

BOOK REVIEW

ELECTROMAGNETIC SCATTERING—Edited by Milton Kerker. Publisher—Pergamon Press. Price £7 net.

The present book edited by Milton Kerker contains the papers presented at the interdisciplinary Conference on scattering of electromagnetic wave. The papers are divided into the following six sections :

- 1) Particle scattering
- 2) Light scattering in the atmosphere and space
- 3) Microwave and Radio wave scattering in atmosphere
- 4) Light scattering in solutions
- 5) Interactions in solids and liquids
- and 6) Multiple scattering.

The first section mainly presents new calculations of electromagnetic scattering from various types of non-spherical particles and inhomogeneous media. A few papers are concerned with the numerical calculations of the scattering intensities by the conventional theories for particles of various sizes having different values of the refractive index. A few very interesting papers in the next section analyse the observation on solar *F*-corona, zodiacal light and the cometary head on the basis of the theory of light scattering by oriented interstellar particles. Theories of back scattering of microwaves by dielectric spheroids are the subject matter of a few papers under the third section. A very useful paper in this section gives the theory of radio wave scattering by a medium possessing irregular dielectric structure and its application to explore the refractive index structure of the atmosphere which is dependant on humidity and temperature gradient. Papers in the fourth session mainly consider the scattering of light and small angle X-rays scattering by solutions of macromolecules and micellar films of soaps. The next section concerns itself with papers on the scattering of light and X-rays from dense systems—such as polymers with heterogeneous structure, metal precipitates in semi conductors etc. The application of the light scattering studies for the evaluation of the crystalline-amorphous structure of a polymeric solid is nicely discussed in a paper by Stein. The last section deals with a few theoretical papers on multiple scattering. From the above short review it is clear that the papers cover a wide field of interest and indicate the possible applications of the studies of electromagnetic scattering for characterising the structure of macromolecules as well as the atmosphere and the interstell particles. The book is very useful for future workers in various disciplines ranging from the biology to the matereology. The book is not meant, however, for the beginners. The figures and photographs are well represented. The book will be an useful addition to a Science library

R. K. Sen