MICRODOSIMETRY

Proceedings of the Symposium on Microdosimetry Ispra, Italy, November 13–15, 1967

Edited by H. G. Ebert. (EUR 3747.) Pp. viii + 789. (Brussels: European Atomic Energy Community—EURATOM, 1968.) 750 B. francs; 60 DM; $15.

THE title of this volume will give little clue to its contents except to a small number of people interested in this field. In understanding the chemical and biological effects of ionizing radiation it is important to know as much as possible about the spatial distribution of the ionized and excited molecules which are formed along the tracks of the secondary ionizing particles. "Absorbed dose" is a term which has been reserved for the average energy imparted by ionizing radiation to a material per unit mass and it takes no account of the discrete nature of the energy transfer processes. The term "microdosimetry" has come into use to describe investigations into the spatial distribution of absorbed energy on a "microscopic" scale. There are, however, some ambiguities in the use of this term and these are reflected in the present volume, which contains the papers given at a symposium with the same title, held at Ispra in November 1967 under the auspices of Euratom. Some of the papers deal with the truly "microscopic" problem—that is, with the size distribution and spatial distribution of individual energy transfers from the secondary charged particles to the molecules of the medium. Other papers discuss the variations in absorbed dose which occur near interfaces between materials of different atomic composition. The latter represent merely the "fine structure" of the true absorbed dose distribution in the material and are to be measured on a scale of microns rather than Ångstroms.

Experiments designed to study the distribution of energy transfers along a track are not, as a rule, very direct. Some workers have drawn deductions from biological work, others from the pulse height distribution in specially designed ionization chambers or proportional counters containing gas at low or very low pressures. The present three-day symposium at Ispra brought together most of those who have been active in the field and is an up-to-date account of measurements and theoretical calculations on both aspects of "microdosimetry". There is not, however, much connexion between the two interpretations of the term, and one gets the impression that two symposia were being held simultaneously with very little interaction between them. The weight of the contributions varies considerably. Some bring new information of considerable interest, others merely discuss terms and quantities in a rather formal manner. Of the thirty-six papers in the volume, twenty-nine are in English, four in German and three in French.

It is very satisfactory that the organizers have been able to publish this book within some four months of the date of the symposium, but the speed has been achieved by reproducing from typescript, and it would be rather alarming if all conference proceedings were to be published in such an inconveniently large and heavy format.

J. W. BOAG

CONSULT BEFORE HAZARD

Handbook of Laboratory Safety

Edited by Norman V. Steere. Pp. xii + 568. (Cleveland, Ohio: The Chemical Rubber Co., 1967. Distributed in the UK by Blackwell Scientific Publications, Oxford.) 210*s*.

THE subject of safety in laboratories is treated, not infrequently, in a haphazard and piecemeal manner, and is rarely made the first responsibility of any one person. Some firms employ safety officers, who are invested with considerable advisory and occasionally executive powers; in addition, technical superintendents and chief technicians assume responsibility for many aspects of preventive safety and first aid. Nevertheless, I think it is true to say that the majority of laboratory personnel receive very little formal training in this most important subject.

This very wide-ranging book on the subject is eminently readable and will be read, it is hoped, from cover to cover by those whose professional concern it is, and consulted by laboratory staff whenever they embark on a new aspect of their work. The first section of the book deals with the subject in general, discussing such matters as responsibility, first aid, waste disposal and legal liability. Then, more specifically, are considered protective equipment of all sorts: eye protection, safety shields and showers and protection against ultraviolet radiations. Then we meet the subject of ventilation, hazards involving fire risks, toxicity, radioactivity, electrical and mechanical apparatus, chemical reactions, and the hazards involved in handling micro-organisms both *in vivo* and *in vitro*. A particularly interesting section is the seven pages devoted to the prevention of contamination of drinking water supplies. The penultimate chapter provides the reader with a number of items to be taken into account when considering the safety aspects of laboratory design.

The last section of the book, section twelve, is entitled "Tables of Chemical Hazard Information", and it occupies almost a quarter of the total number of pages. Here, listed in tabular form, are more than a thousand chemicals, with fifteen columns containing such characteristics of the chemicals as their health hazards, fire hazards, vapour pressures, water solubilities, and references to supplementary information on their toxicity, flammability and other hazards. This is indeed an impressive and comprehensive list, and is the section of the book which will be consulted again and again.

The index in a book of this type must be particularly complete, and as far as I could judge, by the use of spot checks, this one seems to be adequate. The forty contributors to the work (two English, the rest American) are to be congratulated on a thorough coverage of the subject. It is to be hoped that the price of the book will not prevent a copy from appearing in every department, where we may hope that it will be consulted before the hazard is encountered, or perhaps even read as part of one's general laboratory education.

A. C. TAYLOR

OBITUARIES

Professor Zdenko Stary

PROFESSOR ZDENKO STARY, who died on May 15, was born in Prague in 1899. He received his MD in 1923 and his degree of Dr rer. nat. in 1925 from the German University in Prague. In 1928 he was appointed docent for physiological chemistry. He was promoted to associate professorship in 1933, and was appointed chairman of the department of physiological chemistry in 1939, after the occupation of Czechoslovakia by German troops.

In contrast to most of his colleagues at the German University, and disregarding directives of the Nazi government, Stary maintained cordial relations with his colleagues from the liquidated Czech University, enabling some of them to continue their scientific activities. When the German forces were withdrawn from Prague, Stary and his family, like many other German speaking people, were seized by the outraged population who intended to expel them, but they were saved by colleagues from the Czech University, who made it possible for them to stay in Prague. In 1947 Stary became head of the

department of biochemistry at the University of Ankara, and two years later he moved to Istanbul as head of the department of biochemistry there. In 1956 he emigrated to the United States, where he became head of the biochemistry laboratory of the Pennsylvania State Hospital in Warren, Pennsylvania.

