

## INDEX TO VOLUME 21

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.

Adamite from Chloride Cliff, California. (Murdoch).....	811	Babingtonite and epidote from Westfield, Mass. (Palache).193, 652	
Aguilarite from Comstock lode, Virginia City, Nevada. (Coats).....	532	Bacalite. (Buddhue).....	269
Ahlfeld, D.....	270	Baier, E. and Schmidt, W. Lehrbuch der Mineralogie. [Book review].....	267
Aidyrlite (Godlevsky).....	269	<b>Balk, R. and Krieger, P.</b> Devitrified felsite dikes from Ascutney Mt., Vermont.....	516
Akermanite.....	193	Barite in red beds of Colorado. (Howland).....	584
Alexander, A. E. Locality for opalized spherules.....	266	Barth, T. F. W.....	204
Allemontite, x-ray study of. (Holmes).....	199	——— Book review.....	331
Allen, V. T. Dickite from St. Louis, Missouri.....	457	Bastite.....	463
——— Mineralized spherulitic limestone in the Cheltenham fireclay.....	369	Bates limestone, Lewiston, Maine, minerals in. (Fisher).....	200, 321
Alling, H. L. Interpretative petrology of igneous rocks. [Book review].....	202	Beiyinite. (Ho).....	214
Al-atoms in the two reaction series, role of. (Brammall).....	268	<b>Bentonitic magnesian clay-mineral.</b> (Foshag, Woodford)....	238
Amarillite. (Ungemach).....	270	Berman, H.....	201
Ammonium molybdo-ditellurate, crystallography of. (Donnay, Mélon).....	250	<b>Bermanite</b> , a new phosphate, occurring with triplite in Arizona. (Hurlbut).....	656
Amygdaloidal dikes. (Moehlman).....	329	Berthierite, crystallographic data, unit cell and space group. (Buerger).....	205, 442
Andalusite in pegmatite. (Murdoch).....	68	Bertrandite and epistilbite from Bedford, N. Y. (Pough).....	264
Anderson, B. W.....	140	Biographisch-literarisches Handwörterbuch für Mathematik, Astronomie, Physik mit Geophysik, Chemie, Kristallographie und verwandte Wissenschaftsbiete. (Poggendorff) [Book review].....	535
Anorthite from Duke Island, Alaska. (Glass).....	201	Blockite. (Herzenberg, Ahlfeld)...	270
Antigorite.....	463, 494	Boldyrev, A. K. Are there 47 or 48 simple forms possible on crystals?.....	731
Anterlite, x-ray powder data for. (Waldo).....	71	Book of minerals. (Hawkins) [Book review].....	74
Arsenoferrite, probable non-existence of. (Buerger).....	70	Borax. (Schaller).....	192
Arsenopyrite group, crystal structure of. (Buerger).....	203		
Asbestos, mineralogy of. (Syromyatnikov).....	48		
Augelite. (Pough).....	536		
"Autoliths," orientation of minerals in. (Pabst).....	68		

