

the figures produced by fine dust on the surfaces of electrified plane surfaces. His electrical experiments led to a correspondence with Volta. Lichtenberg was also well known as a friend of Garrick and a writer on Hogarth.

Albert Ladenberg was born on July 2, 1842, at Mannheim, his parents being Jews. From Karlsruhe Polytechnic he went to Heidelberg to work under Bunsen and Kirchhoff, and he afterwards worked with Kekulé at Ghent and with Wurtz and Friedel in Paris. In 1872 he was appointed professor of chemistry at Kiel, and it was there that he began his important researches on vegetable alkaloids. In 1889 he became professor of chemistry in the University of Breslau and he held this position until 1909. He died on August 15, 1911. While yet a *privatdocent*, Ladenberg began to lecture on the history of chemistry, and during the space of forty years various editions of his "History of the Development of Chemistry during the past 100 Years" appeared in German, French and English. In Great Britain he was awarded the Davy Medal of the Royal Society and the Hanbury Medal, and was made an honorary member of the Chemical Society. A memorial lecture on his life and work was delivered to the Chemical Society by Dr. Kipping on October 23, 1913.

#### Mineral Resources and the Atlantic Charter

THE Conference on "Mineral Resources and the Atlantic Charter", arranged by the Division for the Social and International Relations of Science of the British Association, is to be held in the theatre of the London School of Hygiene and Tropical Medicine, Keppel Street, Bloomsbury, London, on July 24 and 25. There will be morning and afternoon sessions on each day, beginning at 10 a.m. and 2.15 p.m. The subjects of the successive sessions are intended, broadly speaking, to be classified respectively as: (1) distributional, in the geological and geographical aspects; (2) the preceding considerations as applicable to certain mineral products; (3) new sources and materials; (4) economic and planning considerations. The Conference will be opened by Sir Richard Gregory, president of the Association, and the chair at the successive sessions will be taken by Sir Thomas Holland, Sir William Larke, Dr. C. H. Desch and the Right Hon. Sir Stafford Cripps. Among expected speakers are Prof. H. H. Read, Prof. C. B. Fawcett, Prof. W. R. Jones, Sir Lewis Fermor, Dr. E. F. Armstrong, Dr. W. H. Hatfield, Dr. L. Dudley Stamp and Prof. J. G. Smith. Admission to the Conference will be by ticket, obtainable from the British Association, Burlington House, London, W.1; tickets will be issued, so far as accommodation in the theatre permits, on or after July 13.

#### Psychology of Hate

DR. ERICH FROMM, in a recent report to the *Journal of the American Home Economics Association*, discussed the two kinds of hatred which he claims exist. One is what he calls the "counterpoint of life". It is rational hatred, aroused by an attack on life, freedom, country, some person or institution we love. Such hatred is necessary for winning a war against aggression. "People must love what they are defending, in order to hate their attackers effectively." The other kind of hatred, which he calls "character-conditioned", was made use of by the Nazis in recruiting their party. The bulk of their recruits came from the lower middle class, who had led a starved and frus-

trated life socially and economically, particularly since 1918, in Germany. This led to tremendous irrational hatred and destructiveness which could only be expressed in small doses before the Nazi party offered an outlet.

"Destructiveness", says Dr. Fromm, "is the result of un-lived life." He believes that this kind of irrational or character-conditioned hatred, which is all too common in our culture, results from the blocking of spontaneity and self-expression in childhood. Parents and teachers have many ways of discouraging self-development in children, from open intimidation to the subtle, 'sweet' type of authority which does not forbid, but says "I know you won't want to do that". Such children grow up with so little confidence in their own wishes and emotions that they can neither love nor hate constructively. Always dependent on other people even for their opinions, they are ready to follow a leader blindly. Their apparent submissiveness hides a dangerous amount of sadistic aggression, ready to be unleashed at the command of a *Führer*. But Dr. Fromm believes that this irrational hatred, utilized by the Germans, Italians and Japanese, is much less effective for winning wars than the positive kind of savagery shown by the Chinese and the Russians in defending their homes. The latter kind of hatred arises only when people are fighting for something they love. While Nazism pretends to fight for the life and existence of the German people, it is basically a movement of nihilism profoundly attracted by destruction. Its motto was adequately expressed by a speech once made by a Fascist officer who ended: "Long live death".

#### Broadcasts on American Thought and Culture

A NEW series of short-wave broadcasts under the auspices of the American Philosophical Society was inaugurated on April 24 over the non-commercial short-wave radio station WRUL. The world-wide significance of American thought and achievement in the present crisis in our civilization will form the general background of the series; distinguished American authorities will deliver a series of addresses, each in his special field—scientific, sociological and cultural. The American Philosophical Society and the World Wide Broadcasting Foundation have arranged to send out this series of short-wave broadcasts over WRUL from the Society's Hall in historic Independence Square, Philadelphia. They will be directed primarily to countries overseas where the English language is spoken and understood, and where there is still interest in the progress of science and learning and faith in a democratic form of government. WRUL is planning to translate a number of these outstanding talks into other languages for many of the countries covered by its beams; the station now broadcasts in twenty-two languages.

#### The John Innes Horticultural Institution

THE report of the thirty-second year of the John Innes Horticultural Institute covers the activities during 1942. A considerable number of changes of staff, including the resignations of such well-known individuals as C. Pellew, D. de Winton and B. Schafer, have taken place. Many of the staff have left to take up Government work. In addition, a serious drop in income as a result of war damage to

property owned by the Trust has necessitated some reorganization. Nevertheless, an imposing series of research papers (more than fifty) on a large range of subjects, together with several important discoveries, indicate that the Institution is as vigorous as ever.

