

## INDEX TO VOLUME 41

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.

<p><b>Abernathyite, a new uranium mineral of the metatorbernite group (Thompson, Ingram, Gross)</b>..... 82</p> <p>Absite (Whittie)..... 166</p> <p>Adler, I., and Axelrod, J. M. The curved-crystal x-ray spectrometer, a mineralogical tool.... 524</p> <p>Ahrens, L. H. Quantitative Spectrochemical Analysis of Silicates (Book Review)..... 368</p> <p>Alexander, L. E. (Book Review) . . 534</p> <p><b>Alkali feldspars: III. An optical and x-ray study of high-temperature feldspars (MacKenzie, Smith)</b>..... 405</p> <p><b>Allen, R. D. A new equation relating index of refraction and specific gravity</b>..... 245</p> <p>———, with Kramer, H. A restudy of bakerite, priceite, and veatchite..... 689</p> <p><b>Allewardite, a swelling double-layer mica mineral (Brindley)</b>. 91</p> <p>Alluaudite (Nov.-Dec. 1955 issue), corrections to..... 366</p> <p>Aluminum arsenate crystals, hydrothermal growth of (Stanley)..... 947</p> <p>Aluminum nitride monocrystals, synthesis of (Kohn, Cotter, Potter)..... 355</p> <p>Alushite = dickite + hydrous mica (Logvinenko, Frank-Kamenetskii)..... 960</p> <p>Alvarez-Tostado, C., with Kempter, C. P. Calculated atomic scattering factors for silicon at 25° C..... 952</p> <p>Alvarolite (= Mangantantalite) (Tavora)..... 168</p> <p><b>Amblygonite, cassiterite, and associated minerals from Cáceres, western Spain (Weibel)</b> 41</p> <p><b>Ammonium fixation and release in</b></p>	<p><b>certain minerals, thermal studies of (Scott, Hanway, Stanford)</b>..... 701</p> <p>Amor, I. A. .... 165</p> <p><b>Andalusite (Hietanen)</b>..... 1</p> <p>Antkiw, S., Waesche, H., and Senftle, F. E. Surface adsorption of Cs<sup>137</sup> ions on quartz crystals..... 363</p> <p>Antigorite (Brindley)..... 151</p> <p>Antigorite; Superlattice and structural formula (Zussman).... 148</p> <p>Arfvedsonite from Greenland, optical anomalies in (Sahama).... 509</p> <p>Augelite..... 45</p> <p>Axelrod, J. M., with Adler, I. The curved-crystal x-ray spectrometer, a mineralogical tool.... 524</p> <p>—————..... 672</p> <p>Baier, E., with Schmidt, W. Lehrbuch der Mineralogie (Book Review)..... 162</p> <p><b>Bakerite, priceite, and veatchite, a restudy of (Kramer, Allen)</b>.... 689</p> <p>Bannister, F. A..... 164</p> <p>Barium phosphuranylite, optical and x-ray data..... 919</p> <p>Barylite, unit cell and space group of (Smith)..... 512</p> <p><b>Bastnaesite, an accessory mineral in the Redstone granite from Westerly, Rhode Island (Smith, Cisney)</b>..... 76</p> <p>Bayerite (Gedeon)..... 959</p> <p>Beta-Roselite (Fron del)..... 537</p> <p>Betekhtinite (Schüller, Wohlmann) 371</p> <p>Biotite, Chemical analysis..... 7</p> <p>Bismuth jamesonite (Sakharova) . . 814</p> <p>Blinkoff's compound, optical and x-ray data..... 919</p> <p><b>Bloxam, T. W. Jadeite-bearing metagraywackes in California</b> 488</p> <p>Böggildite (Pauly)..... 959</p> <p>Borg, I. Note on twinning and</p>
--	---

- pseudo-twinning in detrital quartz grains. . . . . 792  
 Bornhardtite (Ramdohr, Schmitt) 164  
 Bornite from S. Australia (Nov.-Dec. issue) corrections to . . . 168  
 Boron in tetrahedra of borates and borosilicates (Loewenstein) . . . 349  
 Bowie, S. H. U. . . . . 816  
 Braddock, W., with Thompson, M. E., and Roach, C. New occurrences of native selenium 156  
**Bradley, W. F., and Weaver, C. E. A regularly interstratified chlorite-vermiculite clay mineral. . . . . 497**  
 Branche, G. . . . . 816  
 Brazilian kaolins, tubular morphology of some (Visconti, Nicot, de Andrade) . . . . . 67  
**Brindley, G. W. Allevardite, a swelling double-layer mica mineral. . . . . 91**  
 ——— Antigorite . . . . . 151  
 ———, with Earley, J. W., McVeagh, W. J., and Vanden Heuvel, R. C. A regularly interstratified montmorillonite-chlorite. . . . . 258  
 ———, and Gillery, F. H. X-ray identification of chlorite species. . . . . 169  
 Brown, G. . . . . 536  
 Brushite and taranakite from Pig Hole Cave, Giles County, Virginia (Murray, Dietrich) . . . 616  
 Buerger, M. J., with Pearson, A. D. Confirmation of the crystal structure of pentlandite. . . . . 804  
 Burova, T. A. . . . . 163  
 Bursaitite (Tolun) . . . . . 671  
 Buryanova, E. Z. . . . . 671  
 Bustamite (Hutton) . . . . . 581  
 Calciborite (Petrova) . . . . . 815  
 Calcite-aragonite equilibrium relations at elevated temperatures and pressures, experimental determination of (MacDonald) . . . . . 744  
 Calcite-wollastonite equilibrium, a note on (Ellis, Fyfe) . . . . . 805  
 Canbyite (= Hisingerite) (Bowie) . . 816  
 Cardosonite (Amor) . . . . . 165  
 Carron, M. K., with Glass, J. J. Evans, H. T. Jr., and Rose, H. Jr. Cerite from Mountain Pass, San Bernardino County, California . . . . . 665  
**Cassiterite (Weibel) . . . . . 41**  
 Cerite from Mountain Pass, San Bernardino County, California (Glass, Evans, Carron, Rose) 665  
 Chapman, C. A. (Book Review) . . . 809  
**Chapman, R. W., with Jaffe, H. W., and Evans, H. T. Jr. Occurrence and age of chevkinite from the Devil's Slide fayalite-quartz syenite near Stark, New Hampshire. . . . . 474**  
 Chervet, J. . . . . 816  
**Chevkinite from the Devil's Slide fayalite-quartz syenite near Stark, New Hampshire, occurrence and age of (Jaffe, Evans, Chapman) . . . . . 474**  
 Childrenite (optical data) . . . . . 45  
**Chlorite species, x-ray identification of (Brindley, Gillery) . . . . 169**  
**Chlorite-vermiculite clay mineral, a regularly interstratified (Bradley, Weaver) . . . . . 497**  
**Christ, C. L. Precision determination of lattice constants of single crystals using the conventional Weissenberg camera ———, with Clark, J. R. Observations on rutherfordine . . . . . 844**  
 ——— (Book Review) . . . . . 369  
**Chromites, Indian, on the composition of some (Malhotra, Prasada Rao) . . . . . 460**  
**Chromium lattice constant; absorption and refraction corrections (Straumanis, Weng) . . . . . 437**  
 Chrysotile, determination of magnetite in (Shell) . . . . . 351  
 Chudoba, K. F., and Gübelin, E. J. Echt oder Synthetisch? (Book Review) . . . . . 955  
 Cisney, E. A., with Smith, W. L.

