

**Sixty-first Annual Meeting Papers**

*Symposium on*

**ADVANCES IN ELECTRON  
METALLOGRAPHY**



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1916 Race St., Philadelphia 3, Pa.

***ASTM Special Technical Publication No. 245***

# SYMPOSIUM ON ADVANCES IN ELECTRON METALLOGRAPHY

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Presented at the  
SIXTY-FIRST ANNUAL MEETING  
Boston, Mass., June 24, 1958  
AMERICAN SOCIETY FOR TESTING MATERIALS



*Reg. U. S. Pat. Off.*

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## FOREWORD

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This Symposium on Advances in Electron Metallography includes reports on new techniques and results of research studies in the field of electron metallography. The symposium was developed under the sponsorship of Subcommittee XI on Electron Microstructure of Metals of ASTM Committee E-4 on Metallography. The papers in this symposium, together with the First Progress Report of the Non-Ferrous Task Group, "Techniques Employed in the Electron Microscope Study of Titanium Alloy with 8 per cent Manganese," were presented at a session Tuesday, June 24, 1958, during the Sixty-first Annual Meeting of the Society, Boston, Mass.

In addition to the papers presented at the symposium in Boston, "Selected Etchants for Electron Microscope Studies of Magnesium Alloys" by C. A. Moe has been included in this volume because of its immense practical value to those working in the field of metallography.

Mr. N. A. Nielsen, of E. I. Dupont de Nemours and Co., Inc., acted as Symposium Chairman, and Mr. Irwin Bessen, of North American Philips Co., Inc., presided over the session.

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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 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.