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Book Notice

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The September Number of The Ohio Journal of Science will contain

THE TRAPPING OF SOLAR ENERGY

A Symposium presented at the annual meeting of the Ohio Academy of Science held at Kent State University, Kent, Ohio, April 18, 1952.

DR. EDWARD M. REDDING—Chairman
DR. CHARLES F. KETTERING—Honorary Chairman

INTRODUCTION..................................William M. MacNevin
SOLAR RADIATION................................John H. Shaw
HEATING OF AIR BY SOLAR ENERGY,........George O. G. Löf and Thomas D. Nevins
PHOTOSYNTHESIS................................Paul Rothemund
THE UTILIZATION OF THE SOLAR ENERGY THROUGH
PHOTOCHEMICAL REACTIONS.........................Jack G. Calvert
PHOTOVOLTAIC CELLS AND THEIR POSSIBLE USE AS POWER
CONVERTERS FOR SOLAR ENERGY..................Dan Trivich
THE USE OF OPTICAL SYSTEMS IN THE UTILIZATION OF
SOLAR ENERGY....................................J. Allen Hynek

Copies of the September Number containing the papers in the Symposium may be obtained from the Business Manager of the JOURNAL at $1.00 each.


The text outlines the logical steps one takes in pursuing scientific research. The chapters are devoted to problems and procedures in the following topics: the choice and statement of a research problem (both pure and applied); searching the literature (with an analysis on the structure of scientific literature); scientific methodology; design of experiments; design of apparatus; execution of experiments; classification, sampling, and measurement; analysis of experimental data; errors of measurement; probability, randomness, and logic; mathematical work; numerical computations; and reporting the results of research.

While the material is presented as a progressive and continuous account for teaching purposes, each section is so organized that it can be studied for review or reference reading as an independent unit. The content leans heavily toward the physical sciences and is concerned largely with laboratory and experimental methods. However, the general principles and techniques are applicable to a wide range of the sciences. In the biological fields, this book is most suitable for students preparing for physiological research. There is no specific treatment of the descriptive sciences or field sciences. A few sections, such as the design of apparatus, are devoted entirely to laboratory physical science. This emphasis would be expected from an author who is a specialist in physical chemistry (Theodore William Richards, Professor of Chemistry at Harvard University).

The book is oriented around quantitative studies with emphasis upon practical problems and their solution rather than philosophical discussion. Fundamental and universal theories of research are stressed. A knowledge of mathematics is needed to understand many sections although much of the basic discussion is non-mathematical. Sources and references are given at the end of each chapter. Illustrations consist of diagrams, graphs, and tables. There is a complete index. Interesting and amusing anecdotes throughout add a touch of humor to a weighty subject as well as illustrate the case in point. This would be a good text for a graduate seminar in experimental laboratory sciences.

RALPH W. DEXTER.