- Bastnaesite, an accessory mineral in the Redstone granite from Westerly, Rhode Island 76
- Clark, J. R., and Christ, C. L. Observations on rutherfordine 844
- Clarkeite (Frondel, Meyrowitz) . . . 127
- Clay mineral dehydroxylation, oscillating-heating x-ray diffractometer studies of (Weiss, Rowland) . . . . . 117
- Clays and Clay Minerals (Milligan, editor) (Book Review) . . . . . 956
- Clays and Clay Minerals (Swineford and Plummer, editors) (Book Review) . . . . . 162
- Clinopyroxenes of alkali olivine-basalt magma (Wilkinson) . . . 724
- Cobalt selenide, unnamed (Ramdohr, Schmitt) . . . . . 164
- Coelho, A. V. P. . . . . 164
- Coffinite, a uranous silicate with hydroxyl substitution: a new mineral (Stieff, Stern, Sherwood) . . . . . 675
- Cohen, A. J. Color centers in the  $\alpha$ -quartz called amethyst . . . . 874
- Color centers in the  $\alpha$ -quartz called amethyst (Cohen) . . . . . 874
- Contamination of the characteristic  $\alpha$ -radiation of copper by Fe, Cr, and Ni radiation (Kohn, Levinson) . . . . . 514
- Cordierite porphyroblasts, large, Fremont County, Colorado, note on (Travis) . . . . . 796
- Cotelo Neiva, J. M. . . . . 370
- Cotter, P. G., with Kohn, J. A., and Potter, R. A. Synthesis of aluminum nitride monocrystals . . . . . 355
- Crednerite, crystallography and composition of (McAndrew) . . 276
- Crosby, J. W. III. A Descriptive Glossary of Radioactive Minerals . . . . . 532
- Cs<sup>137</sup> ions, surface adsorption on quartz crystals (Antkiw, Waesche, Senftle) . . . . . 363
- Curtisite (= Idrialite) (Tuček, Kouřimský) . . . . . 168
- de Andrade, E. G., with Visconti, Y. S., and Nicot, B. N. F. Tubular morphology of some Brazilian kaolins . . . . . 67
- Deans, T. . . . . 167
- Dehydroxylation, clay mineral, oscillating-heating x-ray diffractometer studies of (Weiss, Rowland) . . . . . 117
- Dennen, W. H., and Shields, R. Yttria in zircon . . . . . 655
- Denning, R. M. (Book Review) . . . 533
- Descriptive Glossary of Radioactive Minerals (Crosby) (Book Review) . . . . . 532
- "Dewindtite" . . . . . 921
- Diamond type crystals, faces and habits of (Wolff) . . . . . 60
- Diamond type structures, twinning in (Kohn) . . . . . 778
- Diderichite (Frondel, Meyerowitz) 127
- Die Bergwirtschaft der Erde (Friedensburg) (Book Review) . . . . 669
- Die Erzminerale und ihre Verwachsungen (Ramdohr) (Book Review) . . . . . 954
- Dietrich, R. V., with Murray, J. W. Brushite and taranakite from Pig Hole Cave, Giles County, Virginia . . . . . 616
- Trigonal paragonite from Campbell and Franklin Counties, Virginia . . . . . 940
- Dillnite (Konta) . . . . . 673
- Discredited minerals . . 168, 538, 816, 960
- Dolomanova, I. . . . . 371
- Donnay and Harker, an interpretation of the law of (Hartman, Perdok) . . . . . 449
- Donnay, G., Kracek, F. C., and Rowland, W. R. Jr. The chemical formula of empresite . . . . . 722
- Dumontite, optical and x-ray data . . . . . 921
- Duttonite (Thompson, Roach, Meyrowitz) . . . . . 958
- Earley, J. W., Brindley, G. W., McVeagh, W. J., and Vanden

