

## INDEX TO VOLUME 38

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>α-Eucryptite problem. (Mrose) . . . . .</b>	353
Abell, J. F., with Richter, D. H. A simple high-temperature microscope heating stage . . . . .	1269
Acanthite crystals, unusual synthesis of. (Bannister) . . . . .	397
Adams, J. W. with Glass, J. J. Genthelite crystal from El Paso Co., Colo. . . . .	858
Afwillite from Crestmore, California. (Switzer, Bailey) . . . . .	629
Ahrens, L. H. . . . .	356
Albee, A. L. . . . .	327
Aldrich, L. T. . . . .	327, 333
<b>Alkali silicates, crystal geometry of. (Donnay, Donnay) . . . . .</b>	163
Allen, R. D. and Kramer, H. Occurrence of bassanite in two basins in southeastern California . . . . .	1266
Allen, V. T. and Fahey, J. J. Rhodonite, johannsenite and ferroan johannsenite at Vanadium, New Mexico . . . . .	883
<b>Allophanes from Lawrence County, Indiana. (White) . . . . .</b>	634
Alteration and uranium mineralization, Marysvale, Utah. (Kerr, Brophy, Dahl, Green, Woolard) . . . . .	347
Altshuler, Z. S. . . . .	328
Amphiboles, role of water in. (Whittaker) . . . . .	734
<b>Amygdules, giant, in andesite from the southern Quitman Mountains, Texas. (Ingerson) . . . . .</b>	1057
Anderson, A. L. . . . .	328
<b>Anthony, J. W. Memorial of Maxwell N. Short . . . . .</b>	309
Armstrong, F. C. . . . .	329
Augelite from pegmatites in New Hampshire. (Seaman) . . . . .	728
Bailey, E. H. with Switzer, G. Afwillite from Crestmore, Cal. . . . .	629
<b>Baker, G. Ilvaite and prehnite in</b>	
	1285
<b>micropelitic diorite, Southeast Papua . . . . .</b>	840
Bannister, F. A. . . . .	397, 734
<b>Barbosa, A. L. de M. with Lindberg, M. L. and Pecora, W. T. Moraesite, a new hydrous beryllium phosphate from Minas Gerais, Brazil . . . . .</b>	1126
<b>Barium feldspar, new occurrence at Otjonsodu, S. W. Africa, and an x-ray method of determining composition of hyalophane. (Vermaas) . . . . .</b>	845
Ba, Sr, Sc and Zr in chondrites and ultramafic rocks. (Pinson, Ahrens) . . . . .	356
Barlow, I. H. . . . .	328
Barnes, W. H. with Qurashi, M. M. A note on cone axis and upper level precession photographs . . . . .	552
— The structure of pucherite, $\text{BiVO}_4$ . . . . .	489
— and Berry, L. G. The space group of conichalcite . . . . .	557
<b>Barthauer, G. L., Rulfs, C. L. and Pearce, D. W. Investigation of thucolite . . . . .</b>	802
Baryte, morphology of. (Seager) . . . . .	397
Bassanite occurrence in two desert basins in southeastern California. (Allen, Kramer) . . . . .	1266
<b>Bastnaesite, parisite, roentgenite, and synchisite, crystallography of. (Donnay, Donnay) . . . . .</b>	932
Bate, G. L. . . . .	329
<b>Bates, T. F., with Sand, L. B., Endellite, halloysite, and kao-linite, differential thermal analysis of . . . . .</b>	271
— . . . . .	355, 358
<b>Bauer, L. H. with Frondel C. Manganyrosmalite and its polymorphic relation to friedelite and schallerite . . . . .</b>	755
Baumauerite, x-ray data . . . . .	330

- Bavenite problem. (Fleischer, Switzer)..... 988
- Beck, C. W., with Givens, D. B., Chinoite, a new mineral..... 191  
..... 329
- Beckmann, W..... 355, 357
- Becquerelite and billietite, status of. (Frondel, Cuttitta)..... 339, 1019
- Belt series northwest of Idaho batholith, structure and metasomatism of. (Hietanen)..... 344
- Benjaminite. (Nuffield)..... 550
- Berman, H., with Palache, C., and Frondel, C., System of Mineralogy of James Dwight Dana and Edward Salisbury Dana. (Book Review)..... 419
- Berman, J., with Larsen, E. S., Jr., and Waring, C. L. Zoned zircon from Oklahoma..... 1118  
..... 330
- Berry, L. G. with Graham, A. R. and Thompson, R. M. Studies of sulpho-salts: XVII-Cannizzarite..... 536  
— with Keating, L. F. Pisomite from Flin Flon, Manitoba..... 501  
— with Qurashi, M. M. and Barnes, W. H. The space group of conichalcite..... 557  
..... 330
- Beryllium minerals in the Victorio Mountains, Luna County, New Mexico. (Holser)..... 599
- Bever, J. E. Note on some mineral occurrences in the Guffey region, Colorado..... 138
- Billietite and becquerelite, status of. (Frondel, Cuttitta)..... 339, 1019
- Block, S. with Evans, H. T., Jr. Crystal structure of montroseite, a vanadium member of the diaspore group..... 1242
- Bloss, F. D..... 330
- Bøggild, O. B. The Mineralogy of Greenland. (Book Review).... 877
- Borate minerals, studies of, x-ray crystallography of colemanite. (Christ)..... 411
- Borate minerals, studies of. (II): X-ray of crystallography of inyoite and meyerhofferite) x-ray and morphological crystallography of  $2\text{CaO} \cdot 3\text{B}_2\text{O}_5 \cdot 9\text{H}_2\text{O}$ . (Christ)..... 912
- Bowie, S. H. U..... 734
- Boyle, R. W. On the colour of black and grey quartz from Yellowknife, Northwest Territories, Canada..... 528
- Bradley, O..... 872
- Bradley, W. F., with Burst, J. F. and Graf, D. L., Crystal chemistry and differential thermal effects of dolomite..... 207
- Briggs, L. I..... 334
- Brindley, G. W..... 398
- Brobst, D. A..... 331
- Brophy, G. P..... 347
- Buddington, A. F. and Leonard, B. F. Chemical petrology and mineralogy of hornblende in northwest Adirondack granitic rocks..... 891
- Burbankite and calkinsite, two new carbonate minerals from Montana. (Pecora, Kerr)..... 1169
- Burst, J. F. with Bradley, W. F. and Graf, D. L., Crystal chemistry and differential thermal effects of dolomite..... 207
- Bytownites and anorthites, x-ray studies of. (Gay)..... 734
- Calkinsite and burbankite, two new carbonate minerals from Montana. (Pecora, Kerr)..... 1169
- Cameron, E. N., with Rowe, R. B. and Weis, P. L., Fluid inclusions in beryl and quartz from pegmatites of Middletown, Conn..... 218
- Camptonite dikes, amygdular, from Mount Jo, Mount Marcy quadrangle, Essex County, N. Y. (Jaffe)..... 1065
- Canney, F. C..... 331
- Cannizzarite, Studies of mineral sulpho-salts: XVII. (Graham, Thompson, Berry)..... 536

