

BOOK REVIEW

Advancing Materials Research. Edited by P. A. PSARAS AND H. D. LANGFORD. Nat. Acad. Press, Washington, DC, 1987. xvi + 391 pp. \$47.50.

The first part of this book gives an excellent summary of the development and achievements of the Materials Research Laboratories (MRL's) in their first 25 years of existence. This program was originally funded by the Advanced Research Project Agency and, since 1972, by the National Science Foundation. The impact of the MRL program on the training of scientists and engineers for American industry, government, and university laboratories has been enormous. Over 3000 Ph.D.'s in materials research have been funded by the block grants of this program. In addition, there have been considerable scientific achievements in the development of organic metals, lower dimensionality materials, amorphous compounds, fibers, high-modulus polyethylene, mechanical behavior of metals fracture, among others.

In recent years Materials Research Groups (MRG's) have been created at a number of institutions. This program is designed to expand the variety of cross-disciplinary collaborations and to increase the number

of interdisciplinary programs being carried out by traditional materials departments.

The MRL, MRG programs, developed by block funding, have improved markedly the materials programs in the United States. Unfortunately, there is still a lack of involvement by the traditionally conservative chemistry departments. It is hoped that the MRG's being formed will include more chemists within their programs.

The second part of the book deals with the status of selected areas in materials science. It contains interesting summaries in a number of areas, e.g., catalysis, electronic and magnetic materials, and polymers, and is therefore useful in ascertaining the present status of these fields.

The last part of the book deals briefly with several topics such as instrumentation for materials research, the corporate sector, and materials research. Unfortunately, the treatment is too brief to be particularly rewarding to the reader.

AARON WOLD

Brown University