- Heuvel, R. C.** A regularly interstratified montmorillonite-chlorite . . . . . 258  
 Echt oder Synthetisch (Chudoba, Gübelin) (Book Review) . . . . . 955  
 Edwards, A. B. Hypogene goethite at Peko Mine, N. T., Australia . . . . . 657  
 Ellis, A. J., and Fyfe, W. S. A note on the calcite-wollastonite equilibrium . . . . . 805  
**Empressite, the chemical formula of (Donnay, Kracek, Rowland)** . . . . . 722  
 Eppler, W. F. Praktische Edelmetsteinprüfung (Book Review) . . . . . 531  
 Erd, R. C. . . . . 815  
 Erhart, H. La Genèse des Sols en tant que Phénomène Géologique (Book Review) . . . . . 956  
 Ericaité (Heide) (Kühn, Schaacke) . . . . . 372  
 Erzmikroskopie (Wakromejev). Translated from the Russian by Wolfgang Osetreich. (Book Review) . . . . . 954  
 Eucolite, a new occurrence near Wausau, Marathon County, Wisconsin (Stobbe, Murray) . . . . . 932  
**Evans, H. T. Jr., with Jaffe, H. W., and Chapmann, R. W.** Occurrence and age of chevkinite from the Devil's Slide fayalite-quartz syenite near Stark, New Hampshire . . . . . 474  
 ———, with Glass, J. J., Carron, M. K., and Rose, H. Jr. Cerite from Mountain Pass, San Bernardino County, California . . . . . 665  
 ——— . . . . . 815  
 Evenkite, correction to formula (Rudkin) . . . . . 163  
**Faust, G. T., with Nagy, B.** Serpentine: Natural mixtures of chrysotile and antigorite . . . . . 817  
 Ferroan johannsenite (Hutton) . . . . . 581  
 Ferroselite (Buryanova, Komkov) . . . . . 671  
 Ferutite (Kazitsyn) . . . . . 163  
 Fischer, E. . . . . 538  
 Fischerite (= Wavellite) (?) (Sumin) . . . . . 537  
**Fisher, D. J.** Presentation of The Mineralogical Society of America Award to Julian Royce Goldsmith . . . . . 329  
 Fisher, E. . . . . 538, 960  
 Fleischer, M. A notable centenary in American mineralogy: Samuel Lewis Penfield, 1856-1906 . . . . . 139  
 Fluorine phlogopite, OH-F exchange in (Noda, Roy) . . . . . 929  
**Foshag, W. F. Memorial of John Putnam Marble** . . . . . 301  
 Foster, W. F. (Book Review) . . . . . 667  
 Fournet, G., with Guinier, A. Small-Angle Scattering of X-rays. Translated by C. B. Walker. (Book Review) . . . . . 534  
 Frank-Kamenetskii, V. A. . . . . 960  
 Frechette, V. D., with Insley, H. Microscopy of Ceramics, Including Glasses, Slags and Foundry Sands (Book Review) . . . . . 530  
**Friedelite family, the empirical unit cell contents of (Hey)** . . . . . 134  
 Friedensburg, F. Die Bergwirtschaft der Erde (Book Review) . . . . . 669  
**Frondel, C. Memorial of Charles Palache** . . . . . 306  
 ——— Mineral composition of gummite . . . . . 539  
 ———, and Meyrowitz, R. Studies of uranium minerals (XIX): Rutherfordine, diderichite, and clarkeite . . . . . 127  
 ———, and Morgan V. Inderite and gerstleyite from the Kramer borate district, Kern County, California . . . . . 839  
 ———, Morgan, V., and Waugh, J. L. T. Lesserite, a new borate mineral . . . . . 927  
 Fyfe, W. S., with Ellis, A. J. A note on the calcite-wollastonite equilibrium . . . . . 805  
**Gabriel, Alton, memorial of (McVay)** . . . . . 297  
 Galeite (Pabst, Sawyer, Switzer) . . . . . 672  
 Garavelli, C. L. . . . . 370  
 Gard, J. A. . . . . 958

- Garnet group, physical properties of end-members of (Skinner)** 428
- Garrelsite (Milton, Axelrod, Grimaldi) . . . . . 672
- Gearksite (Grivor'ev, Dolomanova) . . . . . 371
- Gedeon, T. G. . . . . 959
- Geochemie (Saukov) (Book Review) . . . . . 811
- Geology of Southern California (Jahns, editor) (Book Review) 813
- Gerstleyite (Fron del, Morgan)** . . . . . 839
- Gillery, F. H., with Brindley, G. W. X-ray identification of chlorite species** . . . . . 169
- Girhard, M. N., with Stern, T. W., Stieff, L. R., and Meyrowitz, R. The occurrence and properties of metatyuyamunite,  $\text{Ca}(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 3-5\text{H}_2\text{O}$**  . . . . . 187
- Gladstone and Dale rule, application to minerals (Jaffe) . . . . . 757
- Glans en Gloed Uit Donkere Diepten (Midderigh-Bokhorst) (Book Review) . . . . . 670
- Glass, J. J., Evans, H. T. Jr., Carron, M. K., and Rose, H. Jr. Cerite from Mountain Pass, San Bernardino County, California . . . . . 665
- Goethite, hypogene, at Peko Mine, N. T., Australia (Edwards) . . . . . 657
- Goldsmith, J. R. Acceptance of The Mineralogical Society of America Award** . . . . . 331
- Gottfried, D., Senftle, F. E., and Waring, C. L. Age determination of zircon crystals from Ceylon . . . . . 157
- Grassmann, H. . . . . 673
- Grawe, O. R. Starkeyite, a correction . . . . . 662
- Grigor'ev, I. F. . . . . 371
- Grimaldi, F. S. . . . . 672
- Gross, E. B., with Thompson, M. E., and Ingram, B. Abernathyite, a new uranium mineral of the metatorbernite group** . . . . . 82
- Grovesite (Bannister, Hey, Smith) 164
- Gübelin, E. J., with Chudoba, K. F. Echt oder Synthetisch? (Book Review) . . . . . 955
- Guinier, A., and Fournet, G. Small-Angle Scattering of X-rays, translated by C. B. Walker (Book Review) . . . . . 534
- Gummite, mineral composition of (Fron del)** . . . . . 539
- Hall, F. P., with Levin, E. M., and McMurdie, H. F. Phase Diagrams for Ceramists (Book Review) . . . . . 667
- Hamilton, W. B., and Neuerburg, G. J. Olivine-sanidine trachybasalt from the Sierra Nevada, California** . . . . . 851
- Hanway, J. J., with Scott, A. D., and Stanford, G. Thermal studies of ammonium fixation and release in certain minerals 701
- Hartman, P., and Perdok, W. G. An interpretation of the law of Donnay and Harker** . . . . . 449
- Hastite (Ramdohr, Schmitt) . . . . . 164
- Hawley, J. E. Memorial of Robert Charles Wallace** . . . . . 315
- Heide, F. . . . . 372
- Heinrich, E. W. Microscopic Petrography (Book Review) . . . . . 809
- (Book Reviews) . . . . . 531, 532, 669, 811, 812, 813, 954, 955
- Hey, M. H. The empirical unit cell contents of the friedelite family** 134
- An Index of Mineral Species and Varieties Arranged Chemically (Book Review) . . . . . 812
- . . . . . 164
- Hiemstra, S. A. An easy method to obtain x-ray diffraction patterns of small amounts of material . . . . . 519
- Hietanen, A. Kyanite, andalusite, and sillimanite in the schist in Boehls Butte quadrangle, Idaho** . . . . . 1
- Holser, W. T. Hydrothermal alteration of muscovite in steam gage-glasses . . . . . 799

