

## INDEX TO VOLUME 34

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 of infrared radiation by powdered silica minerals. (Keller, Pickett)</b> ..... 855	<b>axial angle</b> ..... 559 ..... 274
<b>Accessory elements in pegmatites, distribution of. I. Theory. (Holland, Kulp)</b> .....35, 278	<b>Bader, H. Definition of Euclidean geometrical symmetry</b> ..... 226 ———. <b>Screw axes of symmetry and their symbols</b> ..... 752
Activity measurements of micro-radioactive inclusions. (Yagoda)..... 285	Bailey, D. A. Conversion of amorphous silica to quartz..... 601
<b>Adams, C. E. with Tunell, G. Symmetry and crystal structure of bornite</b> ..... 824	Bailey, R. K. Talc in the salines of potash field near Carlsbad, Eddy County, New Mexico..... 757
<b>Aggie Creek meteorite from Seward Peninsula, Alaska. (Henderson)</b> ..... 229	Bannister, F. A..... 614
Ahlfeld, F..... 133	Barium mineral, new, from Benallt manganese mine, Rhiw, Carnarvonshire. (Smith, Bassister, Hey)..... 614
Altaite..... 361	<b>Barnes, W. H. Some comments on the Buerger precession method for determination of unit cell constants and space groups</b> ..... 173 ———. <b>Unit cell and space group of childrenite</b> ..... 12 ———. <b>Unit cell and space group of lindgrenite</b> ..... 163 ———. <b>Unit cell and space group of proberite</b> ..... 19 ———. Corrections to papers on proberite and lindgrenite..... 611
<b>Aluminium fluoride minerals, observations on. (Ferguson)</b> ... 383	<b>Barshad, I. Nature of lattice expansion and its relation to hydration in montmorillonite and vermiculite</b> ..... 675
American Geological Institute... 620	Baryite bearing nodules from Middle Lias of the East Midlands. (Taylor)..... 337
Analcime suite of igneous rocks, Brewster Co., Texas. (Lonsdale, O'Neill)..... 280	Basaltic fan jointing induced by aqueous chilling. (Fuller)..... 276
Analysis of rock-forming minerals by spectrochemical methods in petrological research (Strock). 284	<b>Bastnäsite and xenotime, petrographic distinction of. (Foster)</b> 830
Anatase, occurrence in sedimentary kaolin. (Nagelschmidt, Donnelly, Morcom)..... 132	Bates, T. F..... 274
Anderson, J. L. Pseudotachylite of the Antietam quartzite..... 331	Bayleyite..... 274
Andersonite..... 274	<b>Beatty, S. v. D. X-ray spectrometer study of mica powders</b> ..... 74
Andrews, K. W..... 769	<b>Bentonite, Wyoming, fluorescence study of. (Brown)</b> ..... 98
Andrews site..... 534	
Antimonial silver ore from Cobalt, Ontario. (Wells)..... 456	
Antimony and tellurium minerals in western Canada, further occurrences of (Warren, Thompson)..... 458	
Arrojadite and graftonite from the Nickel Plate Mine, South Dakota. (Lindberg)..... 279	
Atterberg plastic limits of clay minerals. (White)..... 508	
Axelrod, J. M. and Grimaldi, F. S. Muscovite with small optic	

- Bentonite, fluorescence test of.  
(Hseung, Yeh)..... 000
- Beraunite..... 536
- Berry, L. G..... 275
- Biotite,  $x$ -ray data..... 79
- Bodenbenderite, a discredited species.  
