

Contemporary Birthdays.

- September 12, 1851. Sir Arthur Schuster, F.R.S.
 September 14, 1849. Prof. Ivan Petrovitch Pavlov, For. Mem. R.S.
 September 16, 1859. Mr. Basil Mott, C.B., M.Inst.C.E.
 September 17, 1859. Dr. Frank Dawson Adams, F.R.S.
 September 18, 1854. Sir Richard Tetley Glazebrook, K.C.B., F.R.S.

Sir ARTHUR SCHUSTER was born at Frankfort-on-Main, and he was educated at the University of Heidelberg, and at Owens College, Manchester. Professor of physics in the University of Manchester, 1888-1907, he was a secretary of the Royal Society from 1912 until 1919, and president of the British Association at the Manchester meeting of 1915. As chairman of the executive committee of the National Physical Laboratory for the six years' period, 1919-1925, Sir Arthur rendered important services, not only to the institution, but also to science in general. It is worthy of recall that in his article "Spectroscopy," in the "Encyclopædia Britannica" (11th edit., 1911), Sir Arthur remarks in a footnote that he believes he was the first to introduce the word 'spectroscopy' at a Royal Institution lecture. This discourse was delivered January 28, 1881, under the title, "The Teachings of Modern Spectroscopy."

Prof. I. P. PAVLOV, the distinguished Russian physiologist, is a foreign member of the Royal Society, and he was Nobel laureate in physiology and medicine for 1904. Prof. Pavlov's earlier researches related to the physiology of the circulation, and especially the nerve supply of the blood-vessels. Soon, however, he was concerned in chief with the physiology of digestion, establishing new methods of procedure in the examination of functions, and deducing conclusions which have proved of fundamental importance in the whole study and range of the subject. In 1915 Prof. Pavlov was awarded the Copley medal of the Royal Society.

Mr. BASIL MOTT received his early technical training at the Royal School of Mines. Mr. Mott was president of the Institution of Civil Engineers in 1924.

Dr. F. D. ADAMS is emeritus dean of the Faculty of Applied Science, and Logan professor of geology in McGill University, Montreal. Born in that city, he was educated at the High School there, graduating at McGill. He is Hon. LL.D., Toronto. Dr. Adams has conducted many researches in economic and experimental geology. An account of one of these (in collaboration with Dr. J. T. Nicolson), entitled "An Experimental Investigation into the Flow of Marble," was published in the *Philosophical Transactions* for 1901.

Sir RICHARD GLAZEBROOK, foreign secretary of the Royal Society, was educated at Liverpool College, and at Trinity College, Cambridge, graduating 5th wrangler. Sometime assistant director of the Cavendish Laboratory, he was afterwards principal of University College, Liverpool, from 1898 until 1899, retiring to become director of the newly established National Physical Laboratory, a post which he filled with acumen and distinction for fifteen years. He is now chairman of the executive committee of the Laboratory. Sir Richard was awarded the Hughes medal of the Royal Society in 1909. Author of a number of valuable text-books, the editorship of the "Dictionary of Applied Physics" is his latest service to scientific publications of permanent value.

Societies and Academies.

PARIS.

Academy of Sciences, July 26.—Gabriel Bertrand and M. Mâchebœuf: Nickel, cobalt and diabetes. Injections of saline solutions containing small quantities of these two metals in some cases of diabetes proved to be without effect; in others, there was a marked improvement. Administered by the mouth, in one case of diabetes, the amount of insulin injected daily could be reduced by 25 per cent.—Rateau, Leroux and Bourgeat: The experimental determination of the coefficient of yield of tuyères working with a free flow.—Kyrille Popoff: The convergence of series in ballistics.—E. M. Antoniad: Changes recently observed on the planet Jupiter with the 83 cm. telescope of Meudon Observatory. A detailed description of recent changes in the surface of the planet, with two reproductions of photographs.—Léon Brillouin: A general type of problems, allowing the separation of the variables in the undulatory mechanics of Schrödinger.—Louis de Broglie: Remarks on the new undulatory mechanics.—Lucien Mallet: The luminescence of water and organic substances submitted to γ -radiation. Under the influence of the γ -rays, water and certain transparent organic liquids exhibit a marked luminescence. The light from water contains ultra-violet rays of wavelength less than 3000 Å.U.—F. Wolfers: A probable action of matter on the quanta of radiation.—Pierre Auger and Francis Perrin: The distribution in space of the directions of emission of the photo-electrons.—Rodolphe Berthon: The projection and reproduction of reticulated photographs.—Pierre Thomas and Mlle. Mari Sibi: Contribution to the study of the structure of jellies. Organogels obtained with the benzoylacetal of sorbite.—P. Dumanois and P. Laffitte: The influence of the pressure on the formation of the explosive wave. From experiments ($2\text{H}_2 + \text{O}_2$) with initial pressures from 1 to 6.5 atmospheres, the distance travelled by the flame before the explosive wave is set up diminishes as the pressure increases, at first rapidly and then more slowly.—Michel O. Samsøen: The dilatometric and thermal study of glasses composed of silica and soda.—Marcel Laporte and Mario A. da Silva: The mobility of the negative ions and ionisation currents in pure argon. From the results of earlier work, it was concluded that in perfectly pure argon the saturation current would be obtained with a much lower potential difference than in air: this prediction is now confirmed experimentally. The curves given show that saturation is obtained in highly purified argon at 50 volts, whilst in air, saturation is not reached at 1760 volts. The effect of impurities on the ionisation curve of argon is shown.—Georges Denigès: The action of hydrobromic acid and of the alkaline bromides in acetic acid solution on cupric bromide. A new cupric reaction. The reaction is based on the colour produced by the addition of a cupric salt to pure acetic acid containing some potassium bromide.—A. Travers and Malaprade: The constitution of solutions of molybdcic acid. Solutions of molybdcic acid contain a condensed acid, $4\text{MoO}_3 \cdot \text{H}_2\text{O}$, which, by analogy with metatungstic acid, may be called metamolybdcic acid.—R. Cornubert and Ch. Borrel: The action of benzaldehyde on cyclanones containing the groups $-\text{CH}(\text{CH}_3) \cdot \text{CO} \cdot \text{CHR}-$ or $-\text{CHR} \cdot \text{CO} \cdot \text{CH}_2-$.—G. Bruhat and V. Thomas: The dimagnesium compounds containing the benzene nucleus. An account of the general reactions of compounds of the type $\text{C}_6\text{H}_2(\text{MgI})_2$.—G. Vavon and Jakeš: The catalytic hydrogenation of conjugated double bonds. So far