Stary's work was concerned with the chemistry of glycoproteins and mucopolysaccharides. In addition to more than a hundred experimental papers, he published review articles on glyco and mucoproteins in handbooks and periodicals. Stary had a quiet and modest personality; when he exposed himself to great danger by maintaining strictly forbidden relations with his Czech colleagues in occupied Prague, he did it out of feelings of humanity and compassion for colleagues who were officially suppressed. Those who knew Stary in this dangerous period will never forget the decency and courage of this gentle and generous scientist.

University News

The Social Science Research Council has announced a grant of £25,765 to the **University of Glasgow** for the 3 year period until September 1971 towards the cost of an investigation into manpower policy and redeployment, to be carried out in the Department of Social and Economic Research.

Mr B. C. Leighton has been appointed to the Chair of Orthodontics tenable at **King's College Hospital Medical School, London.**

Professor F. R. Johnson has been appointed to the Chair of Anatomy tenable at the **London Hospital Medical College.**

Professor F. Hobbiger has been appointed to the Chair of Pharmacology at the **Middlesex Hospital Medical School.**

The Agricultural Research Council has awarded a grant of £44,200 plus professional fees to the **University of Reading,** for extensions to the Department of Engineering at the National Institute for Research in Dairying. The council has also made a grant of £502 for the continuation of research on dwarfness in wheat which is being carried out in the Department of Agricultural Botany.

Dr T. Evans has been awarded the personal title of Professor of Physics at the **University of Reading.**

Mr C. W. N. Miles, chief agent to the Meyrick Estates, has been appointed Professor and Head of the Department of Estate Management at the **University of Reading.**

Announcements

A grant of $750,000 has been made to the **Woods Hole Oceanographic Institution** by the **Henry L. and Grace Doherty Charitable Foundation,** to establish the Henry L. Doherty Chair in Oceanography.

Dr Oleg Jardetzky, director of the Department of Biophysics and Pharmacology, Merck, Sharp and Dohme Research Laboratories, Rahway, New Jersey, has been appointed Deputy Director of the **MRC Molecular Pharmacology Research Unit** at the Department of Pharmacology, University of Cambridge, where he will continue his work on the application of nuclear magnetic resonance to problems of interaction between drugs and macromolecules or organized cellular structures.

The Wolfe Award of £500 has been made by the Ministry of Technology to **Mr Alexander Russell** of the National Engineering Laboratory, East Kilbride, for his development of an electronic system for measuring or controlling movements in precision mechanisms.

Dr Elsa Reiner, Institute for Medical Sciences and Research, Yugoslav Academy of Sciences and Art, Zagreb, has been awarded the 1968–69 **Unilever Inter-European Fellowship** in Biochemistry. Dr Reiner will work at the MRC Toxicology Research Unit, Carshalton.

Meetings

August 12–24, **New Trends in Computer Programming,** Technical University of Denmark (Hans Jorgen Helms, Northern Europe University Computing Center, Technical University of Denmark, 2800 Lyngby).

August 18–22, **16th International Congress of Applied Psychology,** Amsterdam (Secretariat, c/o Holland Organizing Centre, 16 Lange Voorhout, The Hague).

August 26–28, **Chemistry of Natural Products,** Fredericton, New Brunswick (Seminar, Chemistry Department, University of New Brunswick, Fredericton, Canada).

August 29–31, **The AC Properties of Superconductors and their Applications,** University of Warwick (Meetings Officer, The Institute of Physics and the Physical Society, 47 Belgrave Square, London SW1).

August 30–September 3, **Sixth General Meeting of the International Mineralogical Association,** Technical University, Prague-Dejvice (The Organizing Committee, Ustřední Ustav Geologický, Malostranské Nám. 19, Prague 1).

September 25–26, **Vertebrate Palaeontology and Comparative Anatomy,** Reading (Dr L. B. H. Tarlo, Department of Geology, University of Reading).

September 26, **Nucleotide Group Meeting,** University of Keele (Dr D. W. Hutchinson, School of Molecular Sciences, University of Warwick, Coventry).

September 30–October 2, **Tropospheric Wave Propagation,** Institution of Electrical Engineers (IEE Conference Department, Savoy Place, London WC2).

October 31–November 2, **Photo-electronic Imaging,** Washington, DC (Robert A. Jones, Papers Chairman, Mail Station 68, The Perkin-Elmer Corporation, Norwalk, Connecticut 06852).

November 19–21, **Physics in the Metal Forming Industries,** Harrogate, Yorkshire (The Press Officer, Ministry of Technology, Millbank Tower, Millbank, London SW1).

July 6–19, 1969, **Fourth Advanced Study Institute of Molecular Biology,** Spetsai, Greece (Dr M. S. Bretscher, MRC Laboratory of Molecular Biology, Cambridge).

ERRATUM. In the work reported in the communication "Interaction of Defect and Domain Structures of Triglycine Sulphate Crystals in Ferroelectric and Paraelectric States" by G. I. Distler *et al.* (*Nature*, 218, 762; 1968) TGS crystals were cooled for 12 h and not 1 h after they had been grown.

ERRATUM. In the communication "Morphological Changes in a Parasitic Nematode due to Acquired Resistance of the Host" by J. F. Michel (*Nature*, 215, 520; 1967) there was an error in the fifth paragraph, and the last four lines should read: "The flapless worms are slightly shorter but the difference is sufficiently small to be explained by the fact that the different members of the population completed their development over a period of about a month".