

## INDEX TO VOLUME 43

Leading articles are in **bold face** type; notes, abstracts and reviews are in ordinary type. Only minerals for which definite data are given are indexed.

<b>Absorption for rod-shaped single crystals, correction for (Buerger, Niizeki)</b> .....	726	<b>Andreev, Y. K.</b> .....	797
<b>Adsorption and retention of an organic material by montmorillonite in the presence of water (Brindley, Rustom)</b> .....	627	Ankerite and dolomite, x-ray data for (Howie, Broadhurst)....	1210
<b>Ajoite, a new hydrous aluminum copper silicate (Schaller, Vlisidis)</b> .....	1107	Anthoinite (Niggli, Jäger).....	384
Alkali amphiboles, classification of (Miyashiro, Iwasaki) (Andreev).....	797	Arduinite (= mordenite) (Davis)..	1224
<b>Alkali feldspars: IV. The cooling history of high-temperature sodium-rich feldspars (Smith, MacKenzie)</b> .....	872	<b>Argon and helium, excess, in beryl and other minerals (Damon, Kulp)</b> .....	433
Allen, R. D., and Almond, H., Nonfibrous ulexite from the Kramer District, California.	169	Arsenolamprite (= arsenic + arsenolite) (Padera, Fischer).....	1225
<b>Almond, H., with Smith, G. L., and Sawyer, D. L. Sassolite from the Kramer borate district, California</b> .....	1068	<b>Ashby, G. E., and Kellagher, R. C. Apparatus for the study of thermoluminescence from minerals</b> .....	695
———, with Allen, R. D. Nonfibrous ulexite from the Kramer District, California.	169	Atchley, F. W. Low-magnification thin-section photography....	997
Alumian (= natroalunite) (Moss).	1225	Atoms and ions in minerals, chart showing the sphere of influence of (Remick).....	166
Aluminum boride monocrystals, microhardness of (Cotter)....	781	Autenrieth, H.....	1221
Alumochalcosiderite (= aluminum chalcosiderite) (Fischer)....	1224	<b>Axelrod, J. M., with Milton, C., Carron, M. K., and MacNeil, F. S. Gorceixite from Dale County, Alabama</b> .....	688
Ambramovich, Y. M.....	1222	——— with Milton, C., and Ingram, B. Bismutoferrite, chapmanite and "hypochlorite"...	656
<b>Ames, L. L., and Sand, L. B. Factors effecting maximum hydrothermal stability in montmorillonites</b> .....	641	( $\beta$ -MnS), unnamed (Baron, Debyser).....	795
——— Hydrothermal synthesis in wairakite and calcium-mordenite.....	476	Barbierite (= microcline) (Schneider, Laves).....	1008
<b>Amphibole paragenesis in the Bidwell Bar region, California, significance of (Compton)</b> ....	890	Baron, G.....	795
Amstutz, G. C. (Book Review)....	788	<b>Barton, P. B., Jr. Synthesis and properties of carnotite and its alkali analogues</b> .....	799
———.....	794	<b>Bassett, W. A. Copper vermiculites from northern Rhodesia</b> ....	1112
<b>Andradite-spessartite garnet from Pajsberg, Sweden (Lee)</b> ....	208	Bastiansen, O., with Vogt, T., and Skancke, P. Holmquistite as a rhombic amphibole.....	981
		Batchelorite (= muscovite) (Bothwell, Moss).....	1008
		Bates, T. F. Selected electron micrographs of clays and other fine-grained minerals (Book Review).....	1218

- Bayerite (natural) = gibbsite (Sasvari, Zalai) . . . . . 626
- Beamish, F. E., with Westland, A. D. Chemical analysis of iridosmines and other platinum-metal minerals . . . . . 503
- Bellite (Strunz) . . . . . 798
- Beryl and other minerals, excess helium and argon in (Damon, Kulp) . . . . . 433
- Beryllium content of roscherite from the Sapucaia pegmatite mine, Minas Gerais, Brazil (Lindberg) . . . . . 824
- Bikitaite additional data on (Hurlbut) . . . . . 768
- Biotite, chlorine-rich, from Lemhi County, Idaho (Lee) . . . . . 107
- Bismutoferrite, chapmanite and "hypochlorite" (Milton, Axelrod, Ingram) . . . . . 626, 656
- Bismutomicrolite (Zalashkova, Kukharchik) . . . . . 1223
- Blade, L. V. . . . . 1006
- , with Rose, H. J., Jr., and Ross, M. Earthy monazite at Magnet Cove, Arkansas . . . . . 995
- Blix, R. . . . . 387
- Bonattite (Garavelli) . . . . . 180
- Bonchevite (Kostov) . . . . . 1221
- Bose, M. K. Goethite-hematite relation . . . . . 989
- Bothwell, D. I. . . . . 1008
- Branche, G. . . . . 180
- Braune, G. . . . . 1221
- Breger, I. A. (Book Review) . . . . . 788
- Breislakite (= vonsenite) (Federico) . . . . . 626
- Brindley, G. W., and Rustom, M. Adsorption and retention of an organic material by montmorillonite in the presence of water . . . . . 627
- Broadhurst, F. M., with Howie, R. A. X-ray data for dolomite and ankerite . . . . . 1210
- Bruyerite (Tacnet) . . . . . 624
- Buckle, E. R., and Taylor, H. F. W. Calcium analogue of chondrodite . . . . . 818
- Buerger, M. J., and Kennedy, G. C. Improved specimen holder for the focusing-type x-ray spectrometer . . . . . 756
- and Niizeki, N. Correction for adsorption for rod-shaped single crystals . . . . . 726
- Bunting, E. N., and Van Valkenburg, A. Some properties of diamond . . . . . 102
- Burst, J. F. Mineral heterogeneity in "glaucosite" pellets . . . . . 481
- Bur'yanova, E. Z. . . . . 623
- Butkovich, T. R. Hardness of single ice crystals . . . . . 48
- Cadmoselite (Bur'yanova, Kovaliev, Komkov) . . . . . 623
- Caillère, S. . . . . 1223
- Calcite, melting of in the presence of water and carbon dioxide (Paterson) . . . . . 603
- Calcium-mordenite and wairakite, hydrothermal synthesis in (Ames, Sand) . . . . . 476
- Carnotite, synthesis and properties and its alkali analogues (Bartton) . . . . . 799
- Carr, R. M., and Fyfe, W. S. Some observations on the crystallization of amorphous silica . . . . . 908
- Carron, M. K., with Glass, J. J., Evans, H. T., Jr., and Hildebrand, F. A. Cerite from Mountain Pass, San Bernardino County, California . . . . . 460
- with Milton, C., MacNeil, F. S., and Axelrod, J. M. Gorceixite from Dale County, Alabama . . . . . 688
- , Mrose, M. E., and Murata, K. J. Relation of ionic radius to structures of rare-earth phosphates, arsenates and vanadates . . . . . 985
- Célébonovic, S. The Living Rocks (Book Review) . . . . . 177
- Cerite from Mountain Pass, San Bernardino County, California (Glass, Evans, Carron, Hilde-

