

INDEX TO VOLUME 51

Only leading articles are set in **boldface type**.

<p>Abdel-Gawad, A. M. <i>X</i>-ray spectrographic determination of hafnium-zirconium ratio in zirconium minerals</p>	464	<p>Analcime and wairakite, cation exchange properties of (Ames)</p>	903
<p>Absorption corrections, computation of, and the significance of end effect (Burnham)</p>	159	<p>Analcite in the Newcastle coal measure sediments of the Sydney Basin, Australia (Loughnan)</p>	486
<p>Acmite-diopside, the system, and its bearing on the stability relations of natural pyroxenes of the acmite-hedenbergite-diopside series (Yagi)</p>	976	<p>Analcite solid solutions, the melting of, in the system NaAlSiO₄-NaAlSi₃O₈-H₂O (Peters, Luth, Tuttle)</p>	736
<p>Adelpholite (= Samarskite) (Vorma, Hoffren)</p>	1553	<p>Analysis instrumentation (Fowler, Eanes, Kehoe) (Book review)</p>	945
<p>Aegirine-augite, zirconian, and jefersonite from Franklin, New Jersey (Fron del, Ito)</p>	1406	<p>Anderson, A. T., Jr., Mineralogy of the Labrieville anorthosite, Quebec</p>	1671
<p>Albite, metamorphic, optical properties of (Crawford)</p>	523	<p>Anderson, D. D. and Reynolds, R. C. Umiat bentonite: an unusual montmorillonite from Umiat, Alaska</p>	1443
<p>Alexander, J. B. and Flinter, B. H.</p>	1551	<p>Anderson, O. L. An approximate method for computing the isotropic sound velocities using refractive index data</p>	1001
<p>Alkalic rocks and carbonatites of the Arkansas River Canyon, Fremont County, Colorado. 3. The Amethyst carbonatites (Heinrich, Shappirio)</p>	1088	<p>Andersen, S. with Semenov, E. I. Gerassimovsky, V. I. Maksimova, N. V. and Petersen, O. V.</p>	1547
<p>Allen, W. C. An <i>x</i>-ray method for defining composition of a magnesium spinel</p>	239	<p>Anorthoclase for Antarctica, physical properties of (Boudette, Ford)</p>	1374
<p>Alluaudite, Palermo "huhnkerobelite" is (Fisher)</p>	935	<p>Anorthosite, Labrieville, mineralogy of the, Quebec (Anderson, Jr.)</p>	1671
<p>Aluminum hydroxide-montmorillonite complexes, the nature of (Brydon, Kodama)</p>	875	<p>Aoki, K. Phenocrystic spineliferous titanomagnetites from trachyandesites, Iki Island, Japan</p>	1799
<p>Aluminum silicates, thermodynamic properties of (Holm, Kleppa)</p>	1608	<p>Apatite, carbonate-bearing, from Faraday Township, Ontario, Canada (Gulbrandsen, Kramer, Beatty, Mays)</p>	819
<p>American gem trails (Pearl) (Book review)</p>	543	<p>—, effects of magnesium on the formation of (Simpson)</p>	205
<p>Ames, L. L., Jr. Cation exchange properties of wairakite and analcime</p>	903	<p>—, fluor, manganese- and strontium-bearing, from the Peerless pegmatite, South</p>	
<p>Amphiboles, monoclinic, relationships between cell parameters and chemical compositions of (Colville, Ernst, Gilbert)</p>	1727		

- Dakota (Young, Sheridan, Munson)..... 1516
- **fluor-chlor-oxy, and sphene from Crystal Lode pegmatite, near Eagle, Colorado (Young, Munson)**..... 1476
- Arnold, R. G. Mixtures of hexagonal and monoclinic pyrrhotite and the measurement of the metal content of pyrrhotite by *x*-ray diffraction..... 1221
- Attakolite (Attacolite) (Gabrielson, Geijer)..... 534
- Augite, an unusual hourglass structure in (Preston)..... 1227
- Aumento, F. Stability, lattice parameters, and thermal expansion of β -cristobalite**..... 1167
- Axinite, manganoean, from the Mesabi Range, Minnesota, short-range chemical variations in a (French) (abs.).... 1561
- Babcock, L. I. The manganese bearing minerals of Champion Mine, Champion, Michigan (abs.)..... 1560
- Babephite (Nazarova, Kuznetsova, Shaskin)..... 1547
- Babushkin, V. I., Matveev, G. M. and Mchedlov-Petrosyan O. P. (Book review)..... 251
- Bachet, B. with Cesbron, F. and Oosterbosch, R..... 1815
- Badgley, P. C. (Book review).... 943
- Bailey, S. W. with Bradley, W. F. (Book review)..... 1556
- **with Shirozu, H. Crystal structure of a two-layer Mg-vermiculite**..... 1124
- Baker, W. E. An *x*-ray diffraction study of synthetic members of the pyromorphite series**... 1712
- Ballman, A. A. with Wood, D. L. Blue synthetic quartz..... 216
- Banno, S. with Forbes, R. B. Nickel-iron content of peridotite inclusion and cognate olivine from an alkali-olivine basalt**..... 130
- Barczak, V. J. Schroeckingerite from Ambrosia Lake uranium district..... 929
- Barite-quartz phase in the Fire-sand River Carbonate, Wawa, Ontario (Heinrich, Vian) (abs.)..... 1562
- Barker, D. S. Application of plastic peel techniques to the study of silicate rocks..... 1541
- Barytolamprophyllite (Peng, Chang)..... 1549
- Basalts, petrology of the Karroo, of Basutoland (Cox, Horning)**..... 1414
- Bayer, G. and Hoffman, W. Complex alkali titanium oxides $A_x(B_yTi_{8-y})O_{16}$ of the α - MnO_2 structure-type..... 511
- Beatty, L. B. with Gulbrandsen, R. A., Kramer, J. R. and Mays, R. E. Carbonate-bearing apatite from Faraday Township, Ontario, Canada**.. 819
- Bentonite, Umiat: an unusual montmorillonite from Umiat, Alaska (Anderson, Reynolds)** 1443
- Berger, K. C. (Book review)..... 543
- Berman, R. (Book review)..... 941
- Berndtite (Moh)..... 1551
- Berryite (Nuffield, Harris)..... 532
- Beryl in a Montana tactite body (King)..... 502
- Beus, A. A. (Book review)..... 1559
- Bezsmertnaya, M. S. and Soboleva, L. N..... 531
- Biedl, A. Scandium borate, $ScBO_3$ 521
- **with Frondel, C. and Ito, J. New type of ferric iron tourmaline**..... 1501
- Binocular microscope for orientation of single crystals, use of the (Robinson)..... 1243
- Blake, R. L., Hessevick, R. E., Zoltai, T. and Finger, L. W. Refinement of the hematite structure**..... 123
- Blanchard, F. N. Thermoluminescence of fluorite and age of deposition**..... 474

- Bloss, F. D. Suggested terminology for interstratified clay minerals 855
- with Robinson, P. D. and Fang, J. H. Cell dimensions and space group of tamarugite 1805
- Borate, scandium, ScBO_3 (Biedl). 521
- Bottinga, Y. Kudo, A. and Weill, D. Some observations on oscillatory zoning and crystallization of magmatic plagioclase 792
- Boudette, E. L. and Ford, A. B. Physical properties of anorthoclase from Antarctica 1374
- Boyer, R. E. (Book review) 943
- Bradley, J. with Mandarino, J. A. and Harris, D. C. 533
- Bradley, W. F. and Bailey, S. W. (Book review) 1556
- Bredigite, iarnite, and γ dicalcium silicates from Marble Canyon (Bridge) 1766
- Briartite (Francotte, Moreau, Ottenburgs, Levy) 1816
- Bridge, T. E. Bredigite, iarnite, and γ dicalcium silicates from Marble Canyon 1766
- Brindley, G. W. with de Souza Santos, P. and de Souza Santos, H. Mineralogical studies of kaolinite-halloysite clays: Part IV. A platy mineral with structural swelling and shrinking characteristics 1640
- Bromellite, Synthetic III. Some optical properties (Newkirk, Smith, Kahn) 141
- Brovkin, A. A. with Grigoriev, A. P. and Nekrosov, I. Y. 1818
- Brucite in Alpine serpentinites (Hostetler, Coleman, Mump-ton, Evans) 75
- Brydon, J. E. and Kodama, H. The nature of aluminum hydroxide-montmorillonite complexes 875
- Buergerite, a new species of tourmaline (Donnay, Ingamells, Mason) 198
- Burnham, C. W. Computation of absorption corrections, and the significance of end effect — with Prewitt, C. T. The crystal structure of jadeite, $\text{NaAlSi}_2\text{O}_6$ 956
- Burns, R. G. and Fuerstenau, D. W. Electron-probe determination of inter-element relationships in manganese nodules 895
- Burri, G., Graeser, S., Marumo, F. and Nowacki, W. 531
- with Marumo, F. 532
- Buryanova, E. A., Strokova, G. S. and Shitov, V. A. 1548
- Buseck, P. R. and Keil, K. Meteoritic rutile 1506
- Byström-Askklund, A. M. Sample cups and a technique for side-ward packing of α -ray diffractometer specimens 1233
- Bykova, A. V. with Semenov, E. I. and Khomyakov, A. P. 530
- Cabri, L. J. with Kracek, F. C. and Ksanda, C. J. Phase relations in the silver-tellurium system 14
- Cacoxenite from Arkansas (Fisher) 1811
- Calcite and pyrite, unique inter-growth of (Zimmer) (abs.) 1563
- Cameron, E. N. with Ramsden, A. R. Kamacite and taenite superstructures and a metastable tetragonal phase in iron meteorites 37
- "Kamacite and taenite superstructures and a metastable tetragonal phase in iron meteorites" Correction. 1544
- Campbell, I. Presentation of the Roebling medal to Adolf Pabst 548
- Carpenter, A. B., Chalmers, R. A., Gard, J. A., Speakman, K. and Taylor, H. F. W. Jennite, a new mineral 56
- Catoptrite and yeatmanite—