- Huang, W. T. Novacekite from the Wichita Mountains, Oklahoma . . . . . 152
- Hurlbut, C. S. Jr. Muscovite from Methuen Township, Ontario . . . . . 892
- Hutton, C. O. Further data on the stilpnomelane mineral group . . . . . 608
- Manganpyrosmalite, bustamite, and ferroan johannsenite from Broken Hill, New South Wales, Australia . . . . . 581
- Hydrogen uranospinite . . . . . 816
- Hydrohetaerolite, observations on (McAndrew) . . . . . 268
- Hydrous ferric oxides, natural, application of differential thermal analysis to identification of (Kelly) . . . . . 353
- Hydroxyls, tetrahedral, comments on (McConnell) . . . . . 661
- Immersion liquids of high index of refraction, solvents and solutes for the preparation of (Meyrowitz)** . . . . . 49
- Inclusions, authigenic, origin of in synthetic crystals (Zerfoss, Slawson)** . . . . . 598
- Inderite and gerstleyite from the Kramer borate district, Kern county, California (Fron del, Morgan)** . . . . . 839
- Index of Mineral Species and Varieties Arranged Chemically (Hey) (Book Review) . . . . . 812
- Index of refraction and specific gravity, a new equation relating (Allen)** . . . . . 245
- Ingerson, E. (Book Reviews) 368, 530, 955
- Ingram, B., with Thompson, M. E., and Gross, E. B. Abernathyite, a new uranium mineral of the metatorbernite group** . . . . . 82
- Insley, H., and Fréchette, V. D. Microscopy of Ceramics and Cements, Including Glasses, Slags and Foundry Sands (with a chapter on Abrasives, by H. N. Baumann, Jr.) (Book Review) . . . . . 530
- Introduction to the Space Groups (Terpstra) (Book Review) . . . . . 808
- Isokite (Deans, McConnell) . . . . . 167
- Jackson, E. D., and Ross, D. C. A technique for modal analyses of medium- and coarse-grained (3-10 mm.) rocks . . . . . 648
- Jadeite-bearing metagraywackes in California (Bloxam)** . . . . . 488
- Jaffe, H. W. Application of the rule of Gladstone and Dale to minerals** . . . . . 757
- , Evans, H. T. Jr., and Chapman, R. W. Occurrence and age of chevkinite from the Devil's Slide fayalite-quartz syenite near Stark, New Hampshire . . . . . 474
- Jarosite, occurrence in underclays (Warsaw)** . . . . . 288
- Jensen, D. E. My Hobby is collecting Rocks and Minerals (Book Review) . . . . . 668
- Johannsenite, ferroan (Hutton) . . . . . 581
- Kandites, Smectites (Brown) . . . . . 536
- Kaolins, Brazilian, tubular morphology of some (Visconti, Nicot, de Andrade)** . . . . . 67
- Kaolins, residual, genesis of (Sand)** . . . . . 28
- Kazitsyn, Y. V. . . . . 163
- K-bentonite, mineralogy of the Middle Devonian (Weaver) . . . . . 359
- Kelly, W. C. Application of differential thermal analysis to identification of the natural hydrous ferric oxides . . . . . 353
- Kempton, C. P., and Alvarez-Tostado, C. Calculated atomic scattering factors for silicon at 25° C. . . . . 952
- Kerr, P. F. Presentation of the Roebling Medal to Alexander Newton Winchell** . . . . . 321
- Knopf, A. (Book Review) . . . . . 367
- Kohlhaas, R., and Otto, H. Röntgenstrukturanalyse von Kristallen, Eine Elementare Ein-

- führung (Book Review)..... 369
- Kohn, J. A. Twinning in diamond-type structures: High-order twinning in silicon**..... 778
- , Cotter, P. G., and Potter, R. A. Synthesis of aluminum nitride monocrystals..... 355
- , and Levinson, A. A. Contamination of the characteristic  $\alpha$ -radiation of copper by Fe, Cr, and Ni radiation..... 514
- Komkov, A. I..... 671
- Konta, J..... 673
- Kouřimský, J..... 168
- Kôzu, Shukusuké, memorial of (Yagi)**..... 592
- Kracek, F. C., with Donnay, G., and Rowland, W. R. Jr. The chemical formula of empressite**..... 722
- Kramer, H., and Allen, R. D. A re-study of bakerite, priceite, and veatchite**..... 689
- Kraus, E. H. (Book Reviews)..... 162, 531, 956
- Kühn, R..... 372
- Kyanite, andalusite, and sillimanite in the schist in Boehls Butte quadrangle, Idaho (Hietanen)**..... 1
- La Genèse des Sols en tant que Phénomène Géologique (Erhart) (Book Review)..... 956
- Labuntsovite (Semenov, Burova)..... 163
- La Prospection de L'Uranium (Book Review)..... 812
- Lattice constants of single crystals, precision determination using the conventional Weissenberg camera (Christ)**..... 569
- Lead meta-autunite,  $\alpha$ -ray data..... 907
- Ledikite (Brown)..... 536
- Lehrbuch der Mineralogie (Schmidt, Baier) (Book Review)..... 162
- Lepp, H. Precision measurements of the cell edge of synthetic pyrite..... 347
- Lermontovite..... 816
- Lesserite, a new borate mineral (Frondel, Morgan, Waugh)**... 927
- Leuchtenbergite,  $\alpha$ -ray data..... 907
- Leverrierite (Schüller, Grassman)..... 673
- Levin, E. M., McMurdie, H. F., and Hall, F. P. Phase Diagrams for Ceramists (Book Review)..... 667
- Levinson, A. A., with Kohn, J. A. Contamination of the characteristic  $\alpha$ -radiation of copper by Fe, Cr, and Ni radiation..... 514
- Limaite (Cotelo Neiva)..... 370
- Lodochnikovite (Nefedov)..... 672
- Loewenstein, W. Boron in tetrahedra of borates and borosilicates..... 349
- Logvinenko, L. V..... 960
- Lyon, R. J. P. Anomalous fluorescence in torbernite from Rum Jungle, N. T., Australia..... 789
- MacDonald, G. J. F. Experimental determination of calcite-aragonite equilibrium relations at elevated temperatures and pressures**..... 744
- MacKenzie, W. S., and Smith J. V. The alkali feldspars: III. An optical and x-ray study of high temperature feldspars**..... 405
- Magnetite in chrysotile, determination of (Shell)..... 351
- Magnetite enclosed in muscovite, notes on a six-rayed diffraction star produced by (Shaub, Wrinch)..... 944
- Malhotra, P. D., and Prasada Rao, G. H. S. V. On the composition of some Indian chromites**... 460
- Mandarino, J. A. A new technique for micrometric analysis of thin sections..... 786
- Manganpyrosmalite, bustamite, and ferroan johannsenite from Broken Hill, New South Wales, Australia (Hutton)**... 581
- Marble, John Putnam, memorial of (Foshag)**..... 301
- Mavudzite (Coelho)..... 164
- McAndrew, J. Crystallography and composition of crednerite**... 276

