space is devoted to some particulars which will seldom, if ever, be observable by experiment.

It is not until Chapters III and IV that the significance of much of the preceding discussion will become evident to the reader who is not fully conversant with the subject. For many readers the main value of the book will lie in these chapters. In Chapter III, after an introduction to Vibrational Infrared and Raman Spectra, an exhaustive and critical review is given of existing data on all molecules up to the twelve-atomic. The unsatisfactory condition of certain analyses is pointed out, and this section should prove stimulating in its suggestions for future work. Chapter IV deals with the Interaction of Rotation and Vibration and is adequately illustrated by representative examples of vibration-rotation spectra. The collections of molecular constants obtained from rotational analyses will be useful for eference. Chapter V, which concludes the book, deals with the applications of molecular spectroscopy and is comparatively brief. It may prove somewhat disappointing to certain readers. Had it been more comprehensive, the need for the book itself would have been more evident.

The scope of the book and its possible relation to future applications of spectroscopy is naturally restricted by the fact that it deals with molecules of a limited size, for which a more or less complete analysis of the spectrum can be anticipated. This is illustrated by the fact that the most significant spectroscopic investigations on intramolecular hydrogen bonding have not been mentioned, and that other qualitative, though important, applications of spectroscopy have not been covered.

It is unfortunate that it was necessary to print this book in a type which is at best too small and, in very considerable sections, so small as to be a very severe strain on the eyes.

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Uranium and atomic power. **Jack De Ment and H. C. Dake. Brooklyn: Chemical Publishing Co., 1945. Pp. x + 343. $4.00.**

The uranium atom, possessing as it does extraordinary chemical as well as nuclear properties, is a difficult subject for a book. The usual procedure is to stress either the ordinary chemical properties of such an element or its nuclear or radioactive properties, but not both. The present volume does not deviate in this regard. It is far more concerned with the chemical properties of the element than with the properties of its nuclei, though it pays extended attention to some of the more recent and spectacular results. One finds a considerable increase in emphasis on the atomic energy in contrasting this second edition with the first edition, which is understandable.

As a chemical treatise, this volume is extraordinary. It reports in some detail a considerable number of facts about uranium and uranium ores which are normally omitted in standard reference volumes. For this reason, it has some real interest. On the other hand, the chemistry is rather incomplete and unsystematic. No serious attempt is made to correlate the properties of uranium with the neighboring elements of the periodic table, and great stress is laid on certain less fundamental properties, such as the fluorescence of uranium salts.

On the whole, this volume is a sort of collection of bits of information about the ordinary chemical and mineralogical properties of uranium compounds, with a considerable amount of rather heterogeneous writing about the more spectacular nuclear properties of the element. The title of the volume is misleading, because little of an authoritative nature is said about atomic power.

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Kilgore-Magnuson Bill

(*Continued from p. 230*)

DEFINITIONS

SEC. 12. As used in this Act—

(a) "Research and development" means theoretical analysis, exploration, and experimentation in any field of science (including but not limited to the mathematical, physical, biological, medical, engineering, and social sciences), and the extension of investigative findings and theories of a scientific or technical nature into practical application, including the experimental production and testing of models and processes.

(b) "Federally financed research and development" means research and development conducted directly by the Federal Government and all other research and development financed in whole or in part directly by the Federal Government from funds designated for research and development, under a contract, grant, or other direct form of financial assistance for research and development.

(c) "Government agency" includes departments, independent agencies and commissions, corporations, and other instrumentalities of the Federal Government.

(d' "Organizations includes State and Local government agencies, corporations, partnerships, nonprofit institutions, and individuals.

(e) "Scholarships and fellowships" means stipends covering tuition and other fees, and such living, travel, and other expenses as the Administrator may determine.

Scanning Science—

At a meeting of the New York Section of the American Chemical Society it was announced that several steel and iron companies in this country have already established very complete micrographic laboratories, where in three hours an accurate determination of the condition of any specimen of the daily output may be secured.

—7 February 1896