(Milton, Myers)..... 608
- Borickite..... 701
- Bornite, symmetry and crystal structure of. (Tunell, Adams). 824
- Bracewell, S..... 339
- Bragg, W. L. Acceptance of the Roebing Medal of the Mineralogical Society of America. 238
- Brazilianite, optical data..... 92
- Brindley, G. W..... 337
- Brown, B. W. Fluorescence study of Wyoming bentonite..... 98
- Buerger, M. J. Fourier summations for symmetrical crystals..... 771
- Buerger precession method for the determination of unit cell constants and space groups, some comments on. (Barnes)..... 173
- Buttgenbach, H..... 618
- Calaverite..... 347
- Calcioferrite..... 701
- Calcite, natural solid solution effects in. (Andrews)..... 769
- Canadian mineralogy, contributions to..... 341-469
- Cancrinite from Blue Mountain, Ontario. (Phoenix, Nuffield) 452
- Charting five and six variables within the bounding tetrahedra of hypertetrahedra. (Mertie)..... 280, 706
- Chayes, F. Simple point counter for thin-section analysis..... 1, 600
- ..... 275
- Childrenite, unit cell and space group of. (Barnes)..... 12
- Chloritoid from Megantic County, Quebec. (Milne)..... 422
- Claffy, E. W. and Ginther, R. J. with Schulman, J. H. Some observations on the crystallization of silicic acid..... 68
- Clay minerals, absorption of infra-red radiation by. (Keller).... 278
- Clay minerals, Atterberg plastic limits of. (White)..... 508
- Clay mineral names, glossary of (Kerr, Hamilton)..... 618
- Clays, International Committee for Study of..... 612
- Clinopyroxenes, common, chemical composition and optical properties of. Part I. (Hess)..... 621
- Clinzoisite from Camaderry Mt., Glendalough, Co. Wicklow. (Johnston)..... 132
- Coloradoite..... 363
- Committee on Measurement of Geologic Time, report of. 1947-48 (Marble)..... 766
- Copper in California, Bull. 144, State Division of Mines. Book review..... 768
- Corrego Frio pegmatite, Minas Gerais: Scorzalite and souzalite, two new phosphate minerals (Pecora, Fahey)..... 83
- Cryolite,  $x$ -ray data..... 384
- Cryolithionite,  $x$ -ray powder data. 384
- Crystallization of basaltic magma as recorded by variation of crystal-size in dikes. (Winkler) 338
- Crystallography, Conference on teaching of. (Donnay, Fisher, Gordon, Peacock, Tunell).... 288
- Dake, H. C..... 134
- Dana's Minerals and How to Study Them. (Hurlbut) Book review 616
- Das Bestimmen der Mineralien. (Köhler) Book review..... 767
- Dedolomitization and its relation to a possible derivation of a magnesium-rich hydrothermal solution. (Faust)..... 789
- De Ment, J..... 134
- Derry, D. R..... 275
- Dervillite. (Weil)..... 618
- Die Entwicklung der chemischen Elemente. Part II. (Efremov) Book review..... 617
- Differential thermal analysis apparatus, improved. (Kulp,

- Kerr) . . . . . 839
- Differential thermal analysis curves of siderite, variations in. (Rowland, Jonas) . . . . . 550
- Dolomite, unusual, from Portsoy, Banff. (Harry, Patterson) . . . . . 615
- Donnay, J. D. H. . . . . 288
- Donnelly, H. F. . . . . 132
- Dreyer, R. M., Garrels, R. M., and Howland, A. L. Liquid inclusions in halite as a guide to geologic thermometry . . . . . 26, 276
- Dufrenite problem (Fron del) . . . . . 513
- Early, J. W. Studies of natural and artificial selenides: I-Kockmannite,  $\text{CuSe}$ . . . . . 435
- Eastonite, x-ray data . . . . . 77
- Edwards, A. B. Natural ex-solution intergrowths of magnetite and hematite . . . . . 759
- Efremov, N. Die Entwicklung der chemischen Elemente. Part II. Book review . . . . . 617
- Egweite . . . . . 701
- Empressite . . . . . 357
- Enargite and tennantite, hydrothermal synthesis. (Gaines) . . . . . 276
- Ervin, G., Jr., and Osborn, E. F. X-ray data on synthetic melilites . . . . . 717
- Etching iron meteorites, improved method of. (Reberholt, Henderson) . . . . . 606
- Euclidean geometrical symmetry, a definition of. (H. Bader) . . . . . 226
- Eudialyte in quartz-bearing syenites. (Nockolds) . . . . . 769
- Evaporites of East Yorkshire, petrology of. (Stewart) . . . . . 614
- Ex-solution intergrowths, natural, of magnetite and hematite. (Edwards) . . . . . 759
- Fahey, J. J. with Murdoch, J. Geikielite, a new find from California . . . . . 281, 835
