
Symposium on

ADVANCES IN ELECTRON
METALLOGRAPHY AND
ELECTRON PROBE
MICROANALYSIS



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SYMPOSIUM ON ADVANCES IN ELECTRON METALLOGRAPHY AND ELECTRON PROBE MICROANALYSIS

Sponsored by
SUBCOMMITTEE XI ON ELECTRON MICROSTRUCTURE OF
ASTM COMMITTEE E-4 ON ELECTRON METALLOGRAPHY

Held at
Atlantic City, N. J., June 28, 1960, and June 26, 1961



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FOREWORD

This Special Technical Publication presents reports on new techniques and researches in the field of electron metallography and electron probe microanalysis. Included are papers presented in two technical sessions of ASTM under the sponsorship of Subcommittee XI on Electron Microstructure of Metals of ASTM Committee E-4 on Metallography. The first session was held in Atlantic City, N. J., Tuesday, June 28, 1960, during the Sixty-third Annual Meeting of the Society. The second session took place Monday, June 26, 1961, in Atlantic City, N. J., at the Sixty-fourth Annual Meeting of the Society.

In addition to the papers presented at these sessions, the First Progress Report of the Electron Transmission Microscopy Task Group of Subcommittee XI, entitled "Electron Transmission Microscopy of Metals" is presented in this volume. A survey paper, "Recent Advances in the Application of Electron Microscopy to the Study of Metals," by W. C. Bigelow, has been included because of the practical value of an extensive and timely review of this type to workers in the field. A "Classified Bibliography on Electron Probe X-ray Microanalysis," prepared by B. R. Banerjee (chairman), K. F. J. Heinrich, and F. B. Riggs of the Task Group on Electron Probe Microanalysis of Subcommittee XI is also included, again because of its timeliness in relation to an expanding interest in this field. Also included is "Effect of Surface Finishing on Development of θ' Phase in an Aluminum - 4 per cent Copper Alloy" by N. Takahashi and H. Kosuge.

NOTE.—The Society is not responsible, as a body, for the statements
and opinions advanced in this publication.

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THIS PUBLICATION is one of many issued by the American Society for Testing and Materials in connection with its work of promoting knowledge of the properties of materials and developing standard specifications and tests for materials. Much of the data result from the voluntary contributions of many of the country's leading technical authorities from industry, scientific agencies, and government.

Over the years the Society has published many technical symposiums, reports, and special books. These may consist of a series of technical papers, reports by the ASTM technical committees, or compilations of data developed in special Society groups with many organizations cooperating. A list of ASTM publications and information on the work of the Society will be furnished on request.