Among the new results may be mentioned the discovery of a method for testing incompatibility of pollen *in vitro*, the production of polyploid apples and pears by heat treatment, the successful hybridization of *Phaseolus vulgaris* and *P. multiflorus*, and the discovery of the plant with probably the highest chromosome number among wild Angiosperms—*Morus nigra* ( $2n = 308$ ). Highly important work is developing from the theory of polygenes and from the discovery that inert parts of the chromosome may be identified by starvation of nucleic acid. The publication of the John Innes leaflets on horticultural subjects has met with a popular demand, and there has been a large increase in advisory work on horticulture. This is a new and welcome branch of the activities of the John Innes.

### A New X-Ray Synthesis

S. H. Yü has recently developed a synthesis of X-ray intensity data which, it is claimed, has certain advantages over the Patterson synthesis. An account of the method has been published in *NATURE* (June 6, 1942, p. 638). S. H. Yü and C. P. Ho have illustrated the synthesis by a detailed treatment of iron pyrites (*Science Records, Academica Sinica*, 1; 1942). In a further study, submitted to *NATURE*, they have investigated the effect of the approximations necessary in practice, and the conditions for obtaining satisfactory results from the new method. It is necessary to use a mean value for the variation of atomic structure factor with angle; that given by the Thomas-Fermi atom proves to be a sufficient approximation. For a good determination of the atomic parameters the edge of the unit cell must be divided into at least 100 parts. For the synthesis described in *NATURE* it is necessary to know at least 13 orders of  $h00$  to get a good result, but it is shown that it is possible to modify the method so that it is applicable to a smaller number. Yü and Ho are to be congratulated on maintaining scientific research in China in difficult circumstances, and the application of the method to unknown structures will be awaited with interest.

### Shortage of Drugs in France

ACCORDING to the *Journal of the American Medical Association* of March 25, the Academy of Medicine of Paris has for months been studying the problem of the shortage of indispensable drugs. At the suggestion of Dr. Georges Duhamel, a committee has been formed to publish periodically a list of drugs and chemical products becoming rare. The majority of raw materials come from foreign countries, and importation of these has mostly been cut off. A second reason consists in the difficulty of transport and the dearth of packing material. In the latest list presented to the Academy the following were said to be extremely scarce or entirely absent: caffeine, theobromine, iodine, camphor, boric acid and its derivatives, quinine, opium and its alkaloids, glycerine, cod liver oil, starch, dextrose, mustard meal, lactose, tartaric and citric acids, insulin, and many other chemical and vegetable products.

### Lady Tata Memorial Trust

THE Trustees of the Lady Tata Memorial Fund announce that, on the recommendation of the Scientific Advisory Committee, they have agreed, if circumstances permit, to make the following awards for research in blood diseases, with special reference to leukaemia, in the academic year beginning on October 1, 1942. Grants for research expenses: Prof. J. Furth (New York); Dr. P. A. Gorer (London); Dr. A. H. T. Robb-Smith (Oxford); Prof. L. Doljanski (Jerusalem). Part-time personal grant for assistance: Dr. W. Jacobson (Cambridge).

### The Night Sky in July

THE moon is new on July 13d. 12h. 03m. U.T. and full on July 27d. 19h. 14m. There are no occultations of any bright stars during the month. The following conjunctions occur: July 3d. 23h., Venus in conjunction with Saturn, Venus  $0.1^\circ$  N.; July 9d. 21h., Saturn in conjunction with the moon, Saturn  $3^\circ$  N.; July 10d. 11h., Venus in conjunction with the moon, Venus  $4^\circ$  N.; July 11d. 15h., Mercury in conjunction with the moon, Mercury  $3^\circ$  N.; July 12d. 10h., Jupiter in conjunction with the moon, Jupiter  $4^\circ$  N.; July 16d. 00h., Mars in conjunction with the moon, Mars  $3^\circ$  N.; July 18d. 08h., Mercury in conjunction with Jupiter, Mercury  $0.4^\circ$  S.; July 30, 10h., Mars in conjunction with Regulus, Mars  $0.7^\circ$  N. Mercury is a morning star and is in greatest elongation on July 6 when it is  $21^\circ$  W. Venus is a morning star and souths at 9h. 50m. in the middle of the month. Mars is too close to the sun to be well observed. Jupiter is a morning star, in Gemini, and rises about 2h. 40m. in the middle of the month. Saturn is a morning star and souths about three hours before the sun in the middle of the month. Comet Grigg-Skjellerup can be observed with a small telescope; an ephemeris appeared in *NATURE* of June 6, p. 636. The earth is at aphelion on July 6.

### Announcements

MR. A. GOUGE has been elected president of the Royal Aeronautical Society for the year 1942-43, and Mr. E. F. Relf, superintendent of the Aerodynamics Department, National Physical Laboratory, and Dr. H. Roxbee-Cox, deputy director of scientific research at the Ministry of Aircraft Production, have been elected vice-presidents.

AT the seventy-ninth annual general meeting of the Institution of Gas Engineers, held on June 10, Mr. E. V. Evans, general manager of the South Metropolitan Gas Company, was elected president for the year 1942-43. Mr. Evans, who is also chairman of the Council of the Gas Research Board, is the first chemist to occupy the presidency of the Institution of Gas Engineers.

THE Association of Scientific Workers (with the collaboration of the Federation of Ayrshire Scientific Film Societies) has arranged a Conference on "The Scientific Film and Scientific Film Societies", to be held in two sections: in Ayr on August 1 and 2, and in London on August 16. The Conference will discuss the possibilities of scientific film societies run by branches of the Association of Scientific Workers to give science films the widest possible showing, and will direct public attention to these activities and to the need for increased and co-ordinated production of science films.