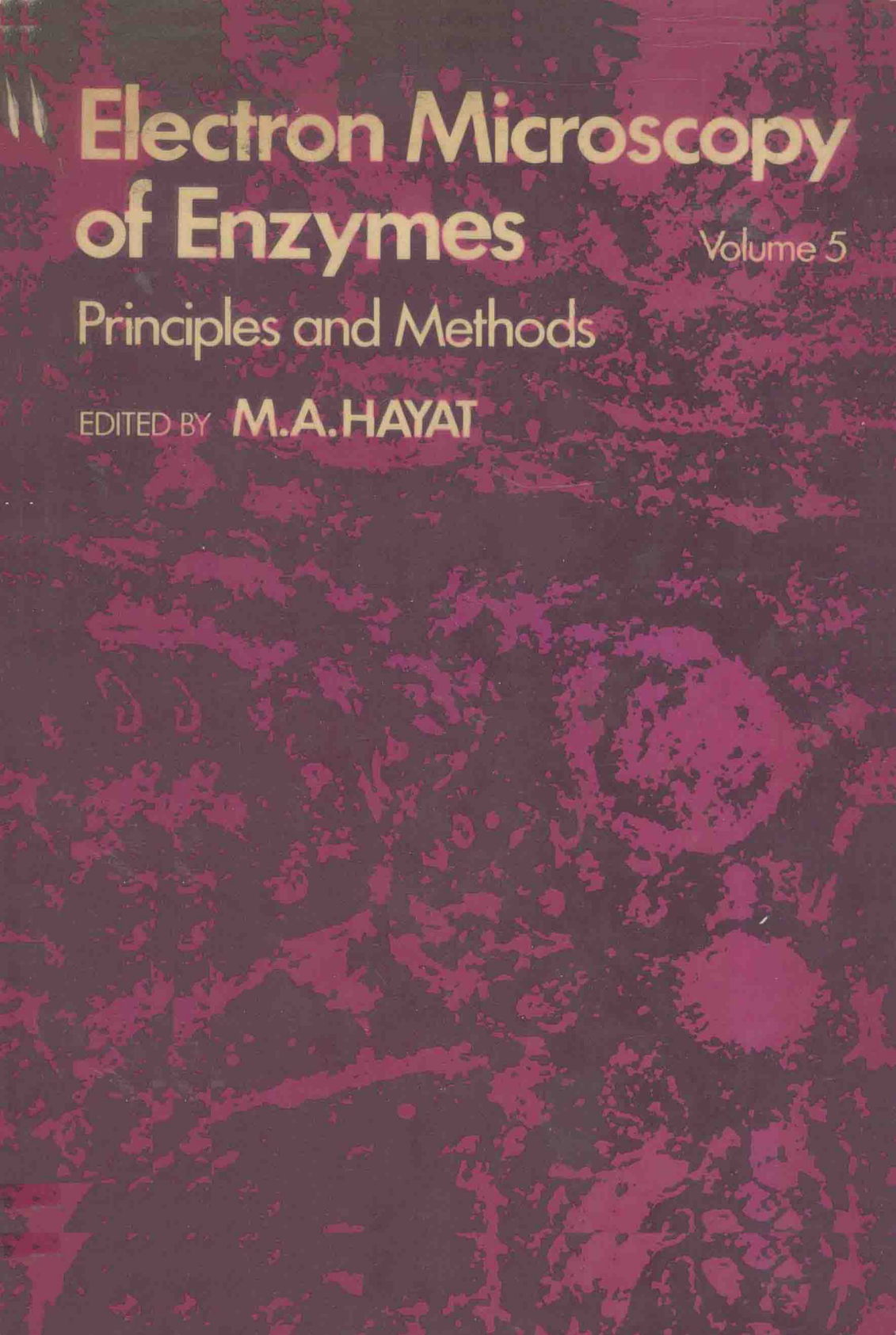


Electron Microscopy of Enzymes

Volume 5

Principles and Methods

EDITED BY **M.A. HAYAT**



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Principles and Methods

VOLUME 5

Edited by

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Preface

This is the fifth volume of a multi-volume series on the principles and methods of electron microscopy of enzymes. The series deals comprehensively with all aspects of enzyme localization. Since its inception in 1973, the series has successfully reflected the growth of methodology used in enzyme electron microscopy. There was a pressing need to keep the readers abreast of the remarkable expansion of the field in recent years and the ever-growing importance of its contributions to the understanding of many problems in biological and medical areas. This series serves as an international authoritative source in the field, and is designed to cover important new developments systematically. The series departs from the tradition that books on methodology present only the contemporary consensus of knowledge. It is written by scholars, and when they have anticipated the potential usefulness of a new method, they have so stated. The series should serve as a guide and survey, which can save a newcomer the tedious task of searching for information scattered in biological journals.

This volume has developed over the years through the joint effort of fourteen distinguished author-scientists. As a result, a most com-

prehensive compilation of methods developed and used by a large number of competent scientists has been achieved. The book contains new viewpoints with particular regard to current problems. Areas of disagreement and potential research problems have been pointed out. It is hoped that the readers would become aware that correct interpretation of the information retrieved from electron micrographs is dependent largely upon an understanding of the principles underlying the methodology.

The basic approach in this volume is similar to that in the previous four volumes in that most of the methods presented have been tested for their reliability and are the best of those currently available. The instructions for the preparation and use of various buffers, fixatives, substrates, stains, and apparatus are straightforward and complete, and should enable the worker even without previous cytological experience to prepare his specimens without outside help. It is suggested that prior to undertaking the processing, the entire procedure should be read and necessary solutions and other media prepared. Each chapter is provided with an exhaustive list of references with complete titles. Full author and subject indexes are included in the book.

It is encouraging to know that the previous four volumes have been received favorably. It is my impression that this volume will also fulfill its purpose: to provide an understanding of the usefulness, limitations, and potential of the preparatory procedures used for enzyme electron microscopy. I hope that it may arouse more interest in the importance and problems of electron cytochemistry and stimulate a deeper and refined study of enzymatic activity.

Berkeley Heights, New Jersey

M. A. HAYAT

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Electron Microscopy of Enzymes

Principles and Methods

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