- , with Pecora, W. T. Corrego Frio pegmatite, Minas Gerais: scorzalite and souzalite, two new phosphate minerals . . . . . 83
- . Scorzalite from South Dakota, a new occurrence . . . . . 282, 685
- Faust, G. T. Dedolomitization and its relation to a possible magnesium-rich solution . . . . . 789
- Ferguson, R. B. Aluminium fluoride minerals, observations on . . . . . 383
- Ferrous iron and silica determinations. (Hey) . . . . . 769
- Fisher, D. J. . . . . 289
- Forman, S. A. and Peacock, M. A. Crystal structure of rickardite,  $\text{Cu}_{4-x}\text{Te}_2$  . . . . . 441
- Foster, W. R. Petrographic distinction of xenotime and bastnäsite . . . . . 830
- Fourier summations for symmetrical crystals. (Buerger) . . . . . 771
- Fourier Transforms and Structure Factors. (Wrinch) Book review . . . . . 129
- Franklin, V. with Wolfe, C. W. Refractive indices of high index liquids by the prism method on the two-circle goniometer . . . . . 893
- Friedman, I. I. Laboratory growth of quartz . . . . . 583
- Frohbergite . . . . . 360
- Fron del, C. Crystallography of spangolite . . . . . 181
- . The dufrenite problem . . . . . 513
- . Wolfeite, xanthoxenite, and whitlockite from Palermo Mine, New Hampshire . . . . . 692
- and Palache, C. Retgersite,  $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$ , a new mineral . . . . . 188, 276
- Fron delite and the frondelite-rockbridgeite series. (Lindberg) . . . . . 541
- Fuller, R. E. . . . . 276
- Gabbro-granite transition in Norfolk County, Massachusetts, remains of. (Chayes) . . . . . 275
- Gaines, R. V. . . . . 276
- Game, P. M. . . . . 614, 615
- Garnet and associated minerals of

- the Barton Mine near North Creek, N. Y., paragenesis of (Shaub) . . . . . 573
- Garnet, physical analysis of poly-component. (Levin) . . . . . 279
- Garrels, R. M. and Howland, A. L. with Dreyer, R. M. Liquid inclusions in halite as a guide to geologic thermometry . . . . . 26, 276
- Gault, H. R. Frequency of twin types in quartz crystals . . . . . 142
- Gearsutite, x-ray powder data . . . . . 385
- Geikielite, a new find from California. (Murdoch, Fahey) . . . . . 281, 835
- Geologic thermometer, variable inversion temperature of quartz as a. (Tuttle) . . . . . 723
- Geologic thermometry, liquid inclusion in halite as a guide to. (Dreyer, Garrels, Howland) . . . . . 26, 276
- Geothermometer, decrepitation. (Peach) . . . . . 413
- Geothermometry, liquid inclusions in. (Peach) . . . . . 460
- Geschichte des Goldes. (Quiring) Book review . . . . . 617
- Gesteine und Minerallagerstätten. Vol. I. (Niggli) Book review . . . . . 128
- Giannetite. (Guimarães) . . . . . 770
- Ginther, R. J. with Schulman, J. H. and Claffy, E. W. Some observations on the crystallization of silicic acid . . . . . 68
- Glass, J. J. and Vhay, J. S. A new locality for ludlamite . . . . . 335
- Goldsmith, J. R. Some aspects of system  $\text{NaAlSi}_3\text{O}_8\text{-CaO}\cdot\text{Al}_2\text{O}_3$ . . . . . 277, 471
- Golledge, A., and Grenwell-Wells, H. J., with Young, R. S. Magnetite crystals from a copper converter . . . . . 761
- Goodspeed, G. E. . . . . 277
- Goodyear, J. . . . . 337
- Goongarrite and warthaite discredited. (Thompson) . . . . . 459
- Gordon, S. G. . . . . 291
- Graftonite (Lindberg) . . . . . 279
- Graham, A. R. Artificial pyrrhotite . . . . . 462
- Grain-thin sections and other teaching aids in optical mineralogy. (von Huene) . . . . . 121
- Grenwell-Wells, H. J. and Golledge, A. with Young, R. S. Magnetite crystals from a copper converter . . . . . 761
- Grimaldi, F. S. with Axelrod, J. M. Muscovite with small optic axial angle . . . . . 559  
 ——— . . . . . 274
- Gruver, R. M., Henry, E. C., and Heystek, H. Suppression of thermal reactions in kaolinite . . . . . 869
- Guimarães, D. . . . . 770
- Hale, D. R. and Hurlbut, C. S., Jr., Quartz sphere grown into a faced crystal . . . . . 596
- Halloysite-metahalloysite transition, effect of temperature and pressure. (Brindley, Robinson, Goodyear) . . . . . 337
- Halloysite, transition to metahalloysite, in relation to relative humidity. (Brindley, Goodyear) . . . . . 337
