Calendar of Scientific Pioneers.

April 28, 1842. Sir Charles Bell died.—Famous for his important discoveries in anatomy, Bell in 1807 distinguished between the sensory and the motor nerves in the brain. Born in Edinburgh in 1774, his principal appointment was the professorship of anatomy and surgery to the London College of Surgeons.

April 28, 1858. Johannes Peter Müller died.—A professor first at Bonn and then at Berlin, Müller has been referred to as the founder of modern physiology. He extended the knowledge of the mechanism of voice, speech, and hearing and of the properties of the lymph, chyle, and blood. Helmholtz, Du Bois Reymond, and Ludwig were among his pupils.

April 28, 1903. Josiah Willard Gibbs died.—Called by Ostwald the founder of chemical energetics, Gibbs enunciated the phase rule and was the first to apply the second law of thermodynamics to the exhaustive discussion of the relation between chemical, electrical, and thermal energy and capacity for external work. For thirty years he was professor of mathematical physics in Yale University.

April 30, 1865. Robert Fitzroy died.—The commander for eight years of H.M.S. *Beagle*, in which Darwin sailed as naturalist, Fitzroy in 1854 became the first head of the Meteorological Department of the Board of Trade, where he instituted a system of storm warnings and daily weather forecasts in 1860–61.

April 30, 1876. Antoine Jérôme Balard died.—The discoverer in 1826 of the element bromine, Balard held various appointments at Montpellier, and then succeeded Thénard in the chair of chemistry in the Faculty of Sciences in Paris.

May 1, 1796. Alexandre Gui Pingre died.—In 1751 Pingre became director of the observatory at St. Geneviève in Paris. He travelled abroad to observe the transit of Venus of 1769, verified Lacaille's work on eclipses, and wrote an important book on comets.

May 1, 1891. Eduard Schönfeld died.—The successor of Argelander at Bonn, Schönfeld continued the great survey of the heavens and formed a catalogue of 133,659 stars between 2° and 23° south declination.

May 2, 1519. Leonardo da Vinci died.—One of the most remarkable and versatile geniuses of any age, Leonardo in turn was painter, sculptor, engineer, and architect, and studied physics, biology, and philosophy. As a man of science he was essentially a forerunner, and anticipated by centuries developments which have but recently been witnessed.

May 4, 1677. Isaac Barrow died.—The first to hold the Lucasian chair of mathematics at Cambridge, Barrow relinquished this post in 1669 in favour of his pupil Newton. At the time of his death Barrow was Master of Trinity College.

May 4, 1827. Mark Beaufoy died.—Beaufoy was the first Englishman to climb Mont Blanc, which he did six days after Saussure. As a scientific investigator he made experiments on the form of ships, carried out magnetical observations to determine the law of diurnal variation, and studied the eclipses of Jupiter's satellites.

May 4, 1892. Karl August Dohrn died.—The father of Anton Dohrn, the zoologist, Karl Dohrn was well known for his writings on entomology. He was a merchant in Stettin, where he died.

May 4, 1916. Prince Boris Galitzin died.—Well known for his inventions and his writings on seismology, Galitzin was professor of physics in the Academy of Sciences of Petrograd. E. C. S.

Societies and Academies.

LONDON.

Royal Society, April 14.—Prof. C. S. Sherrington, president, in the chair.—Prof. K. **Onnes**, Sir R. **Hadfield**, and Dr. H. R. **Woltjer**: The influence of low temperatures on the magnetic properties of alloys of iron with nickel and manganese. A series of iron–manganese and iron–nickel alloys with a range of percentages of manganese and nickel respectively has been tested in order to investigate the influence of cooling to very low temperatures (liquid hydrogen and liquid helium) on their magnetic properties, especially to ascertain whether the iron–manganese alloys which are non-magnetic at atmospheric temperature become magnetic by so doing. Samples are tested quickly one after another at a temperature of 20° K. The iron–manganese alloys containing the higher percentages of manganese cannot be made magnetic at atmospheric temperature by cooling to the boiling point of liquid hydrogen or liquid helium. The existence of one magnetic and one non-magnetic, or at most slightly magnetic, manganese–iron compound is probable, and the non-magnetic properties of the higher manganese–iron alloys may be explained by their means.—C. N. **Hinshelwood** and E. J. **Bowen**: The influence of physical conditions on the velocity of decomposition of certain crystalline solids. The velocity of decomposition by heat of potassium permanganate and ammonium bichromate. For solids the temperature coefficient of the reaction velocity does not allow calculation of a "heat of activation" or "critical increment" of the reacting molecule, according to the method of Trautz, Lewis, and others, for various physical reasons connected with the propagation of the reaction from the surface into the interior. The lowering of the velocity of decomposition of potassium permanganate in solid solution in potassium perchlorate indicates that the heat of activation of the permanganate is increased by the physical process of solid mixture. By equating this assumed increase in the heat of activation to the observed heat of solid mixture obtained from the calorimetric measurements of Sommerfeld, approximate quantitative agreement is found between the observed rates of decomposition of potassium permanganate in various solid solutions and those calculated.—Prof. H. **Briggs**: The adsorption of gas by charcoal, silica, and other substances. The method of determining the adsorptive capacity of a substance at liquid-air temperature is described, and results are given of the capacity and manner of preparation or occurrence of thirty-six substances. Charcoal and silica are compared, especially as relates to nitrogen and hydrogen, to illustrate preferential adsorption; the influence of chemical composition on gas adsorption is discussed. The effect of the compressibility of the initial layer when the density of an adsorbent is determined by the immersion method is considered. An evaluation is made of (*a*) the volume of solid matter, (*b*) that of the interstitial space between the granules, and (*c*) that of the internal gaseous space for silica and coconut charcoal. The density of the nitrogen adsorbed at −190° C. by silica and charcoal is calculated from experimental data. From these results it is possible to estimate the error affecting the density of charcoal ascertained from water-immersion. The conditions affecting adsorption at low and high saturation are given. The presence of capillaries is not sufficient to account for adsorption. A high-capacity silica may be deactivated, but remain porous. Graphite, which has no pores, adsorbs gas at −190° C. The evidence leads to the conclusion