- stuffed pyrochroite structures? (Moore) 1494
- Cesbron, F., Bachet, B. and Oosterbosch, R. 1815
- Chabazite, silica-rich, from the Barstow Formation, San Bernardino County, Southern California (Gude, Sheppard). 909
- Chalmers, R. A. with Carpenter, A. B., Gard, J. A., Speakman, K. and Taylor, H. F. W. Jennite, a new mineral 56
- Chang, C. with Peng, T. 1549
- Charnockite, myrmekite in, from South-West Nigeria (Hubbard) 762
- Chase, A. B. and Osmer, J. A. Growth of single crystals of ZrO_2 and HfO_2 from PbF_2 1808
- Chevkinite and serrierite, Virginia metamict minerals (Mitchell) 1394
- Chlorites in the system $MgO-Al_2O_3-SiO_2-H_2O$, phase relationships of (Fawcett, Yoder) 353
- Chondrite, Mezö-Madaras, significance of iron-rich silicates in the (Dodd, Jr., Van Schmus, Marvin) 1177
- Christ, C. L. with Garrels, R. M. (Book review) 535
- Chrysotile asbestos, the morphology of, as inferred from nitrogen adsorption data (Naumann, Dresher) 711
- dehydroxylation, the influence of sample texture on (Naumann, Dresher) 1200
- fiber, hollow (Clifton, Huggins, Shell) 508
- Clark, A. M. with Stampfl, E. F. 1551
- Clark, G. W. with Kopp, O. C. Synthetic pollucites in the system $Cs_2O \cdot Al_2O_3 \cdot 4SiO_2 \cdot Cs_2O \cdot Fe_2O_3 \cdot 4SiO_2 \cdot H_2O$ —their phase relationship and physical properties: A discussion 1243
- Classification by elements (index of new minerals, discredited minerals, and changes of mineralogical nomenclature) (Fleischer) 1336
- by anionic groups (index of new minerals, discredited minerals, and changes of mineralogical nomenclature) (Fleischer) 1327
- Clay minerals, interstratified, suggested terminology for (Bloss) 855
- mica-type, weathering effects on the structures of (Güven, Kerr) 858
- Clays, selected Great Basin playa (Güven, Kerr) 1056
- and clay minerals—proceedings of the thirteenth national conference on clays and clay minerals (Bradley, Bailey) (Book review) 1556
- Clifton, R. A. Jr., Huggins, C. W. and Shell, H. R. Hollow chrysotile fibers 508
- Clinopyroxenes, common, unit cell dimensions and ionic substitutions in (Viswanathan) 429
- Cloke, P. L. (Book review) 536, 540, 541, 1821, 1822
- Coconinoite, a new uranium mineral from Utah and Arizona (Young, Weeks, Meyrowitz) 651
- Cohen, L. H. and Ribbe, P. H. Magnesium phosphate mineral replacement at Mono Lake, California 1755
- Cole, W. F. and Crook, D. N. A note on the examination of pyrite in conventional differential thermal analysis equipment 499
- Coleman, R. G. with Hostetler, P. B., Mumpton, F. A. and Evans, B. W. Brucite in Alpine serpentinites 75
- Ross, D. R. and Meyrowitz, R. Zellerite and metazellerite, new uranyl carbonates 1567
- Colville, P. A., Ernst, W. G. and Gilbert, M. C. Relationships between cell parameters and

chemical compositions of monoclinic amphiboles.....	1727	Deer, W. A., Howie, R. A. and Zussman, J. (Book review)...	1555
Complexing and hydrothermal ore deposition (Helgeson) (Book review).....	541	Demesmaekerite (Cesbron, Bacht Oosterbosch).....	1815
Cordierite, the polymorphism of, I: The crystal structure of low cordierite (Gibbs).....	1068	Dennen, W. H. with Ritter, C. J. Blackening of natural quartz by γ -irradiation.....	220
Cossyrite from the island of Pantelleria, a new analysis of (Zies).....	200	Denning, R. M. (Book review)...	538, 539, 542, 941, 942, 945, 1822
Cox, K. G. and Hornung, G. The petrology of the Karroo basalts of Basutoland.....	1414	Depths of the earth; caves and caverns of the United States (Halliday) (Book review)...	1559
Crawford, M. L. Optical properties of metamorphic albite...	523	Diamond, S., White, J. L. and Dolch, W. L. Effects of isomorphous substitution in hydrothermally-synthesized tobermorite.....	388
Crednerite (Gaudefroy, Dietrich, Permingeat, Picot).....	1819	Diaspore, dehydration of, at water pressures from 15 to 15,000 psi (Weber).....	235
Cristobalite, β - stability, lattice parameters, and thermal expansion of (Aumento).....	1167	Dietrich, J. with Gaudefroy, C., Permingeat, F. and Picot, P..	1819
Crook, D. N. with Cole, W. F. A note on the examination of pyrite in conventional differential thermal analysis equipment.....	499	Djerfisherite (Fuchs).....	1815
Crystallographic book list (Megaw) (Book review).....	255	Dodd, R. T. Jr., Van Schmus, W. R. and Marvin, U. B. Significance of iron-rich silicates in the Mezö-Madaras chondrite.....	1177
Cummingtonite, (Mg,Fe)$_2$(Si$_4$O$_{11}$)$_2$(OH)$_2$, a further refinement of the crystal structure of (Fischer).....	814	Dolch, W. L. with Diamond, S. and White, J. L. Effects of isomorphous substitution in hydrothermally-synthesized tobermorite.....	388
Data of geochemistry. Chapter F. (White, Hem, Waring) (Book review).....	1821	Dolomite, organic, from Point Fermin, California (Spotts, Silverman).....	1144
de Kun, N. (Book review).....	1557	Donnay, G., Ingamells, Co. O. and Mason, B. Buergerite, a new species of tourmaline....	198
de Souza Santos, H. with de Souza Santos, P. and Brindley, G. W. Mineralogical studies of kaolinite-halloysite clays: Part IV. A platy mineral with structural swelling and shrinking characteristics.....	1640	Dorofeeva, K. A. with Malinko, S. V., Lisitsyn, A. E., Ostravskaya, I. V. and Shashkin, D. P.....	1817
de Souza Santos, P., de Souza Santos, H. and Brindley, G. W. Mineralogical studies of kaolinite-halloysite clays: Part IV. A platy mineral with structural swelling and shrinking characteristics....	1640	Dresher, W. H. with Naumann, A. W. The morphology of chrysotile asbestos as inferred from nitrogen adsorption data.....	711
		—— The influence of sample texture on chrysotile dehy-	

- droxylation 1200
- Dutra, C. V. with Herz, N. Trace elements in alkali feldspars, Quadrilátero Ferrífero, Minas Gerais, Brazil 1593
- Eanes, R. D. with Fowler, L. J. and Kehoe, T. J. (Book review) 945
- Eclogite, peridotite and pyrope from the Navajo country, Arizona and New Mexico (O'Hara, Mercy) 336
- Effects of ultrasound on the kinetics of crystallization (Kapustin) (Book review) 942
- Eitel, W. (Book review) 249, 251
- Electron-probe determination of inter-element relationships in manganese nodules (Burns, Fuerstenau) 895
- Eliason, J. R. Montmorillonite exchange equilibria with strontium-sodium-cesium 324
- Epididymite, crossed axial plane dispersion in (Petersen) 916
- Epoxy resin, preparation of thin sections of fragmental materials using (Hagni) 1237
- Ernst, W. G. with Colville, P. A. and Gilbert, M. C. Relationships between cell parameters and chemical compositions of monoclinic amphiboles 1727
- Eschman, D. F. (Book review) 543
- Evans, B. W. with Hostetler, P. B., Coleman, R. G. and Mumpton, F. A. Brucite in Alpine serpentinites 75
- Fahey, J. J. with Stewart, D. B., Walker, G. W. and Wright, T. L. Physical properties of calcic labradorite from Lake County, Oregon 177
- Fairbanksite (Morgan) 533
- Fang, J. H. with Robinson, P. D. and Bloss, F. D. Cell dimensions and space group of tamarugite 1805
- Faust, G. T. The hydrous nickel-magnesium silicates—the garnierite group 279
 ——— (Book review) 1555
- Fawcett, J. J. and Yoder, H. S., Jr. Phase relationships of chlorites in the system $MgO-Al_2O_3-SiO_2-H_2O$ 353
- Feldspar, alkali, solvus in the system $Na_2O-K_2O-Al_2O_3-SiO_2-H_2O$ (Luth, Tuttle) 1359
- Feldspars, alkali, trace elements in, Quadrilátero Ferrífero, Minas Gerais, Brazil (Herz, Dutra) 1593
 ——— barium, from Franklin, New Jersey (Fron del, Ito, Hendricks) 1388
- Ferromagnetism in zircon, the source of (Lewis, Senftle) 1467
- Finger, L. W. with Blake, R. L., Hessevick, R. E. and Zoltai, T. Refinement of the hematite structure 123
- Finney, J. J. The unit cell of tarbuttite and paradamite 1218
- Fischer, K. F. A further refinement of the crystal structure of cummingtonite, $(Mg,Fe)_7(Si_4O_{11})_2(OH)_2$ 814
- Fisher, D. J. Palermo "hühnerkobelite" is alluaudite 935
 ——— Cacoenite from Arkansas 1811
 ——— (Book review) 542
 ——— professor, reply to (Moore) 939
- Fleischer, M. Alphabetical index of new minerals, discredited minerals, and changes of mineralogical nomenclature 1251
 ——— (Book review) 256
 ——— Classification by anionic groups 1327
 ——— Classification by elements 1336
 ——— Index of new mineral names, discredited minerals, and changes of mineralogical nomenclature in Volumes 1-50 of *The American Mineralogist* 1248
 ——— New Mineral Names 529, 1546, 1815