- Handbook of Uranium Minerals. (DeMent, Dake) Book review . . . . . 134
- Harry, W. T. . . . . 615
- Hedleyite . . . . . 364
- Heinrich, E. Wm. . . . . 278  
 ———. Book reviews . . . . . 128, 616, 617, 764, 765
- Hematite-goethite relations in neutral and alkaline solutions under pressure. (Smith, Kidd) . . . . . 403
- Henderson, E. P. Aggie Creek meteorite from Seward Peninsula, Alaska . . . . . 229  
 ——— with Hess, H. H. Moore County Meteorite; a further study with comment on its primordial environment . . . . . 287, 494, 763  
 ——— with Perry, S. H. The Wathena, Doniphan Co. Kansas, meteorite . . . . . 102  
 ——— with Reberholt, B. O. Improved method of etching iron meteorites . . . . . 606

- Henry, E. C. and Heystek, H. with Gruver, R. M. Suppression of thermal reactions in kaolinite. 869
- Hess, H. H. Chemical composition and optical properties of common clinopyroxenes. 621
- with Henderson, E. P. Moore County Meteorite; a further study with comment on its primordial environment. 278, 494, 763
- Hessite. 354
- Hey, M. H. 614, 769
- Heystek, H. with Gruver, R. M. and Henry, E. C. Suppression of thermal reactions in kaolinite. 869
- Hildebrand, F. A. 274
- Holdenite, Mooreite, and torreyite, x-ray study of (Prewitt-Hopkins). 589
- Holland, H. D. and Kulp, J. L. Distribution of accessory elements in pegmatites. I. Theory. 35, 278
- Holmes, R. J. and Wright, H. D. with Kulp, J. L. Thermal study of rhodochrosite. 195, 285
- Howland, A. L. with Dreyer, R. M. and Garrels, R. M. Liquid inclusions in halite as a guide to geologic thermometry. 26, 276
- Hseung, Y. and Yeh, C. C. Fluorescence test of bentonite. 896
- Hunt, W. F. Book review. 766
- Hurlbut, C. S., Jr., Dana's Minerals and How to Study Them. Book review. 616
- with Hale, D. R. Quartz sphere grown into a faced crystal. 596
- Igneous rocks of the Capitan Quadrangle, New Mexico (Patton). 281
- International Committee for Study of Clays, organization of. 612
- Jaffe, H. Visual arc spectroscopic detection of halogens, rare earths and other elements by use of molecular spectra. 667
- Jarlite, x-ray and optical data. (Ferguson). 386
- Johnson, L. R. with Zerkov, S. Crystal chemical relations in inorganic piezoelectric materials. 61
- Johnston, R. W. 132
- Jonas, E. C. with Rowland, R. A. Variations in differential thermal analysis curves of siderite. 282, 550
- Joseite A. 365
- Joseite B. 367
- Jujuyite (Ahlfeld). 133
- Kaiman, S. Lattice spacing for glancing angles with iron x-radiation. 465
- Kaolin minerals, electron microscopy of. (Bates, Hildebrand, Swineford). 274
- Keller, W. D. and Pickett, E. E. Absorption of infrared radiation by powdered silica minerals. 855
- 278
- Kerr, P. F. with Kulp, J. L. Improved differential thermal analysis apparatus. 839
- with Vaes, J. F. Sengierite: a preliminary description. 109
- Kidd, D. J. with Smith, F. G. Hematite-goethite relations in neutral and alkaline solutions under pressure. 403
- Klockmannite. (Earley). 435
- Köhler, A. Das Bestimmen der Mineralien. Book review. 767
- Koktaite (Sekanina). 618
- Kraus, E. H. Book review. 767
- Krennerite. 349
- Kulp, J. L. with Holland, H. D. Distribution of accessory elements in pegmatites, I. Theory. 35, 278
- with Wright, H. D. and Holmes, R. J. Thermal study of rhodochrosite. 195, 285

- and Kerr, P. R. Improved differential thermal analysis apparatus. . . . . 839
- Lacroix, A., memorial of. (Orcel) . . . . . 242
- Lakeside No. 70 transparent cement, notes on. (von Huene) . . . . . 125
- Lane, Alfred Church, memorial of. (Larsen) . . . . . 249
- Larsen, E. S. Jr., Memorial of Alfred Church Lane . . . . . 249
- Lattice expansion and its relation to hydration in montmorillonite and vermiculite (Barshad) . . . . . 675
- Lattice spacings for glancing angles with iron  $\alpha$ -radiation. (Kaiman) . . . . . 465
- Law of Rationality to the law of Bravais. (Donnay) . . . . . 288
- Laubmannite . . . . . 534
- Lepidolite,  $\alpha$ -ray data . . . . . 77
- Levin, S. B. . . . . 279
- Lindberg, M. L. Frondelite and the frondelite-rockbridgeite series . . . . . 541  
 — . . . . . 279
- Lindgrenite, unit cell and space group of. (Barnes) . . . . . 163, 611
