DR. GEORGE GORE, F.R.S.

DR. GEORGE GORE, F.R.S., whose death was announced last week, was born at Bristol in 1826, the son of a small cooper. First as errand-boy and afterwards as cooper's apprentice, he devoted himself to whatever scientific studies came within his reach.

He went to Birmingham in 1851, and made his home there for the remainder of his life. His occupations were numerous and varied; at one time he was a practitioner in medical galvanism, at another chemical expert in a phosphorus factory, and again a lecturer in physics and chemistry at King Edward's School. He always, however, employed himself in original investigation, more especially in the province of electrometallurgy, whenever his other work would allow, and his knowledge of electrochemical processes enabled him to be of the greatest service to the electroplating industry in the town of his adoption.

His researches on hydrofluoric acid and the fluorides, definitely proving the analogy of these compounds with those of chlorine, are well known to chemists, and in 1865 he was elected to the Fellowship of the Royal Society in recognition of the value of his work. It may be noted in this connection that many years later he was only just anticipated by Moissan in the isolation of fluorine.

In 1877 the honorary degree of LL.D. was conferred on him by the University of Edinburgh as an acknowledgment of his services to science. Some years later he declined the offer of a knighthood, but in 1891 he accepted a Civil List pension.

From the age of thirteen he had had to rely upon himself for his own education, which occupied all his spare time at a period when he was earning his living by arduous labour. Hence it is not surprising to find that one of his characteristics was an extraordinary degree of energy, which, making him one of the greatest of workers, enabled him to accomplish very much, even for a lifetime of close upon eighty-three years. His was a restless mind, constantly seizing upon fresh subjects for research, and the result of this may be seen in the length of the list of publications associated with his name in the Royal Society's catalogue. It may be, indeed, that this very quality, by distributing his energies, was an obstacle to achievements of still greater importance which might have ensued upon the concentration of an intellect combining so much ingenuity and so great a capacity for work.

He was strongly impressed with the necessity for State endowment of scientific research, and was partly instrumental in procuring for the Royal Society the Government grant of 4000*l.* a year for this purpose.

In addition to his contributions to learned societies, he published a text-book on "The Art of Electrometallurgy," and a volume on "The Electrolytic Separation of Metals"; he also wrote a treatise on "The Art of Scientific Discovery." His mind always had a bent for philosophy, which expressed itself more especially in his later years. He was an unswerving materialist, and his views may be gathered from his recently published work on "The Scientific Basis of Morality."

G. A. S.

PROF. J. M. PERNTER.

AS announced with deep regret last week, the death of Hofrat Prof. Josef Maria Pernter took place after a long illness at Arco, South Tyrol, on December 20. From 1897 until compelled in the early part of last year to abandon his work, Pernter was professor of meteorology and geodynamics in the University of Vienna, and director of the Austrian Zentralanstalt for those sciences. The institute is situated in the Hohe Warte, about three miles from the centre of the city of Vienna.

He was born on March 15, 1848, in Neumarkt, Tyrol. In 1864 he entered the novitiate of the Society of Jesus, and became successively professor of philosophy at Presburg, professor of physics and mathematics at Kalócsá, Hungary, and at Kalksburg. He left the society in 1877, and in 1882 became an assistant in the Central Meteorological Institute of Vienna. In 1890 he was made professor of cosmical physics in Innsbruck, but returned to Vienna as director and professor upon the retirement of Hann. Throughout his life he was a sincere churchman, and occupied a position of great influence among Catholic university students.

His best known work is his "Meteorological Optics," an admirable and exhaustive treatise the publication of which is not yet completed. And apart from his official work as director of the Austrian Meteorological Service, there are many valuable papers by him on various branches of meteorology to be found in meteorological journals or in the publications of the Vienna Academy, of which he was a corresponding member. His friends will probably remember him best as a controversialist of the best kind. Himself full of vigour, energy and "Geist," he possessed the power of putting his ideas with perfect fairness into the most lucid and vigorous language, both in conversation and in print. His contributions to the discussion of the question of the cannonade against hail concluded with a masterly summary in "Das ende des Wetterschiessen's" in the *Meteorologische Zeitschrift* of 1907.

He was an active member of the International Meteorological Committee, and presided over the conference of directors of meteorological institutes and observatories at Innsbruck in 1905. His work, both official and unofficial, was characterised by great thoroughness and vivacity.

In recent years he suffered most poignant family bereavement. He lost his young daughter in 1904 and his wife in 1906, and from these losses he never recovered. He leaves an only son, who is still of student age.

NOTES.

M. P. VILLARD has been elected a member of the Paris Academy of Sciences, in the section of physics, in succession to the late M. Mascart.

PROF. A. BÉHAL, of the École supérieure de Pharmacie of Paris, has resigned the general secretaryship of the Paris Chemical Society. He will be succeeded by M. Freundler, of the faculty of science in the University of Paris.

MR. ARTHUR H. SMITH has been appointed keeper of the department of Greek and Roman antiquities in the British Museum, in succession to Mr. Cecil H. Smith, who was recently appointed director of the Victoria and Albert Museum.

AT the initiative of the Association internationale de l'Institut Marey, a subscription list has been opened for the erection of a monument to the late M. E. J. Marey. We learn from *La Nature* that donations may be sent to M. Carvallo, at the Institut Marey, Parc des Princes, Boulogne-sur-Seine. A committee of management has been formed, with M. Chauveau as chairman.

DR. H. W. WILEY, the chief of the bureau of chemistry in the U.S. Department of Agriculture, is directing atten-