- Cannon, R. S., Jr., and Grimaldi, F. S. Lindgrenite and cuprotungstite from the Seven Devils district, Idaho ..... 903
- Carbon 14 measurements on geological samples. (Kulp, Tryon and Snell) ..... 347
- Carbonate-apatite, x-ray evidence of the nature of. (Altschuler, Cisney, and Barlow) ..... 328
- Carr, K. ..... 735
- Cavender, W. S. ..... 352
- Chamosite, ferrous and ferric. (Brindley and Youell) ..... 398
- Chapman, C. A. ..... 332
- Chayes, F. In defense of the second decimal ..... 784
- Chemical analyses of sedimentary and metamorphic rocks, comparison of. (Albee) ..... 737
- Chemical differentiation of multi-generation pegmatite minerals. (Heinrich) ..... 327
- Chemical mineralogy, some problems of. (Fleischer) ..... 343
- Chemical variations in pre-Tertiary rocks of Cornucopia, Oregon. (Goodspeed) ..... 149
- Cheralite, new mineral of the monazite group. (Bowie, Horne) ..... 341
- Chinoite, a new mineral. (Beck, Givens) ..... 734
- Chlor-spodiosite ( $\text{Ca}_2\text{ClPO}_4$ ), unit cell and space group of. (MacKay) ..... 191
- Christ, C. L. Studies of borate minerals. I: X-ray crystallography of colemanite ..... 735
- Studies of borate minerals (II): X-ray crystallography of inyoite and meyerhofferite; x-ray and morphological crystallography of  $2\text{CaO} \cdot 3\text{B}_2\text{O}_5 \cdot 9\text{H}_2\text{O}$  ..... 411
- Christensenite and tridymite. (Mason) ..... 912
- Chudoba, K. F. and Gübelin, E. J. Schmuk- und Edelsteinkund- lichen Taschenbuch. (Book review) ..... 876
- Churchite, re-examination of. (Claringbull and Hey) ..... 397
- Cisney, E. A. ..... 328
- and Sherwood, A. M. with Weeks, A. D. Montroseite, a new vanadium oxide from the Colorado Plateaus ..... 1235
- Claffy, E. W. Composition, tenebrescence and luminescence of spodumene minerals ..... 919
- Claringbull, G. F. ..... 397, 734, 736
- Clay mineral, 2:1, lath shaped, non-expanded dioctahedral. (Weaver) ..... 279
- Clay minerals, 2:1, classification of (Weaver) ..... 698
- Clay minerals, geochemical studies of (II): Relation between ionic substitution and swelling in montmorillonite. (Foster) ..... 994
- Clintonite as a contact-metasomatic product of Boulder batholith, Montana. (Knopf) ..... 1113
- Coleman, L. C. Mineralogy of the Yellowknife Bay Area, N.W.T. ..... 506
- Colemanite, x-ray crystallography of. (Christ) ..... 411
- Collins, C. B. ..... 332, 333
- Colorado Plateau, mineralogic studies on. (Weeks) ..... 362
- Colour of black and grey quartz from Yellowknife, Northwest Territories, Canada. (Boyle) ..... 528
- Colusite, germanite and reniérite, x-ray investigation of. (Murdoch) ..... 354, 794
- Complex inclusions in pegmatite minerals. (Smith) ..... 559
- Compositional control of the dimensional properties of crystals. (Devore) ..... 334
- Cone axis and upper level precession photographs, a note on. (Qurashi, Barnes) ..... 552
- Conichalcite, space group of. (Qurashi, Barnes, Berry) ..... 557
- Coombs, D. S. ..... 398, 735
- Corey, A. S. Note on sphalerite

- and wurtzite..... 141  
 Cosalite and other lead sulpho-salts at Grainsgill, Caldbeck, Cumberland. (Kingsbury, Hartley)..... 782  
 Crichtonite, a distinct species. (Bannister, Claringbull, Hey)..... 734  
**Crystal chemistry and differential thermal effects of dolomite.** (Bradley, Burst, Graf)..... 207  
 Crystal classes, notation and arrangement of. (West)..... 363  
**Crystal geometry of alkali silicates.** (Donnay, Donnay)..... 163  
**Crystallographic control of replacement of quartz by feldspar.** (Stringham)..... 834  
 Cummingtonite from the Mikonui River, Westland, New Zealand. (Mason).....  
**Cuprotungstite and lindgrenite from the Seven Devils district, Idaho.** (Cannon, Grimaldi)..... 903  
 Curtis, G..... 364  
 Cuttita, F. with Frondel, J. W. The status of billietite and becquerelite..... 339, 1019  
 Dahl, H. M..... 347  
 Dana's Manual of Mineralogy. (Hurlbut) (Book Review).... 423  
 Data on lead sulpharsenides from Binnental, Switzerland. (Berry)..... 330  
 Davis, G. L..... 327, 333, 346  
 Decrepitation characteristics of some high grade metamorphic rocks. (Smith)..... 448  
 Dellwig, L. F. Hopper crystals of halite in the Salina of Michigan..... 730  
 ——..... 334  
**Denning, R. M. Directional grinding hardness in diamond**... 108, 334  
**Density determination by a modified suspension method; x-ray molecular weight, and soundness of sodium chloride.** (Straumanis)..... 662  
 Deuterium content of natural waters. (Friedman, Urey).... 338  
 Devore, G. W..... 334  
**Diamond, directional grinding hardness in.** (Denning).... 108, 334  
 Dickson, K. O..... 350  
 "Difference Patterson" to facilitate the solution of order-disorder problems in mineralogy. (Frueh, Jr.)..... 340  
 Differential leaching of uranium, radium, and lead from pitch-blende in  $H_2SO_4$  solutions. (Phair and Levine)..... 356  
 Diopside-water system. (Yoder).... 365  
 Doak, J. B..... 327, 346  
**Dolomite, crystal chemistry and differential thermal effects of.** (Bradley, Burst, Graf)..... 207  
 Donnay, G. Roentgenite,  $3CeFCO_3 \cdot 2CaCO_3$ , a new mineral from Greenland..... 868  
 —— Book Review..... 874  
 —— and Donnay, J. D. H. Crystallography of bastnaesite, parisite, roentgenite, and synchisite..... 932  
 Donnay, J. D. H., with Donnay, G., **Crystal geometry of alkali silicates**..... 163  
 —— (Book Review)..... 421  
 Douglas, A. M. B..... 397  
 Drake, C. L..... 335  
 Dufrenoysite, x-ray data..... 330  
**Earley, J. W., Milne, I. H. and McVeagh, W. J. Thermal dehydration and x-ray studies on montmorillonite**..... 336, 770  
**Earley, J. W., Osthaus, B. B. and Milne, I. H. Purification and properties of montmorillonite.** ..... 335, 707  
 Earthquake surface wave investigations. (Ewing and Press).... 337  
 Efremov, N..... 336  
 Eitel, W. Thermochemical Methods in Silicate Investigations. (Book Review)..... 738  
**Ellsworth, Hardy Vincent, memorial of.** (Haycock)..... 427