- Liquid inclusions in halite as a guide to geologic thermometry. (Dreyer, Garrels, Howland) . . . . . 26, 276
- Lithium-bearing pegmatites in Northern Quebec. (Derry) . . . . . 275
- Lonsdale, J. T., and O'Neill, K. K. . . . . 280
- Ludlamite from the Palermo mine, North Groton, New Hampshire (Wolfe) . . . . . 94
- Ludlamite, a new locality for. (Glass, Vhay) . . . . . 335
- Magnetite crystals from a copper converter. (Young, Colledge, Grenwell-Wells) . . . . . 761
- Manchester, James Greenfield, memorial of. (Stanton) . . . . . 253
- Marble, J. P. Report of committee on measurement of Geologic time, 1947-48. . . . . 766
- Mathias, M. . . . . 132
- McKinstry, H. Mineral isograds in southern Pennsylvania. . . . . 874
- Melilite, synthetic,  $\alpha$ -ray data on. (Ervin, Osborn) . . . . . 717
- Melonite . . . . . 359
- Melvin, J. H. Memorial of Lewis Gardner Westgate . . . . . 256
- Mertie, J. B., Jr., Charting five and six variables on the bounding tetrahedra of a hypertetrahedra . . . . . 280, 706
- Merumite (Bracewell) . . . . . 339
- Meta-halloysite, Random layer structure. (Brindley, Robinson) . . . . . 337
- Methyl-ethyl ketone as an index liquid. (Wherry) . . . . . 613
- Meteorite collections, list of catalogues of. (Spencer) . . . . . 132
- Mica powders,  $\alpha$ -ray spectrometer study of. (Beatty) . . . . . 74
- Milne, I. H. Chloritoid from Megantic County, Quebec . . . . . 422
- Milton, C. and Myers, A. T. Bodenbenderite, a discredited species . . . . . 608  
 — . . . . . 274
- Mineral isograds in southern Pennsylvania. (McKinstry) . . . . . 874
- Mineral, what is a? (A. N. Winchell) . . . . . 220, 284
- Mineralogical crystallography, objectives in teaching of. (Fisher) . . . . . 289
- Mineralogical Society of America. Announcement of 30th Annual Meeting . . . . . 340  
 —. List of correspondents, fellows, members, and subscribers . . . . . 293  
 —. Proceedings of the twenty-ninth annual meeting at New York, N. Y. . . . . 267
- Mineralogical Society (London) . . . . . 132, 337, 614, 769
- Mineralogy, prospect of. (M. A. Peacock) . . . . . 135
- Mohs' scale, correlation with Vicker's hardness numbers. (Taylor) . . . . . 768

Montbrayite.....	345	Nockolds, S. R.....	769
<b>Montmorillonite and vermiculite, nature of lattice expansion and its relation to hydration in. (Barshad).....</b>	<b>675</b>	<b>Nuffield, E. W. with Phoenix, R. Cancrinite from Blue Mountain, Ontario.....</b>	<b>452</b>
<b>Moore County meteorite: a further study with comment on the primordial environment. (Hess, Henderson).....</b>	<b>278, 494, 763</b>	Olivier, C. P. Note on Aggie Creek meteorite.....	232
<b>Mooreite, x-ray study of. (Prewitt-Hopkins).....</b>	<b>589</b>	Olivines from South African melilite-basalts. (Mathias).....	132
Morcom, A. J.....	132	O'Neill, K. K.....	280
Morenosite (optical data).....	193	Optical constants and thickness of thin sections, determination of. (Game).....	615
Morey, G. W.....	281	<b>Orcel, J. Memorial of A. Lacroix..</b>	<b>242</b>
Morphological crystallography, teaching of. (Peacock).....	291	<b>Osborn, E. F. with Ervin, G. Jr. X-ray data on synthetic melilites.....</b>	<b>717</b>
<b>Moyd, L. Petrology of the nepheline and corundum rocks of southeastern Ontario.....</b>	<b>736</b>	<b>Owyheeite (Robinson).....</b>	<b>398</b>
Murata, K. J.....	274	<b>Palache, C. with Frondel, C. Retgersite, NiSO<sub>4</sub>·6H<sub>2</sub>O, a new mineral.....</b>	<b>188, 276</b>
<b>Murdoch, J. and Fahey, J. J. Geikielite, a new find from California.....</b>	<b>281, 835</b>	Paraguanjuatite (Ramdohr).....	619
<b>Muscovite with small optic axial angle. (Axelrod, Grimaldi)...</b>	<b>559</b>	Parajamesonite. (Zsivny, Naray-Szabo).....	133
Muscovite with 3-layered monoclinic structure. (Axelrod, Grimaldi).....	565	Patterson, E. M.....	615
Muscovite, x-ray data.....	78	Patton, L. T.....	281
Museum, role of, in teaching crystallography. (Gordon)...	291	<b>Peach, P. A. Decrepitation geothermometer.....</b>	<b>413</b>
Muthmannite.....	373	———. Geothermometry, liquid inclusions in.....	460
Myers, A. T. with Milton, C. Bodenbenderite, a discredited species.....	608	<b>Peacock, M. A. Prospect of mineralogy.....</b>	<b>135</b>