- Observations on hydrohetaerolite ..... 268  
 ..... 370
- McAtee, J. L. Jr. Determination of random interstratification in montmorillonite** ..... 627
- A modified sample holder for the Norelco rotating specimen device ..... 942
- McConnell, D. Comments on tetrahedral hydroxyls** ..... 661
- An unusual palagonite tuff ..... 153
- (Book Reviews) ..... 162, 957
- McConnell, J. D. C.** ..... 167
- McKinney, C. R., and Silver, L. T. A joint-free sample splitter** .. 521
- McVay, T. N. Memorial of Alton Gabriel** ..... 297
- McVeagh, W. J., with Earley, J. W., Brindley, G. W., and Vanden Heuvel, R. C. A regularly interstratified montmorillonite-chlorite** ..... 258
- McMurdie, H. F., with Levin, E. M., and Hall, F. P. Phase Diagrams for Ceramists (Book Review)** ..... 667
- Meijer, W. O. J. G.** ..... 538
- Meixner, H.** ..... 816
- Metatyuyamunite,  $\text{Ca}(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 3-5\text{H}_2\text{O}$ , the occurrence and properties of (Stern, Stieff, Girhard, Meyrowitz)** ..... 187
- Meyrowitz, R. Solvents and solutes for the preparation of immersion liquids of high index of refraction** ..... 49
- , with Frondel, C. **Studies of uranium minerals (XIX): Rutherfordine, diderichite, and clarkeite** ..... 127
- , with Stern, T. W., Stieff, L. R., and Girhard, M. N. **The occurrence and properties of metatyuyamunite,  $\text{Ca}(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 3-5\text{H}_2\text{O}$**  ..... 187  
 ..... 958
- Micrometric analysis of thin sections, new technique for (Mandarino)** ..... 786
- Microscopic Petrography (Heinrich) (Book Review)** ..... 809
- Microscopy of Ceramics and Cements, Including Glasses, Slags and Foundry Sands (with a chapter on Abrasives, by H. N. Baumann, Jr.) (Insley, Fréchet) (Book Review)** ..... 530
- Microstructures of Diamond Surfaces (Tolansky) (Book Review)** ..... 533
- Midderigh-Bokhorst, B. Glansen Gloed Uit Donkere Diepten (Book Review)** ..... 670
- Mikheevite = Görgeyite (Nefedov) (Meixner)** ..... 816
- Milton, C. (Book Review)** ..... 668  
 ..... 762
- Mineralogical Society of America, correspondents, fellows and members of** ..... 373
- Mineralogical Society of America, proceedings of the thirty-sixth annual meeting at New Orleans, Louisiana** ..... 334  
 List of papers of special mineralogical interest presented at annual meeting .... 343
- Mineralogical Society of America Award, acceptance of (Goldsmith)** ..... 331
- Mineralogical Society of America Award, presentation to Julian Royce Goldsmith (Fisher)** .... 329
- Minerals for Atomic Energy (Ninninger) (Book Review)** ..... 955
- Minguzzite (Garavelli)** ..... 370
- Mixed-layer clays, the distribution and identification in sedimentary rocks (Weaver)** ..... 202
- Miyashiro, A. Osumilite, a new silicate mineral, and its crystal structure** ..... 104
- Modal analyses of fine- and medium-grained (0.1-5 mm.) rocks, technique for (Plafker)** ..... 652
- Modal analyses of medium- and coarse-grained (3-10 mm.) rocks, a technique for (Jackson,**



