International Symposia on the Chemistry of Cement. He was probably best known for his work on the manufacture of cement from impure limestone which led to the setting up of a thriving cement industry in Uganda, the first anywhere in the world to use phosphatic limestone. His work was recognised in 1963 by the award of the Sir George Beilby Medal. He also initiated at BRS studies of fibrous composites and crystallised glasses. In 1965, in recognition of his outstanding research abilities he was awarded special merit promotion to Deputy Chief Scientific Officer, which enabled him to reduce his administrative responsibilities and to concentrate on research. Between 1965 and his retirement in 1973, he continued his work on fibrous composite materials, contributing to the understanding of the properties and fracture mechanics of glass fibre cement composites in particular. He had been President of the Mineralogical Society and was an honorary member of the Permanent Committee of RILEM (Réunion International des Laboratoires d'Essais et de Recherches sur les Matériaux).

Ron Nurse was a man of very wide-ranging interests and talents: he took a particular interest in the training of young people, for instance as a member of the Board of Governors in local schools and colleges. Among his many qualities his generosity of mind, modesty and his willingness to help others were outstanding. He leaves a wife, a son and a daughter by whom, as well as by his colleagues and friends, he will be greatly missed.

Witold Gutt