Nagelschmidt, G.....	132	———. .....	291
Nagyagite.....	363	——— and Forman, S. A. Crystal structure of rickardite, Cu <sub>4</sub> Te <sub>2</sub> .....	441
Naray-Szabo, I.....	133	<b>Pecora, W. T. and Fahey, J. J. Corrego Frio pegmatite, Minas Gerais: scorzalite and souzalite, two new phosphate minerals.....</b>	<b>83</b>
<b>Nepheline and corundum rocks of southeastern Ontario, petrology of. (Moyd).....</b>	<b>736</b>	———. <b>Scorzalite from South Dakota, a new occurrence.....</b>	<b>282, 685</b>
Neptunite in quartz-bearing syenites. (Nockolds).....	769	Pennaite (Guimarães).....	770
Nesterova, Y. S.....	619	Pepinsky, R. Book review.....	129
New mineral names.....	133, 339, 618, 770	<b>Perry, S. H. with Henderson, E. P. The Wathena, Doniphan Co. Kansas, meteorite.....</b>	<b>102</b>
Nichols, J. B. Book review.....	768		
Niggli, P. Gesteine und Mineral-lagerstätten. Book review..	128		
Niggliite.....	373		

- Petrographic microscope, inexpensive. (Winchell, Walton) . . . 688
- Pettijohn, F. J. Sedimentary Rocks. Book review . . . . . 764
- Petzite . . . . . 350
- Phlogopite,  $x$ -ray data . . . . . 80
- Phoenix, R. and Nuffield, E. W. Cancrinite from Blue Mountain, Ontario . . . . . 452
- Phosphorodite. (Shadlun, Nesterova) . . . . . 619
- Pickett, E. E. with Keller, W. D. Absorption of infrared radiation by powdered silica minerals . . . . . 855
- Piezoelectric materials, inorganic, crystal chemical relations in. (Zerfoss, Johnson) . . . . . 61
- Plagioclases from Sultan Hamud, Kenya. (Game) . . . . . 614
- Point counter for thin-section analysis. (Chayes) . . . . . 1,600
- Pough, F. H. Memorial of Herbert Percy Whitlock . . . . . 261
- Pre-Beltian Rocks near Dillon, Montana. (Heinrich) . . . . . 278
- Precision lattice measurements of pyrite from Leadville, Colo., observations on. (Wasserstein) . . . . . 731
- Prewitt-Hopkins, J. X-ray study of holdenite, mooreite, and torreyite . . . . . 589
- Probertite, unit cell and space group of. (Barnes) . . . . . 19, 611
- Prosopite,  $x$ -ray data. (Ferguson) 391
- Prospect of mineralogy. (Peacock) 135
- Pseudotachylite of the Antietam quartzite. (Anderson) . . . . . 331
- Pyrrhotite, artificial. (Graham) . . . 462
- Quartz, artificial, by hydrothermal methods. (Swinnerton) . . . . . 284
- Quartz, conversion of amorphous silica to. (Bailey) . . . . . 601
- Quartz crystals, frequency of twin types in. (Gault) . . . . . 142
- Quartz, laboratory growth of. (Friedman) . . . . . 583
- Quartz sphere grown into a faced crystal. (Hale, Hurlbut) . . . . . 596
- Quartz, variable inversion temperature of, as a possible geologic thermometer. (Tuttle) . . . . . 284, 723
- Quiring, H. Geschichte des Goldes. Book review . . . . . 617
- Radioactive Measurement with Nuclear Emulsions. (Yagoda) Book review . . . . . 765
- Ralstonite,  $x$ -ray data. (Ferguson) . 393
- Ramdohr, P. . . . . 619
- Reberbolt, B. O. and Henderson, E. P. Improved method of etching iron meteorites . . . . . 606
- Refractive indices of high index liquids by the prism method on the two-circle goniometer. (Wolfe, Franklin) . . . . . 893
- Retgersite,  $\text{NiSO} \cdot 6\text{H}_2\text{O}$ , a new mineral. (Fron del, Palache) . . . . . 188, 276
- Retrogressive alteration following granitization and rheomorphism (Goodspeed) . . . . . 277
- Rhodochrosite, thermal study of. (Wright, Kulp, Holmes) . . . 195, 285
- Rickardite,  $\text{Cu}_{4-x}\text{Te}_2$ , crystal structure of. (Forman, Peacock) . 359, 441
- Riley, D. P. . . . . 132
- Robertson, F. . . . . 282
- Robinson, K. . . . . 337
- Robinson, S. C. Owyheite . . . . . 398
- Rockbridgeite, optical and chemical data. (Fron del) (Lindberg) . . . . . 525, 528, 543
- Roeb ling Medal of the Mineralogical Society of America: Presentation to William Lawrence Bragg. (Tunell) . . . . . 235
- Roeb ling Medal of the Mineralogical Society of America, acceptance of. (Bragg) . . . . . 238
- Roedder, E. W. . . . . 292
- Rosenholtz, J. L. and Smith, D. T. Linear thermal expansion of calcite, var. Iceland spar and Yule marble . . . . . 846
- Rowland, R. A. and Jonas, E. C.