- brand)..... 460
- Chalmers, R. A..... 624
- Chantret, F..... 180
- Chao, E. C. T., with Milton, C.  
Eskolaite in "merumite" from  
British Guiana..... 1203
- Chapmanite, bismutoferrite, and  
"hypochlorite" (Milton, Axel-  
rod, Ingram)..... 656**
- Chapmanite, bismutoferrite, hypo-  
chlorite (Milton, Axelrod, In-  
gram)..... 626
- Chayes, F. Memorial of Samuel  
James Shand..... 317**
- Chemical Engineering in the Coal  
Industry (F. W. Sharpley, Ed.)  
(Book Review)..... 788
- Chernikov, A. A..... 383
- Chondrodite, calcium analogue of  
(Buckle, Taylor)..... 818
- Chlorine in serpentinized dunite  
(Earley)..... 148
- Chlorite, chromium, structural and  
chemical variation in (Lap-  
ham)..... 921
- Chlorite, white, from Cobargo,  
N.S.W. (Loughnan, See)..... 671
- Chlorites, synthesis of, and their  
structural and chemical con-  
stitution (Nelson, Roy)..... 707
- Christ, C. L., with Ross, M. Min-  
eralogical applications of elec-  
tron diffraction..... 1157
- Chrome mica-clay, Temple Moun-  
tain, Utah (Kerr, Hamilton).. 34**
- Chromian muscovite from Baker  
Mountain, Virginia (Dietrich) 162
- Cipriani, C..... 378
- Clay-carbonate-soluble salt inter-  
action during differential ther-  
mal analysis (Martin)..... 649
- Coeruleolactite (=Ca analogue of  
turquoise) (Fischer)..... 1224
- Coffinite, thorite and uranorhites,  
synthetic, x-ray studies of  
(Fuchs, Gebert)..... 243**
- Cohen, A. J., and Rice, R. V. New  
method for orienting electron  
microscope replicas..... 25**
- and Sumner, G. G. Rela-  
tionships among impurity con-  
tents, color centers and lattice  
constants in quartz..... 58
- Combeite (Sahama, Hytönen).... 791
- Compton, R. R. Significance of  
amphibole paragenesis in the  
Bidwell Bar region, California 890**
- Comuccite (=jamesonite) (Gara-  
velli)..... 1225
- Concise International Dictionary  
of Mechanics and Geology  
(Book Review)..... 1004
- Constitution of Binary Alloys.  
(Hansen) (Book Review).... 1217
- Copper vermiculites from northern  
Rhodesia (Bassett)..... 1112**
- Corey, A. S., with Gross, E. B.,  
Mitchell, R. S., and Walenta,  
K. Heinrichite and metaheini-  
richite, hydrated barium ura-  
nyl arsenate minerals..... 1134**
- Corwin, J. F., with White, J. F.,  
and Shaw, E. R. A chalcedony-  
like variety of germania, GeO<sub>2</sub> 580**
- Cotter, P. G. Microhardness of  
aluminum boride monocrystals 781
- Crandallite (pseudowavellite) from  
Gardner Mine Ridge, Law-  
rence County, Indiana (Green-  
berg, Elberty)..... 983
- Cuspidine, synthetic (Van Valken-  
burg, Rynders)..... 1195**
- Dahllite pseudomorphs after pyrite  
concretions (Mitchell, Sher-  
wood)..... 600
- Damon, P. E., and Kulp, J. L. Ex-  
cess helium and argon in beryl  
and other minerals..... 433**
- D'Ansite (Autenrieth, Braune).... 1221
- Davis, R. J..... 1224
- Day, G., with Sabine, P. A., and  
Rowe, R. H. Device for pre-  
cisely controlling an iris dia-  
phragm..... 784
- Debyser, J..... 795
- De Las Casas, F..... 794
- Denning, R. M. (Book Reviews) 618, 622
- Diamond, some properties of  
(Bunting, Van Valkenburg)... 102**

- Dietrich, R. V. Chromian muscovite from Baker Mountain, Virginia. . . . . 162
- Differential Thermal Investigation of Clays (Mackenzie, Ed.) (Book Review) . . . . . 617
- Digenite,  $\text{Cu}_9\text{S}_5$ , crystal and twin structure of (Donnay, Donnay, Kullerud)** . . . . . 228
- Discredited minerals. . . . . 626, 1008, 1224
- Dolomite and ankerite, x-ray data for (Howie, Broadhurst) . . . . . 1210
- Dolomonova, E. I. . . . . 386
- Donnay, G. (Book Review) . . . . . 376
- , **Donnay, J. D. H., and Kullerud, G. Crystal and twin structure of digenite,  $\text{Cu}_9\text{S}_5$**  . . . . . 228
- Donnay, J. D. H. (Book Review) . . . . . 376
- , **with Donnay, G., and Kullerud, G. Crystal and twin structure of digenite  $\text{Cu}_9\text{S}_5$**  . . . . . 228
- Douglas, R. M. Crystal structure of sanbornite,  $\text{BaSi}_2\text{O}_5$**  . . . . . 517
- Duffin, W. J. . . . . 384
- Earley, J. W. On chlorine in serpentized dunite** . . . . . 148
- Einführung in die Kristallographie (Kleber) (Book Review) . . . . . 788
- Eitel, W. . . . . 626
- Elberty, W. T., with Greenberg, S. S. Crandallite (pseudowavellite) from Gardner Mine Ridge, Lawrence County, Indiana . . . . . 983
- Electron diffraction, mineralogical applications of (Ross, Christ)** . . . . . 1157
- Electron microscope replicas, new method for orienting (Rice, Cohen)** . . . . . 25
- Emerson, D. O. Stage for macro point counting . . . . . 1000
- English, G. L., and Jensen, D. E. Getting Acquainted with Minerals. 2d ed. (Book Review) . . . . . 1217
- Eosphorite-childrenite series, optics of (Winchell) . . . . . 765
- Erdelyi, J. . . . . 1222
- Eskolaite, a new chromium mineral (Kouvo, Vuorelainen)** . . . . . 1098
- Eskolaite in "merumite" from British Guiana (Milton, Chao) . . . . . 1203
- Evans, H. T., Jr. . . . . 385
- (Book Review) . . . . . 787
- , **with Glass, J. J., Carron, M. K., and Hildebrand, F. A. Cerite from Mountain Pass, San Bernardino County, California** . . . . . 460
- Fahey, J. J. . . . . 625
- Faick, J. N., and Hildebrand, F. A. An occurrence of molybdenian stolzite in Arizona . . . . . 156
- Faust, G. T. (Book Reviews) . . . . . 178, 616, 617
- Federico, M. . . . . 626
- Ferroelectricity in Crystals (Megaw) (Book Review) . . . . . 787
- Ferutite (Getseva, Savel'eva) . . . . . 382
- Fischer, E. . . . . 1224
- Fisher, D. J. Pegmatite phosphates and their problems** . . . . . 181
- Addendum to the pegmatite phosphates . . . . . 609
- Note on lithiophosphate . . . . . 761
- Refractometer perils . . . . . 777
- , **and Runner, J. J. Morinite from the Black Hills** . . . . . 585
- Fleischer, M. Memorial of Benno Wasserstein** . . . . . 331
- , New mineral names . . . . . 180, 378, 623, 790, 1006, 1219
- (Book Review) . . . . . 616
- Flokite (= mordenite) (Davis) . . . . . 1224
- Foshagite: composition, unit cell and dehydration (Gard, Taylor)** . . . . . 1
- Foster, L. M., Long, G., and Stumpf, H. S. Production of graphite single crystals by thermal decomposition of aluminum carbide** . . . . . 285
- Francevillite (Branche, Ropert, Chantret, Morignat, Pouget) . . . . . 180
- Frenzel, G. . . . . 1219
- Frolovite (Petrova) . . . . . 385
- Frondel, C. . . . . 793
- Fuchs, L. H. Formation and properties of synthetic thorite crystals . . . . . 367