Bowen, N. L. and Ellestad, R. B.	
Nepheline contrasts.....	363
— Book review.....	813
— .....193, 678	
Bowenite.....	463
Brammall, A.....	268, 388
Brandtite.....	600
Brauns, R. Mineralogie. [Book review].....	815
Brochantite, x-ray powder data for. (Waldo).....	71
Bruner, F. H. Uraninite from Hottah Lake.....	265
Buddhue, J.....	269
Buerger, M. J. Crystallographic data, unit cell and space group for berthierite ( $\text{FeSb}_2\text{S}_4$ ).....	205, 442
— Crystals of the realgar type: symmetry, unit cell and space group of nitrogen sulfide.....	575
— Law of complication.....	702
— Probable non-existence of arsenoferrite.....	70
— X-ray powder camera.....	11
— .....203, 205, 206	
— and Butler, R. D. Technique for construction of models illustrating arrangement and packing of atoms in crystals.....	150
— and Lukesh, J. S. Preparation of oriented polished sections of small single crystals..	667
Buie, B. F.....	197
Burri, C.....	269
Bustamite from Inyo Co., Calif. (Murdoch, Webb).....	
Butler, J. W., Jr. Origin of emery deposits near Peekskill, N.Y.	
— with Buerger, M. J. Technique for construction of models illustrating arrangement and packing of atoms in crystals.....	150
Buttgenbach, H. Les minéraux et les roches, études pratiques de cristallographie, pétrographie et minéralogie. [Book review]	
Bytownite, optical data and analysis.....	211
Caesium molybdo-tellurates, crystallography of. (Donnay, Mélon).....	299
Calaverite. (Tunell, Ksanda).....	203
Calcic plagioclases, chemical composition and optical properties of. (Phillips, Hess).....	194
Calcite twins from North Plainfield, N.J. (Hawkins).....	204, 809
Callaghan, E.....	198
Cameron, E. N. with Kerr, P. F. Fuller's earth of bentonitic origin from Tehachapi, Calif. ....	230
Cape Nedick, Maine, dikes of. (Haff).....	197
Cases for display and storage of specimens. (Gordon).....	196
Cassiterite crystals of distorted habit from Pilbara goldfield, western Australia. (Simpson)	140
Cerite, radioactive, deposits near Jamestown, Colo. (Goddard, Glass).....	199
Chapman, W. M. Feldspar twinning in a differentiated sill... ..	33
Chlorite, third study of. (Winchell) .....	194, 642
Claudetite, occurrence in Imperial Valley, Calif. (Kelley).....	137
Cleavage of ionic minerals. (Shapell).....	75, 390
Cleveland Mineralogical Society..	461
Clinoferrosilite. (Bowen).....	678
Coats, R. R. Aguarilarite from Comstock lode, Virginia City, Nev.	532
Complication, law of. (Buerger) ..	702
Cordierite, optically positive, in Kissleynew gneiss at Sheridon, Manitoba. (Rutherford)	386
Cristobalite.....	689
Crystal forms, 47 or 48 possible? (Boldyrev).....	731
Cubanite, crystal structure of. (Buerger).....	205
Cubanite from Sudbury, Ontario. (Peacock, Yatsevitch).....	55
Cummingtonite from the Black Hills, S. Dakota. (Wayland) ..	607
Currier, L. W. Memorial of C. H. Richardson.....	178

Cyclic permutation of crystallo-graphic axes. (Peacock).....	136	Dowie, D. L.....	268
Dana, E. S., memorial of. (Ford) .....	173	Drugman, J. L. E.....	612
Danburite, melting of. (Morey, Ingerson).....	194	Dunham, K. C. Xenoliths in the Organ batholith, N. Mexico..	312
Davis, H. T. with Henderson, E. P. Moore County, N. Carolina, meteorite—A new eucrite....	215	Edingtonites, substituted, x-ray examination of. (Taylor)....	140
DeJong, W. F. and DeLange, J. J. X-ray study of pucherite....	809	Edmundson, R. Phosphatic concretions near Junction City, Ky.....	529
De Lange, J. J. with DeJong, W. F. Pucherite.....	809	Ellestad, R. B. with Bowen, N. L. Nepheline contrasts.....	363
De Leenheer, L.....	270	Emery deposits near Peekskill, N.Y., origin of. (Butler).....	537
Denny, M. V.....	197	Emigh, G. D. Improved Vander-wilt rock saw.....	670
Devitrified felsite dikes from Ascutney Mt., Vermont. (Balk, Krieger).....	516	Epidote from Westfield, Mass. (Palache).....	652
Deweylite.....	467, 496	Epistilbite from Bedford, N.Y. (Pough).....	264
Dickite in Missouri. (Tarr, Keller) .....	109, 195	Essai de détermination des propriétés optiques d'un minéral par la mesure, en lumière parallèle oblique, des retards en différents points d'une lame cristalline. (Mélon) [Review]	331
Dickite from St. Louis, Missouri. (Allen).....	457	Eulyssites and related rock-types from Loch Duich, Ross-shire. (Tilley).....	268
Dielectric constant of mineral powders. (Rosenholtz, Smith) .....	115	Faust, G. T. Fusion relations of iron-orthoclase, with discussion of the evidence for the existence of an iron-orthoclase molecule in feldspar.....	735
Differentiated igneous intrusion, peculiar form of. (Buie)....	197	Feldspar, replacing fossils. (Stringham).....	200
Diopsides from southern California. (Merriam, Lauder-milk).....	715	Feldspar twinning in a differentiated sill. (Chapman).....	33
Diopside, morphological description and analysis. (Peacock) .....	318	Fisher, L. W. Minerals in Bates limestone, Lewiston, Maine .....	200, 321
Diopside.....	193	Fluorite-silica pseudomorphs. (Murdoch).....	18
Dodge, T. A. Rapid microscopic method for distinguishing quartz from untwinned oligoclase-andesine .....	531	Ford, W. E. Memorial of E. S. Dana.....	173
Dolomites, castellated, from Major Co. Okla. (Merritt).....	604	Foshag, W. F. Ganophyllite and zincian amphibole from Franklin Furnace, N.J.....	63
Donnay, J. D. H. [Book review] .....	211		
— and Mélon, J. Crystallography of ammonium molybdo-ditellurate.....	250		
— — — Crystallography of caesium molybdate tellurates... .....	299		
— — — Crystallography of lithium molybdate tellurate....	125		
— — — with Morse, H. W. Optics and structure of three-dimensional spherulites.....	201, 391		