Flinter, B. H. with Alexander, J. B.	1551	R. G. Electron-probe determination of inter-element relationships in manganese nodules	895
Fluellite, $Al_2PO_4F_2(OH) \cdot 7H_2O$, the crystal structure of (Guy, Jeffrey)	1579	Gabrielson, O. and Geijer, P.	534
Fluorite, thermoluminescence of, and age of deposition (Blanchard)	474	Galena, mechanical twinning in, the origin of (Lyall)	243
Foit, F. F. Jr. New data on roeblingite	504	Gard, J. A. with Carpenter, A. B., Chambers, R. A., Speakman, K. and Taylor, H. F. W. Jennite, a new mineral	56
Forbes, R. B. and Banno, S. Nickel-iron content of peridotite inclusion and cognate olivine from an alkali-olivine basalt	130	Garnet growth by mineralogical environment, dimensional and compositional control of (Gresens)	524
Ford, A. B. with Boudette, E. L. Physical properties of anorthoclase from Antarctica	1374	Garnierite group, the hydrous nickel-magnesium silicates (Faust)	279
Foster, M. D. and Schaller, W. T. Cause of colors in wavellite from Dug Hill, Arkansas	422	Garrels, R. M. and Christ, C. L. (Book review)	535
Fowler, L. J., Eanes, R. D. and Kehoe, T. J. (Book review)	945	Gaspeite, (Ni, Mg, Fe)(CO ₃), a new carbonate from the Gaspé Peninsula, Quebec (Kohls, Rodda)	677
Francotte, J., Moreau, J., Ottenburgs, R. and Levy, C.	1816	Gaudefroy, C., Dietrich, J., Permingeat, F. and Picot, P.	1819
French, B. M. Short-range chemical variations in a manganoan axinite from the Mesabi Range, Minnesota (abs.)	1561	Gaudette, H. E., Grim, R. E. and Metzger, C. F. Illite: A model based on the sorption behavior of cesium	1649
Fron del, C., Biedl, A. and Ito, J. New type of ferric iron tourmaline	1501	Geijer, P. with Gabrielson, O.	534
— with Fuchs, L. H. and Klein, C., Jr. Roedderite, a new mineral from the Indarch meteorite	949	Geochemistry of beryllium and genetic types of beryllium deposits (Beus) (Book review)	1559
— and Ito, J.	533	Geological investigations of chromite in California, Klamath Mountains. Chromite deposits of Shasta, Tehama, Trinity and Humboldt Counties, California (Wells, Hawkes) (Book review)	1558
— and Ito, J. Hendricksite, a new species of mica	1107	Geological problems in lunar research (Green) (Book review)	1558
— and Ito, J. Zincian aegirine-augite and jeffersonite from Franklin, New Jersey	1406	Gerassimovsky, V. I. with Semenov, E. I., Maksimova, N. V., Andersen, S. and Petersen, O. V.	1547
— Ito, J. and Hendricks, J. G. Barium feldspars from Franklin, New Jersey	1388	Gibbs, G. V. The polymorphism of	
Fuchs, L. H.	1315		
— Fron del, C. and Klein, C., Jr. Roedderite, a new mineral from the Indarch meteorite	949		
Fuerstenau, D. W. with Burns,			

- cordierite I: The crystal structure of low cordierite . . . 1068
- Gilbert, M. C. with Colville, P. A. and Ernst, W. G. Relationships between cell parameters and chemical compositions of monoclinic amphiboles 1727
- Gnome event near Carlsbad, New Mexico, mineralogical investigations in the debris of the (Kahn, Smith) 1192
- Gordillo, C. E., Linares, E., Toubes, R. O. and H. Winchell Huemulite, $\text{Na}_4\text{Mg}_{10}\text{O}_{28} \cdot 24\text{H}_2\text{O}$, a new hydrous sodium and magnesium vanadate from Huemul mine, Mendoza Province, Argentina 1
- Gorzhevskaya, S. A., Lugovskoi, G. P. and Sidorenko, G. A. 1551
- Gottardi, G. X-ray crystallography of rinkite 1529
- Graeser, S. with Burri, G., Marumo, F. and Nowacki, W. 531
- Green, J. (Book review) 1558
- Greigite from the Lojane chromium deposit, Macedonia (Radusinović) 209
- Gresens, R. L. Dimensional and compositional control of garnet growth by mineralogical environment 524
- Grigoriev, A. P., Brovkin, A. A. and Nekrasov, I. Y. 1818
- and Nekrasov, I. Y. 1818
- Grim, R. E. with Gaudette, H. E. and Metzger, C. F. Illite: A model based on the sorption behavior of cesium 1649
- Gross, E. B. and Heinrich, E. Wm. Petrology and mineralogy of the Mount Rosa area, El Paso and Teller Counties, Colorado. II. Pegmatites 299
- Petrology and mineralogy of the Mount Rosa area, El Paso and Teller Counties, Colorado. III. Lamprophyres and mineral deposits 1433
- Gude, A. J., 3rd and Sheppard, R. A. Silica-rich chabazite from the Barstow Formation, San Bernardino County, southern California 909
- Guidotti, C. V. Variations of the basal spacings of muscovite in sillimanite-bearing metapelites of northwestern Maine 1778
- Gulbrandsen, R. A., Kramer, J. R. Beatty, L. B. and Mays, R. E. Carbonate-bearing apatite from Faraday Township, Ontario, Canada 819
- Güven, N. and Kerr, P. F. Selected Great Basin playa clays 1056
- Weathering effects on the structures of mica-type clay minerals 858
- Guy, B. B. and Jeffrey, G. A. The crystal structure of fluellite, $\text{Al}_2\text{PO}_4\text{F}_2(\text{OH}) \cdot 7\text{H}_2\text{O}$ 1579
- Hagni, R. D. The preparation of thin sections of fragmental materials using epoxy resin 1237
- Halliday, Wm. R. (Book review) 1559
- Han, T. Textural relations of hematite and magnetite in some Precambrian metamorphosed oxide iron-formations (abs.) 1561
- Harkerite (Ostrovskaya, Pertsev, Nikitina) 1820
- Harris, D. C. with Mandarino, J. A. and Bradley, J. 533
- with Nuffield, E. W. 532, 533
- Hawkes, H. E. with Wells, F. G. (Book review) 1558
- Hays, J. F. Stability and properties of the synthetic pyroxene $\text{CaAl}_2\text{SiO}_6$ 1524
- Heinrich, E. Wm. (Book review 253, 542, 1555, 1558, 1559
- with Gross, E. B. Petrology and mineralogy of the Mount Rosa area, El Paso and Teller Counties, Colo-