- , and Gebert, E. *X-ray studies of synthetic coffinite, thorite and uranothorites* . . . . . 243
- Fyfe, W. S., with Carr, R. M. *Some observations on the crystallization of amorphous silica* . . . . . 908
- Gabrielson, O. . . . . 387
- Garavelli, C. L. . . . . 180, 1225
- Gard, J. A. . . . . 624
- , and Taylor, H. F. W. *Foshagite: composition, unit cell and dehydration* . . . . . 1
- Garnet, composition and physical properties of (Winchell) . . . . . 595
- Gebert, E., with Fuchs, L. H. *X-ray studies of synthetic coffinite, thorite and uranothorites* . . . . . 243
- Geffroy, J. . . . . 792
- Geier, B. H. . . . . 1006
- Gelbertrandite, spherobertrandite (Semenov) . . . . . 1219
- Gerasimovskite (niobobelyankinite), mangano-belyankinite (Semenov) . . . . . 1220
- Germania,  $\text{GeO}_2$ , a chalcidony-like variety (White, Shaw, Corwin)** . . . . . 580
- Getseva, R. V. . . . . 378
- Getting Acquainted with Minerals. 2d ed. (English, Jensen) (Book Review) . . . . . 1217
- Giannini, W. F., with Mitchell, R. S. *Natrojarosite from near the Montana-Wyoming line* . . . . . 1205
- Giardini, A. A. *Double arc goniometer head for crystal orientation, sawing and grinding* . . . . . 370
- *Piezobirefringence in silicon* . . . . . 249
- *Study of the directional hardness in silicon* . . . . . 957
- Gillespite, leached, a sheet silicate, structure of (Pabst) . . . . . 970
- Giulekhite (Khalifa-Zade) . . . . . 1223
- Glass, J. J., Evans, H. T., Jr., Carron, M. K., and Hildebrand, F. A. *Cerite from Mountain Pass, San Bernardino County, California* . . . . . 460
- , Rose, H. J., Jr., and Over, E. *Yttrium-bearing pegmatite body near Lake George, Park County, Colorado* . . . . . 991
- “*Glaucosite*” pellets, mineral heterogeneity in (Burst) . . . . . 481
- Goethite-hematite relation (Bose) . . . . . 989
- Goldsmith, J. R., and Graf, D. L. *Relation between lattice constants and composition of the Ca-Mg carbonates* . . . . . 84
- Goniometer head, double arc, for crystal orientation, sawing and grinding (Giardini) . . . . . 370
- Goodman, N. R. . . . . 791
- Goodyear, J. . . . . 384
- Gorceixite from Dale County, Alabama (Milton, Axelrod, Carron, MacNeil)** . . . . . 688
- Gorceixite, occurrence in Arkansas (Young) . . . . . 762
- Gotman, Y. D. . . . . 1007
- Götzenite (Sahama, Hytönen) . . . . . 790
- Gradwell, R. *A simple fusion method for determination of plagioclase feldspar from thin section* . . . . . 368
- Graf, D. L., with Goldsmith, J. R. *Relation between lattice constants and composition of the Ca-Mg carbonates* . . . . . 84
- Graphite single crystals, production of by thermal decomposition of aluminum carbide (Foster, Long, Stumpf)** . . . . . 285
- Greenberg, S. S., and Elberty, W. T. *Crandallite (pseudowavellite) from Gardner Mine Ridge, Lawrence County, Indiana* . . . . . 983
- Grigor'ev, I. F. . . . . 386
- Gross, E. B., Corey, A. S., Mitchell, R. S., and Walenta, K. *Heinrichite and metaheinrichite, hydrated barium uranyl arsenate minerals* . . . . . 1134
- Guillemin, C. . . . . 796
- Guinier camera, multiple, application in clay mineral studies (Porrenga) . . . . . 770

