

slow electrons in polar materials. Later in the 50s and early 60s he published a series of six papers on electro-dynamics including contributions to damping processes, line shapes, intermolecular forces (including retardation and three body interactions) and gauge problems. The final set of papers concern various specialised aspects of field theory.

He trained about ten research students who now teach throughout the world and these will always have that special magic that comes from having worked with and learned from Sigurd.

In recent years he interested himself in the history and philosophy of science and was active in the British Society for Social Responsibility in Science.

He will be sadly missed by his friends, colleagues and students at University College. He leaves a young daughter and son by his second marriage, and one son by his first.

E. A. Power

F. F. Heymann

J. V. Peive, the Soviet soil scientist, died after a long illness on September 13, 1976, aged 70. As well as being one of the leading Soviet agricultural scientists of the post-war era, Dr Peive had been politically active and, according to Tass, his official obituary was signed by Mr Brezhnev and other prominent Soviet politicians and scientists. Of Latvian extraction, he was born in 1906 in the adjoining Toropets district of Russia and, after training as a teacher, graduated in 1929 from the Timiryazev Agricultural Academy in Moscow.

For 13 years from 1931 he worked in the All-Union Flax Research Institute in Torzhok, some 200 km north-east of Moscow, rising to the position of Director. After the war he became Rector of the Latvian Agricultural Academy in Riga, carrying out his own specialist investigations in the Laboratory of Biochemistry of Soils and Trace Elements in the Institute of Biology. He published a text-book on the biochemistry of soils in 1961 but will be best remembered for his work on the effects of trace elements in soils on plants and animals. Several volumes of the Transactions of his laboratory, dealing with different aspects of trace element problems, have been published by the Latvian Academy of Sciences, and he chaired the Co-ordinating Commission on Trace Elements in Soils, Plants, Animals and Human Nutrition in the USSR. Dr Peive's wider interests in soils were recognised by his appointment as Editor-in-chief of *Pochvovedenie*, the Soviet journal of soil science, a post that he had occupied for the past 14 years.

Peive rose to the Presidency of the Latvian Academy of Sciences and, after 13 years as a Corresponding Member, was elected an Academician of the Academy of Sciences of the USSR in 1966, in which he held the post of General Secretary. He was Prime Minister of Latvia from 1959 until 1962 and was one of the three Latvian representatives in the Soviet of Nationalities, one of the two Chambers of the Supreme Soviet of the USSR, and Chairman between 1958 and 1966.

He seldom attended scientific gatherings outside Russia, although only ill-health prevented his participation in the meeting of Commissions II and IV of the International Society of Soil Science in Aberdeen in 1966. In private discussion he talked about his work with much less formality than is the case with many Soviet scientists and often introduced a light-hearted note. His major contribution to Soviet agriculture was in the immediate post-war years when he pointed out the existence of trace element problems in many Russian soils, particularly deficiencies of boron, zinc, manganese, cobalt, copper and molybdenum.

R. L. Mitchell

Professor Leo Pincherle died suddenly on October 25, 1976. I came to know him well during the last years of his life. He regularly attended the Bedford/Westfield College solid state physics seminars. Characteristically, he spoke little at these meetings, but his rare contributions were profound and to the point. He was modest to a fault and abhorred the limelight; yet his colleagues, friends and students know of the innumerable unobtrusive ways in which he served the cause of scholarship in teaching and research.

Leo Pincherle was born in Bologna in 1910. He came from a line of distinguished academics—the mathematician Salvatore Pincherle was a grandfather—but Leo was the first of the family to take up physics as a career. His first publication (1931) reported a calculation of the wavelength of the oscillations in Hull's magnetron; and the interest in the theoretical principles underlying practical devices marked his work to the end. He was with Fermi in Rome, later moved to Padua and came to England shortly before the Second World War as a refugee from Mussolini's Italy. During the difficult years which followed he was befriended by the late H. T. Flint who brought him as a lecturer to King's College, London. Leo's early research, on a variety of topics in spectroscopy, atomic physics and electromagnetic theory, demonstrates the width of his scientific interests. But his great productive period

came at the Telecommunications Research Establishment (TRE), Malvern, where he was Principal Scientific Officer from 1948 until 1955. Here he established himself as a leading authority on energy band theory. The 1953 paper on the band structure of lead sulphide (Bell *et al.*), in which the cellular method was first applied to a diatomic semiconductor, is an early classic in the field, and fundamental theoretical work on applications of group theory appeared in the form of TRE Memoranda. Pincherle returned to university life in 1955 when he rejoined Flint, by then head of the physics department at Bedford College, London, as a University Reader; overdue promotion to Professor of Mathematical Physics came in 1969. A fruitful collaboration with P. M. Lee led to further band structure papers in the early 1960s. In the last ten years of his life Leo Pincherle published few research papers. But he continued to be active and fertile in the many other ways a scholar exerts his influence: as supervisor of research students, as a sought-after contributor to summer schools in Italy, as UK editor of the international journal *Solid State Electronics*, and not least as author of the definitive textbook *Electronic Energy Bands in Solids* (1971) which itself contains much original work. Above all Leo Pincherle loved teaching and the contact with his students, a love which was fully returned, and the prospect of retirement from this activity filled him with dismay. Leo's lectures and publications all bear the stamp of his characteristic approach to physics: careful preparation, great clarity and economy of style, the use of the simplest mathematical techniques appropriate to the physics of the problem in hand. He tackled difficult problems but was never a narrow specialist.

The picture of Leo Pincherle the scientist cannot be separated from that of Leo Pincherle the man. He was devoted to his family, for whom his too-early death is a tragic loss. His sense of humour, dry and delicious, showed in his fund of stories about well-known contemporaries — always amusing and never malicious. His quiet demeanour concealed plenty of fire and imagination, as you soon discovered when you partnered him at bridge. He was the most knowledgeable of men on fundamental aspects of European culture and history and wore his learning lightly; his love of music and the arts was intense, his taste discriminating. He was, in the best sense, both very Italian and very English, combining in his person that internationalism in science and that European spirit which it is so necessary to keep alive today. His friends miss him deeply.

Ernst Sondheimer