- Variations in differential thermal analysis curves of siderite . . . . . 282, 550
- Schairer, J. F. . . . . 283
- Shulman, J. H., Claffy, E. W. and Ginther, R. J. Some observations on the crystallization of silicic acid. . . . . 68
- Scorzalite from South Dakota, new occurrence. (Pecora, Fahey). . . . . 282, 685
- Scorzalite and souzalite, two new phosphate minerals, Corrego Frio pegmatite, Minas Gerais: (Pecora, Fahey). . . . . 83
- Screw axes of symmetry and their symbols. (Bader). . . . . 752
- Sedimentary Rocks. (Pettijohn) Book review . . . . . 764
- Sekanina, J. . . . . 618
- Selenides, natural and artificial: I-Klockmannite, CuSe (Earley). . . . . 435
- Sengierite: a preliminary description. (Vaes, Kerr). . . . . 109, 763
- Sengit, E. R. . . . . 132
- Shaub, B. M. Paragenesis of garnet and associated minerals of the Barton Mine near North Creek, N. Y. . . . . 573
- Shadlun, T. N. . . . . 619
- Siderite, variations in differential thermal analysis curves of. (Rowland, Jonas). . . . . 282, 550
- Silica percentage as a factor in rock classification. (Wells). . . . . 615
- Silicic acid, some observations on the crystallization of. (Schulman, Claffy, Ginther). . . . . 68
- Silicocarnotite, basic slag mineral, optical and x-ray examination of. (Riley, Sengit). . . . . 132
- Smith, D. T. with Rosenholtz, J. L. Linear thermal analysis of Iceland spar and Yule marble. . . . . 846
- Smith, F. G. and Kidd, D. J. Hematite-goethite relations in neutral and alkaline solutions under pressure. . . . . 403
- Smith, W. Campbell. . . . . 614
- Souzalite and scorzalite, two new phosphate minerals, Corrego Frio pegmatite, Minas Gerais: (Pecora, Fahey). . . . . 83
- Spangolite, crystallography of. (Frondel). . . . . 181
- Spectrochemical methods of rock analysis. (Strock). . . . . 284
- Spencer, L. J. . . . . 132
- Stanton, G. S. Memorial of James Greenfield Manchester. . . . . 253
- Stewart, F. H. . . . . 614
- Stobbe, H. . . . . 283
- Strock, L. W. . . . . 284
- Stuetzite. . . . . 373
- Svanbergite from Nevada. (Switzer). . . . . 104
- Swartzite. . . . . 274
- Swineford, A. . . . . 274
- Swinnerton, A. C. . . . . 284
- Switzer, G. Svanbergite from Nevada. . . . . 104
- Sylvanite. . . . . 353
- System  $H_2O-Na_2O-SiO_2$ , Isothermal polybaric saturation curve at  $400^\circ$  in. (Morey). . . . . 281
- System  $K_2O-MgO-Al_2O_3-SiO_2$ , phase equilibrium relations in the quaternary. (Schairer) . . . . . 283
- System  $K_2O-MgO-SiO_2$ . (Roedder) 282
- System  $(NaAlSiO_4-CaO \cdot Al_2O_3)$ , some aspects of. (Goldsmith) . . . . . 277, 471
- Talc in the salines of the potash field near Carlsbad, New Mexico. (Bailey). . . . . 757
- Taylor, E. W. . . . . 769
- Taylor, J. H. . . . . 337
- Tellurbismuth. . . . . 367
- Telluride minerals and their occurrence in Canada. (Thompson). . . . . 342
- Tellurium minerals, occurrences in western Canada. (Warren, Thompson). . . . . 458
- Tennantite, hydrothermal synthesis of. (Gaines). . . . . 276
- Tetradymite. . . . . 370

- Thermal expansion, linear, of calcite, var. Iceland spar, and Yule marble. (Rosenholtz, Smith)** . . . . . 846
- Thermal reaction in kaolinite, suppression of. (Gruver, Henry, Heystek)** . . . . . 869
- Thompson, R. M. Goongarrite and warthaite discredited.** . . . . 459
- . **Telluride minerals and their occurrence in Canada.** . . . . 342
- with Warren, H. V. Further occurrences of antimony and tellurium minerals in western Canada. . . . . 458
- Tolman, C.** . . . . . 282
- Torreyite, x-ray study of. (Pre-witt-Hopkins)** . . . . . 589
- Tunell, G. Presentation of the Roebling Medal of the Mineralogical Society of America to William Lawrence Bragg.** . . . . 235
- . . . . . 292
- and Adams, C. **Symmetry and crystal structure of bornite.** . . . . . 824