- rado. III. Lamprophyres and mineral deposits 1433
- with Gross, E. B. Petrology and mineralogy of the Mount Rosa area, El Paso and Teller Counties, Colorado. II. Pegmatites 299
- and Shappirio, J. R. Alkalic rocks and carbonatites of the Arkansas River Canyon, Fremont County, Colorado. 3. The Amethyst carbonatites 1088
- and Vian, R. W. A barite-quartz phase in the Firesand River Carbonate, Wawa, Ontario (abs.) 1562
- Helgeson, H. C. (Book review) 541
- Hellandite (Ofstedal) 534
- Hem, J. D. with White, D. E. and Waring, G. A. (Book review) 1821
- Hematite and magnetite in some Precambrian metamorphosed oxide iron-formations textural relations of (Han) (abs.) 1561
- Hematite structure, refinement of the (Blake, Hessevick, Zoltai, Finger) 123
- Hendricksite, a new species of mica (Fronzel, Ito) 1107
- Herz, N. and Dutra, C. V. Trace elements in alkali feldspars, Quadrilátero Ferrífero, Minas Gerais, Brazil 1593
- Hessevick, R. E. with Blake, R. L., Zoltai, T. and Finger, L. W. Refinement of the hematite structure 123
- Hoffer, J. M. Compositional variations of plagioclase feldspar from a basaltic lava flow 807
- Hoffman, W. with Bayer, G. Complex alkali titanium oxides $A_x(B_yTi_{8-y})O_{16}$ of the α - MnO_2 structure-type 511
- Hoffren, V. with Vormá, A. 1553
- Holm, J. L. and Kleppa, O. J. The thermodynamic properties of the aluminum silicates 1608
- Holser, W. T. Diagenetic polyhalite in Recent salt from Baja California 99
- Hornfels, phase equilibria in calc-silicate, Lewis and Clark County, Montana (Melson) 402
- Hornung, G. with Cox, K. G. The petrology of the Karroo basalts of Basutoland 1414
- Hostetler, P. B., Coleman, R. G., Mumpton, F. A. and Evans, B. W. Brucite in Alpine serpentinites 75
- Hower, J. and Mowatt, T. C. The mineralogy of illites and mixed-layer illite/montmorillonites 825
- Howie, R. A. with Deer, W. A. and Zussman, J. (Book review) 1555
- Hubbard, F. H. Myrmekite in charnockite from South-West Nigeria 762
- Huemulite, $Na_4MgV_{10}O_{28} \cdot 24H_2O$, a new hydrous sodium and magnesium vanadate from Heumul Mine, Mendoza Province, Argentina (Gordillo, Linares, Toubes, Winchell) 1
- Huggins, C. W. with Clifton, R. A., Jr. and Shell, H. R. Hollow chrysotile fibers 508
- “Hühnerkobelite”, Palermo, is alluaudite (Fisher) 935
- Hyde, C. and Landy, R. A. Wellite from septarian concretions near Milan, Ohio 228
- Hydromolysite (Povarennykh) 1551
- Hydroxyl—ascharite (Grigoriev, Brovkin, Nekrasov) 1818
- (Grigoriev, Nekrasov) 1818
- Hydroxyl-bastnaesite (Kirillov) 1819
- (Svyazhin) 1819
- Illite: A model based on the sorption behavior of cesium (Gaudette, Grim, Metzger) 1649
- Illites and mixed-layer illite/montmorillonites, the mineralogy of (Hower, Mowatt) 825
- Imhofite (Burri, Graeser, Marumo, Nowacki) 531

- Index of new minerals, discredited minerals, and changes of mineralogical nomenclature, alphabetical (Fleischer)..... 1251
- discredited minerals, and changes of mineralogical nomenclature in Volumes 1-50 of *The American Mineralogist* (Fleischer)..... 1248
- Indicatrix orientation and 2V with the spindle stage, determination of: a caution and a test (Wright)..... 919
- Inesite, evidence for $[(\text{SiO}_3)_n]_\infty$ type chains in, as shown by x-ray and infrared absorption studies (Ryall, Threadgold)..... 754
- Ingamells, C. O. with Donnay, G., and Mason, B. Buergerite, a new species of tourmaline.... 198
- Ingram, B. L. with Murdoch, J. A cerian vesuvianite from California..... 381
- Introduction to soil behavior (Young, Warkentin) (Book review)..... 1823
- Introductory soils (Berger) (Book review)..... 543
- Ion-exchange constants of natural glasses by the electrode method (Truesdell)..... 110
- Iron meteorites, kamacite and taenite superstructures and a metastable tetragonal phase in (Ramsden, Cameron).... 37
- Isotropic sound velocities, an approximate method for computing the, using refractive index data (Anderson).... 1001
- Ito, J. with Frondel, C..... 533
- Hendricksite, a new species of mica..... 1107
- Zincian aegirine-augite and jeffersonite from Franklin, New Jersey..... 1406
- and Hendricks, J. G. Barium feldspars from Franklin, New Jersey..... 1388
- Jadeite, $\text{NaAlSi}_2\text{O}_6$, the crystal structure of (Prewitt, Burnham)..... 956
- Jahns, R. H. Presentation of the 1965 Mineralogical Society of American award to Peter J. Wyllie..... 555
- Jeffrey, G. A. with Guy, B. B. The crystal structure of fluellite, $\text{Al}_2\text{PO}_4\text{F}_2(\text{OH}) \cdot 7\text{H}_2\text{O}$ 1579
- Jennite, a new mineral (Carpenter, Chalmers, Gard, Speakman, Taylow)..... 56
- Kahn, J. S. with Newkirk, H. W. and Smith, D. K. Synthetic bromellite III. Some optical properties..... 141
- and Smith, D. K. Mineralogical investigations in the debris of the Gnome event near Garlsbad, New Mexico..... 1192
- Kamacite and taenite superstructures and a metastable tetragonal phase in iron meteorites (Ramsden, Cameron).. 37
- Correction (Ramsden, Cameron)..... 1544
- Kaolinite, free energy of formation of, from solubility measurements (Kittrick)..... 1457
- Kaolinite-halloysite clays, mineralogical studies of: Part IV. A platy mineral with structural swelling and shrinking characteristics (de Souza Santos, de Souza Santos, Brindley)..... 1640
- Kaolinite-sodium carbonate system, inverted phase relation in the formation of nepheline and carnegieite from the (Kubo, Yamaguchi, Kasahara)..... 516
- Kapustin, Yu, I..... 529
- (Book review)..... 942
- Karamsinite (= tremolite) (Vorma, Ojanperä)..... 1552
- Kasahara, K. with Kubo, Y. and Yamaguchi, G. Inverted

- phase relation in the formation of nepheline and carnegieite from the system kaolinite-sodium carbonate. 516
- Keester, K. L. with White, W. B.**
Optical absorption spectra of iron in the rock-forming silicates. 774
- Kehoe, T. J. with Fowler, L. J. and Eanes, R. D. (Book review). 945
- Keil, K. with Buseck, P. R.**
Meteoritic rutile. 1506
- Kern, R. and Weisbrod, A. (Book review). 536
- Kerr, P. F. with Güven, N.** Selected Great Basin playa clays. 1056
- Weathering effects on the structures of mica-type clay minerals. 858
- Khomyakov, A. P. with Semenov, E. I. and Bykova, A. V. 530
- King, R. H. Beryl in a Montana tactite body. 502
- Kirillov, A. S. 1819
- Kittrick, J. A.** Free energy of formation of kaolinite from solubility measurements. . . . 1457
- Klassen-Neklyudova, M. V. (Book review). 539
- Klein, C., Jr. with Fuchs, L. H. and Frondel, C.** Roedderite, a new mineral from the Indarch meteorite. 949
- Kleppa, O. J. with Holm, J. L.** The thermodynamic properties of the aluminum silicates. 1608
- Kodama, H.** The nature of the component layers of rectorite. . . 1035
- with Brydon, J. E. The nature of aluminum hydroxide-montmorillonite complexes. . . 875
- Kohls, D. W. and Rodda, J. L.** Gaspeite, (Ni, Mg, Fe) (CO₃), a new carbonate from the Gaspé Peninsula, Quebec. . . . 677
- Kondrat'eva, V. V., Ostrovskaya, I. V. and Yarzhemskii, Y. Y. . . 1550
- Kopp, O. C. and Clark, G. W.** Synthetic pollucites in the system Cs₂O·Al₂O₃·4SiO₂·Cs₂O·Fe₂O₃·4SiO₂·H₂O—their phase relationship and physical properties: A discussion. . . 1243
- Kostovite, a gold-copper telluride from Bulgaria (Terziev).** 29
- Kracek, F. C., Ksanda, C. J. and Cabri, L. J.** Phase relations in the silver-tellurium system. 14
- Kramer, J. R. with Gulbrandsen, R. A. Beatty, L. B. and Mays R. E.** Carbonate-bearing apatite from Faraday Township, Ontario, Canada. 819
- Krishna, P. with Verma, A. R. (Book review). 1556
- Ksanda, C. J. with Kracek, F. C. and Cabri, L. J.** Phase relations in the silver-tellurium system. 14
- Kubo, Y., Yamaguchi, G. and Kasahara, K. Inverted phase relation in the formation of nepheline and carnegieite from the system kaolinite-sodium carbonate. 516
- Kudo, A. with Bottinga, Y. and Weill, D.** Some observations on oscillatory zoning and crystallization of magmatic plagioclase. 792
- Kurchatovite (Malinko, Lisitsyn, Dorofeeva, Ostravskaya, Shashkin). 1817
- Kuznetsova, M. N. with Novikova, M. I. and Sidorenko, G. A. 1546
- Kuznetsova, N. N. with Nazarova, A. S. and Shashkin, D. P. . . 1547
- Labradorite, calcic, from Lake County, Oregon, physical properties of (Stewart, Walker, Wright, Fahey).** 177
- Lamprophyres and mineral deposits. Petrology and mineralogy of the Mount Rosa area, El Paso and Teller Counties, Colorado (Gross,

