

electricity and magnetism are well known as the basis of all practical developments in that field during the past century. In 1844, Faraday was invited to accept the chair of chemistry at the University of Edinburgh. His loyalty to the Royal Institution, however, led him to refuse; money meant nothing to him—the advancement of science was his sole objective.

### British Nuclear Energy Conference

IN the light of recent rapid developments in the technology of nuclear energy, and the increasing demand for a common ground between scientists and engineers where these developments can be discussed, an organization has been formed by the Institutions of Civil, Mechanical, Electrical, and Chemical Engineers, and the Institute of Physics, to satisfy this need. This will be known as the British Nuclear Energy Conference, and its affairs will be managed by a board consisting of three representatives from each of these societies. The chairman is Sir Christopher Hinton, and the secretary Mr. Alexander McDonald (secretary of the Institution of Civil Engineers, Great George Street, London, S.W.1). The five societies will arrange for the presentation of papers dealing with nuclear energy subjects, and all members of the societies will be able to attend and take part in the discussions. The Conference will publish a journal about four times a year containing records of the papers, discussions, symposia and conferences conducted by the Board. This journal will be offered for sale. The Board proposes to hold its inaugural meeting in the autumn, at which a symposium of lectures will be delivered on the technology of nuclear energy and its applications. The Board proposes to promote national and international conferences from time to time, and to arrange for British participation in international meetings. The expenses of the Conference will be met by the societies, although it is expected to be self-supporting once it is fully established.

### Colonial Geology in the British Commonwealth

THE quarterly bulletin of the Colonial Geological Surveys, *Colonial Geology and Mineral Resources* (London: H.M.S.O.; 7s. 6d. a number), is now well into its fifth volume. Since its inception in 1950, this publication has been an outstanding success, and in many parts of the world it must have become one of the most welcome of geological journals. Important contributions to the earlier volumes include up-to-date accounts of the geology and mineral resources of Northern Rhodesia, Sierra Leone, Nigeria, Somaliland, Jamaica, Mauritius, Trinidad and St. Helena; and of specific mineral deposits such as those of lead-zinc-vanadium at Broken Hill (Northern Rhodesia), manganese in the Gold Coast, bauxite in Jamaica, wolfram in Uganda, and coal in Bechuanaland. A regular feature of great scientific value as well as of personal interest is devoted to reports on the progress of the various Colonial Geological Surveys. No. 1 of the current volume (March 1955; pp. 126) is notable in containing a very full and well-documented report on African geochronology, which indicates that seven Pre-Cambrian orogenic cycles have now been dated in Africa, carrying geological history back at least three thousand million years. A cautiously optimistic account of the industrial possibilities of mineral wealth in Tanganyika is accompanied by geological and mineral maps of the high quality that character-

izes all the illustrations of the bulletin. No. 2 (May 1955; pp. 128) contains articles on the Upper Cretaceous Mollusca of Nigeria; on the effects of heat and hydrochloric acid on cassiterite, columbite and other economic Nigerian minerals; and on the geology of a remarkable dome-like structure of concentric shells of granitic and amphibolitic rocks recently discovered on the western flank of the Sula Mountains in Sierra Leone. Besides the reports mentioned above, other regular features include notes on matters of current interest, abstracts, bibliographies, reviews and mineral statistics.

### Coal Gasification in Australia

IN his Masson Memorial Lecture at the meeting of the Australian and New Zealand Association for the Advancement of Science at Canberra on January 15, 1954, Dr. P. S. Andrews gave a full account of the Federal project for the pressure gasification of non-coking coals for the combined purpose of town's gas and the production of synthetic liquid fuel. Work on the gasification of brown coal in Victoria was commenced in 1931 by the technical staff of the Metropolitan Gas Co.; but the present project was based on research carried out in Germany and the United States and elsewhere. Contracts for the plant for the project were placed in 1951, and it was expected that manufacture of gas would commence in 1951 with an output of 18 million cubic feet per day, or nearly half the present requirements of Melbourne. Three hundred and seventy acres had been purchased by the Gas and Fuel Corporation of Victoria, some ninety-six miles from Melbourne, and, when completed, the initial plant would comprise six Lurgi pressure generators, two boilers fired by brown coal, with an evaporative capacity of 55,000 lb. per hr. each, and two Linde-Frankl oxygen units each capable of liquefying 500,000 cu. ft. of air per hr. for oxygen production. In addition to gas, 1 million gallons of tar and 300,000 gallons of benzole would be recovered per annum. The gas would be conveyed in an 18-in. welded steel pipe for 74 miles to the terminal station, where pressure would be reduced to 25 lb., and it would enter the present reticulation system at three points about twenty-two miles from the terminal station. Eventually the gas would be pumped to the principal country centres of Victoria, and it was expected that ultimately the gas industry would adopt the method in all the Australian States. Further research is proceeding into properties and reactivities of non-coking coals, into the interchangeability of gas from black coal and brown coal, and the dehydration, rehumidification and odorization of the gas. By 1976 an output of 60,000 million cu. ft. of 450 B.Th.U. gas was projected, with 22 million gallons of petrol and 20 million gallons of diesel and fuel oil, and recoveries from the gas of 13 million gallons of tar, 5 million gallons of high-octane benzole motor spirit and 1.5 million gallons of naphtha.

### Large-scale Experiment in Weather Modification in the United States

NEW YORK UNIVERSITY has recently reported on an extensive cloud-seeding experiment, "Project Scud", carried out along the eastern coast of the United States during 1953-54 and sponsored by the Office of Naval Research. During January-April 1953 and December 1953-April 1954, aircraft dropped 30 tons of 'dry ice' into cyclonic storms lying between Florida and Massachusetts and, in addition, 250 lb. of silver iodide was vaporized from