- Häggite (Evans, Mrose) . . . . . 385
- Hallimond, A. F. Manual of the Polarizing Microscope (Book Review) . . . . . 616
- Hamilton, P. K., with Kerr, P. F. Chrome mica-clay, Temple Mountain, Utah** . . . . . 34
- Hansen, M. Constitution of Binary Alloys. (Book Review) . . . . . 1217
- Hayase, K. . . . . 623
- Hayes, E. T. (Book Review) . . . . . 1218
- Heating stage. Liquid, a new low-temperature (Virgin, Massoni) . . . . . 606
- Heide, F. Kleine Meteoritkunde (Book Review) . . . . . 177
- Heinrich, E. Wm. (Book Reviews) . . . . . 177, 1004
- Heinrichite and metaheinrichite, hydrated barium uranyl arsenate minerals (Gross, Corey, Mitchell, Walenta)** . . . . . 1134
- Helium and argon, excess, in beryl and other minerals (Damon, Kulp)** . . . . . 433
- Hénin, S. . . . . 1223
- Hessenbergite (=bertrandite) (Parker, Indergand) . . . . . 1008
- Hildebrand, F. A., with Faick, J. N. An occurrence of molybdenian stolzite in Arizona . . . . . 156
- , with Glass, J. J., Evans, H. T., Jr., and Carron, M. K. **Cerite from Mountain Pass, San Bernardino County, California** . . . . . 460
- Holmquistite as a rhombic amphibole (Vogt, Bastiansen, Skancke) . . . . . 981
- Hooker, M. . . . . 624
- Horobetsuite (Hayase) . . . . . 623
- Howie, R. A., and Broadhurst, F. M. X-ray data for dolomite and ankerite . . . . . 1210
- Hunt, W. F. Acceptance of the Roebling Medal** . . . . . 336
- Huntite from Tea Tree Gully, South Australia (Skinner) . . . . . 159
- Hurlbut, C. S., Jr. Additional data on bikitaite . . . . . 768
- Hutton, C. O. Notes on tapiolite, with special reference to tapiolite from southern Westland, New Zealand** . . . . . 112
- Hydroparagonite (Erdelyi, Koblenz, Tolnay) . . . . . 1222
- "Hypochlorite," bismutoferrite and chapmanite (Milton, Axelrod, Ingram)** . . . . . 656
- Hypochlorite, bismutoferrite, chapmanite (Milton, Axelrod, Ingram) . . . . . 626
- Hytönen, K. . . . . 790, 791, 795
- , with Sahama, T. G. **Calcium-bearing magnesium-iron olivines** . . . . . 862
- Ice crystals, single, hardness of (Butkovich)** . . . . . 48
- Idaite (Frenzel) . . . . . 1219
- Indergand, P. . . . . 1008
- Índice Alfabético Para el Diccionario Minero (Español, Francés, Alemán Y Ruso) (Novitzky) (Book Review) . . . . . 1004
- Ingerson, E. (Book Reviews) . . . . . 176, 177, 376, 1004, 1217
- Ingram, B., with Milton, C., and Axelrod, J. M. Bismutoferrite, chapmanite and "hypochlorite"** . . . . . 656
- Inyoite at Laguna Salinas, Peru, first known occurrence in a playa (Muessig)** . . . . . 1144
- Ionic radius, relation to structures of rare-earth phosphates, arsenates and vanadates (Carron, Mrose, Murata) . . . . . 985
- Iridosmines and other platinum-metal minerals, chemical analysis of (Westland, Beamish)** . . . . . 503
- Irriginite (Soboleva, Pudovkina) . . . . . 379
- Iris diaphragm, device for precisely controlling (Sabine, Rowe, Day) . . . . . 784
- Iron-alabandite (Ramdohr) . . . . . 378
- Iron Ore Beneficiation (Roe) (Book Review) . . . . . 376
- Isogyres in interference figures (Kamb)** . . . . . 1029
- Iwasaki, M. . . . . 797

- Jäger, E. . . . . 384
- Jagoite (Blix, Gabrielson, Wickman) . . . . . 387
- Jasmund, K. Die Silikatischen Tonminerale (Book Review) . . . . . 178
- Jensen, D. E., with English, G. L. Getting Acquainted with Minerals. 2d ed. (Book Review) . . . . . 1217
- Johan, Z. . . . . 794
- Kalita, A. P. . . . . 797
- Kamb, W. B. Isogyres in interference figures. . . . . 1029
- Kazakova, M. E. . . . . 792
- Keith, M. L., with Van Hook, H. J. The system  $Fe_3O_4$ - $Mn_3O_4$  . . . . . 69
- Kellagher, R. C., with Ashby, G. E. Apparatus for the study of thermoluminescence from minerals . . . . . 695
- Kelly, W. C. (Book Review) . . . . . 178
- Kennedy, G. C., with Buerger, M. J. Improved specimen holder for the focusing-type x-ray spectrometer . . . . . 756
- Kerr, P. F. Memorial of Austin Flint Rogers . . . . . 310
- , and Hamilton, P. K. Chrome mica-clay, Temple Mountain, Utah. . . . . 34
- , with Kopp, O. C. Differential thermal analysis of pyrite and marcasite . . . . . 1079
- Differential thermal analysis of sphalerite . . . . . 732
- Kësterite (Orlova) . . . . . 1222
- Kettnerite (Zak, Syneček) . . . . . 385
- Khalifa-Zade, Ch. M. . . . . 1223
- Khapaev, I. A. . . . . 1007
- Kimzeyite (Milton, Blade) . . . . . 1006
- Kirschsteinite (Sahama, Hytönen) . . . . . 790
- Kleber, W. Einführung in die Kristallographie (Book Review) . . . . . 788
- Kleine Meteoritkunde. 2d ed. (Heide) (Book Review) . . . . . 177
- Koblencz, V. . . . . 1222
- Kobokobite (Thoreau) . . . . . 795
- Kohn, J. A. Twinning in diamond-type structures: A proposed boundary-structure model . . . . . 263
- Komkov, A. I. . . . . 623
- Kopchenova, E. V. . . . . 383
- Kopp, O. C., and Kerr, P. F. Differential thermal analysis of pyrite and marcasite . . . . . 1079
- Differential thermal analysis of sphalerite . . . . . 732
- Kostov, I. . . . . 1221
- Koutekite (Johan) . . . . . 794
- Kouvo, O., and Vuorelainen, Y. Eskolaite, a new chromium mineral. . . . . 1098
- Kovalev, G. A. . . . . 623
- Krutetskaya, O. V. . . . . 383
- Kukharchik, M. V. . . . . 1223
- Kullerud, G., with Donnay, G., and Donnay, J. D. H. Crystal and twin structure of digenite,  $Cu_9S_5$  . . . . . 228
- Kulp, J. L., with Damon, P. E. Excess helium and argon in beryl and other minerals . . . . . 433
- Kupa, F. . . . . 792
- Kutina, J. Memorial of František Slavík . . . . . 325
- Laboratory Manual of Crystallography for Students of Mineralogy and Geology (Tunell, Murdoch) (Book Review) . . . . . 618
- Lapham, D. M. Structural and chemical variation in chromium chlorite . . . . . 921
- Larsen, E. S., 3rd. Memorial of John Charles Rabbitt . . . . . 307
- Lattice constants and composition of the Ca-Mg carbonates, relation between (Goldsmith, Graf) . . . . . 84
- Laves, F. . . . . 1008
- Lee, D. E. An andradite-spessartite garnet from Pajsberg, Sweden . . . . . 208
- A chlorine-rich biotite from Lemhi County, Idaho . . . . . 107
- Leonard, B. F. . . . . 793
- Lermontovite (Soboleva, Pudovkina) . . . . . 379