- Enchanted Rock pluton, Llano County, Texas, texture of. (Hutchinson)..... 346
- Endellite, halloysite, and kaolinite, differential thermal analysis of. (Sand, Bates)**..... 271
- Eocene magma series of Bearpaw Mts., Montana. (Pecora)..... 356
- Erd, R. C., Foster, M. D. and Proctor, P. D. Faustite, a new mineral, the zinc analogue of turquoise.**..... 964
- Erzmikroskopisches Praktikum. (Schneiderhöhn) (Book Review).**..... 422
- Evans, H. T., Jr., with Jaffe, H. W. and Meyrowitz, R. Sahamalite, a new rare earth carbonate mineral.**..... 741
- and Block, S. The crystal structure of montroseite, a vanadium member of the diaspore group..... 1242
- Ewing, M. .... 337, 355
- Fahey, J. J. with Allen, V. T. Rhodonite, johannsenite and ferroan johannsenite at Vanadium, New Mexico.**..... 883
- and Foshag, W. T. with Switzer, G. and Murata, K. J. Re-examination of mosesite. .... 1225
- Waldemar T. Schaller.... 881
- Faheyite, new phosphate mineral from Minas Gerais, Brazil. (Lindberg Murata)**..... 263, 349
- Fairbairn, H. W. .... 354
- Farquhar, R. M. .... 332, 333
- Faust, G. T. Clarence S. Ross**.... 879
- Huntite,  $Mg_3Ca(CO_3)_4$ , a new mineral..... 4
- , Memorial of Charles Robinson Toothaker..... 313
- and Murata, K. J. Stevensite redefined as a member of the montmorillonite group..... 973
- Faustite, a new mineral, the zinc analogue of turquoise. (Erd, Foster, Proctor)**..... 964
- Fergusonite, re-examination of. (Berman)..... 330
- Ferriferous orthoclases of Madagascar. (Coombs)**..... 398
- Firman, R. J. .... 873
- Fisher, D. J. Precession orientation photos..... 399
- Fleischer, M. Some problems of chemical mineralogy.**..... 149
- and Switzer, G. The bavenite problem..... 988
- Fluid inclusions in beryl and quartz from pegmatites of Middletown, Conn. (Cameron, Rowe, Weis)**..... 218
- Fluid inclusions in minerals from zoned pegmatites of the Black Hills, South Dakota. (Weis)**..... 363, 671
- Forsterite, optically negative, in the system  $Na_2O-MgO-Al_2O_3-SiO_2$  (Insley). ..... 346
- Fortunes in Minerals Including Uranium. (Idriess) (Book Review)..... 145
- Foshag, W. F. with Switzer, G., Murata, K. J. and Fahey, J. J. Re-examination of mosesite.**..... 1225
- Book reviews..... 422, 739
- Foster, M. D. Geochemical studies of clay minerals (II): Relation between ionic substitution and swelling in montmorillonite**..... 373, 994
- and Proctor, P. D. with Erd, R. C. Faustite, a new mineral, the zinc analogue of turquoise. .... 964
- Fouriersynthese von Kristall und ihre Anwendung in der Chemie. (Nowacki) (Book Review)**..... 421
- Francis, E. E. with Roy, R. On the distinction of sillimanite from mullite..... 725
- Frederickson, A. F. Effectively increasing the resolving power of a microscope to reveal unsuspected detail in thin sections.**..... 815
- ..... 337
- Friedman, G. M. .... 338
- Friedman, I. .... 338

- Frondel, C. Hydroxyl substitution in thorite and zircon..... 1007  
 ——. New manganese oxides: hydro-hausmannite and wood-ruffite..... 761  
 —— and Bauer, L. H. Manganese pyrosmalite and its polymorphic relation to friedelite and schallerite..... 755  
 ——, with Palache, C., and Berman, M., System of Mineralogy of James Dwight Dana and Edward Salisbury Dana. (Book Review)..... 419  
 ..... 339
- Frondel, J. W. and Cuttitta, F. Studies of uranium minerals (XI): Status of billietite and becquerelite..... 339, 1019
- Frueh, A. J., Jr..... 340
- Gamma-ray well logging, theoretical considerations in. (Goodman). 347
- Gardiner, L..... 351
- Garrels, R. M. Some thermodynamic relations among the vanadium oxides and their relation to the oxidation states of the uranium ores of the Colorado Plateaus..... 1251
- Gay, P..... 734
- Genetische Lagerstättengliederung auf Geotektonischer Grundlage. (Schneiderhöhn) (Book Review)..... 739
- Genthelite crystal from El Paso County, Colo. (Glass, Adams). 858
- Geochemistry of potassium, rubidium, cesium, and thallium in sediments. (Canney)..... 331
- Geology of the Caballo Mountains. (Kelly, Silver) (Book Review) 878
- Geophysical investigations in submerged Atlantic Coastal Plain; VII, Continental shelf, slope and rise south of Nova Scotia. (Officer, Ewing)..... 355
- Germanite, colusite and reniérite, x-ray investigation of. (Murdoch)..... 354, 794
- Gheith, M. A. Lipscombe, a new synthetic "iron lazulite".... 612
- Giant crystals, occurrence and origin of. (Jahns)..... 563
- Giardini, A. A. with Mitchell, R. S. Oriented olivine inclusions in diamond..... 136
- Giletti, B. J..... 329
- Gillerman, E..... 340
- Givens, D. B., with Beck, C. W., Chinoite, a new mineral..... 191
- Glass, J. J. and Adams, J. W. Genthelite crystal from El Paso Co., Colo..... 858
- , with Hewett, D. F. Two uranium-bearing pegmatite bodies in San Bernardino County, California..... 1040
- Goldsmith, J. R..... 340, 342
- Goodman, C..... 341
- Goodspeed, G. E..... 341
- Gorden, Samuel George, memorial of. (Parrish)..... 301
- Goyazite, a new strontium mineral (Mrose)..... 354
- Graf, D. L., with Bradley, W. F., and Burst, J. F., Crystal chemistry and differential thermal effects of dolomite..... 207  
 ..... 342
- Graham, A. R., Thompson, R. M. and Berry, L. G. Studies of mineral sulpho-salts: XVII-Cannizzarite..... 536
- Granitic gneiss domes of western New Hampshire, origin of, (Chapman)..... 332
- Granitization, special criteria for. (Misch)..... 351
- Granophyre from Coire Uaigneich, Isle of Skye, containing quartz paramorphs after tridymite. (Wager, Weedon, Vincent).... 736
- Graphite, synthesis of, at room temperatures. (Slawson).... 50
- Green, J..... 347
- Grimaldi, F. S. with Cannon, R. S., Jr. Lindgrenite and cuprotungstate from the Seven Devils district, Idaho..... 903