- Ross)..... 648
- Moeller, C. K..... 959
- Moluranite..... 816
- Montebrasite (amblygonite)..... 47
- Montmorillonite-chlorite, a regularly interstratified (Earley, Brindley, McVeagh, Vanden Heuvel)..... 258**
- Montmorillonite, determination of random interstratification in (McAtee)..... 627**
- Montmorillonites, synthetic, a note on some properties of (Roy, Sand)..... 505
- Morgan, V., with Frondel, C. Inderite and gerstleyite from the Kramer borate district, Kern County, California..... 839**
- , and Waugh, J. L. T. **Les-serite, a new borate mineral** 927
- Morrill, P. **New Hampshire Mines and Mineral Locations (Book Review)..... 669**
- Murata, K. J. (Book Review) . . . 368
- Murray, E. G., with Stobbe, H. A **new occurrence of eucolite near Wausau, Marathon County, Wisconsin..... 932**
- Murray, J. W., and Dietrich, R. V. Brushite and taranakite from Pig Hole Cave, Giles County, Virginia..... 616**
- Muscovite from Methuen Township, Ontario (Hurlbut)..... 892**
- Muscovite, hydrothermal alteration in steam gage-glasses (Holser) 799
- My Hobby is Collecting Rocks and Minerals (Jensen) (Book Review)..... 668
- Nagy, B., and Faust, G. T. Ser-pentines: Natural mixtures of chrysotile and antigorite..... 817**
- Natural hydrous ferric oxides, application of differential thermal analysis to identification of (Kelly)..... 353
- Nefedov, E. I..... 672, 816
- Nekoite (Gard, Taylor)..... 958
- Nenadkevite..... 816
- Neuerburg, G. J., with Hamilton, W. B. Olivine-sanidine trachy-basalt from the Sierra Nevada, California..... 851**
- New data..... 537, 672, 959
- New Hampshire Mines and Mineral Locations (Morrill) (Book Review)..... 669**
- New Mineral names..... 163, 370, 536, 671, 814, 958**
- Nickel, E. H. **Nicolatie—a new calcium niobium silicate mineral..... 785**
- Nicolatie—a new calcium niobium silicate mineral (Nickel)..... 785**
- Nicot, B. N. F., with Visconti, T. S. and de Andrade, E. G. Tubular morphology of some Brazilian kaolins..... 67**
- Nininger, R. D. **Minerals for Atomic Energy (Book Review).... 955**
- Noda, T., and Roy, R. **OH-F exchange in fluorine phlogopite** 929
- Nolanite (Robinson)..... 165
- Novacekite from the Wichita Mountains, Oklahoma (Huang) 152**
- Olivine-sanidine trachybasalt from the Sierra Nevada, California (Hamilton, Neuerburg)..... 851**
- Optic axial angles, a chart for measurement of (Tobi)..... 516, 593**
- Optic axial angles, a stereographic construction for determining (Parker)..... 935**
- Orlite..... 816
- Oscillating-heating x-ray diffractometer studies of clay mineral dehydroxylation (Weiss, Rowland)..... 117**
- Osumilite, a new silicate mineral, and its crystal structure (Miyashiro)..... 104**
- Otto, H., with Kohlhaas, R. **Röntgenstrukturanalyse von Kristallen, Eine Elementare Einführung (Book Review)..... 369**
- Pabst, A. (Book Review)..... 808
- ..... 672

- Palache, Charles, memorial of (Fron del) . . . . . 306
- Palagonite tuff, an unusual (McConnell) . . . . . 153
- Paradamite (Switzer) . . . . . 958
- Paragonite in the schist of Glebe Mountain, southern Vermont (Rosenfeld) . . . . . 144
- Paragonite, trigonal, from Campbell and Franklin Counties, Virginia (Dietrich) . . . . . 940
- Parker, R. L. A stereographic construction for determining optical axial angles. . . . . 935
- Parsonite, x-ray data . . . . . 925
- Pauly, H. . . . . 959
- Pearson, A. D., and Buerger, M. J. Confirmation of the crystal structure of pentlandite. . . . . 804
- Penfield, Samuel Lewis, 1956-1906, a notable centenary in American mineralogy (Fleischer) . . . . . 139
- Pentlandite, confirmation of the crystal structure of (Pearson, Buerger) . . . . . 804
- Perdok, W. G., with Hartman, P. An interpretation of the law of Donnay and Harker . . . . . 449
- Petrographic Mineralogy (Wahlstrom) (Book Review) . . . . . 367
- Petrova, E. S. . . . . 815
- Phase Diagrams for Ceramists (Levin, McMurdie, Hall) (Book Review) . . . . . 667
- Phosphuranylite, optical and x-ray data . . . . . 917
- Plafker, G. A technique for modal analyses of some fine- and medium-grained (0.1-5 mm.) rocks. . . . . 652
- Plagioclase feldspars, variations in x-ray powder diffraction patterns of (Smith, Yoder) . . . . . 632
- Potash feldspars, improved techniques for staining (Rosenblum) . . . . . 662
- Potter, R. A., with Kohn, J. A., and Cotter, P. G. Synthesis of aluminum nitride monocrystals. . . . . 355
- Praktische Edelsteinprüfung (Epler) (Book Review) . . . . . 531
- Prasada Rao, G. H. S. V., and Malhotra, P. D. On the composition of some Indian chromites . . . . . 460
- Priceite (Kramer, Allen) . . . . . 689
- Priguinite . . . . . 816
- Prjevalskite . . . . . 816
- Pseudolaueite (Strunz) . . . . . 815
- Pyrite, synthetic, precision measurements of the cell edge of (Lepp) . . . . . 347
- Quantitative differential thermal analysis of clay and other minerals (van der Marel) . . . . . 222
- Quantitative Spectrochemical Analysis of Silicates (Ahrens) (Book Review) . . . . . 368
- Quartz crystal, surface adsorption of Cs<sup>137</sup> ions on (Antkiw, Waesche, Senftle) . . . . . 363
- Quartz crystals, synthetic, incorporation of impurities in (Stanley, Theokritoff) . . . . . 527
- Ramdohr, P. Die Erzminerale und ihre Verwachsungen (Book Review) . . . . . 954
- \_\_\_\_\_ . . . . . 164
- Ramsdell, L. S. (Book Review) . . . . . 669
- Renardite, optical and x-ray data . . . . . 921
- Report of the Committee on the Measurement of Geologic Time, 1953-1954 (Book Review) . . . . . 531
- Residual kaolins, on the genesis of (Sand) . . . . . 28
- Ribeirite (= Yttrian zircon) (Tavora) . . . . . 168
- Rimsky, A. . . . . 170
- Roach, C., with Thompson, M. E., and Braddock, W. New Occurrences of native selenium . . . . . 156
- Roach, C. H. . . . . 958
- Robinson, S. C. . . . . 165
- Roebing Medal, acceptance of (Winchell) . . . . . 326
- Roebing Medal, presentation to Alexander Newton Winchell