Leucite nepheline dolerite of Meiches, Vogelsberg, Hessen (Tilley).....	758		
<b>Lindberg, M. L. Beryllium content of roscherite from the Sapucaia pegmatite mine, Minas Gerais, Brazil</b> .....	824		
Lithiophosphate, note on (Fisher).....	761		
Living Rocks (Célebonovic) (Book Review).....	177		
Lodochnikite (Gotman).....	1007		
Lodochnikite (Soboleva, Pudovkina).....	380		
<b>Long, G., with Foster, L. M., and Stumpf, H. S. Production of graphite single crystals by thermal decomposition of aluminum carbide</b> .....	285		
Losert, J.....	792		
<b>Louderback, George Davis, memorial of (Pabst)</b> .....	297		
<b>Loughnan, F. C., and See, G. T. White chlorite from Cobargo, N. S. W.</b> .....	671		
<b>MacKenzie, W. S., with Smith, J. V. Alkali feldspars: IV. The cooling history of high-temperature sodium-rich feldspars</b> .....	872		
<b>MacNeil, F. S., with Milton, C., Axelrod, J. M., and Carron, M. K. Gorceixite from Dale County, Alabama</b> .....	688		
Macro point counting, stage for (Emerson).....	1000		
Magak'Yan, I. G.....	1223		
Magnetic susceptibilities of minerals in the Frantz Isodynamic separator (Rosenblum).....	170		
Manganese silicate, unnamed (Smirnov).....	793		
Mangano-belyankinite (Semenov).....	1220		
Manual of the Polarizing Microscope (Hallimond) (Book Review).....	616		
<b>Marcasite and pyrite, differential thermal analysis of (Kopp, Kerr)</b> .....	1079		
<b>Martin, R. T. Clay-carbonate-soluble salt interaction during differential thermal analysis</b> .....	649		
Mason, B.....	1008		
Massoni, C. J., with Virgin, W. W., Jr. A new low-temperature, liquid heating stage.....	606		
<b>Mathieson, A. M. Mg-vermiculite: a refinement and re-examination of the crystal structure of the 14.36 Å phase</b> .....	216		
McConnell, D. The so-called "oxygen excess".....	786		
—— (Book Review).....	619		
—— and Murdoch, J. Crystal chemistry of scawtite.....	498		
McLachlan, D., Jr. X-ray Crystal Structure (Book Review).....	620		
<b>Meen, V. B. Memorial of Arthur Leonard Parsons</b> .....	302		
Megaw, H. D. Ferroelectricity in Crystals (Book Review).....	787		
Melkov, V. G.....	1008		
——, with Thompson, M. E., and Roach, C. H. Sherwoodite, a mixed vanadium(IV)-vanadium(V) mineral from the Colorado Plateau.....	749		
—— Simplotite, a new quadrivalent vanadium mineral from the Colorado Plateau.....	16		
<b>Mg-Al oxides and silicates, physical properties and bond type in (Verhoogen)</b> .....	552		
<b>Mg-vermiculite: a refinement and re-examination of the crystal structure of the 14.36 Å phase (Mathieson)</b> .....	216		
Milton, C.....	1006		
—— (Book Review).....	1217		
——, Axelrod, J. M., Carron, M. K., and MacNeil, F. S. Gorceixite from Dale County, Alabama.....	688		
——, Axelrod, J. M., and Ingram, B. Bismutoferrite, chapmanite and "hypochlorite".....	656		
——, and Chao, E. C. T. Eskolaite in "merumite" from British Guiana.....	1203		
			Mineralogical Society of America



- Award, acceptance of (Roy) . . . 346
- Mineralogical Society of America**
- Award, presentation to Rustum Roy (Osborn) . . . 344
- Mineralogical Society of America, proceedings of the thirty-eighth annual meeting at Atlantic City, New Jersey** . . . 349
- List of papers of special mineralogical interest presented at annual meeting . . . 362
- List of fellows and members . . . 388
- Mineralogische Tabellen (Strunz) (Book Review) . . . 619
- Minéraux D'uranium du Haut Katanga (Vaes, Guillemin, Destas) (Book Review) . . . 1218
- Mitchell, R. S., and Giannini, W. F. Natrojarosite from near the Montana-Wyoming line . . . 1205
- , with Gross, E. B., Corey, A.S., and Walenta, K. Heinrichite and metaheinchite, hydrated barium uranyl arsenate minerals . . . 1134
- and Sherwood, W. C. Dahllite pseudomorphs after pyrite concretions . . . 600
- Miyashiro, A. . . . 797
- Moluranite (Soboleva, Pudovkina) . . . 380
- Molybdenian stolzite, an occurrence in Arizona (Faick, Hildebrand) . . . 156
- Monazite, earthy, at Magnet Cove, Arkansas (Rose, Blade, Ross) . . . 995
- Montmorillonites, factors effecting maximum hydrothermal stability in (Ames, Sand)** . . . 641
- Morignat, B. . . . 180
- Morinite from the Black Hills (Fisher, Runner)** . . . 585
- Moss, A. A. . . . 1008, 1225
- Mountain, E. D. . . . 624
- Mountainite, Rhodesite (Mountain) (Gard, Taylor, Chalmers) . . . 624
- Mrose, M. E. . . . 385
- , with Carron, M. K., and Murata, K. J. Relation of ionic radius to structures of rare-earth phosphates, arsenates and vanadates . . . 985
- Muessig, S. First known occurrence of inyoite in a playa, at Laguna, Peru** . . . 1144
- Murata, K. J., with Carron, M. K., and Mrose, M. E. Relation of ionic radius to structures of rare-earth phosphates, arsenates and vanadates . . . 985
- Murdoch, J. Phosphate minerals of the Borborema pegmatites. II. Boqueirão** . . . 1148
- , with McConnell, D. **Crystal chemistry of scawtite** . . . 498
- , with Tunell, G. **Laboratory Manual of Crystallography for Students of Mineralogy and Geology** (Book Review) . . . 618
- Nakaya, U. **Snow Crystals, Natural and Artificial** (Book Review) . . . 622
- Natrojarosite from near the Montana-Wyoming line (Mitchell, Giannini) . . . 1205
- Nelson, B. W., and Roy, R. Synthesis of chlorites and their structural and chemical constitution** . . . 707
- Nendo-Kobutso (Clay Minerals) (Sudo) (Book Review) . . . 1217
- Nepheline, natural, a complex form from Iivaara, Finland (Sahama) . . . 165
- New data . . . 384, 626, 795, 1223
- New mineral names . . . 180, 378, 623, 790, 1006, 1219
- Niggli, E. . . . 384
- Niizeki, N., with Buerger, M. J. Correction for absorption for rod-shaped single crystals** . . . 726
- Nioboloparite (Tikhonenkov, Kazakova) . . . 792
- Novak, F. . . . 792
- Novitzky, A. **Índice Alfabético Para el Diccionario Minero (Español, Francés, Alemán Y Ruso)** (Book Review) . . . 1004
- Tables for the Microscopic