- Grimshaw, R. W. .... 735  
 Gruner, J. W. .... 342, 357  
 Gübelin, E. J. and Chudoba, K. F.  
     Schmuk- und Edelsteinkund-  
     liches Taschenbuch. (Book  
     Review) .... 876  
 Gueblin, E. J. Inclusions as a  
     Means of Gemstone Identifica-  
     tion. (Book Review) .... 740  
 Guffey region, Colorado, notes on  
     some mineral occurrences in.  
     (Bever) .... 138  
 Gummite. (Frondel) .... 339  
 Gypsum deposits near Sun City,  
     Barber Co., Kansas, geology  
     of. (McGregor) .... 350  
 Gyrolite. (Mackay, Taylor) .... 397  
 Halloysite, endellite, and kaolinite,  
     differential thermal analysis  
     of (Sand and Bates) .... 271  
 Harmotome in N. W. Ross-shire,  
     occurrence of. (Waterston) .... 398  
 Hartley, J. .... 872  
 Hawley, J. E., and Rimsaite, Y.  
     Platinum metals in some Ca-  
     nadian uranium and sulphide  
     ores .... 463  
 Hay, R. L. .... 343  
 Hayashi, A. .... 426  
 Haycock, M. Memorial of Hardy  
     Vincent Ellsworth .... 427  
 Heat production in basalts and  
     their origin. (Hurley) .... 345  
 Heinrich, E. W. and Levinson,  
     A. A. Studies in the mica  
     group; Mineralogy of the rose  
     muscovites .... 25  
     — Zoning in pegmatite dis-  
     tricts .... 68  
     — (Book Reviews) .... 343  
     ..... 144, 145, 146, 425, 877, 878  
     — ..... 344  
 Heller, L. .... 734  
 Henderson, D. M. .... 344  
 Henderson, E. P. and Perry, S. H.  
     The Mayodan meteorite,  
     Rockingham County, N. Caro-  
     lina .... 1025  
 Hewett, D. F. and Glass, J. J. Two  
     uranium-bearing pegmatite  
     bodies in San Bernadino  
     County, California .... 1040  
 Hey, M. H. .... 397, 734  
 Heystek, H. .... 873  
 Hidalgoite, a new mineral. (Smith,  
     Simons, Vlisidis) .... 1218  
 Hietanen, A. .... 344  
 Higazy, R. A., Trace elements in  
     perthite pegmatites of the  
     Black Hills, S. Dakota .... 172  
 High-order plates for the micro-  
     scopic examination of mineral  
     grains. (Smithson) .... 737  
 High-temperature optics in some  
     naturally occurring plagioclases.  
     (Bradley) .... 872  
 Hildebrand, F. A. Minimizing the  
     effects of preferred orienta-  
     tion in x-ray diffraction pat-  
     terns .... 1051  
     — and Sherwood, A. M. with  
     Milton, C. The identity of  
     tinzenite with manganous  
     axinite .... 1148  
 Hillebrandite, preliminary x-ray in-  
     vestigations of. (Heller) .... 734  
 Hilmy, M. E. Structural crystal-  
     lographic relation between so-  
     dium sulfate and potassium  
     sulfate and some other syn-  
     thetic sulfate minerals .... 118  
 Holmes, A., Transactions of the  
     Edinburgh Geological Society,  
     Vol. XV, Campbell Volume.  
     (Book Review) .... 425  
 Holser, W. T. Beryllium minerals  
     in the Victorio Mountains,  
     Luna County, New Mexico .... 599  
 Hooker, M. Bibliography of Clar-  
     ence Samuel Ross .... 1272  
     — Bibliography of Waldemar  
     Theodore Schaller .... 1276  
 Hopper crystals of halite in the  
     Salina of Michigan. (Dellwig) .... 730  
 Hornblende in northwest Adiron-  
     dack granitic rocks, chemical  
     petrology and mineralogy of.  
     (Buddington, Leonard) .... 891  
 Horne, J. E. T. .... 734

- |  |          |  |      |
|--|----------|--|------|
| Hunt, Walter F. (Kraus).....   | 1        | Isotopic constitution of ore leads and their relation to geological time. (Collins, Russell, and Farquhar).....        | 333  |
| Huntite, Mg <sub>2</sub> Ca(CO <sub>3</sub> ) <sub>2</sub> , a new mineral. (Faust).....                         | 4        |  |      |
| Hurlbut, C. S., Jr., Dana's Manual of Mineralogy. (Book Review)  | 423      | Isotopic constitution of radiogenic leads and measurement of geological time. (Collins, Farquhar, and Russell).....    | 332  |
| Hurley, P. M.....  | 345      |  |      |
| Hutchinson, R. M.....  | 346      |  |      |
| Hyalophane, x-ray method for determining composition of. (Vermaas).....  | 845      | Jaffe, H. W., Meyrowitz, R., and Evans, H. T., Jr., Sahamalite, a new rare earth carbonate mineral.....                | 741  |
| Hydrated Ca silicates, riversideite, tobermorite, plumbierite (Mc Connell).....                                  | 735      | — Amygdular camptonite dikes from Mount Jo, Mount Marcy quadrangle, Essex County, N. Y.....                            | 1065 |
| Hydrohausmannite and woodruffite (Frondel).....  | 761      | —  |      |
| Hydrous mica from Yorkshire fire-clay. (Carr, Grimshaw, Roberts).....  | 735      | Jahns, R. H. The genesis of pegmatites. I. Occurrence and origin of giant crystals.....                                | 563  |
| Hydroxyl substitution in thorite and zircon (Frondel).....   | 1007     | — Genesis of pegmatites (II): Quantitative analysis of lithium-bearing pegmatite, Mora County, New Mexico.....         | 1078 |
| Idriess, I. L. Fortunes in Minerals Including Uranium. (Book Review).....  | 145      | Jalpaite (Ag <sub>2</sub> CuS <sub>2</sub> ), natural and synthetic. (Claringbull).....                                | 735  |
| Ilmenite, proposed petrographic method for the rapid determination of. (Wallace).....                            | 729      | Johannsenite, ferroan johannsenite and rhodonite at Vanadium, New Mexico. (Allen, Fahey) ..                            | 883  |
| Ilvaite and prehnite in micropegmatic diorite, Southeast Papua. (Baker).....                                     | 840      | Johns, W. D. ....  | 873  |
| Inclusions as a Means of Gemstone Identification. (Gueblin) (Book Review).....                                   | 740      | Judith Mountains, Montana, petrology of. (Wallace).....  | 362  |
| Ingerson, E. Giant amygdules in andesite from the southern Quitman Mountains, Texas ..                           | 1057     | K <sup>40</sup> radioactive decay, branching ratio of, and application to geological age determinations. (Mousuf)..... | 352  |
| — (Book Reviews).....  | 419, 874 | Kaolinite, endellite, and halloysite, differential thermal analysis of. (Sand, Bates).....                             | 271  |
| Inghram, M. G.....   | 361      | Kaolinites, high-temperature phase changes in. (Johns).....  | 873  |
| Insley, R. H.....  | 346      | Kaliophilite, imperfections in crystal structure of. (Douglas) ..  | 397  |
| International Tables for X-ray Crystallography. Vol. I. Symmetry Groups. (Henry, Lonsdale—editors) (Book Review) | 147      | Kaye, C. A. Xonolite occurrence in Puerto Rico.....  | 860  |
| Intrusion breccias of Majuba Hill, Nevada. (Thurston, Trites) ..   | 360      | Keating, L. F., and Berry, L. G. Pisanite from Flin Flon, Manitoba.....  | 501  |
| Inyoite and meyerhofferite, x-ray crystallography of. (Christ) ..  | 912      | Keith, M. L ..   | 346  |
| Ionic substitution and swelling in montmorillonites, relation between. (Foster) ..                               | 337, 994 |  |      |

