

ELECTRON MICROSCOPY 1974

VOLUME I PHYSICAL

Electron Microscopy 1974

Abstracts of papers presented to the
EIGHTH INTERNATIONAL CONGRESS

on

ELECTRON MICROSCOPY

*held in Canberra, Australia ,
August 25-31 1974*

Edited by: J. V. SANDERS and D. J. GOODCHILD

VOLUME I PHYSICAL

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Preface

The Australian Academy of Science and electron microscopists in Australia welcome the chance of being hosts, in Canberra, to the delegates of the Eighth International Congress on Electron Microscopy.

It is particularly fortunate that Prof. E. Ruska in this, the year of his retirement, has been able to attend. The opening ceremony has been designed to honour the pioneers of electron microscopy. We are therefore very grateful to both Prof. Ruska and Prof. Gabor, for coming to Australia and presenting in their opening addresses a history and an appreciation of the founders of the science and art of electron microscopy. A text of their addresses is included in these Proceedings.

In Australia Electron Microscopy began with the installation, early in 1945, of an RCA type EMU electron microscope by Mr. J. L. Farrant at the Chemical Physics Section of the Division of Industrial Chemistry of the Council for Scientific and Industrial Research (now CSIRO), in Melbourne. In the 30 years since that time the number of microscopes in Australia has increased to more than 200. This Congress is a result of John Farrant's first microscope which began, for him and for Australia, a long association with the pioneers of electron microscopy. His personal enthusiasm for electron microscopy is largely responsible for Australia being a member of the International Federation of Societies for Electron Microscopy and consequently for the Eighth International Congress being held in Australia.

These two volumes of the Proceedings contain the abstracts of papers submitted to the Congress. In the manner which has been established by past Congresses, the Proceedings are published before the Congress, and constitute the only record of the Congress. These volumes contain only brief abstracts and authors usually publish their work in full in their regular journals. However, the Proceedings represent an up-to-date record of the state of electron microscopy. Despite the geographical remoteness of Australia, participants come from most parts of the world to attend the Congress, and many of these have submitted abstracts to the Proceedings, making its representation world wide.

The technique of electron microscopy has now spread into many branches of science. A conference such as this consequently must contain many unrelated applications of the technique. The organizers of this conference have therefore encouraged the submission of papers on the instruments, techniques and interpretations of electron microscopy. They have attempted to concentrate the contribution to topics thought to be important and developing at the time of the conference. These topics have been chosen for Symposia and international experts in the fields have been invited to lead the Symposia. These Symposia are supported by relevant contributed papers. It is hoped that this will encourage an atmosphere for the exchange of ideas and results, which will be profitable to all participants.

J. V. SANDERS,
CSIRO, Melbourne.

D. J. GOODCHILD,
CSIRO, Canberra.

SOME PIONEERS OF ELECTRON MICROSCOPY



Max Knoll in 1930
(1897-1969)



Ernst Ruska in 1937



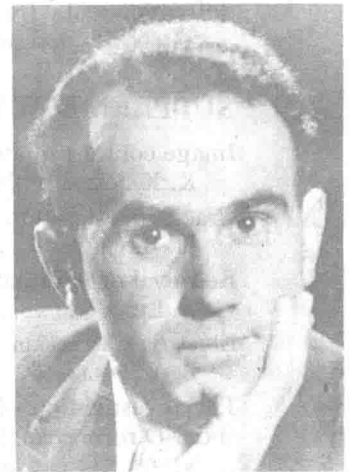
Bodo v. Borries in 1937
(1905-1956)



Dennis Gabor in 1924



Walter Glaser in 1952
(1906-1960)



Hans Mahl in 1936

(Photographs courtesy Professor E. Ruska)

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