- and X-ray Determination of the Opaque Minerals ("Tablas Para la Determinación Microscópica y Rayos X de Minerales Opacos") (Book Review)..... 176
- Obruchevite (Getseva, Savel'eva) 380
- Obruchevite (Kalita)..... 797
- Olivine and orthopyroxene in basic lavas and shallow intrusions, alteration of (Wilshire)..... 120
- Olivines, calcium-bearing magnesium-iron (Sahama, Hytönen). 862
- Orcel, J..... 1223
- Ordite (Ambramovich)..... 1222
- Organov, N. I..... 383
- Orlite (Soboleva, Pudovkina)..... 381
- Orlova, Z. V..... 1222
- Orthochamosite (Novak, Vtlen-sky, Losert, Kupa, Valcha)... 792
- Osborn, E. F. Presentation of the Mineralogical Society of America Award to Rustum Roy..... 344
- Over, E., with Glass, J. J., and Rose, H. J., Jr. Yttrium-bearing pegmatite body near Lake George, Park County, Colorado..... 991
- "Oxygen excess," so-called (McConnell)..... 786
- Pabst, A. Memorial of George Davis Louderback..... 297
- The structure of leached gillespite, a sheet silicate..... 970
- (Book Review)..... 620
- Padera, K..... 1225
- Parapitchblende (Geffroy, Sarcia). 792
- Parker, R. L..... 1008
- Parsons, Arthur Leonard, memorial of (Meen)..... 302
- Paterson, M. S. Melting of calcite in the presence of water and carbon dioxide..... 603
- Pegmatite phosphates, addendum to (Fisher)..... 609
- Pegmatite phosphates and their problems (Fisher)..... 181
- Petrova, E. S..... 385
- Phosphate minerals of the Borborema pegmatites. II. Borequero (Murdoch)..... 1148
- Physics and Chemistry of the Earth (Book Review)..... 616
- Pierrot, R..... 796
- Plagioclase, heated, optical properties of (Smith)..... 1179
- Plagioclase feldspar, a simple fusion method for determination from thin section (Gradwell)... 368
- Plagioclase feldspars, effect of temperature, structural state and composition on the albite, pericline and acline-A twins of (Smith)..... 546
- Planerite (=cuprian coeruleolac-tite and calcian turquoise) (Fischer)..... 1224
- Platinum-metal minerals, chemical analysis of (Westland, Beam-ish)..... 503
- Porrenga, D. H. Application of multiple Guinier camera in clay mineral studies..... 770
- Potassium "fixation" by expandable clay minerals derived from muscovite, biotite, chlorite and volcanic material, effects of geologic significance of (Weaver)..... 839
- Pouget, R..... 180
- Przhevalskite (Soboleva, Pudovkina)..... 381
- Ptilolite, Flokite, Arduinite (all = mordenite) (Davis)..... 1224
- Pudovkina, I. A..... 378
- Pukhal'skii, L. C..... 1008
- Pyrite and marcasite, differential thermal analysis of (Kopp, Kerr)..... 1079
- Quartz, relationships among im-purity contents, color centers and lattice constants in (Cohen, Sumner)..... 58
- Rabbitt, John Charles, memorial of (Larsen)..... 307

- Ramdohr, P. . . . . 378, 794
- Ramsdell, L. S. Presentation of the Roebling Medal to Walter F. Hunt** . . . . . 334
- , Book Reviews . . . . . 1218
- Ranite (=gonnardite) (Mason) . . . . . 1008
- Refractometer perils (Fisher) . . . . . 777
- Reinerite (Strunz, Söhge, Geier) . . . . . 1006
- Remick, J. H. Chart showing the sphere of influence of atoms and ions in minerals . . . . . 166
- (Book Review) . . . . . 622
- Revoredite (Amstutz, Ramdohr, De Las Casas) . . . . . 794
- Rhodesite, Mountainite (Mountain) (Gard, Taylor, Chalmers) . . . . . 624
- Rice, R. V., and Cohen, A. J. New method for orienting electron microscope replicas** . . . . . 25
- Rinkite, johnstrupite, rinkolite, lovchorrite, and calcium rinkite (all = mosandrite) (Slepnev) (Sahama, Hytönen) . . . . . 795
- , with Thompson, M. E., and Meyrowitz, R. Sherwoodite, a mixed vanadium(IV)-vanadium(V) mineral from the Colorado Plateau . . . . . 749
- Simplotite, a new quadrivalent vanadium mineral from the Colorado Plateau . . . . . 16
- Roe, L. A. Iron Ore Beneficiation (Book Review) . . . . . 376
- Roebling Medal, acceptance of (Hunt)** . . . . . 336
- Roebling Medal, presentation to Walter F. Hunt (Ramsdell)** . . . . . 334
- Rogers, Austin Flint, memorial of (Kerr) . . . . . 310
- Ropert, M. E. . . . . 180
- Roscherite from the Sapucaia pegmatite mine, Minas Gerais, Brazil, beryllium content of (Lindberg)** . . . . . 824
- Rose, A. J. Tables Permettant le Dépouillement des Diagrammes de Rayons X et Abaques de Réglage des Monochromateurs à Lame Courbe (Book Review) . . . . . 376
- Rose, H. J., Jr., Blade, L. V., and Ross, M. Earthy monazite at Magnet Cove, Arkansas . . . . . 995
- , with Glass, J. J., and Over, E. Yttrium-bearing pegmatite body near Lake George, Park County, Colorado . . . . . 991
- Rosenblum, S. Magnetic susceptibilities of minerals in the Frantz Isodynamic magnetic separator . . . . . 170
- Ross, C. S. Welded tuff from deepwell cores from Clinch County, Georgia** . . . . . 537
- Ross, M., and Christ, C. L. Mineralogical applications of electron diffraction** . . . . . 1157
- , with Rose, H. J., Jr., and Blade, L. V. Earthy monazite at Magnet Cove, Arkansas . . . . . 995
- Rowe, R. H., with Sabine, P. A., and Day, G. Device for precisely controlling an iris diaphragm . . . . . 784
- Roy, D. M. System CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O IV: Phase equilibria in the high lime portion of the system CaO-SiO<sub>2</sub>-H<sub>2</sub>O** . . . . . 1009
- Roy, H. Acceptance of the Mineralogical Society of America Award . . . . . 346
- , with Nelson, B. W. Synthesis of chlorites and their structural and chemical constitution . . . . . 707
- Runner, J. J., with Fisher, D. J. Morinite from the Black Hills** . . . . . 585
- Rustom, M., with Brindley, G. W. Adsorption and retention of an organic material by montmorillonite in the presence of water** . . . . . 627
- Rynders, G. F., with Van Valkenburg, A. Synthetic cuspidine** . . . . . 1195
- Sabine, P. A., Rowe, R. H., and Day, G. Device for precisely controlling an iris diaphragm . . . . . 784
- Saha, P., and Smith, J. B. The

