

TABLE OF CONTENTS

FOREWORD.....	v
SYMPOSIUM ON LAYERED INTRUSIONS.....	1
The mechanism of adcumulus growth in the layered series of the Skaergaard intrusion.....	1
..... <i>L. R. Wager</i>	1
Contrasted styles of igneous layering in the Gardar Province of south Greenland.....	10
..... <i>J. Ferguson and T. C. R. Pulvertaft</i>	10
Structural and petrographic observations on layered granites from southern Greenland.....	22
..... <i>C. H. Emeleus</i>	22
The Muskox intrusion, a recently discovered layered intrusion in the Coppermine River area, Northwest Territories, Canada.....	30
..... <i>Charles H. Smith and H. E. Kapp</i>	30
Origin of the ultramafic complex at Duke Island, southeastern Alaska.....	36
..... <i>T. N. Irvine</i>	36
Stratigraphic and lateral variation of chromite composition in the Stillwater Complex.....	46
..... <i>Everett D. Jackson</i>	46
Flow-layering in alpine peridotite-gabbro complexes.....	55
..... <i>T. P. Thayer</i>	55
Noritic anorthosite bodies in the Sierra Nevada batholith.....	62
..... <i>Alden A. Loomis</i>	62
Layered picrite-anorthositic gabbro sheet, West Humboldt Range, Nevada.....	69
..... <i>Robert C. Speed</i>	69
Layered pegmatite-aplite intrusives.....	78
..... <i>Richard H. Jahns and O. Frank Tuttle</i>	78
Structure and rock sequences of the Critical Zone of the eastern Bushveld Complex.....	93
..... <i>Eugene N. Cameron</i>	93
The Kapalagulu layered intrusion of western Tanganyika.....	108
..... <i>W. J. Wadsworth</i>	108
A layered complex in Sittampundi, Madras State, India.....	116
..... <i>P. R. J. Naidu</i>	116
Layered intrusions in the Ferrar dolerites, Antarctica.....	124
..... <i>Bernard M. Gunn</i>	124
Layered basic intrusive rocks of the Wichita Mountains, S.W. Oklahoma (abs.).....	134
..... <i>H. E. Hunter</i>	134
Internal structure of a differentiated teschenite intrusion, Prospect Hill, New South Wales (abs.)	134
..... <i>H. G. Wilshire</i>	134
SYMPOSIUM ON THE MINERALOGY OF THE SULFIDES.....	135
The physical properties of semiconducting sulfides, selenides and tellurides.....	135
..... <i>Wayne W. Scanlon</i>	135
Various aspects of atomic displacements in metallic sulfides.....	144
..... <i>Jean Prouvost</i>	144
Étude structurale de quelques sulfures de plomb et d'arsenic naturels du gisement de Binn.....	149
..... <i>M-Th. Le Bihan</i>	149
On the transition of bornite.....	153
..... <i>Nobuo Morimoto</i>	153
On the superstructure and twinning of pyrrhotite.....	157
..... <i>Bernhardt J. Wuensch</i>	157
The crystal structure of chalcocite, Cu_2S	164
..... <i>Bernhardt J. Wuensch and M. J. Buerger</i>	164
Equilibrium in ore deposits.....	171
..... <i>Paul B. Barton, Jr., Philip M. Bethke and Priestley Toulmin, 3rd</i>	171
A study of distorted pyrite crystals from Spain.....	186
..... <i>M. Font-Altaba</i>	186
A statistical study of bravoite zoning.....	190
..... <i>Farouk El Baz and G. C. Amstutz</i>	190
Sulfur isotope mineralogy of sulfides (abs.).....	198
..... <i>Mead Leroy Jensen</i>	198
Thermodynamic study of pyrrhotite and pyrite (abs.).....	198
..... <i>Priestley Toulmin, 3rd and Paul B. Barton, Jr.</i>	198
MISCELLANEOUS PAPERS.....	200
The role of oriented transformations in mineralogy.....	200
..... <i>L. S. Dent Glasser, F. P. Glasser and H. F. W. Taylor</i>	200
Effects of the changes in slope occurring on liquidus and solidus paths in the system diopside- anorthite-albite.....	204
..... <i>Peter J. Wyllie</i>	204
Cell parameters of orthopyroxenes.....	213
..... <i>R. A. Howie</i>	213
Sur les constituants phosphatés des minerais de fer oolithiques de France.....	223
..... <i>S. Caillère and F. Kraut</i>	223
Trends and affinities of basaltic magmas and pyroxenes as illustrated on the diopside—olivine—silica diagram.....	227
..... <i>D. S. Coombs</i>	227
Crystallization of leucite-nepheline-sanidine in basic differentiates from a peridotite-dunite mass in Salem, Madras State, India.....	251
..... <i>P. R. J. Naidu</i>	251

Studies of crystal surfaces.....	<i>Ichiro Sunagawa</i>	258
Clinoamphibole regression studies. I. Regressions of optical properties and density on composition.....	<i>Horace Winchell</i>	267
Contribution to the study of the fluorite deposit "Mina Berta" in San Cugat del Valles (Barcelona, Spain).....	<i>J. Montoriol Pous, A. San Miguel and M. Font-Altaba</i>	278
Structural classification of zeolites.....	<i>J. V. Smith</i>	281
The crystal structure of dachiardite.....	<i>G. Gottardi and W. M. Meier</i>	291
Comparison of the crystal structures of wollastonite and pectolite. .	<i>C. T. Prewitt and M. J. Buerger</i>	293
Interpretation of systematic extra-extinctions.....	<i>N. Morimoto, F. Marumo and R. Sadanaga</i>	303
Spiroffite, a new tellurite mineral from Moctezuma, Sonora, Mexico.....	<i>J. A. Mandarino, S. J. Williams and R. S. Mitchell</i>	305
The crystal structure of pseudomalachite (abs.).....	<i>Subrata Ghose</i>	310
Light extinction and scattering by suspensions of finely-divided minerals (abs.)....	<i>J. R. Hodgkinson</i>	310
Accurate determination of olivine composition using standard small-diameter x-ray powder cameras (abs.).....	<i>J. L. Jambor and Charles H. Smith</i>	310
Infrared study of sulfate minerals (abs.).....	<i>Keiichi Omori and Paul F. Kerr</i>	311
Study of translucent tiny grains using the interference microscope (abs.).....	<i>Horst Piller</i>	311
Studies of rock-forming micas (abs.).....	<i>J. Rimsaite</i>	312
The composition of quartz-forming fluids in nature (abs.).....	<i>Edwin Roedder</i>	312
The crystal structures and crystal chemistry of various members of the metatorbernite group (abs.).....	<i>Malcolm Ross and Howard T. Evans, Jr.</i>	313
The significance of sapphirine in the granulite terrains of Western Australia (abs.).....	<i>Allan F. Wilson</i>	313
Iron-feldspar polymorphs in the system $K_2O-FeO-Fe_2O_3-SiO_2-H_2O$ (abs.).....	<i>David R. Wones and Daniel E. Appleman</i>	314
PROCEEDINGS OF THE INTERNATIONAL MINERALOGICAL ASSOCIATION.....		315
INDEX.....		327