- (Kerr)..... 321
- Röntgenstrukturanalyse von Kristallen, Eine Elementare Einführung (Kohlhaas, Otto) (Book review)..... 369
- Rose, H. Jr., with Glass, J. J., Evans, H. T. Jr., and Carron, M. K. Cerite from Mountain Pass, San Bernardino County, California..... 665
- Rosenblum, S. Improved techniques for staining potash feldspars..... 662
- Rosenfeld, J. L. Paragonite in the schist of Glebe Mountain, southern Vermont..... 144
- Ross, D. C., with Jackson, E. D. A technique for modal analyses of medium- and coarse-grained (3-10 mm.) rocks..... 648
- Ross, V. Studies of uranium minerals (XXII): Synthetic calcium and lead uranyl phosphate minerals..... 915
- Rowland, R. A., with Weiss, E. J. Effect of heat on vermiculite and mixed-layered vermiculite chlorite..... 899
- Oscillating-heating *x*-ray diffractometer studies of clay mineral dehydroxylation..... 117
- Rowland, W. R. Jr., with Donnay G., and Kracek, F. C. The chemical formula of empressite..... 722
- Roy, R., with Noda, T. OH-F exchange in fluorine phlogopite..... 929
- , and Sand, L. B. A note on some properties of synthetic montmorillonites..... 505
- Rudkin, A. W..... 163
- Rutherfordine (Fron del, Meyrowitz)..... 127
- Rutherfordine, observations on (Clark, Christ)..... 844
- Sahama, T. G. Optical anomalies in arfvedsonite from Greenland..... 509
- Sakharova, M. S..... 814
- Sample holder, modified, for the Norelco rotating specimen device (McAtee)..... 942
- Sample splitter, a joint-free (McKinney, Silver)..... 521
- Sand, L. B. On the genesis of residual kaolins**..... 28
- , with Roy, R. A note on some properties of synthetic montmorillonites..... 505
- Sandr ea, A..... 170
- Saukov, A. A. *Geochemie* (Book Review)..... 811
- Sawyer, D. L..... 672
- Schaacke, I..... 372
- Schmidt, W., and Baier, E. *Lehrbuch der Mineralogie* (Book Review)..... 162
- Schmitt, M..... 164
- Sch uller, A..... 371, 673
- Scott, A. D., Hanway, J. J., and Stanford, G. Thermal studies of ammonium fixation and release in certain minerals**..... 701
- Scott, T. R..... 370
- Secondary uranium minerals (Chervet, Branche)..... 816
- Selenium, native, new occurrences of (Thompson, Roach, Brad-dock)..... 156
- Semenov, E. I..... 163
- Senftle, F. E., with Antkiw, S., and Waesche, H. Surface adsorption of Cs<sup>137</sup> ions on quartz crystals..... 363
- , with Gottfried, D., and Waring, C. L. Age determination of zircon crystals from Ceylon..... 157
- Senstius, M. W. (Book Reviews)..... 670, 956
- Serpentines: Natural mixtures of chrysotile and antigorite (Nagy, Faust)**..... 817
- Shaub, B. M., and Winch, D. Notes on a six-rayed diffraction star produced by magnetite enclosed in muscovite.... 944
- Shell, H. R. Determination of magnetite in chrysotile..... 351

- Sherwood, A. M., with Stieff, L. R., and Stern, T. W. Coffinite, a uranous silicate with hydroxyl substitution: a new mineral. . . 675
- Shields, R., with Dennen, W. H. Yttria in zircon. . . . . 655
- Shubnikovite (Nefedov). . . . . 673
- Silicon, calculated atomic scattering factors at 25° C. (Kempter, Alvarez-Tostado). . . . . 952
- Silicon, high-order twinning in (Kohn). . . . . 778
- Sillimanite (Hietanen). . . . . 1
- Silver, L. T., with McKinney, C. R. A joint-free sample splitter. . . 521
- Skinner, B. J. Physical properties of end-members of the garnet group. . . . . 428
- Slawson, S. I., with Zerfoss, S. Origin of authigenic inclusions in synthetic crystals. . . . . 598
- Small-Angle Scattering of X-rays, (Guinier, Fournet) translated by C. B. Walker (Book Review). . . . . 534
- Smectites (Brown). . . . . 536
- Smith, J. C. Unit cell and space group of barylite. . . . . 512
- Smith, J. R., and Yoder, H. S. Jr. Variations in x-ray powder diffraction patterns of plagioclase feldspars. . . . . 632
- Smith, J. V., with MacKenzie, W. S. The alkali feldspars: III. An optical and x-ray study of high-temperature feldspars 405
- Smith, W. C. . . . . 164
- Smith, W. L., and Cisney, E. A. Bastnaesite, an accessory mineral in the Redstone granite from Westerly, Rhode Island 76
- Smythite (Erd, Evans). . . . . 815
- Sodium autunite. . . . . 816
- Southern Africa, A Geographical Study: Volume I, Physical Geography (Wellington) (Book Review). . . . . 368
- Stanford, G., with Scott, A. D., and Hanway, J. J. Thermal studies of ammonium fixation and release in certain minerals 701
- Stanley, J. M. Hydrothermal growth of aluminum arsenate crystals. . . . . 947
- , and Theokritoff, S. Incorporation of impurities in synthetic quartz crystals. . . . . 527
- Starkeyite, a correction (Grawe). . . 662
- Steiner, A. . . . . 166
- Stern, T. W., Stieff, L. R., Girhard, M. N., and Meyrowitz, R. The occurrence and properties of metatyuyamunite,  $\text{Ca}(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 3-5\text{H}_2\text{O}$ . . . . . 187
- Stieff, L. R., Stern, T. W., and Sherwood, A. M. Coffinite, a uranous silicate with hydroxyl substitution: a new mineral 675
- Stillwellite (McAndrew, Scott). . . . 370
- Stilpnomelane mineral group, further data on (Hutton). . . . . 608
- Stobbe, H., and Murray, E. G. A new occurrence of eucolite near Wausau, Marathon County, Wisconsin. . . . . 932
- Straumanis, M. E., and Weng, C. C. The absorption and refraction corrections and the lattice constant of chromium. . . . . 437
- Structure Reports for 1942-1944, Vol. 9 (Book Review). . . . . 669
- Strunz, H. . . . . 815
- Sumin, N. G. . . . . 537
- Switzer, G. . . . . 672, 958
- Taranakite (Murray, Dietrich). . . . 616
- Tavora, E. . . . . 168
- Taylor, H. F. W. . . . . 958
- Terpstra, P. Introduction to the Space Groups (Book Review) 808
- Theokritoff, S., with Stanley, J. M. Incorporation of impurities in synthetic quartz crystals. . 527
- Thin sections, a new technique for micrometric analysis of (Mandarino). . . . . 786
- Thompson, M. E., Ingram, B., and Gross, E. B. Abernathyite, a new uranium mineral of the metatorbernite group. . . . . 82

