MINERALOGY:

TOWARDS THE
TWENTY-FIRST CENTURY



THE ROYAL SOCIETY OF LONDON

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A DISCUSSION ORGANIZED JOINTLY FOR
THE ROYAL SOCIETY AND
THE MINERALOGICAL SOCIETY
BY J.E.T. HORNE AND
SIR KINGSLEY DUNIIAM, FOR SEC.R.S.,
IN CELEBRATION OF
THE MINERALOGICAL SOCIETY'S CENTENARY
MEETING HELD ON 7 AND 8 APRIL 1976

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PREFACE

The papers published in this volume were presented at a two-day Discussion Meeting on 7 and 8 April 1976 organized at the invitation of the Royal Society to mark the centenary of the Mineralogical Society of Great Britain and Ireland.

A Presidential Address reviewing the remarkable progress in all branches of mineralogy since the Society had celebrated its jubilee in 1926 set the scene for sessions on six facets of the subject currently to the fore, namely:

Marine mineralogy
Experimental petrology
Geochemistry
Extraterrestrial mineralogy
Mineralogical aspects of ores
Environmental mineralogy

The important field of clay mineralogy was omitted as this had been the subject of a special meeting the previous day. In the time available, the programme was necessarily representative rather than comprehensive. Authors were encouraged to treat their specialities in depth rather than to review the whole field, and to suggest likely lines of progress 'towards the twenty-first century'. In keeping with this spirit of looking forward was the Centenary Hallimond Lecture delivered by Professor J. V. Smith on the mineralogy of the planets. He gave it as his opinion 'that the mineralogical sciences are currently among the most dynamic of the physical sciences', a view we hope readers of these proceedings will endorse.

The volume contains the full texts of all the papers presented at the Discussion Meeting, in many cases considerably expanded, with the exception of the Presidential Address and the Hallimond Lecture. These are given in extended summary only, as the former has been published in full in the *Mineralogical Magazine* and the latter will appear there later.

Believing as we do that science is indivisible and that progress stems from cross-fertilization, we venture to commend to our fellow scientists in other disciplines this record of research in our Society's centennial year. For as Professor R. V. Jones* has remarked on another occasion 'the unexpected properties of minerals have time after time been the starting points for fundamental developments in physics, and...the mineral world has indeed shown that there are more things in heaven and earth than are dreamt of, even in natural philosophy'.

We should like to thank the past and present staff of the Royal Society for their good-natured efficiency, in particular Miss P. M. Ritchie and Miss S. Leach for ensuring the smooth running of the meeting, and Mr D. Tillotson and Dr M. B. Goatly for respectively initiating and bringing to completion the publication of these proceedings. Lastly we wish to pay tribute to the late Sir David Martin, who during nearly 30 years as Executive Secretary of the Royal Society served the scientific community as a whole in many ways, of which the overseeing of Discussion Meetings was but one.

K. C. Dunham, President, Mineralogical Society
J. E. T. Horne, General Secretary

^{*} Jones, R. V. 1974 Chester Beatty Lecture: Minerals in the history of physical science. J. R. Soc. Arts 122, 589-598.

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