ject, published in 1807. Young had a way of mastering quickly the work of all previous investigators and then contributing to every subject something of his own genius and insight. But Young was not a success as a lecturer—he probably shot too far over the heads of his listeners. As Wood says, in connection with his brilliant medical lectures, "Like many other great men, he provided a repast much too rich for the average intellectual digestion, and gave his hearers much more than they were able to carry away". One senses that Young moved restively from field to field, often doing more in a few months than all others before him had done in years, yet leaving a field for some new interest before it had been cultivated to the roots.

In no field is this better illustrated, aside from his brilliant work on the Rosetta Stone, than in the field of light where Thomas Young first enunciated the wave nature of light as a result of his famous experiment on interference. It was no mean feat to challenge the authority solidified in the prevailing Newtonian concepts, and Young's work was brought into damaging disrepute by published criticisms from the virulent pen of Henry Brougham to whom Young had been somewhat less than tactful a few years earlier. His ideas on light made little headway for a decade until the brilliant work of Fresnel and others of the French school began to expand them. There was always a cordial relationship between Young and Fresnel, closer perhaps because Young was Foreign Secretary of the Royal Society. In the year of Fresnel's death (1827), Young was elected a Foreign Member of the Academy of Sciences at Paris. In correspondence with Young, Fresnel draws a clear and true line when he says, "It seems to me, however, that what you left me to do in those parts of optics was as difficult as what you yourself did. You have gathered the flowers . . . and I have dug painfully for the roots." Young's famous experiment stands as an important landmark in experimental science; but without the extended and careful work of Fresnel, it would not have reached full fruition so early. Young seems to have been obsessed with the longitudinal nature of light waves (as he supposed them to be), and he was only groping tentatively for a possible transverse part when Fresnel crashed through with his thoroughgoing explanation. The book is well annotated in this and other portions of the crucial history of important developments.

It is pleasant to meet in Wood's biography of Young so many of the people who made the early 1800's memorable: men like Arago, Biot, Airy, Kater, Leslie, Black, Laplace, Legendre, Gay-Lussac, Davey, Brewster, Dalton, the Herschels, and Rumford. Young's contacts were wide; he moved in important circles with brilliance and modesty, touching a great variety of fields meaningfully. For ten years, he wrote for the Encyclopedia Britannica, but he kept his connection with that publication anonymous to protect his standing in the medical profession, though many suspected that only he could write as he did on Egypt, Eye, Sound, and numerous other subjects. He wrote on Carpentry, Bridges, Roads (McAdam was just then revolutionizing road building), Tides—sixty-one topics in all, including many biographical sketches, such as the important one on Legendre whose mathematics he mastered before writing.

Further elaboration of the details of Young's life here would be superfluous. Suffice it to say that this new biography has been written with balance, with careful consideration for all available source materials, with appreciation for the breadth of genius under examination, but with due regard for the weaknesses and short-comings of its principal figure. A thoroughly human Dr. Young emerges, interesting in his abilities, but not infallible or superhuman. Some of the source materials available to Peacock in 1855 are apparently no longer in existence, but other materials not known to Peacock have added new life to this biography. Only a fellow scientist like Alexander Wood could have had the patience and insight to delve into and weigh the evidence so carefully, especially with regard to the impact of Young's scientific discoveries. There is a feeling that the evidence has been evaluated fairly and sanely.

Not to be overlooked is a preface to the volume, a fine memoir on Alex Wood, written by his close friend, C. E. Raven, former Master of Christ's College, Cambridge.

Books Received

ATOMS IN THE FAMILY. MY LIFE WITH ENRICO FERMI. By Laura Fermi. 267 pp. The University of Chicago Press, Chicago, Illinois, 1954. $4.00.

THE KINETIC BASIS OF MOLECULAR BIOLOGY. By Frank H. Johnson, Henry Eyring, Milton J. Polissar. 874 pp. John Wiley & Sons, Inc., New York, 1954. $15.00.

SUBMINIATURIZATION TECHNIQUES FOR LOW-FREQUENCY RECEIVERS. By Gustave Shapiro. 64 pp. NBS Circular 545. U. S. Government Printing Office, Washington, D. C., 1954. $0.50.

LUMPED-PARAMETER TWO-TERMINAL NETWORKS. Volume I of Linear Transient Analysis. By Ernst Weber. 348 pp. John Wiley & Sons, Inc., New York, 1954. $7.50.

OPTIK UND ATOMPHYSIK (Ninth revised edition). Volume 3 of Einführung in die Physik. By Robert Wichard Pohl. 356 pp. Springer-Verlag, Berlin, Germany, 1954. DM 29.70.

WEATHER MODIFICATION: PAST, PRESENT AND FUTURE. By Kenneth M. Arenberg, F. Gregg Bemis, Jr., Chandler A. Cushman, Edward Neisser, Gerard P. Thomas, Donald H. Vetterlein. 50 pp. Weather Modification Group. Wollaston, Massachusetts, 1954. Paperbound $3.00.

PROCEEDINGS OF THE UNIVERSITY RESEARCH REACTOR CONFERENCE (Oak Ridge, Tennessee, February, 1954). Edited by W. W. Grigorieff. 221 pp. Office of Technical Services, Department of Commerce, Washington 25, D. C., 1954. Paperbound $1.35.

THE MAN IN THE THICK LEAD SUIT. By Daniel Lang. 207 pp. Oxford University Press, New York, 1954. $3.50.

ROTATIONAL STATES OF ATOMIC NUCLEI. By Aage Bohr. 55 pp. Ejnar Munksgaard Forlag, Copenhagen, Denmark, 1954. Paperbound kr. 10.

PHYSICAL PROPERTIES OF SOLID MATERIALS. By C. Zwikker. 300 pp. Interscience Publishers, Inc., New York, 1954. $8.75.