- Heinrich**..... 1433
 Landau, A. I. with Palatnik, L. S. (Book review)..... 1821
 Landauite (Portnov, Nikolaeva, Stolyarova)..... 1546
 Landy, R. A. with Hyde, C. Wheelite from septarian concretions near Milan, Ohio..... 228
Larnite, bredigite, and γ dicalcium silicates from Marble Canyon (Bridge)..... 1766
 Lavenite, orthorhombic (Portnov, Simonov, Sinyugina)..... 1549
Leucite in plutonic rocks, an experimental study bearing on the absence of (Scarfe, Luth, Tuttle)..... 726
 Levandowski, D. W. (Book review)..... 253
Levinson, A. A. A system of nomenclature for rare-earth minerals..... 152
 ——— and Vian, R. W. The hydrothermal synthesis of montmorillonite group minerals from kaolinite, quartz and various carbonates..... 495
 Levy, C. with Francotte, J., Moreau, J. and Ottenburgs, R..... 1816
Lewis, R. R. and Senftle, F. E. The source of ferromagnetism in zircon..... 1467
Linares, E. with Gordillo, C. E., Toubes, R. O. and Winchell, H. Huemulite, $\text{Na}_4\text{MgV}_{10}\text{O}_{28} \cdot 24\text{H}_2\text{O}$, a new hydrous sodium and magnesium vanadate from Huemul Mine, Mendoza Province, Argentina..... 1
 Lindsley, D. H. Melting relations of KAlSi_3O_8 : effect of pressures up to 40 kilobars..... 1793
 Lisitsyn, A. E. with Malinko, S. V., Dorofeeva, K. A., Ostravskaya, I. V. and Shashkin, D. P..... 1817
**Loughnan, F. C. Analcite in the Newcastle coal measure sedi-
 ments of the Sydney Basin, Australia (Loughnan)**..... 486
 Lugovskoi, G. P. with Gorzhevskaya, S. A. and Sidorenko, G. A..... 1551
Luth, W. C. with Peters, Tj. and Tuttle, O. F. The melting of analcite solid solutions in the system $\text{NaAlSi}_3\text{O}_8$ - $\text{NaAlSi}_2\text{O}_6$ - H_2O 736
 ——— with Scarfe, C. M. and Tuttle, O. F. An experimental study bearing on the absence of leucite in plutonic rocks... 726
 ——— and Tuttle, O. F. The alkali feldspar solvus in the system Na_2O - K_2O - Al_2O_3 - SiO_2 - H_2O 1359
 Lyall, K. D. The origin of mechanical twinning in galena..... 243
 Mackinawite from the Witwatersrand conglomerates (Schidlowski, Ottemann)..... 1535
 Magbasite (Semenov, Khomyakova, Bykova)..... 530
 Maksimova, N. V. with Semenov, E. I., Gerassimovsky, V. I., Andersen, S. and Petersen, O. V..... 1547
 Malayaite (Alexander, Flinter).... 1551
 Malinko, S. V., Lisitsyn, A. E., Dorofeeva, K. A. Ostravskaya, I. V. and Shashkin, D. P..... 1817
 Mandarino, J. A., Harris, D. C. and Bradley, J..... 533
 Mandrikova, N. T. with Oleinikov, B. V., Shvartsev, S. L. and Oleinikova, N. N..... 529
 Manganese-bearing minerals of Champion Mine, Champion, Michigan (abs.) (Babcock) . . 1560
 Manganese nodules, electron-probe determination of interelement relationships in (Burns, Fuerstenau)..... 895
 Marinenko, J. with May, I. A micropycnometer for the determination of the specific gravity of minerals..... 931

Martin, R. T. (Book review)	1823	(Mitchell)	1394
Marumo, F. and Buri, G.	532	Metastrengite, the crystal structure of, and its relationship to strengite and phosphophyllite (Moore)	168
—— and Nowacki, W.	531	Metazellerite and zellerite, new uranyl carbonates (Coleman, Ross, Meyrowitz)	1567
Marvin, U. B. with Dodd, R. T. Jr., and Van Schmus, W. R. Significance of iron-rich silicates in the Mezö-Madaras chondrite	1177	Metzger, C. F. with Gaudette, H. E. and Grim, R. E. Illite: A model based on the sorption behavior of cesium	1649
Mason, B. with Donnay, G. and Ingamells, C. O. Buergerite, a new species of tourmaline	198	Meyrowitz, R. with Coleman, R. G. and Ross, D. R. Zellerite and metazellerite, new uranyl carbonates	1567
Matveev, G. M. with Babushkin, V. I. and Mchedlov-Petrosyan, O. P. (Book review)	251	—— with Young, E. J. and Weeks, A. D. Coconinoite, a new uranium mineral from Utah and Arizona	651
May, I. and Marinenko, J. A micropycnometer for the determination of the specific gravity of minerals	931	Mica, glauconitic, lacustrine, from Pluvial Lake Mound, Lynn and Terry Counties, Texas (Parry, Reeves)	229
Mays, R. E. with Gulbrandsen, R. A., Kramer, J. R. and Beatty, L. B. Carbonate-bearing apatite from Faraday Township, Ontario, Canada	819	Micas, dehydroxylated, electron-microscopic observation of (Nakahira, Uda)	454
Mchedlov-Petrosyan, O. P. with Babushkin, V. I. and Matveev, G. M. (Book review)	251	Micropycnometer for the determination of the specific gravity of minerals (May, Marinenko)	931
Mead, C. (Book review)	941	Microscopic identification of minerals (Heinrich) (Book review)	253
Mechanical twinning of crystals (Klassen-Neklyudova) (Book review)	539	Mineral resources of Africa (de Kun) (Book review)	1557
Megaw, H. D. (Book review)	255	—— of South-central Africa (Pelletier) (Book review)	1558
Melson, W. G. Phase equilibria in calcisilicate hornfels, Lewis and Clark County, Montana	402	Mineralogical Society of America, forty-six annual meeting, proceedings of, at Kansas City, Missouri (Switzer)	569
—— and Switzer, G. Plagioclase-spinel-graphite xenoliths in metallic iron-bearing basalts, Disko Island, Greenland	664	—— Award, acceptance of the 1965, (Wyllie)	557
Melting relations of $KAlSi_3O_8$: effect of pressures up to 40 kilobars (Lindsley)	1793	—— Award, presentation of the 1965, to Peter J. Wyllie (Jahns)	555
Mercy, E. L. P. with O'Hara, M. J. Eclogite, peridotite and pyrope from the Navajo country, Arizona and New Mexico	336	Mineralogy of the Black Hills (Roberts, Rapp) (Book review)	542
Metamict minerals, Virginia: perrierite and chevkinite			

- Mineralogy, spravochnik (Book review) 256
- Mitchell, R. S. Virginia metamict minerals perrierite and chevkinite 1394
 ——— (Book review) 1556
- Mizzonite, the crystal structure of, a calcium- and carbonate-rich scapolite (Papike, Stephenson) 1014
- Moenke, H. (Book review) 540
 ——— and Moenke-Blankenburg, L. (Book review) 1822
- Moenke-Blankenburg, L. with Moenke, H. (Book review) 1822
- Moh, G. H. 1551
- Montmorillonite clay, molecular structure and pH effects on the adsorption of 13 s-triazine compounds on (Weber) 1657
 ——— exchange equilibria with strontium-sodium-cesium (Eliason) 324
 ——— group minerals, hydrothermal synthesis of, from kaolinite, quartz and various carbonates, the 495
- Moore, P. B. Catoptrite and yeatmanite—stuffed pyrochroite structures? 1494
 ——— The crystal structure of metastrengite and its relationship to strengite and phosphophyllite 168
 ——— Reply to Prof. D. J. Fisher 939
- Moreau, J. with Francotte, J., Ottenburgs, R. and Levy, C. 1816
- Morgan, F. 533
- Mortland, M. M. with Raman, K. V. External specific surface area of vermiculite 1787
- Mount Rosa area, El Paso and Teller Counties, Colorado, petrology and mineralogy of the III. Lamprophyres and mineral deposits (Gross, Heinrich) 1433
 ——— El Paso and Teller Counties, Colorado, petrology and mineralogy of the, II. Pegmatites (Gross, Heinrich) 299
- Mowatt, T. C. with Hower, J. The mineralogy of illites and mixed-layer illite/montmorillonites 825
- Moyd, L. Michipicoten scheelite deposit near Michipicoten Harbour, Ontario (abs.) 1562
- Maun, A. and Osborn, E. F. (Book review) 248
- Mumme, W. G. and Scott, T. R. The relationship between basic ferric sulfate and plumbojarosite 443
- Mumpton, F. A. with Hostetler, P. B., Coleman, R. G. and Evans, B. W. Brucite in Alpine serpentinites 75
- Munson, E. L. with Young, E. J. Fluor-chloroxy-apatite and sphene from Crystal Lode pegmatite, near Eagle, Colorado 1476
 ——— and Sheridan, D. M. Manganese- and strontium-bearing fluorapatite from the Peerless pegmatite, South Dakota 1516
- Murdoch, J. and Ingram, B. L. A cerian vesuvianite from California 381
- Muscovite, barium-vanadium, and vanadium tourmaline from Mariposa County, California (Snetsinger) 1623
 ——— in sillimanite-bearing meta-pelites of northwestern Maine, variations of the basal spacings of (Guidotti) 1778
 ——— upper stability of (Velde) 924
- Myrmekite in charnockite from South-West Nigeria (Hubbard) 762
- Nakahira, M. and Uda, M. Electron-microscopical observation of dehydroxylated micas 454
 ——— with Yamamoto, T. Ammonium ions in sericites 1775
- Naumann, A. W. and Drescher, W. H. The influence of sam-