- , Roach, C., and Braddock,  
W. New occurrences of native  
selenium..... 156  
..... 958
- Tobi, A. C. A chart for measure-  
ment of optic axial angles...516, 953
- Tolansky, S. The Microstructures  
of Diamond Surfaces (Book  
Review)..... 533
- Tolun, R..... 671
- Torbernite from Rum Jungle, N. T.  
Australia, anomalous fluores-  
cence in (Lyon)..... 789
- Travis, R. B. Note on large cor-  
dierite porphyroblasts, Fre-  
mont County, Colorado..... 796
- Trogtalite (Ramdohr, Schmitt)... 164
- Tuček, K..... 168
- Tuhualite (Hutton)..... 959
- Twinning in diamond-type struc-  
tures: High-order twinning in  
silicon (Kohn)..... 778**
- Twinning and pseudo-twinning in  
detrital quartz veins, note on  
(Borg)..... 792
- Uranium minerals, studies of  
(XIX): Rutherfordine, diderich-  
chite, and clarkeite (Fron-  
del, Meyrowitz)..... 127  
(XXII): Synthetic calcium and lead  
uranyl phosphate minerals  
(Ross)..... 915
- Ustarasite (Sakharova)..... 814
- Vanden Heuvel, R. C., with Earley,  
J. W., Brindley, G. W., and  
McVeagh, W. J. A regularly  
interstratified montmorillonite-  
chlorite..... 258
- van der Marel, H. W. Quantitative  
differential thermal analysis  
of clay and other minerals... 222
- Väyrynenite (Volborth)..... 371
- Veatchite (Kramer, Allen)..... 689
- "Vegard's law," validity of (Zen) 523
- Vermiculite and mixed-layered  
vermiculite-chlorite, effect of  
heat on (Weiss, Rowland).... 899
- Villanova, A. C..... 67
- Visconti, Y. S., Nicot, B. N. F., and  
de Andrade, E. G. Tubular  
morphology of some Brazilian  
kaolins ..... 67
- Vladimirite (Nefedov)..... 673
- Volborth, A..... 371
- Volkovite (Nefedov)..... 673
- Waesche, H., with Antkiw, S., and  
Senftle, F. E. Surface adsorp-  
tion of Cs<sup>137</sup> ions on quartz  
crystals..... 363
- Wahlstrom, E. E. Petrographic  
Mineralogy (Book Review)... 367
- Wairakite (Steiner)..... 166
- Wakromejev, S. A Erzmikroskopie  
(Book Review)..... 954
- Wallace, Robert Charles, memorial  
of (Hawley)..... 315**
- Waltherite (= Walpurgite) (Fisher) 960
- Waring, C. L., with Gottfried, D.,  
and Senftle, F. E. Age deter-  
mination of zircon crystals  
from Ceylon..... 157
- Warshaw, C. M. Occurrence of  
jarosite in underclays..... 288**
- Waugh, J. L. T., with Frondel, C.,  
and Morgan, V. Lesserite, a  
new borate mineral..... 927
- Weaver, C. E. The distribution and  
identification of mixed-layer  
clays in sedimentary rocks... 202  
——— Mineralogy of the Middle  
Devonian Tioga K-bentonite . 359  
———, with Bradley, W. F. A  
regularly interstratified chlo-  
rite-vermiculite clay mineral.. 497
- Weibel, M. Amblygonite, cassiter-  
ite, and associated minerals  
from Cáceres, western Spain. 41
- Weiss, E. J., and Rowland, R. A.  
Effect of heat on vermiculite  
and mixed-layered vermicu-  
lite-chlorite..... 899  
——— Oscillating-heating x-ray  
diffractometer studies of clay  
mineral dehydroxylation.... 117
- Wellington, J. H. Southern Africa  
A Geographical Study: Volume  
I, Physical Geography (Book

- Review)..... 368
- Weng, C. C., with Straumanis, M. E. The absorption and refraction corrections and the lattice constant of chromium. 437
- Whittie, A. W. G..... 166
- Wilkinson, J. F. G. Clinopyroxenes of alkali olivine-basalt magma 724
- Winchell, A. N. Acceptance of the Roebling Medal..... 326
- Wohlmann, E..... 371
- Wolff, G. A. Faces and habits of diamond type crystals. .... 60
- Wollastonite, x-ray data..... 588
- Wrinch, D., with Shaub, B. M. Notes on a six-rayed diffraction star produced by magnetite enclosed in muscovite..... 944
- X-ray diffraction patterns of small amounts of material, an easy method to obtain (Hiemstra). 519
- X-ray spectrometer, curved-crystal, a mineralogical tool (Adler, Axelrod)..... 524
- Yagi, K. Memorial of Shukusuké Kôzu..... 592
- Yoder, H. S. Jr., with Smith, J. R. Variations in x-ray powder diffraction patterns of plagioclase feldspars..... 632
- Yttria in zircon (Dennen, Shields) 655
- Zen, E. Validity of "Vegard's law" 523
- Zerfoss, S., and Slawson, S. I. Origin of authigenic inclusions in synthetic crystals..... 598
- Zircon crystals from Ceylon, age determination of (Gottfried, Senftle, Waring)..... 157
- Zussman, J. Antigorite: Superlattice and structural formula... 148