- Kelly, V. C. and Silver, C. Geology of the Caballo Mountains. (Book Review).....
- Kerr, J. H. with Pecora, W. T. Burbankite and calkinsite, two new carbonate minerals from Montana..... 1169
- Kerr, P. F..... 347
- Knopf, A. Clintonite as a contact-metasomatic product of Boulder batholith, Montana..... 1113
- Kingsbury, A. W. G..... 872
- Kracek, F. C. (Book Review)..... 738
- Kramer, H. with Allen, R. D. Occurrence of bassanite in two desert basins in southeastern California..... 1266
- Kraus, E. H., Presentation of Roebling Medal to Frederick Eugene Wright..... 290
- Walter F. Hunt..... 1
- (Book Reviews)..... 740, 876-7
- Kulp, J. L..... 329, 347
- Larsen, E. S., Jr., Waring, C. L. and Berman, J. Zoned zircon from Oklahoma..... 1118
- Lath shaped non-expanded dioctahedral 2:1 clay mineral. (Weaver)..... 279
- Laue photograph, application of to the study of polytypism and syntactic coalescence in silicon carbide. (Mitchell)..... 60
- Laves, F..... 340
- Lead, native, Presidio Co., Texas. (Lonsdale, Dickson)..... 350
- Lead sulpharsenides from Binnental, new data on (Berry)..... 330
- Lead, trace amounts in zircon and other minerals, spectrographic determination of. (Waring, Worthing).....
- Lead-uranium ages of uraninites from Triassic and Jurassic sedimentary rocks of Colorado plateau. (Stieff, Stern)..... 359
- Leads, ore, isotopic constitution of. (Collins, Farquhar, Russell)..... 332
- Leighton, M. W..... 348
- Leona rhyolite, Alameda County, California. (Robinson)..... 1204
- Leonard, B. F., with Buddington, A. F. Chemical petrology and mineralogy of hornblende in northwest Adirondack rocks. .... 891
- ..... 348
- Levine, H..... 356
- Levinson, A. A. Studies in the mica group; Relationship between polymorphism and composition in the muscovite-lepidolite series..... 88, 349
- with Heinrich, E. W. Studies in the mica group; Mineralogy of the rose muscovites ..... 25
- Light absorption and composition in a solid solution series, relationship between. (Bloss)..... 330
- Lindberg, M. L. with Murata, K. J. Faheyite, new phosphate mineral from Minas Gerais, Brazil..... 263, 349
- , Pecora, W. T. and Barbosa, A. L. de M. Moraesite, a new hydrous beryllium phosphate from Minas Gerais, Brazil..... 1126
- Lindgrenite and cuprotungstite from the Seven Devils district, Idaho. (Cannon, Grimaldi)..... 903
- Lipscombite, a new synthetic "iron lazulite." (Gheith)..... 612
- Listwänites of the Caucasus and Urals, origin of. (Efremov)..... 336
- Lithium-bearing pegmatite, Mora County, New Mexico, quantitative analysis of. (Jahns) .. 1078
- Lonsdale, J. T..... 350
- Mackay, A. L..... 397, 735
- Mackenzie, R. C..... 737
- 827 Magmatic and granitized rocks in Lemhi County, Idaho. (Anderson)..... 328
- Magnesian calcites, stability of. (Graf, Goldsmith)..... 342
- Manganese oxides, new: Hydrohausmannite and woodruffite. (Frondel)..... 761

- Manganpyrosmalite and its polymorphic relation to friedelite and schallerite. (Frondel, Bauer)..... 755
- Marine magnetic investigations: area from New Jersey to Cape Cod, Mass. (Miller)..... 351
- Mason, B. Cummingtonite from the Mikonui River, Westland New Zealand..... 862
- Tridymite and christensenite..... 866
- Mathews, W. H. and Watson, K. D. Spherulitic alkali rhyolite dikes in the Atsutla Range, Northern British Columbia.. 432
- Maxwell, C. H..... 329
- Mayodan meteorite, Rockingham County, N. Carolina. (Henderson, Perry)..... 1025
- McConnell, J. D. C..... 735
- McGregor, D. J..... 350
- McLaughlin, R. J..... 736
- McVeagh, W. J. with Earley, J. W. and Milne, I. H. Thermal, dehydration and x-ray studies on montmorillonite..... 770
- Measurement of Geologic Time, Report of Committee on. (Book Review)..... 878
- Measurement of Radioisotopes. (Taylor) (Book Review)..... 877
- Melilite, re-examination of the crystal structure of. (Smith)..... 643
- Mergner, J. L. with Reed, F. S. Preparation of rock thin sections..... 1184
- Metamict minerals (II): re-examination of fergusonite (Berman)..... 330
- Metasomatism by apophysal dikes in Crawford Notch region, N. H. (Henderson)..... 344
- Meta-uranocircite, Studies of radioactive compounds; VI. (Nuffield, Milne)..... 476
- Meyerhofferite and inyoite, x-ray crystallography of. (Christ)..... 912
- Mineral age measurement: chemical separations of Rb and Sr
- lite, a new rare earth carbonate mineral..... 741
- Miasnikov, V. S..... 426
- Mica group, studies in; Mineralogy of the rose muscovites. (Heinrich, Levinson)..... 25
- Mica group, studies in; Relationship between polymorphism and composition in the muscovite-lepidolite series. (Levinson)..... 88
- Micas, effect of grinding on: I. Muscovite. (Mackenzie, Milne)..... 737
- Micaceous minerals in shales, clays, and similar materials, x-ray method for studying orientation of. (Brindley)..... 398
- Microcline-sanidine stability relations. (Goldsmith, Laves).... 340
- Micrometric analysis, relation between area and volume. (Chayes)..... 737
- Microscope high-temperature heating stage. (Richter, Abell).... 1269
- Miller, E. T..... 351
- Miller, L. J..... 351
- Miller, R., III, The Webster-Adie ultramafic ring, Jackson County, N. Carolina, and secondary alteration of its chromite ..... 1134
- Milne, A. A..... 737
- Milne, I. H. with Earley, J. W. and Osthaus, B. B. Purification and properties of montmorillonite..... 335, 707
- and McVeagh, W. J. with Earley, J. W. Thermal, dehydration and x-ray studies on montmorillonite..... 336, 770
- with Nuffield, E. W. Studies of radioactive compounds: VI. Meta-uranocircite..... 476
- Milton, C., Hildebrand, F. A. and Sherwood, A. M. The identity of tinzenite with manganan axinite..... 1148

- by means of ion-exchange columns. (Davis, Aldrich).....
- Mineral age measurement: mass spectrometric determinations of Rb<sup>87</sup> and Sr<sup>87</sup> in lepidolites. (Aldrich, Doak and Davis).....
- Mineralized cavity in tholeiite dike in Northumberland. (Randall).....
- Mineralogic studies of the Colorado Plateau. (Weeks).....
- Mineralogical Society of America Award, acceptance of (Stewart).....
- Mineralogical Society of America Award, presentation to Frederick Henry Stewart. (Schaller).....
- Mineralogical Society of America, proceedings of the thirty-third annual meeting at Boston, Mass. .... 397, 734, 872  
—, List of correspondents, fellows and members.....  
—, List of former officers and meeting places.....
- Mineralogical Society (London) .....
- Mineralogy of Greenland. (Bøggild) (Book Review)..... 877
- Misch, P. .... 351
- Mitchell, R. S. Application of the Laue photograph to the study of polytypism and syntactic coalescence in silicon carbide. .... 60  
— and Giardini, A. A. Oriented olivine inclusions in diamond.....  
— with Ramsdell, L. S. A new hexagonal polymorph of silicon carbide, 19H..... 56
- Moleva, V. A. .... 426
- Monochromator, simple. (Vincent)..... 872
- Montmorillonite, purification and properties of. (Early, Osthaus, Milne)..... 335, 707
- Montmorillonite, relation between ionic substitution and swelling in. (Foster)..... 337, 994
- Montmorillonite, thermal dehydration and x-ray studies on.
- (Earley, Milne, McVeagh) .. 336, 770
- 333 Montroseite, a new vanadium oxide from the Colorado Plateaus. (Weeks, Cisney, Sherwood)..... 1235
- 327 Montroseite, a vanadium member of the diasporite group, crystal structure of. (Evans, Block) .. 1242
- 872 Moody, K. M. .... 398
- 362 Moore, F. B. .... 352
- 298 Moraesite, a new hydrous beryllium phosphate from Minas Gerais, Brazil. (Lindberg, Pecora, Barbosa)..... 1126
- 297 Mosesite, re-examination of. (Switzer, Murata, Fahey, Fosshag)..... 1225
- 317 Mousuf, A. K. .... 352
- Mrose, M. E. Studies of uranium minerals (XIII): Synthetic uranospinites. .... 1159  
— ..... 353, 354
- 369 Murata, K. J. with Lindberg, M. L. Faheyite, new phosphate mineral from Minas Gerais, Brazil ..... 263, 349  
—, Fahey, J. J. and Fosshag, W. F. with Switzer, G. Re-examination of mosesite .. 1225  
— with Faust, G. T. Stevensite redefined as a member of the montmorillonite group ..... 973
- 366 Murdoch, J. X-ray investigation of colusite, germanite and renierite ..... 354, 794
- 136 Muscovites, rose, studies in the mica group; mineralogy of. (Heinrich, Levinson) .. 25
- Muscovite-lepidolite series, relationship between polymorphism and composition in. (Levinson) .. 88, 349
- Nacrite occurrence at Shap, Westmorland. (Firman) .. 873
- Nagy, B. .... 355
- Native lead, Presidio County, Texas. (Lonsdale and Dickson) .. 350
- Nowacki, W., Fourier-synthese von

