

Ewan's article is, as stated, predominantly a status report on utilization of semiconductor detectors in nuclear physics applications with particular emphasis on the newest area of gamma radiation detection with relatively large volume lithium drifted germanium spectrometers. The basic semiconductor theory involved is treated in cursory fashion as is the associated instrumentation requirement. The article collects a number of useful tabulations and nomographs of interest to anyone using semiconductor spectrometers. It specifically does not concern itself with any of the witchcraft involved in the spectrometer fabrication area but does provide a very complete bibliography for readers with such interests.

The paper by Alväger and Uhler is very complete and, to a much greater extent than the other two in this volume, is concerned with the practical details involved in actually carrying out isotopic separations electromagnetically. Questions of ion sorcery, beam formation, magnetic design, sample collection, etc., are treated in detail. This article provides a very useful compendium of technical details in addition to a brief but complete historical introduction and a description of state-of-the-art devices such as the new on-line mass separators used in the study of fragments from accelerator targets. It will be useful not only to the mass spectroscopist but also to anyone concerned with problems of ion beam formation and handling.

One of the outstanding features of this volume is the excellent set of bibliographies appended to the articles. It is gratifying to find that in each article the relevant literature has been surveyed almost to the date of publication; this is unfortunately rare in most multi-author volumes, reflecting the usual difficulties in obtaining all manuscripts at roughly the same time.

Despite the excellence of its three articles, the volume exhibits one of the all-too-prevalent defects of Progress series. It would be a rare scientist indeed who would find all three of the articles of direct interest. Recognizing the difficulty of finding and coordinating appropriate authors, it would nevertheless appear very much worthwhile to work toward more related topics in any one volume with perhaps separators,

bubble and spark chambers, storage rings, etc., in one volume and semiconductor detectors, ion sources, new nuclear accelerator designs, etc., in another. This problem of heterogeneity is very much accentuated in a Progress series devoted to instrumentation as opposed to one concerned with research progress in a broad field where the heterogeneity could be advantageous in broadening horizons and breaking down specialization.

In a mechanical sense, the volume is extremely well produced and a pleasure to read. One of the authors, G. T. Ewan, might well have cause to complain, however, since he appears as G. T. Evans on the dust jacket and as G. T. Owen in Farley's Preface!

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#### WILL BRUSSELS SPROUT?

*Title* Preservation of Fruit and Vegetables by Radiation

*Publisher* International Atomic Energy Agency, 1968

*Pages* 152

*Price* \$3.00

*Reviewer* D. K. Salunkhe

This small book emphasizes the practical side of radiation preserva-

tion of fruits and vegetables. The subject matter is divided into twelve chapters with specific viewpoints of practical application—each one amply documented. In addition, there is a fine chapter on summary, conclusions, and recommendations.

In my opinion, the book represents a broad and fascinating new field. The subject matter is written by various authorities in their fields in a clear and interesting style without diluting the scientific information. This book will be useful to professors and students of horticulture and food technology and also to personnel in the food industry.

The International Atomic Energy Agency and Food and Agricultural Organizations of the United Nations must be congratulated for this excellent and timely book.

*For the past 15 years, Dr. Salunkhe (PhD, Michigan State, 1951) and his co-workers have conducted extensive research on radiation effects on fruits and vegetables and authored many papers on radiation preservation of fruits and vegetables. One of his review articles, "Radiation Effects on Fruits and Vegetables," Economic Botany, 18, 28, 1960, was selected as an outstanding article in biological journals in that year. He is considered as one of the pioneers in the field of radiation pasteurization of fruits and vegetables.*

#### WELL WORTH YOUR DINARS AND RIELS

*Title* Operation and Control of Ion-Exchange Processes for Treatment of Radioactive Wastes

*Publisher* International Atomic Energy Agency, 1967

*Pages* 147, 31 fig., 27 tables

*Price* \$3.00

*Reviewer* Friedrich G. Helfferich

To assist in providing guidance, mainly for developing member states, for treatment of radioactive wastes, the IAEA has commissioned books on the three principal waste-treatment techniques: precipitation, evaporation, and ion exchange. The