- ple texture on chrysotile dehydroxylation. 1200
- The morphology of chrysotile asbestos as inferred from nitrogen adsorption data. 711
- Nazarova, A. S., Kuznetsova, N. N. and Shashkin, D. P. 1547
- Nekrasov, I. Y. with Grigoriev, A. P. 1818
- with Grigoriev, A. P. and Brovkin, A. A. 1818
- New Mineral Names (Fleischer) 529, 1546, 1815
- Newkirk, H. W., Smith, D. K. and Kahn, J. S. Synthetic bromelite III. Some optical properties. 141
- Nickel-iron content of peridotite inclusion and cognate olivine from an alkali-olivine basalt (Forbes, Banno). 130
- Nickelhexahydrate (Oleinikov, Shvartsev, Mandrikova, Oleinikova). 529
- Nikitina, I. B. with Ostrovskaya, J. V. and Pertsev, N. N. 1817, 1820
- Nikolaeva, L. E. with Portnov, A. M. and Stolyarova, T. I. 1546
- Novikova, M. I., Sidorenko, G. A. and Kuznetsova, M. N. 1546
- Nowacki, W. 532
- with Burri, G. and Marumo, F. 531
- Nowackiite (Marumo, Burri). 532
- Nuffield, E. W. and Harris, D. C. 532, 533
- Oftedal, I. 534
- O'Hara, M. J. and Mercy, E. L. P. Eclogite, peridotite and pyrope from the Navajo country, Arizona and New Mexico. 336
- Ojanperä, P. with Vormaa, A. 1552
- Oleinikov, B. V., Shvartsev, S. L., Mandrikova, N. T. and Oleinikova, N. N. 529
- Oleinikova, N. N. with Oleinikov, B. V., Shvartsev, S. L. and Mandrikova, N. T. 529
- Oosterbosch, R. with Cesbron, F. and Bachet, B. 1815
- Optical absorption spectra of iron in the rock-forming silicates (White, Keester). 774
- Optical properties of minerals. A determinative table. (Winchell) (Book review). 542
- Optische Bestimmungsverfahren und Geräte für Mineralogen und Chemiker (Moenke, Moenke-Blankenburg) (Book review). 1822
- Orthopyroxene, disordered, in meteorites (Pollack). 1722
- Osborn, E. F. with Muan, A. (Book review). 248
- Oscillatory zoning and crystallization of magmatic plagioclase, some observations on (Bottinga, Kudo, Weill). 792
- Osmer, J. A. with Chase, A. B. Growth of single crystals of ZrO_2 and HfO_2 from PbF_2 1808
- Ostrovskaya, I. V. with Kondrat'eva, V. V. and Yarzhemskii, Y. Y. 1550
- with Malinko, S. V., Lisitsyn, A. E., Dorofeeva, K. A. and Shashkin, D. P. 1817
- Pertsev, N. N. and Nikitina, I. B. 1817, 1820
- Ottemann, J. with Schidlowski, M. Mackinawite from the Witwatersrand conglomerates. 1535
- Ottemannite, berndtite (Moh). 1551
- Ottengurs, R. with Francotte, J., Moreau, J. and Levy, C. 1816
- Oxydischen Kristallphasen der anorganischen Industrie-Produkte (Trojer) (Book review). 248
- Pabst, A. Acceptance of the Roebbling medal. 552
- (Book review). 538
- Palatnik, L. S. and Landau, A. I. (Book review). 1821
- Papike, J. J. and Stephenson, N. C. The crystal structure of mizzonite, a calcium- and

- carbonate-rich scapolite. 1014
- Parry, W. T. and Reeves, C. C., Jr. Lacustrine glauconitic mica from Pluvial Lake Mound, Lynn and Terry Counties, Texas. 229
- Peacor, D. R. (Book review). 248, 255
- Pearl, R. M. (Book review). 543
- Pegmatites. Petrology and mineralogy of the Mount Rosa area, El Paso and Teller Counties, Colorado. III (Gross, Heinrich)**. 299
- Pelletier, R. A. (Book review). 1558
- Peng, T. and Chang, C. 1549
- Peridotite and pyrope, eclogite, from the Navajo country, Arizona and New Mexico (O'Hara, Mercy)**. 336
- Peridotite inclusion, nickel-iron content of, and cognate olivine from an alkali-olivine basalt (Forbes, Banno)**. 130
- Permingeat, F. with Gaudefroy, C., Dietrich, J. and Picot, P. 1819
- Perrierite and chevkinite, Virginia metamict minerals (Mitchell)** 1394
- Pertsev, N. N. with Ostrovskaya, I. V. and Nikitina, I. B. 1817, 1820
- Peters, Tj., Luth, W. C. and Tuttle, O. F. The melting of analcite solid solutions in the system $\text{NaAlSi}_3\text{O}_8\text{-NaAlSi}_3\text{O}_8\text{-H}_2\text{O}$** 736
- Petersen, O. V. Crossed axial plane dispersion in epididymite. 916
- with Semenov, E. I., Gerassimovsky, V. I., Maksimova, N. V. and Andersen, S. 1547
- Phase equilibria among oxides in steelmaking (Muan, Osborn) (Book review). 248
- in multicomponent systems (Palatnik, Landau) (Book review). 1821
- Phases of silica (Sosman) (Book review). 538
- Phosphate, magnesium, mineral replacement at Mono Lake, California (Cohen, Ribbee)**. 1755
- Physical properties of diamond (Berman) (Book review). 941
- Picot, P. with Gaudefroy, C., Dietrich, J. and Permingeat, F. 1819
- Plagioclase feldspar from a basaltic lava flow, compositional variations of (Hoffer)**. 807
- magmatic, some observations on oscillatory zoning and crystallization of (Bottinga, Kudo, Weill). 792
- -spinel-graphite xenoliths in metallic iron-bearing basalts, Disko Island, Greenland (Melson, Switzer). 664
- Plastic peel techniques, application of, to the study of silicate rocks (Barker). 1541
- Plumbojarosite and basic ferric sulfate, the relationship between (Mumme, Scott)**. 443
- Pollack, S. S. Disordered orthopyroxene in meteorites**. 1722
- Pollucites, synthetic, in the system $\text{Cs}_2\text{O}\cdot\text{Al}_2\text{O}_3\cdot 4\text{SiO}_2\text{-Fe}_2\text{O}_3\cdot 4\text{SiO}_2\text{-H}_2\text{O}$ —their phase relationship and physical properties: A discussion (Kopp, Clark). 1243
- Polymorphism and polytypism in crystals (Verma, Krishna) (Book review). 1556
- Polyhalite, diagenetic, in Recent salt from Baja California (Holser)**. 99
- Portnov, A. M., Nikolaeva, L. E., Stolyarova, T. I. 1546
- Simonov, V. I. and Sinyugina, G. P. 1549
- Povarennykh, A. S. 1551
- Preston, J. An unusual hourglass structure in augite. 1227
- Prewitt, C. T. and Burnham, C. W. The crystal structure of jadeite, $\text{NaAlSi}_2\text{O}_6$** 956
- Principles of structural glaciology (Shumskii) (Book review). 944
- Pyrite in conventional differential