- structure and properties of natural and synthetic minerals 174
- Sahama, T. G. A complex form of natural nepheline from Iivaara, Finland..... 165
- , ..... 790, 791, 795
- , and Hytönen, K. Calcium-bearing magnesium-iron olivines..... 862
- Sanbornite,  $\text{BaSi}_2\text{O}_5$ , crystal structure of (Douglass)..... 517
- Sand, L. B., with Ames, L. L. Factors effecting maximum hydrothermal stability in montmorillonites..... 641
- Hydrothermal synthesis in wairakite and calcium-mordenite..... 476
- Santafite (Sun, Weber)..... 623
- Santafite, a new hydrated vanadate from New Mexico (Sun, Weber)..... 677
- Sarcia, J. A..... 792
- Sassolite, new occurrences in the United States (Smith)..... 1204
- Sassolite from the Kramer borate district, California (Smith, Almond, Sawyer)..... 1068
- Sasvari, K..... 626
- Savel'eva, K. T..... 378
- Sawyer, D. L., with Smith, G. L., and Almond, H. Sassolite from the Kramer borate district, California..... 1068
- Sborgite (Cipriani)..... 378
- Scarbroite (Duffin, Goodyear).... 384
- Scawtite, crystal chemistry of (McConnell, Murdoch)..... 498
- Schaller, W. T., and Vlisidas, A. C. Ajoite, a new hydrous aluminum copper silicate..... 1107
- Schneider, T. R..... 1008
- Schuiligite (Guillemin, Pierrot).. 796
- See G. T., with Loughnan, F. C. White chlorite from Cobargo, N.S.W..... 671
- Semenov, E. I..... 1219, 1220
- Selected Electron Micrographs of Clays and Other Fine-grained Minerals. (Bates) (Book Review)..... 1218
- Serpentine minerals, characterization of (Whittaker, Zussman). 917
- S. James Shand Memorial Volume. (Taljaard, M. S., Editor.) (Book Review)..... 178
- Shand, Samuel James, memorial of (Chayes)..... 317
- Shaw, E. R., with White, J. F., and Corwin, J. F. A chalcedony-like variety of germania,  $\text{GeO}_2$  580
- Sherwood W. C., with Mitchell, R. S. Dahhlite pseudomorphs after pyrite concretions..... 600
- Sherwoodite, a mixed vanadium-(IV)-vanadium(V) mineral from the Colorado Plateau (Thompson, Roach, Meyrowitz)..... 749
- Silica, amorphous, some observations on the crystallization of (Carr, Fyfe)..... 908
- Silicon, piezobirefringence in (Giardini)..... 249
- Silicon, study of the directional hardness in (Giardini)..... 957
- Silikatischen Tonminerale, 2d ed. (Jasmond) (Book Review)... 178
- Simplotite, a new quadrivalent vanadium mineral from the Colorado Plateau (Thompson, Roach, Meyrowitz)..... 16
- Skandke, P., with Vogt, T., and Bastiansen, O. Holmquistite as a rhombic amphibole..... 981
- Skinner, B. J. Huntite from Tea Tree Gully, South Australia.. 159
- Skvortsova, K. V..... 383
- Slavík, František, memorial of (Kutina)..... 325
- Slepnev, Y. S..... 795
- Smirnov, S. S..... 793
- Smirnovskite (Grivor'ev, Dolomnova)..... 386
- Smith, G. L., Almond H., and Sawyer, D. L. Sassolite from the Kramer borate district, California..... 1068
- Smith, J. B., with Saha, P. The structure and properties of

- natural and synthetic minerals 174
- Smith, J. R. Optical properties of heated plagioclases . . . . . 1179
- Smith, J. V. Effect of temperature, structural state and composition on the albite, pericline and accline-A twins of plagioclase feldspars . . . . . 546
- , and MacKenzie, W. S. Alkali feldspars: IV. The cooling history of high-temperature sodium-rich feldspars . . . . . 872
- Smith, R. L. New occurrence of sassolite in the United States. 1204
- Snow Crystals, Natural and Artificial (Nakaya) (Book Review) . . . . . 622
- Soboleva, M. V. . . . . 378
- Sodium autunite (Chernikov, Krutetskaya, Organov) . . . . . 383
- Sodium Uranospinite . . . . . 383
- Sogrenite (Soboleva, Pudovkina) . . . . . 382
- Söhnge, G. . . . . 1006
- Specimen holder, improved, for the focusing-type X-ray spectrometer (Buerger, Kennedy) . . . . . 756
- Sphalerite, differential thermal analysis of (Kopp, Kerr) . . . . . 732
- Spherobertrandite (Semenov) . . . . . 1219
- Stainierite (Orcel, Hémin, Caillère) . . . . . 1223
- Steiner, A. Occurrence of wairakite at The Geysers, California . . . . . 781
- StibioteUurobismuthite (Magak'yan) . . . . . 1223
- Stottite (Strunz, Söhnge, Geier) . . . . . 1006
- Structure and properties of natural and synthetic minerals (Saha, Smith) . . . . . 174
- Structure Reports for 1951 (Book Review) . . . . . 622
- Struktur und Eigenschaften der Kristalle (Winkler) (Book Review) . . . . . 177
- Strunz, H. Mineralogische Tabellen (Book Review) . . . . . 619
- . . . . . 798, 1006
- Strunzite (Frondel) . . . . . 793
- Stumpf, H. S., with Foster, L. M., and Long, G. Production of graphite single crystals by thermal decomposition of aluminum carbide . . . . . 285
- Sudo, T. Nendo-Kubutso (Clay minerals) (Book Review) . . . . . 1217
- Sumner, G. G., and Cohen, A. J. Relation among impurity contents, color centers and lattice constants in quartz . . . . . 58
- Sun, M. S. . . . . 623
- , and Weber, R. H. Santa-feite, a new hydrated vanadate from New Mexico . . . . . 677
- Syneček, V. . . . . 385
- System  $\text{CaO-Al}_2\text{O}_3\text{-SiO}_2\text{-H}_2\text{O}$  IV: Phase equilibria in the high lime portion of the system  $\text{CaO-SiO}_2\text{-H}_2\text{O}$  (Roy) . . . . . 1009
- System  $\text{Fe}_3\text{O}_4\text{-Mn}_3\text{O}_4$  (Van Hook, Keith) . . . . . 69
- Tables for the Microscopic and X-ray Determination of the Opaque Minerals ("Tablas para la Determinación Microscópica y Rayos X de Minerales Opacos"), 2d ed. (Novitzky) (Book Review) . . . . . 176
- Tables Permettant le Dépouillement des Diagrammes de Rayons X et Abaques de Réglage des Monochromateurs à Lame Courbe (Rose) (Book Review) . . . . . 376
- Tacnet, G. . . . . 624
- Tapiolite, notes on, with special reference to tapiolite from southern Westland, New Zealand (Hutton) . . . . . 112
- Taylor, H. F. W. . . . . 624
- , with Buckle, E. R. Calcium analogue of chondrodite . . . . . 818
- , with Gard, J. A. Foshagite: composition, unit cell and dehydration . . . . . 1
- Thermoluminescence from minerals, apparatus for the study of (Ashby, Kellagher) . . . . . 695
- Thin-section photography, low-magnification (Atchley) . . . . . 997
- , Roach, C. H., and Mey-