- Tuttle, O. F. Variable inversion temperature of quartz as a possible geologic thermometer.** . . . . . 284, 723
- Twin types in quartz crystals, frequency of. (Gault)** . . . . . 142
- Uranium minerals from the Hillside Mine, Yavapai County, Arizona. (Axelrod, Grimaldi, Milton, Murata)** . . . . . 274
- Vaes, J. F. and Kerr, P. F. Sengierite: a preliminary description.** . . . . 109
- Variable inversion temperature of quartz as a possible geologic thermometer. (Tuttle)** . . . . . 723
- Variables, charting five or six, on the bounding tetrahedra of a hypertetrahedra. (Mertie)** 280, 706
- Varlamoffite (Buttgenbach)** . . . . . 618
- Vauquelinite, x-ray measurement on. (Berry)** . . . . . 275
- Vhay, John G. and Glass, Jewell, J.**
- A new locality for ludlamite. . . . . 335
- Visual arc spectroscopic detection of halogens, rare earths and other elements by use of molecular spectra. (Jaffe)** . . . . . 667
- Volcanic rocks of northeastern New Mexico, petrology of (Stobbe)** . . . . . 283
- Volcanic rocks, St. Francois Mountains, Missouri, high potash. (Robertson, Tolman)** . . . . . 282
- Von Huene, R. Grain-thin sections and other teaching aids in optical mineralogy.** . . . . . 121
- . **Notes on Lakeside No. 70 transparent cement.** . . . . . 125
- Walker Mineralogical Club, By-laws, officers 1948.** . . . . . 469
- Proceedings. . . . . 133, 470
- Walton, M. S. with Winchell, H. An inexpensive petrographic microscope.** . . . . . 688
- Warren, H. V. and Thompson, R. M. Further occurrences of antimony and tellurium minerals in western Canada.** . . . . . 458
- Warthaite discredited. (Thompson)** 459
- Wasserstein, B. Observations on two precision lattice measurements of pyrite from Leadville, Colo.** . . . . . 731
- Wathena, Doniphan Co. Kansas, meteorite. (Henderson, Perry)** . . . . . 102
- Weberite, x-ray data. (Ferguson)** . . . . . 395
- Wehrlite.** . . . . . 369
- Weil, R.** . . . . . 618
- Weissite.** . . . . . 357
- Wells, A. K.** . . . . . 615
- Wells, R. C. Antimonial silver ore from Cobalt, Ontario.** . . . . . 456
- Westgate, Lewis Gardner, memorial of. (Melvin)** . . . . . 256
- Wherry, E. T. Methyl-ethyl ketone as an index liquid.** . . . . . 613
- White, W. A. Atterberg plastic limits of clay minerals.** . . . . . 508
- Whitlock, Herbert Percy, memorial of. (Pough)** . . . . . 261

- Whitlockite from Palermo Mine,  
New Hampshire. (Fron del) 692
- Winchel, A. N. What is a mineral?  
.....220, 284
- Winchell, H. and Walton, M. S.  
An inexpensive petrographic  
microscope..... 688
- Winkler, H. G. F..... 338
- Wolfe, C. W. Ludlamite from the  
Palermo mine, North Groton,  
New Hampshire..... 94
- , and Franklin, V. Refrac-  
tive indices of high index liq-  
uids by the prism method on  
the two-circle goniometer..... 893
- Wolfeite, xanthoxenite, and whit-  
lockite from Palermo Mine,  
New Hampshire. (Fron del) 692
- Wright, H. D. and Holmes, R. J.  
with Kulp, J. L. Thermal  
study of rhodochrosite. 195, 285
- Wrinch, D. Fourier Transforms and  
Structure Factors. Book re-  
view..... 129
- Xanthoxenite from Palermo Mine,  
New Hampshire. (Fron del) 692
- Xenotime and bastnäsite, petro-  
graphic distinction of (Foster) 830
- X-ray crystallography, teaching of.  
(Tunell)..... 292
- Yagoda, H. Radioactive Measure-  
ments with Nuclear Emulsions.  
Book review..... 765  
..... 285
- Yeh, C. C. with Hseung, Y. Fluor-  
escence test of bentonite..... 896
- Young, R. S., Golledge, A., and  
Grenwell-Wells, H. J. Magne-  
tite crystals from a copper  
converter..... 761
- Zerfoss, S. and Johnson, L. R.  
Crystal chemical relations in  
inorganic piezoelectric mate-  
rials..... 61
- Zinnwaldite, x-ray data..... 81
- Zsivny, V..... 133