tion, briquetting, carbonization, by-products, and mechanical and electrical testing. The work of the Central Research Establishment is dove-tailed with that of a number of other agencies to which the Board looks in carrying out research of interest to it. The National Coal Board's participation in the work of such agencies is co-ordinated by the director-general of research at headquarters, Dr. W. Idris Jones, to whom Dr. Bronowski will be responsible for the part played by the Central Research Establishment.

Dr. Bronowski, who is forty-two, is primarily a mathematician, but he has always been recognized for the wide range of his scientific interests; for example, while senior lecturer in mathematics at University College, Hull, he took part in work on physical, biological and economic problems. During the Second World War he joined Sir Reginald Stradling's team, at the Ministry of Home Security, set up to study and predict the physical and economic effects of bombing. He was a member of the Joint Target Group in Washington, D.C., and of the Chiefs of Staff Mission to Japan, which reported on the effects of the atomic bombs at Hiroshima and Nagasaki. At present Dr. Bronowski is assistant chief scientific adviser at the Ministry of Works and is engaged on mathematical and statistical investigations into the structure of industry, with special reference to the building industries.

Physics at the Australian National University: Prof. E. W. Titterton

Dr. E. W. Titterton, of the Atomic Energy Research Establishment, Harwell, has been appointed to a chair of physics at the Australian National University. Prof. Titterton, who will work with Prof. M. L. Oliphant in the Research School of Physical Sciences, embarked on a research career after graduating with first-class honours in physics from the University of Birmingham. During the early years of the Second World War, he became a member of a small team working on the development of micro-wave radar devices; later, he formed one of the British nuclear research team which went to the United States, where he distinguished himself as a brilliant research worker and master of physical technique. He joined the Atomic Energy Research Establishment at Harwell on his return to Great Britain. Prof. Titterton will go to Australia towards the end of this year.

Meldola Medal for 1949: Dr. A. J. B. Robertson

On the recommendation of the Council of the Royal Institute of Chemistry, the Society of Maccabaeans has awarded the Meldola Medal for 1949 to Dr. A. J. B. Robertson, in recognition of his work, while under the age of thirty, on explosives and on the application of the mass spectrometer to the study of chemical reactions. Dr. Robertson is a graduate of the University of Cambridge, where he joined the Department of Colloid Science as a member of Prof. E. K. Rideal's team working on explosives, and studied the sensitiveness of explosives to heat. Using specially developed experimental methods, many high explosives were found to decompose quite smoothly, although very rapidly, at elevated temperatures, and the kinetic features of several decompositions were studied. The actual transition between thermal decomposition and spontaneous explosion was directly examined by novel methods with a number of high explosives. Several distinct mechanisms whereby this transformation occurs were found, and various theoretical relations were deduced. The sensitiveness of solid high explosives to impact was also related to fundamental kinetic and thermal data by the 'hot spot' theory. Robertson was awarded the Henry Humphries Prize by St. John's College, Cambridge, for this work, and in 1946 elected to a fellowship. He continued experimental work under Prof. Rideal at the Royal Institution on the catalytic pyrolysis of hydrocarbons, using a simple mass spectrometer as an analytical tool and for the direct detection of free radicals. In 1948 he was appointed a junior research fellow by the managers of the Royal Institution, and in 1949 to a senior studentship by the Commissioners for the Exhibition of 1851. He is at present developing his work on the direct study of free radical reactions, in the Davy Faraday Research Laboratory of the Royal Institution.

Madame Kovalevsky (185 –91)

Among the few women whose mathematical researches have gained international recognition, Madame Kovalevsky ranks very high. Most advanced books on differential equations refer to Kovalevsky's proof of the existence theorem, while books on advanced dynamics refer to Kovalevsky's top. She was born in Moscow on January 15, 1850, the daughter of Lieutenant-General Korvin-Krukovsky, and displayed a marked taste for mathematics at an early age. At the age of eighteen she was married to V. Kovalevsky, a palæontologist, and shortly afterwards they both went to study in Germany. For several years she took private lessons from Weierstrass in Berlin, and in 1874 took the degree of Ph.D., *summa cum laude* at Göttingen. After this she returned to Russia. In 1883, after the tragic death of her husband, she became an assistant professor at Stockholm, and made a deep impression by her exposition of Abelian functions and other branches of higher mathematics. In 1888 the French Academy awarded her the Prix Bordin for her researches on the top, and doubled the value of the award on account of the exceptional merit of her work. She died in 1891. The anniversary of her birth has been celebrated in the U.S.S.R., and a play based on her life, which contains many dramatic passages, is being shown in many theatres.

Possible New Industries in the British Commonwealth

Bulletin No. 4 of a new series, "Science in Industry", has recently been published under the title "Technical Knowledge as an Exportable Quantity" (pp. 22; London: Murray, Bull and Co., Ltd., 1949), and this Bulletin consists of a group of four reports on the opportunities for building up new industries in the British Commonwealth and Colonies. In the first of these, W. D. Scott and Co., of Sydney, review the chemical industry in Australia and the opportunities for chemicals in the control of pests of livestock, as weedkillers, insecticides and fungicides, in mining, food preservation, the building trades, for soap and other detergents, cosmetics, in the rubber industry, treatment of textiles, etc. In a second report, Mr. J. C. Nisbet reviews opportunities in East Africa, stressing the need for initial research and fully informed advice on technical requirements and local conditions. Ibcon, Ltd., of Bombay, review the prospects in Burma, which are poor, and in India and Pakistan, where they are good; while in the