- rowitz, R. Sherwoodite, a mixed vanadium(IV)-vanadium(V) mineral from the Colorado Plateau . . . . . 749
- , Simplotite, a new quadrivalent vanadium mineral from the Colorado Plateau . . . . . 16
- Thoreau, J. . . . . 795
- Thorite crystals, synthetic, formation and properties of (Fuchs) . . . . . 367
- Thorite, uranothorites, and coffinite, synthetic, X-ray studies of (Fuchs, Gebert) . . . . . 243
- Thorutite (smirnovite) (Gotman, Khapaev) . . . . . 1007
- Tikhononkov, I. P. . . . . 792
- Tilley, C. E. Leucite nepheline dolerite of Meiches, Vogelsberg, Hessen . . . . . 758
- Tolnay, V. . . . . 1222
- Tunell, G., and Murdoch, J. Laboratory Manual of Crystallography for Students of Mineralogy and Geology (Book Review) . . . . . 618
- Twinning in diamond-type structures: A proposed boundary-structure model (Kohn) . . . . . 263
- Ufertite (Soboleva, Pudovkina) . . . . . 378
- Ulexite, nonfibrous, from the Kramer district, California (Allen) . . . . . 169
- Uranium minerals from U.S.S.R. (Soboleva, Pudovkina) (Gets-eva, Savel'eva) . . . . . 378
- Uraniothorites, thorite and coffinite, synthetic, X-ray studies of (Fuchs, Gebert) . . . . . 243
- Usigite (usihyte) (Melkov, Pukhal'skii) . . . . . 1008
- Valcha, Z. . . . . 792
- Van Hook, H. J., and Keith, M. L. The System  $Fe_3O_4$ - $Mn_3O_4$  . . . . . 69
- Van Valkenburg, A., with Bunting, E. N. Some properties of diamond . . . . . 102
- , and Rynders, G. F. Synthetic cuspidine . . . . . 1195
- Verhoogen, J. Physical properties and bond type in Mg-Al oxides and silicates . . . . . 552
- Vibertite (Goodman) . . . . . 791
- Virgin, W. W., Jr., and Massoni, C. J. A new low-temperature, liquid heating stage . . . . . 606
- Vlisidis, A. C., with Schaller, W. T. Ajoite, a new hydrous aluminum copper silicate . . . . . 1107
- Vogt, T., Bastiansen, O., and Skancke, P. Holmquistite as a rhombic amphibole . . . . . 981
- Vtelensky, J. . . . . 792
- Vuorelainen, Y., with Kouvo, O. Eskolaite, a new chromium mineral . . . . . 1098
- Wairakite, occurrence at The Geysers, California (Steiner) . . . . . 781
- Wairakite and calcium-mordenite, hydrothermal synthesis in (Ames, Sand) . . . . . 476
- Walenta, K., with Gross, E. B., Corey, A. S., and Mitchell, R. S. Heinrichite and metaheinchrite, hydrated barium uranyl arsenate minerals . . . . . 1134
- Walpurgite, unnamed phosphate analogue of (Soboleva, Pudovkina) . . . . . 383
- Wasserstein, Benno, memorial of (Fleischer) . . . . . 331
- Weathered sedimentary ironstones, mineralogical changes in (Youell) . . . . . 774
- Weaver, C. E. Effects of geologic significance of potassium "fixation" by expandable clay minerals derived from muscovite, biotite, chlorite and volcanic material . . . . . 839
- Weber, R. H. . . . . 623
- , with Sun, M. S. Santa-feite, a new hydrated vanadate from New Mexico . . . . . 677
- Welded tuff from deep-well cores from Clinch County, Georgia (Ross) . . . . . 537

- |  |     |  |      |
|--|-----|--|------|
| Westland, A. D., and Beamish, F. E. Chemical analysis of iridosmines and other platinum-metal minerals . . . . . | 503 | X-ray Crystal Structure (McLachlan) (Book Review) . . . . .  | 620  |
| White, J. F., Shaw, E. R., and Corwin, J. F. A chalcedony-like variety of germania, $\text{GeO}_2$ . . . . .     | 580 | Yagi, K. . . . .   | 624  |
| Whittaker, E. J. W., and Zussman, J. Characterization of serpentine minerals . . . . .                           | 917 | Youell, R. F. Mineralogical changes in weathered sedimentary ironstones . . . . .                    | 774  |
| Wickman, F. E. . . . .   | 387 | Young, E. J. Occurrence of gorceixite in Arkansas . . . . .  | 762  |
| Wilshire, H. G. Alteration of olivine and orthopyroxene in basic lavas and shallow intrusions . . . . .          | 120 | Yttrium-bearing pegmatite body near Lake George, Park County, Colorado (Glass, Rose, Over) . . . . . | 991  |
| Winchell, H. The composition and physical properties of garnet . . . . .   | 595 | Zak, L. . . . .  | 385  |
| ——— Optics of the eosphorite-childrenite series . . . . .  | 765 | Zalai, A. . . . .  | 626  |
| Winkler, H. G. F. Struktur und Eigenschaften der Kristalle (Book Review) . . . . .                               | 177 | Zalashkova, N. E. . . . .  | 1223 |
|  |     | Zussman, J., with Whittaker, E. J. W. Characterization of serpentine minerals . . . . .              | 917  |