- thermal analysis equipment,
a note on the examination of
(Cole, Crook)..... 499
- Pyromorphite series, an x-ray
diffraction study of synthetic
members of the, (Baker)** 1712
- Pyroxene, synthetic, $\text{CaAl}_2\text{SiO}_6$,
stability and properties of the
(Hays)..... 1524
- Pyrrhotite, mixtures of hexagonal
and monoclinic, and the
measurement of pyrrhotite by the metal
content of pyrrhotite by x-ray
diffraction (Arnold)..... 1221
- Quantitative electron microprobe
analysis (Theisen) (Book re-
view)..... 941
- Quartz, blue synthetic (Wood,
Ballman)..... 216
- natural, blackening of by
 γ -irradiation, (Ritter, Den-
nen)..... 220
- Radusinovic, D. R. Greigite from
the Lojane chromium de-
posit, Macedonia..... 209
- Raman, K. V. and Mortland,
M. M. External specific sur-
face area of vermiculite..... 1787
- Ramsden, A. R. and Cameron,
E. N. Kamacite and taenite
superstructures and a meta-
stable tetragonal phase in
iron meteorites** 37
- "Kamacite and taenite
superstructures and a meta-
stable tetragonal phase in
iron meteorites." Correction. 1544
- Rare-earth minerals, a system of
nomenclature for, (Levinson)** 152
- Reeves, C. C., Jr. with Parry,
W. T. Lacustrine glauconitic
mica from Pluvial Lake
Mound, Lynn and Terry
Counties, Texas..... 229
- Rectorite, the nature of the com-
ponent layers of (Kodama)** 1035
- Research on the nature of min-
eral-forming solutions (Yer-
makov *et al.* (Book review)..... 1555
- Reynolds, R. C. with Anderson,
D. M. Umiat bentonite: an
unusual montmorillonite
from Umiat, Alaska** 1443
- Rhodizite (Fron del, Ito)..... 533
- Ribbe, P. H. with Cohen, L. W.
Magnesium phosphate min-
eral replacement at Mono
Lake, California** 1755
- Rinkite, x-ray crystallography of
(Gottardi)..... 1529
- Ritter, C. J. and Dennen, W. H.
Blackening of natural quartz
by γ -irradiation..... 220
- Roberts, W. L. and Rapp, G., Jr.
(Book review)..... 542
- Robinson, P. D. Use of the bi-
nocular microscope for orien-
tation of single crystals..... 1243
- Fang, J. H. and Bloss,
F. D. Cell dimensions and
space group of tamarugite... 1805
- Rock forming minerals, Vol. 5,
non-silicates (Deer, Howie,
Zussman) (Book review).... 1555
- Rodda, J. L. with Kohls, D. W.
Gaspeite, (Ni, Mg, Fe) (CO₃),
a new carbonate from the
Gaspè Peninsula, Quebec** 677
- Roeb ling Medal, acceptance of
(Pabst)..... 552
- presentation of, to Adolf
Pabst (Campbell)..... 548
- Roeb lingite, new data on (Foit) . . 504
- Roedderite, a new mineral from
the Indarch meteorite
(Fuchs, Fron del, Klein)** 949
- Ross, D. R. with Coleman, R. G.
and Meyrowitz, R. Zellerite
and metazellerite, new uranyl
carbonates** 1567
- Rutile, meteoritic (Buseck, Keil).** 1506
- Ryall, W. R. and Threadgold,
I. M. Evidence for [(SiO₃)₂]_n
type chains in inesite as
shown by x-ray and infrared
absorption studies** 754
- Sakhaite (Ostrovskaya, Pertsev,
Nikitina)..... 1817
- Samiresite (Gorzhevskaya, Lu-
govskoi, Sidorenko)..... 1551

- Saukovite (Vasiliev)..... 1818
- Scarfe, C. M., Luth, W. C. and Tuttle, O. F. An experimental study bearing on the absence of leucite in plutonic rocks... 726
- Schaller, W. T. with Foster, M. D. Cause of colors in wavelite from Dug Hill, Arkansas... 422
- Scheelite deposit, Michipicoten, near Michipicoten Harbour, Ontario (Moyd) (abs.)..... 1562
- Schidlowski, M. and Ottemann, J. Mackinawite from the Witwatersrand conglomerates..... 1535
- Schroekingite from Ambrosia Lake uranium district (Barczak)..... 929
- Scott, T. R. with Mumme, W. G. The relationship between basic ferric sulfate and plumbojarosite..... 443
- Sedovite (Skvortsova, Sidorenko) 530
- Semenov, E. I., Gerassimovsky, V. I., Maksimova, N. V., Andersen, S. and Petersen, O. V..... 1547
- Khomyakov, A. P. and Bykova, A. V..... 530
- Senftle, F. E. with Lewis, R. R. The source of ferromagnetism in zircon..... 1467
- Sericites, ammonium ions in (Yamamoto, Nakahira)..... 1775
- Serpentinites, Alpine, brucite in (Hostetler, Coleman, Mump-ton, Evans)..... 75
- Serpentinization considered as a constant-volume metasomatic process (Thayer)..... 685
- Shappirio, J. R. with Heinrich, E. Wm. Alkalic rocks and carbonatites of the Arkansas River Canyon, Fremont County, Colorado. 3. The Amethyst carbonatites.... 1088
- Shashkin, D. P. with Malinko, S. V., Lisitsyn, A. E., Dorofeeva, K. A. and Ostravskaya, I. V..... 1817
- with Nazarova, A. S. and Kuznetsova, N. N..... 1547
- Shell, H. R. with Clifton, R. A. Jr. and Huggins, C. W. Hollow chrysotile fibers..... 508
- Sheppard, R. A. with Gude, A. J. Silica-rich chabazite from the Barstow formation, San Bernardino County, Southern California..... 909
- Sheridan, D. M. with Young, E. J. and Munson, E. L. Manganese- and strontium-bearing fluorapatite from the Peerless pegmatite, South Dakota..... 1516
- Shirozu, H. and Bailey, S. W. Crystal structure of a two-layer Mg-vermiculite..... 1124
- Shitov, V. A. with Buryanova, E. Z. and Strokova, G. S.... 1548
- Shumskii, P. A. (Book review).... 944
- Shvartsev, S. L. with Oleinikov, B. V., Mandrikova, N. T. and Oleinikova, N. N..... 529
- Sidorenko, G. A. with Gorzhevskaya, S. A. and Lugovskoi, G. P..... 1551
- with Novikova, M. I. and Kuznetsova, M. N..... 1546
- with Skvortsova, K. V.... 530
- Silicates, iron-rich, significance of, in the Mezö-Madaras chondrite (Dodd, Jr., Van Schmus, Marvin)..... 1177
- nickel-magnesium, hydrous the, garnierite group (Faust)..... 279
- Silver-tellurium system, phase relations in the (Kracek, Ksanda, Cabri)..... 14
- Silverman, S. R. with Spotts, J. H. Organic dolomite from Point Fermin, California.... 1144
- Simonov, V. I. with Portnov, A. M. and Sinyugina, G. P... 1549
- Simpson, D. R. Effects of magnesium on the formation of apatite..... 205
- Sinyugina, G. P. with Portnov,

- A. M. and Simonov, V. I. 1549
- Skatulla, W. with Vogel, W.
(Book review) 249
- Skvortsova, K. V. and Sidorenko,
G. A. 530
- Smith, D. K. with Kahn, J. S.
Mineralogical investigations
in the debris of the Gnome
event near Carlsbad, New
Mexico. 1192
- with Newkirk, H. W. and
Kahn, J. S. Synthetic bromel-
lite III. Some optical proper-
ties 141
- Smith, F. G. (Book review) 535
- Snetsinger, K. G. Barium-vana-
dium muscovite and vanadium
tourmaline from Mariposa
County, California 1623
- Soboleva, L. N. with Bezsmer-
naya, M. S. 531
- Söhngeite (Strunz) 1815
- Solutions, minerals, and equilibria
(Garrels, Christ) (Book re-
view) 535
- Sorensenite (Semenov, Geras-
simovsky, Maksimova An-
dersen, Petersen) 1547
- Sosman, R. B. (Book review) 538
- Speakman, K. with Carpenter,
A. B., Chalmers, R. A., Gard,
J. A. and Taylor, H. F. W.
Jennite, a new mineral 56
- Spektralanalyse von Mineralien
und Gesteinen (Moenke)
(Book review) 540
- Spinel, magnesium, an x-ray
method for defining composi-
tion of a (Allen) 239
- Spotts, J. H. and Silverman, S. R.
Organic dolomite from Point
Fermin, California 1144
- Stephenson, N. C. with Papike,
J. J. The crystal structure of
mizsonite, a calcium- and
carbonate-rich scapolite 1014
- Stewart, D. B., Walker, G. W.,
Wright, T. L., and Fahey,
J. J. Physical properties of
calcic labradorite from Lake
County, Oregon 177
- Stolyarova, T. I. with Portnov,
A. M. and Nikolaeva, L. E. 1546
- Stroková, G. S. with Buryanova,
E. Z. and Shitov, V. A. 1548
- Structural and tectonic principles
(Badgley) (Book review) 943
- Struktur und Kristallisation der
Gläser (Vogel, Skatulla)
(Book review) 249
- Strunz, H. 1815
- Stumpfl, E. F. and Clark, A. M. 1551
- Sulfate, basic ferric, and plumbo-
jarosite, the relationship be-
tween (Mumme, Scott) 443
- Sulvanite, refinement of the struc-
ture of (Trojer) 890
- Svyazhin, N. V. 1819
- Swineford, A. (Book review) 1556
- Switzer, G. Proceedings of the
forty-sixth annual meeting of
the Mineralogical Society of
America at Kansas City,
Missouri 569
- with Melson, W. G. Pla-
gioclase-spinel-graphite xeno-
liths in metallic iron-bearing
basalts, Disko Island, Green-
land 664
- Taenite superstructures and kam-
acite, and a metastable tetra-
gonal phase in iron meteor-
ites (Ramsden, Cameron) 37
- Tamarugite, cell dimensions and
space group of (Robinson,
Fang, Bloss) 1805
- Tarbuttite and paradamite, the
unit cell of (Finney) 1218
- Taylor, H. F. W. with Carpenter,
A. B., Chalmers, R. A., Gard,
J. A. and Speakman, K.
Jennite, a new mineral 56
- Temple, A. K. Zoisite-rutile rock
from Los Angeles County,
California 1028
- Termodinamika Silikatov (Ba-
bushkin, Matveev, Mched-
lov-Petrosyan) (Book re-
view) 251
- Terziev, G. Kostovite, a gold-