Kristallen und ihre Anwendung in der Chemie. (Book Review).....	421	from Minas Gerais, Brazil.....	1126
Nuffield, E. W. and Milne, I. H. Studies of radioactive compounds: VI-Meta-uranocircite.....	476	Pegmatites, genesis of. I. Occurrence and origin of giant crystals. (Jahns).....	356
— Benjaminitie.....	550	Pegmatites, genesis of (II): Quantitative analysis of lithium-bearing pegmatite, Mora County, N. Mexico. (Jahns) ..	563
Officer, C. B. ....	355	Perry, S. H. with Henderson, E. P. The Mayodan meteorite, Rockingham County, N. Carolina.....	1078
Olivine amphibolite of Parry Sound, Ontario, petrology of. (Friedman).....	338	Petrogenesis of a gabbro-granophyre complex in northern Wisconsin. (Leighton) .....	1025
Olivine inclusions in diamond, oriented. (Mitchell, Giardini) .....	136	Petrology of Judith Mts., Montana. (Wallace) .....	348
Osthaus, B. B. and Milne, I. H. with Earley, J. W. Purification and properties of montmorillonite.....	335, 707	Phair, G. ....	362
Oxygen isotopes in quartz of contrasted origin, ratio of. (Keith, Tuve, Davis, Doak).....	346	Pinson, W. H. ....	356
Palache, C. with Berman, H. and Frondel, C. System of Mineralogy of James Dwight Dana and Edward Salisbury Dana. (Book Review).....	419	Pisanite from Flin Flon, Manitoba. (Keating, Berry).....	356
Palermoite and goyazite, two new Sr minerals from North Groton, N. H. (Mrose).....	354	Pitchblende deposit, Boulder County, Colorado. (Moore and Cavender) .....	352
Parosite, crystallography of. (Donnay, Donnay).....	932	Pitchblende deposits on Quartz Hill, Gilpin County, Colorado. (Armstrong) .....	329
Parrish, W. Memorial of Samuel George Gorden.....	301	Pitchblende deposits, relation of to hypogene zoning in the Front Range mineral belt, Colorado. (Leonard) .....	348
Paths along which matter has moved in and around quartz and feldspars in metamorphic rocks. (Frederickson).....	337	Pitchblende in Triassic and Jurassic sediments of Colorado Plateau, occurrence and character of. (Rosenzweig, Gruner, and Gardiner) .....	357
Patterson, C. ....	361	Platinum metals in some Canadian uranium and sulphide ores. (Hawley, Rimsaite) .....	463
Pearce, D. W. with Barthauer, G. L. and Rulfs, C. L. Investigation of thucolite.....	802	Pleonaste from Caballo Mts., New Mexico. (Beck, Maxwell).....	329
Pecora, W. T. and Kerr, J. H. Burbankite and calkinsite, two new carbonate minerals from Montana.....	1169	Polymorphism and composition in muscovite-lepidolite series, relationship between. (Levinson) .....	349
—, and Barbosa, A. L. de M. with Lindberg, M. L. Morainesite, a new hydrous phosphate		Porphyry intrusions in Beartooth Range, Montana. (Stobbe) .....	360
		Positive and negative extinction angles in plagioclase feldspars. (Tunell) .....	404

- Precession orientation photos.  
(Fisher)..... 399
- Preferred orientation in x-ray  
powder diffraction patterns,  
minimizing the effects of.  
(Hildebrand)..... 1051
- Prehnite and ilvaite in micropeg-  
matic diorite, Southeast  
Papua. (Baker)..... 840
- Prehnitization of albite. (Watson)  
Press, F..... 197
- 337, 357
- Problems of chemical mineralogy.  
(Fleischer)..... 149
- Proctor, P. D. with Erd, R. C. and  
Foster, M. D. Faustite, a new  
mineral, the zinc analogue of  
turquois..... 964
- Pseudosymmetry and atomic pat-  
terns of crystals. (Wrinch).... 365
- Pucherite,  $\text{BiVO}_4$ , the structure of  
(Qurashi, Barnes)..... 489
- Pumpellyite mineral series.  
(Coombs)..... 735
- Purification and properties of mont-  
morillonite. (Earley, Osthaus,  
and Milne)..... 335
- Quantitative mineralogical analysis  
of clay and silt fractions by  
differential thermal analysis.  
(McLaughlin)..... 736
- Qurashi, M. M. and Barnes, W. H.  
A note on cone axis and upper  
level precession photographs.  
— and Barnes, W. H., The  
structure of pucherite,  $\text{BiVO}_4$ .  
—, Barnes, W. H., and Berry,  
L. G. The space group of  
conichalcite..... 552
- Quartz paramorphs after tridymite
- Quartz, replacement by feldspar,  
crystallographic control of.  
(Stringham)..... 489
- Radiation damage in zircon: a pos-  
sible age method. (Hurley,  
Fairbairn)..... 345
- Radioactive compounds, studies:  
VI—Meta-uranocircite. (Nuf-  
field, Milne)..... 476
- Radon leakage from radioactive  
minerals. (Bate, Giletti, Kulp) 329
- Ramsdell, L. S. and Mitchell, R. S.  
A new hexagonal polymorph  
of silicon carbide, 19H..... 56
- (Book Reviews)..... 147, 148
- Randall, B. A. O..... 872
- Rankinite, space-group and cell-  
dimensions. (Moody)..... 398
- Rathite-II, x-ray data..... 330
- Reed, F. S. and Mergner, J. L.  
Preparation of rock thin sec-  
tions..... 1184
- Renierite, colusite and germanite,  
x-ray investigation of. (Mur-  
doch)..... 354, 794
- Residual kaolins of southern Ap-  
palachians. (Sand, Bates).... 358
- Resolving power of a microscope,  
effective increase in, to reveal  
unsuspected detail in thin sec-  
tions. (Frederickson)..... 815
- Rhodonite, johannsenite and fer-  
roan johannsenite at Vana-  
dium, New Mexico. (Allen,  
Fahey)..... 883
- Richter, D. H. and Abell, J. F. A  
simple high-temperature mi-  
croscope heating stage..... 1269
- Rigby, G. R. The Thin-Section  
Mineralogy of Ceramic Mate-  
rials. (Book Review)..... 146
- Rimsaite, Y. with Hawley, J. E.  
Platinum metals in some  
Canadian uranium and sul-  
phide ores..... 463
- Riversideite, tobermorite and  
plumbierite, hydrated calcium  
silicates. (McConnell)..... 735
- Roan and Carolina gneisses in the  
Spruce Pine District, N. Caro-  
lina, character and origin of.  
(Brobst)..... 331
- Roberts, A. L..... 735
- Robinson, G. D. The Leona rhyo-  
lite, Alameda County, Cali-  
fornia..... 1204
- Rocks for Chemists. (Shand) (Book  
Review)..... 874
- Rock thin sections, preparation of.

