QUÍMICA FÍSICA

In recognition of the extraordinary services In recognition of the extraordinary he has rendered by the discovery of the services he has rendered by the 1901 laws of chemical dynamics and osmotic discovery of the remarkable rays pressure in solutions. subsequently named after him. VAN 'T HOFF, Jacobus Henricus RÖNTGEN, Wilhelm Conrad (1852-1911) (1845-1923) In recognition of the In recognition of the extraordinary services he has rendered by his work extraordinary service they 1902 rendered by their researches on sugar and purine syntheses. into the influence of magnetism LORENTZ, ZEEMAN, Pieter FISCHER, Hermann Emil upon radiation phenomena. (1865-1943) Hendrik Antoon (1852-1919)(1853-1928)In recognition of the extraordinary services he has rendered by his discovery of spontaneous In recognition of the extraordinary radioactivity. services he has rendered to the 1903 In recognition of the extraordinary services advancement of chemistry by his they have rendered by their joint researches electrolytic theory of dissociation. CURIE, **BECQUEREL** on the radiation phenomena discovered by ARRHENIUS, Svante August **Antoine Henri** Pierre Professor Henri Becquerel. (1859-1927) (1859-1906) (1867-1934) (1852-1908) In recognition of his services in the For his investigations of the densities of the most important discovery of the inert gaseous elements in 1904 air, and his determination of their place in gases and for his discovery of argon in connection with these the periodic system. LORD RAYLEIGH (STRUTT, RAMSAY, Sir William studies. John William) (1852-1916)(1842-1919)In recognition of his services in the advancement of organic chemistry and the 1905 For his work on cathode rays. chemical industry, through his work on organic dyes and hydroaromatic compounds. VON BAEYER, J. F. W. Adolf LENARD, Philipp Eduard (1835-1917) (1862-1947)In recognition of the great services In recognition of the great merits of rendered by him in his investigation and his theoretical and experimental isolation of the element fluorine, and for 1906 investigations on the conduction of the adoption in the service of science of electricity by gases. the electric furnace called after him. MOISSAN, Henri THOMSON, Joseph John (1856-1940)(1852-1917)For his biochemical researches and For his optical precision instruments his discovery of cell-free 1907 and the spectroscopic and metrological fermentation. investigations carried out with their aid. MICHELSON, Albert Abraham **BUCHNER**, Eduard (1852-1931) (1860-1917)For his method of reproducing For his investigations into the disintegration colours photographically based on of the elements, and the chemistry of 1908 the phenomenon of interference. radioactive substances. RUTHERFORD, Ernest LIPPMANN, Gabriel (1871-1937)(1945-1921)In recognition of their In recognition of his work on catalysis and for contributions to the his investigations into the fundamental 1909 development of principles governing chemical equilibria and wireless telegraphy. rates of reaction. BRAUN, MARCONI, OSTWALD, Wilhelm Karl Ferdinand Guglielmo (1853-1932) (1874-1937) (1850-1918)In recognition of his services to organic For his work on the chemistry and the chemical industry by his equation of state for 1910 pioneer work in the field of alicyclic gases and liquids. compounds. VAN DER WAALS, Johannes Diderik WALLACH, Otto (1837-1923)(1847-1931) In recognition of her services to the advancement For his discoveries regarding the of chemistry by the discovery of the elements laws governing the radiation of radium and polonium, by the isolation of radium 1911 heat. and the study of the nature and compounds of CURIE, Marie this remarkable element. Née SKLODOWSKA WIEN, Wilhelm (1867-1934)(1864-1928)GRIGNARD. For his method of hydrogenating organic compounds in the For his invention of automatic Victor presence of finely disintegrated metals whereby the progress of (1871-1935) regulators for use in conjunction with organic chemistry has been greatly advanced in recent years. 1912 gas accumulators for illuminating SABATIER, or the discovery of the so-called Grignard reagent, which in recent lighthouses and buoys. (1854-1941)DALEN. Nils Gustaf years has greatly advanced the progress of organic chemistry. (1869-1937)In recognition of his work on the linkage of atoms in For his investigations on the properties of molecules by which he has thrown new light on matter at low temperatures which led, inter 1913 earlier investigations and opened up new fields of alia, to the production of liquid helium. research especially in inorganic chemistry. KAMERLINGH ONNES, Heike WERNER, Alfred (1853-1926)(1866-1919) In recognition of his accurate For his discovery of the diffraction determinations of the atomic weight of a 1914 of X-rays by crystals. large number of chemical elements. VON LAUE, Max RICHARDS, Theodore William (1879-1960)(1868-1928)For their services in the analysis of For his researches on plant crystal structure by means of X-rays. 1915 pigments, especially chlorophyll. BRAGG, BRAGG, WILLSTÄTTER, Richard Martin Sir William Henry William Laurence (1872-1942)(1890-1971) (1862-1942)