

CHEMISTRY AND PHYSICS IN SPAIN

DURING the period April 15–21 the Real Sociedad Española de Física y Química celebrated its fiftieth anniversary. The proceedings opened with an official reception at which representatives of various foreign chemical and physical societies presented congratulatory addresses, followed by an address on the Society itself by the president, Prof. M. Lora Tamayo. Witness was given to the importance with which science is regarded in modern Spain by the fact that on the dais no less than four ministers of State were present, namely, the Ministers for External Affairs, for National Education, for Industry, and a Minister representing the Sub-Secretariat of the Chief of State. In attendance were the majority of the ambassadors of the foreign delegates. The Minister for National Education welcomed the foreign delegates to Spain.

The actual work of the conference was preceded by a Requiem Mass in the Church of Consejo Superior de Investigaciones Científicas. Four days were devoted to colloquia and to the communication of papers on original work carried out by Spanish men of science. In addition, a number of open lectures were given on special themes. These included the following: the physical limits of vision, by Prof. J. M. Otero; lignin and its formation, by Prof. K. Freudenberg; the total synthesis of nucleic co-enzymes, by Prof. A. R. Todd; the determination of geological age by isotopic methods, by Prof. Otto Hahn; diene synthesis in natural products, by Prof. Kurt Alder; the role of chromatography, by Prof. A. Tiselius; and electrochemical polarization, by Prof. A. Rius. These alone indicate the truly international character of the meeting.

The meeting also gave opportunity for a reunion of the International Commission on Optics and for the officers of the International Union of Chemistry to discuss the forthcoming meeting at Stockholm.

The Minister for Industry welcomed the delegates and showed them around the permanent exhibit of the activities of the Instituto Nacional de Industria. This is a truly impressive display of the industrial activities which are being developed in Spain. Research work on the lines of that in Britain by the Department of Scientific and Industrial Research is being carried out to the large pilot-plant scale in Madrid on various topics. These include the treatment of shale for the production of lubricants and the utilization of waste raw materials of vegetable origin such as grape stones, sprouts, vine shoots and straw by the process of fermentation followed by briquetting of the non-hydrolysable residue. It is contemplated that 30,000 metric tons a year of yeast for animal consumption, 24,000 tons of petrol and higher ketones for motor fuel, 35,000 tons of wood preservatives and 145,000 tons of charcoal will be produced, together with acetone, methanol and other by-products. The pilot plant has operated successfully, and engineering drawings for the larger plant are now almost completed.

The Instituto Nacional de Industria participates with private firms in a great number of industrial operations which are required for the reconstruction of the national economy in Spain. The outcome of this welding together of national effort and private enterprise will certainly be a matter which the rest of the world cannot ignore.

As will be seen from this brief account of the proceedings of the anniversary meeting of the Society, attendance at and participation in the scientific meetings were tasks of no mean order. In addition, the proverbial Spanish hospitality was on a truly lavish scale, including opera, dinners and tours. Spanish men of science can, at least so far as the foreign delegates are concerned, rest assured that the anniversary celebrations of their Society was an event of outstanding interest. ERIC K. RIDEAL

RUMFORD BICENTENNIAL SYMPOSIA AND AWARDS

MARCH 26 was the two-hundredth anniversary of the birth of Benjamin Thompson, Count Rumford, who although an American by birth, has left his mark on European science and technology. Apart from his purely scientific achievements, he is best remembered in Britain as the founder of the Royal Institution; he also established the Rumford Medals, one series of which is awarded by the Royal Society and another by the American Academy of Arts and Sciences, the latter for work carried out in America only.

To celebrate the anniversary, the American Academy of Arts and Sciences organized a conference in Boston to which were invited all former Rumford medallists, but which was also open to the scientific public. A great number of the American medallists were present, as well as four medallists of the Royal Society—Sir Alfred Egerton and Prof. F. E. Simon from Britain, Prof. M. Siegbahn from Sweden and Prof. P. Debye from the United States. The celebrations started with a banquet given by the American Academy in the Harvard Club at Boston; the president of the Academy, Dr. Edwin H. Land, of 'Polaroid' fame, presided, and Sir Alfred Egerton transmitted the greetings of the Royal Society and

of the Royal Institution. The menu included Rumford's famous soup which he devised for feeding the poor; fortunately, as part of an opulent dinner it produced none of the bad effects it had when for a time, about a hundred years ago, it became the sole diet of the inmates of a British prison! The main speaker was Prof. Sanborn Brown, who gave a very informative and amusing talk on Rumford as a physicist and technologist, and also presented a picture of his personality which made it clear why Rumford was not too popular with many of his contemporaries.

The first symposium was held on the morning of March 27 in the rooms of the Academy and dealt with recent developments in thermodynamics. Prof. P. W. Bridgman spoke on "Reflections on Thermodynamics", Sir Alfred Egerton on "Management of Flame", Prof. L. Onsager on "Reciprocal Relations in Irreversible Processes" and Prof. F. E. Simon on "Helium and the Range of Stability of the Solid State". In the afternoon another symposium took place on recent developments in atomic spectroscopy; Prof. M. Deutsch discussed "Positronium", Prof. W. E. Lamb, jun., "Excited Hydrogen Atoms", Prof. E. M. Purcell "Line Spectra in Radio Astro-