(Reed, Mergner).....	1184	Stewart.....	297
Roebling Medal, acceptance of (Wright).....	292	Schmidt, E. R.....	873
Roebling Medal, presentation to Frederick Eugene Wright. (Kraus).....	290	Schmuk- und Edelsteinkundliches Taschenbuch. (Chudoba, Gübelin) (Book Review).....	876
Roentgenite, $3\text{CeFCO}_3 \cdot 2\text{CaCO}_3$ , a new mineral from Greenland. (Donnay).....	868	Schneiderhöhn, H., Erzmikroskopisches Praktikum. (Book Review).....	422
Roentgenite, x-ray crystallography of. (Donnay, Donnay).....	932	——— Genetische Lagerstätten- gliederung auf Geotektonischer Grundlage. (Book Review) .....	738
Rosenzweig, A.....	357	Seager, A. F.....	397
Ross, Clarence S. (Faust).....	879	Seaman, D. M. Augelite from peg- matites in New Hampshire.....	728
———, Bibliography of. (Hooker). 1272		Second decimal, in defense of. (Chayes).....	784
Rowe, R. B. with Cameron, E. N. and Weis, P. L. Fluid inclu- sions in beryl and quartz from pegmatites of Middletown, Conn.....	218	Seismic refraction measurements in Grand Banks and adjacent shelves. (Press and Beckman) .	357
Rowland, E. O.....	872	Seismic refraction measurements in the Gulf of Maine. (Drake, Worzel, and Beckmann) .....	335
Roy, D. M.....	358	Serpentine group, mineralogy of. (Nagy, Bates) .....	355
Roy, R. and Francis, E. E. The distinction of sillimanite from mullite by infra-red techniques	725	Shand, S. J. Rocks for Chemists. (Book Review).....	874
——— .....	358	Shaw, D. M.....	359
Rulfs, C. L. and Pearce, D. W. with Barthauer, G. L. Investi- gation of thucolite.....	802	Sherwood, A. M. with Weeks, A. D. and Disney, E. A. Montroseite, a new vanadium oxide from the Colorado Plateaus.....	1235
Russell, R. D.....	332, 333	——— with Milton, C. and Hilde- brand, F. A. The identity of tinzenite with manganoan axi- nite .....	1148
Sahamalite, a new rare earth car- bonate mineral. (Jaffe, Meyro- witz, Evans).....	741	Short, Maxwell Naylor, memorial of. (Anthony).....	309
Sakurai, K.....	426	Silicon carbide, application of the Laue photograph to the study of polytypism and syntactic coalescence. (Mitchell) .....	60
Salina salt of Michigan, textural re- lationships in. (Dellwig, Briggs).....	334	Silicon carbide, 19H, a new hexag- onal polymorph. (Ramsdell, Mitchell) .....	56
Sand, L. B. and Bates, T. F. Endel- lite, halloysite, and kaolinite, differential thermal analysis of.....	271	Sillimanite, distinction from mul- lite by infra-red techniques. (Roy, Francis).....	725
——— .....	358	Silver, C. and Kelly, V. C. Geology of the Caballo Mountains. (Book Review) .....	878
Saponite from Krugersdorp Dis- trict, Transvaal. (Schmidt, Heystek).....	873		
Schaller, Waldemar T. (Fahey) ——— Bibliography of. (Hooker). 1276			
——— Presentation of the Miner- alogical Society of America Award to Frederick Henry			

- Simons, F. S. and Vlisidis, A. C.  
with Smith, R. L. Hidalgoite,  
a new mineral..... 1218
- Sir Douglas Mawson Anniversary  
Volume. (Book Review)..... 145
- Slawson, C. B. Synthesis of graphite  
at room temperatures..... 50
- Smith, F. G. Decrepitation charac-  
teristics of some high grade  
metamorphic rocks..... 448
- Complex inclusions in peg-  
matite minerals..... 559
- Smith, J. V. Re-examination of the  
crystal structure of melilite... 643
- Smith, R. L., Simons, F. S. and  
Vlisidis, A. C. Hidalgoite, a  
new mineral..... 1218
- Smithson, F..... 737
- Snell, W. A..... 347
- Sodium chloride, x-ray molecular  
weight and soundness of.  
(Straumanis)..... 662
- Sodium sulfate and potassium sul-  
fate and some other synthetic  
minerals, structural crystallo-  
graphic relation between.  
(Hilmy)..... 118
- Sphalerite and wurtzite, note on.  
(Corey)..... 141
- Spherulitic alkali rhyolite dikes in  
the Atsutla Range, Northern  
British Columbia. (Mathews,  
Watson)..... 432
- Spodumene minerals, composition,  
tenebrescence and lumines-  
cence of. (Claffy)..... 919
- Stability of magnesian calcites.  
(Graf and Goldsmith)..... 342
- Steacy, H. R. An occurrence of  
uraninite in a black sand..... 549
- Steamboat Springs, Nevada, three-  
dimensional picture of. (White)  
Stern, T. W..... 364
- Stevensite redefined as a member  
of the montmorillonite group.  
(Faust, Murata)..... 359
- Stewart, F. H. Acceptance of the  
Mineralogical Society Award.. 298
- Stieff, L. R..... 359
- Stobbe, H..... 360
- Straumanis, M. E. Density deter-  
mination by a modified sus-  
pension method; x-ray mole-  
cular weight, and soundness  
of sodium chloride..... 662
- Stringham, B. Crystallographic con-  
trol of replacement of quartz  
by feldspar..... 834
- Structure Reports for 1949. Vol. 12.  
(Wilson-Editor) (Book Re-  
view)..... 148
- Sulpho-salts, studies of; XVII-Can-  
nizzarite. (Graham, Thomp-  
son, Berry)..... 536
- Sulphur. A Study by the Secre-  
tariat of the Chemical Prod-  
ucts Committee. (Book Re-  
view)..... 148
- Sutter buttes restudied. (Williams,  
Curtis)..... 364
- Switzer, G. Afillite from Crest-  
more, California..... 629
- with Fleischer, M. The  
bavenite problem..... 988
- , Murata, K. J., Fahey, J. J.  
and Foshag, W. F. Re-exami-  
nation of mosesite..... 1225
- Synchisite, x-ray crystallography  
of. (Donnay, Donnay)..... 932
- System  $MgO \cdot Al_2O_3 \cdot SiO_2 \cdot H_2O$ ,  
studies in. (Roy, Roy)..... 358
- System of Mineralogy of James  
Dwight Dana and Edward  
Salisbury Dana. (Palache, Ber-  
man and Frondel) (Book Re-  
view)..... 419
- Synthesis of uranium minerals at  
room and elevated tempera-  
tures. (Gruner)..... 342
- Tabellen zur Optischen Bestim-  
mung der Gesteinbildenden  
Minerale. (Tröger) (Book Re-  
view)..... 144
- Taylor, D. Measurement of Radio-  
isotopes. (Book Review)..... 877
- Taylor, H. F. W..... 397
- Terpstra, P. Thousand and One  
Questions on Crystallographic  
Problems. (Book Review).... 421