- copper telluride from Bulgaria 29
- Thayer, T. P. Serpentinization considered as a constant-volume metasomatic process. 685
- Theisen, R. (Book review) 941
- Thermal methods of analysis (Wendlandt) (Book review). 538
- Thermodynamique de base pour minéralogistes pétrographes et géologues (Kern, Weisbrod) (Book review) 536
- Thermoluminescence of calcite from high gamma radiation doses (Vaz, Zeller) 1156
- Threadgold, I. M. with Ryall, W. R. Evidence for $[(\text{SiO}_3)_n]_\infty$ type chains in inesite as shown by x-ray and infrared absorption studies 754
- Titanium oxides $\text{A}_x(\text{B}_y\text{Ti}_{8-y})\text{O}_{16}$, complex alkali, of the α - MnO_2 structure-type (Bayer, Hoffman) 511
- Titanomagnetites, phenocrystic spineliferous, from trachyandesites, Iki Island, Japan (Aoki) 1799
- Tobermorite, hydrothermally-synthesized, effects of isomorphous substitution in (Diamond, White, Dolch) 388
- Toubes, R. O. with Gordillo, C. E. Winchell, H. and Linares, E. Huemulite, $\text{Na}_4\text{MgV}_{10}\text{O}_{28} \cdot 24\text{H}_2\text{O}$, a new hydrous sodium and magnesium vanadate from Huemul Mine, Mendoza Province, Argentina 1
- Tourmaline, ferric iron, new type of (Frondel, Biedl, Ito) 1501
- vanadium and barium-vanadium muscovite from Mariposa County, California (Snetsinger) 1623
- Trojer, F. J. Refinement of the structure of sulvanite 890
- (Book review) 248
- Truesdell, A. H. Ion-exchange constants of natural glasses by the electrode method 110
- Tuttle, O. F. with Luth, W. C. The alkali feldspar solvus in the system $\text{Na}_2\text{O}-\text{K}_2\text{O}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{H}_2\text{O}$ 1359
- with Peters, Tj, and Luth, W. C. The melting of analcite solid solutions in the system $\text{NaAlSi}_3\text{O}_8-\text{NaAlSi}_2\text{O}_7-\text{H}_2\text{O}$ 736
- with Scarfe, C. M. and Luth, W. C. An experimental study bearing on the absence of leucite in plutonic rocks 726
- Uda, M. with Nakahira, M. Electronmicroscopic observation of dehydroxylated micas 454
- Unnamed (Harris, Nuffield) 533
- Unnamed Ca analogue of palermoite (von Knorring) 1819
- Unnamed minerals, two (Mandarino, Harris, Bradley) 533
- Unnamed ruthenium sulfide (Stumpfl, Clark) 1551
- Van Schmus, W. R. with Dodd, R. T., Jr., and Marvin, U. B. Significance of iron-rich silicates in the Mezö-Mandaras chondrite 1177
- Vanuranylite (Buryanova, Strokova, Shitov) 1548
- Vasiliev, V. I. 1818
- Vaz, J. E. and Zeller, E. J. Thermoluminescence of calcite from high gamma radiation doses 1156
- Velde, B. Upper stability of muscovite 924
- Verma, A. R. and Krishna, P. (Book review) 1556
- Vermiculite, Mg-crystal structure of a two-layer (Shirozu, Bailey) 1124
- external specific surface area of (Raman, Mortland) 1787
- Vesuvianite from California, a cerian (Murdoch, Ingram) 381
- Vian, R. W. with Heinrich, E. Wm. A barite-quartz phase in the Firesand River carbon-

- atite, Wawa, Ontario (abs.) . . . 1562
 ——— with Levinson, A. A. The hydrothermal synthesis of montmorillonite group minerals from kaolinite, quartz and various carbonates 495
- Viswanathan, K. Unit cell dimensions and ionic substitutions in common clinopyroxenes** 429
- Vogel, W. and Skatulla, W. (Book review) 249
- Volkovskite (Kondrat'eva, Ostrovskaya, Yarzhemskii) 1550
- Volynskite (Bezsmertnaya, Soboleva) 531
- von Knorring, O. 1819
- Vorma, A. and Hoffren, V. 1553
 ——— and Ojanperä, P. 1552
- Wairakite and analcime, cation exchange properties of (Ames) 903
- Walker, G. W. with Stewart, D. B. Wright, T. L. and Fahey, J. J. Physical properties of calcic labradorite from Lake County, Oregon** 177
- Wallisite (Nowacki) 532
- Waring, G. A. with White, D. E. and Hem, J. D. (Book review) 1821
- Warkentin, B. P. with Yong, R. N. (Book review) 1823
- Wavellite, cause of colors in, from Dug Hill, Arkansas (Foster, Schaller)** 422
- Weber, J. B. Molecular structure and pH effects on the adsorption of 13 s-triazine compounds on montmorillonite clay** 1657
- Weber, J. N. Dehydration of diasporite at water pressures from 15 to 15,000 psi 235
- Weeks, A. D. with Young, E. J. and Meyrowitz, R. Coconinoite, a new uranium mineral from Utah and Arizona** 651
- Weill, D. with Bottinga, Y. and Kudo, Y. Some observations on oscillatory zoning and crystallization of magmatic plagioclase** 792
- Weisbrod, A. with Kern, R. (Book review) 536
- Wells, F. G. and Hawkes, H. E. (Book review) 1558
- Wells, R. G. (Book review) 248
- Wendlandt, W. W. (Book review) 538
- Whewellite from septarian concretions near Milan, Ohio (Hyde, Landy) 228
- White, D. E., Hem, J. D. and Waring, G. A. (Book review) 1821
- White, J. L. with Diamond, S. and Dolch, W. L. Effects of isomorphous substitution in hydrothermally-synthesized tobermorite** 388
- White, W. B. and Keester, K. L. Optical absorption spectra of iron in the rock-forming silicates** 774
- Williams, S. A. The significance of habit and morphology of wulfenite 1212
- Winchell, H. (Book review) 542
 ——— with Gordillo, C. E., Linares, E. and Toubes, R. O. Huemulite, $\text{Na}_4\text{MgV}_{10}\text{O}_{28} \cdot 24\text{H}_2\text{O}$, a new hydrous sodium and magnesium vanadate from Huemul Mine, Mendoza Province, Argentina 1
- Wood, D. L. and Ballman, A. A. Blue synthetic quartz 216
- Wright, H. G. Determination of indicatrix orientation and 2V with the spindle stage: a caution and a test 919
- Wright, T. L. with Stewart, D. B. Walker, G. W. and Fahey, J. J. Physical properties of calcic labradorite from Lake County, Oregon** 177
- Wulfenite, significance of habit and morphology of (Williams) 1212
- Wyllie, P. J. Acceptance of the 1965 Mineralogical Society of America award 557

- X-ray diffractometer specimens, sample cups and a technique for sideward packing of (Bryström-Asklund)..... 1233
- Yagi, K.** The system acmite-diopside and its bearing on the stability relations of natural pyroxenes of the acmite-hedenbergite-diopside series..... 976
- Yamaguchi, G. with Kubo, Y. and Kasahara, K. Inverted phase relation in the formation of nepheline and carnegieite from the system kaolinite-sodium carbonate..... 516
- Yamamoto, T. and Nakahira, M. Ammonium ions in sericites... 1775
- Yaroslavite (Novikova, Sidorenko, Kuznetsova)..... 1546
- Yarzhemskii, Y. Y. with Kondrat'eva, V. V. and Ostrovskaia, I. V..... 1550
- Yeatmanite and catoprite—stuffed pyrochroite structures? (Moore)**..... 1494
- Yermakov, N. P. et al (Book review)..... 1555
- Yoder, H. S., Jr. with Fawcett, J. J.** Phase relationships of chlorites in the system $MgO-Al_2O_3-SiO_2-H_2O$ 353
- Yong, R. N. and Warkentin, B. P. (Book review)..... 1823
- Young, E. J. and Munson, E. L.** Fluor-chlor-oxy-apatite and sphene from Crystal Lode pegmatite, near Eagle, Colorado..... 1476
- Sheridan, D. M. and Munson, E. L. Manganese- and strontium-bearing fluor-apatite from the Peerless pegmatite, South Dakota.... 1516
- Weeks, A. D. and Meyrowitz, R. Coconinoite, a new uranium mineral from Utah and Arizona..... 651
- Zeller, E. J. with Vaz, J. E.** Thermoluminescence of calcite from high gamma radiation doses..... 1156
- Zellerite and metazellerite, new uranyl carbonates (Coleman, Ross, Meyrowitz)**..... 1567
- Zies, E. G. A new analysis of cosyrite from the island of Pantelleria..... 200
- Zimmer, P. W. A unique intergrowth of calcite and pyrite (abs.)..... 1563
- Zirconium minerals, x-ray spectrographic determination of hafnium-zirconium ratio in (Abdel-Gawad)**..... 464
- Zircosulfate (Kapustin)..... 529
- Zoisite-rutile rock from Los Angeles County, California (Temple)**..... 1028
- Zoltai, T. with Blake, R. L. Hessevick, R. E. and Finger, L. W.** Refinement of the hematite structure..... 123
- ZrO_2 and HfO_2 , growth of single crystals of from PbF_2 (Chase, Osmer)..... 1808
- Zumberge, J. H. (Book review).... 944
- Zussman, J. with Deer, W. A. and Howie, R. A. (Book review).... 1555