

# BOOKS

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**Advances in Photochemistry** (Volume 1), W. Albert Noyes, Jr., George S. Hammond, and J. N. Pitts, Jr., editors, Interscience, New York (1963). 443 pages. \$16.50.

The volume begins with a welcome discussion of the vocabulary of photochemistry, with the worthy aim of amalgamating terms used in photochemistry and spectroscopy. The definitions and a summary of symmetry and state notations add considerable clarity to this confused subject. It is hoped that authors of subsequent articles in the series will pay close attention to the suggestions made here.

The vocabulary section is followed by eight authoritative review articles on various topics in photochemistry: the photochemistry of aromatic hydrocarbon solutions, photochemical gas phase reactions in the hydrogen-oxygen system, photochemistry of the cyclic ketones, addition of atoms to olefins in the gas phase, a new approach to mechanistic organic photochemistry, isotopic effects and the mechanism of energy transfer in mercury photosensitization, photochromism, photochemical rearrangements of organic molecules. Each article includes an up-to-date bibliography, roughly covering the years since 1940, when photochemistry began to receive much attention. Earlier references are included in some cases.

Subsequent books in the series on advances in photochemistry will consist of a second volume to be published soon and about one volume a year thereafter. The high standards of writing, editing, and printing set by this first volume indicate that the series will make positive and much-needed contributions to the subject.

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**Introductory Nuclear Reactor Theory**, H. S. Isbin, Reinhold, New York (1963). \$22.50.

It is a great privilege to review and report on a new work which so clearly meets its goals. Professor Isbin's text is a remarkably superior effort of a scholar-engineer, and it will be surprising if it is not widely adopted for instructional purposes in this field.

The organization and layout of the book, which runs somewhat over 600 pages, are excellent. The use of non-glare paper, exceptionally clear type, well-balanced line drawings and graphs, and the relative freedom from typographical errors, should contribute heavily to its success. Of greatest importance, however, are the author's clear exposition and his wise selection and use of the large body of literature of ideas and data which has accumulated over nearly two decades of prog-

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