- Textural relationships in the Salina salt of Michigan. (Dellwig, Briggs)..... 334
- Theoretical considerations in gamma-ray well logging. (Goodman)..... 341
- Thermal, dehydration, and x-ray studies on montmorillonite. (Earley and Milne)..... 336
- Thermal transformations in layer silicate minerals. (Tooker)....
- Thermochemical Methods in Silicate Investigations. (Eitel) (Book Review).....
- Thin rock sections, rapid method for production of. (Rowland)....
- Thin-section Mineralogy of Ceramic Materials. (Rigby) (Book Review).....
- Thompson, R. M. with Graham A. R. and Berry, L. G.** Studies of mineral sulpho-salts: XVII-Cannizarite.....
- Mineral occurrences in Western Canada.....
- Thorite and zircon, hydroxyl substitution in.** (Frondel)..... 1007
- Thorium, mass spectrographic determination of. (Tilton, Patterson, Inghram)..... 361
- Thousand and One Questions on Crystallographic Problems. (Terpstra) (Book Review).... 421
- Three-dimensional picture of Steamboat Springs, Nevada. (White).....
- Thucolite, investigation of.** (Barthauer, Rulfs, Pearce)..... 364
- Thurston, R. H..... 802
- Tilton, G. R..... 360
- Tinzenite, identity with manganesean axinite. (Milton, Hildebrand, Sherwood)..... 361
- Toothaker, Charles Robinson, memorial of. (Faust)..... 1148
- Tooker, E. W.....
- Trace elements in pegmatites of the Black Hills, S. Dakota. (Higazy)..... 172
- Trace element distribution in mag-
- matic minerals. (Shaw)..... 359
- Transactions of the Edinburgh Geological Society, Vol. XV, Campbell Volume. (Holmes) (Book Review)..... 425
- Tridymite and christensenite. (Mason)..... 866
- Trites, A. F., Jr..... 360
- Tröger, W. E. Tabellen zur Optischen Bestimmung der Gesteinsbildenden Minerale. (Book Review)..... 144
- Tryon, L. E..... 347
- Tuff-breccia, intrusive. (Hay).... 343
- Tunell, G. Definitions of positive and negative extinction angles on the plagioclase feldspars... 404
- Tuttle, O. F..... 361
- Tuve, M. A..... 346
- Uraninite in a black sand, occurrence of. (Steacy)..... 549
- Uranium-bearing pegmatitic bodies in San Bernardino County, California.** (Hewett, Glass) ... 1040
- Uranium deposits in Grant County, New Mexico. (Gillerman) ... 340
- Uranium minerals, studies of (XI): Gummite.** (Frondel)..... 339
- (XII): Status of billietite and becquerelite. (Frondel, Cuttitta)..... 339, 1019
- (XIII): Synthetic uranospinites. (Mrose)..... 1159
- Uranium minerals, synthesis of, at room and elevated temperatures (Gruner)..... 342
- Uranium ore controls in Happy Jack Mine, White Canyon, Utah. (Miller)..... 351
- Uranospinites, synthetic.** (Mrose) .. 1159
- Urey, H. C..... 338
- Vanadium oxides, thermodynamic relations among, and their relation to the oxidation states of the uranium ores of the Colorado Plateaus.** (Garrels). 1251
- Variation in normative vs. modal

feldspar of granites, significance of. (Tuttle) . . . . .	361	of the Black Hills, South Dakota . . . . .	671
Vermaas, F. H. S. New occurrence of barium feldspar at Otjosondou, S. W. Africa, and an x-ray method of determining composition of hyalophane . . . . .	845	—, with Cameron, E. N. and Rowe, R. B. Fluid inclusions in beryl and quartz from pegmatites of Middletown, Conn. . . . .	218
Vincent, E. A. . . . .	736	— . . . . .	363
Vincent, H. C. G. . . . .	872	West, C. D. . . . .	363
Vlisisidis, A. C. with Smith, R. L. and Simons, F. S. Hidalgoite, a new mineral . . . . .	1218	Western Canada, mineral occurrences. (Thompson) . . . . .	545
Wager, L. R. . . . .	736	White, D. E. . . . .	364
Walker Mineralogical Club . . . . .	561	White, W. A. Allophanes from Lawrence County, Indiana . . . . .	634
Wallace, R. M. A proposed petrographic method for the rapid determination of ilmenite . . . . .	729	Whittaker, E. J. W. . . . .	734
Wallace, S. R. . . . .	362	Williams, H. . . . .	364
Waring, C. L. and Worthing, H. Spectrographic method for determining trace amounts of lead in zircon and other minerals . . . . .	827	Wolfe, C. W. (Book Review) . . . . .	423
— and Berman, J. with Larsen, E. S., Jr. Zoned zircon from Oklahoma . . . . .	1118	Woodruffite and hydrohausmanite. (Frondel) . . . . .	761
Waterston, C. D. . . . .	398	Woolard, L. E. . . . .	347
Watson, K. D. with Mathews, W. H. Spherulitic alkali rhyolite dikes in the Atsuta Range, Northern British Columbia . . . . .	432	Worthing, H. with Waring, C. L. Spectrographic method for determining trace amounts of lead in zircon and other minerals . . . . .	827
Watson, K. D. Prehnitization of albite . . . . .	197	Worzel, J. L. . . . .	335
Weaver, C. E. A classification of the 2:1 clay minerals . . . . .	698	Wright, F. E. Acceptance of the Roebling Medal . . . . .	292
— Lath shaped non-expanded dioctahedral 2:1 clay mineral . . . . .	279	Wrinch, D. . . . .	365
Webster-Addie ultramafic ring, Jackson County, N. Carolina, and secondary alteration of its chromite. (Miller) . . . . .	1134	Xonotlite occurrence in Puerto Rico. (Kaye) . . . . .	860
Weedon, D. S. . . . .	736	Yellowknife Bay Area, N. W. T., mineralogy of. (Coleman) . . . . .	506
Weeks, A. D., Cisney, E. A. and Sherwood, A. M. Montroseite, a new vanadium oxide from the Colorado Plateaus . . . . .	1235	Yoder, H. S., Jr. . . . .	365
— . . . . .	362	Youell, R. F. . . . .	398
Weis, P. L. Fluid inclusions in minerals from zoned pegmatites		Yugawaralite. (Sakurai and Hayashi) . . . . .	426
		Zinc hoegbomite. (Moleva and Miasnikov) . . . . .	426
		Zircon, hydroxyl substitution in. (Frondel) . . . . .	1007
		Zircon, zoned, from Oklahoma. (Larsen, Waring, Berman) . . . . .	1118
		Zoning in pegmatite districts. (Heinrich) . . . . .	68
		Zur Struktur und Materie der Festkörper. (Book Review) . . . . .	874