Foshag, W. F. and Woodford, A. O.	
Bentonitic magnesian clay-mineral . . . . .	238
Fraser, D. M. Paleozoic pegmatites in the Pennsylvania highlands	662
Frondel, C. Oriented inclusions of tourmaline in muscovite . . . . .	777
Fuller's earth of bentonitic origin from Tehachapi, Calif. (Kerr, Cameron) . . . . .	230
Ganophyllite and zincian amphibole from Franklin Furnace, N.J. (Foshag) . . . . .	63
Germanium, test for . . . . .	383
Glass, J. J. . . . .	199, 201
— with Henderson, E. P.	
Pyroxmangite, new locality; identity of sobralite and pyroxmangite . . . . .	273
Goddard, E. N. . . . .	199
Gabbro near Philadelphia, Penna., alteration of. (Watson) . . . . .	200
Godlevsky, M. N. . . . .	269
Gold and silver in the crystalline rocks of the Malvern Hills. (Brammall, Dowie) . . . . .	268
Gonyer, F. A. with Larsen, E. S., Irving, J., and Larsen, E. S. 3rd. Petrologic results of a study of the minerals from the Tertiary rocks of the San Juan region, Colo. . . . .	679
Gordon, S. G. . . . .	196
Greenalite structures, probably identity of. (Gruner) . . . . .	205
Greenalite, structure and chemical composition. (Gruner) . . . . .	449
Greig, J. W., Merwin, H. E. and Posnjak, E. Separation planes in magnetite . . . . .	193, 504
Grossularite (analysis and optical data) . . . . .	9
Gruner, J. W. Hydrothermal alteration of montmorillonite to feldspar at 245°–300°C . . . . .	201, 511
— Structure and chemical composition of greenalite . . . . .	205, 449
— Book review . . . . .	267
— . . . . .	204, 205
Hackmanite from Bancroft, Ont., reversible photosensitivity in. (Lee) . . . . .	764
Haff, J. C. Igneous rock names and their evaluation . . . . .	427
— . . . . .	197
Hatton, J. H. An inexpensive table for polishing ores . . . . .	800
Hawkins, A. C. Calcite twins from N. Plainfield, N.J. . . . .	204, 809
— Book of minerals. [Book review] . . . . .	74
Henderson, E. P. and Davis, H. T.	
Moore County, N. Carolina, meteorite—A new eucrite . . . . .	215
— and Glass, J. J. Pyroxmangite, new locality, and identity of sobralite and pyroxmangite . . . . .	273
Herzenberg, R. . . . .	270
Herzenbergite (kolbeckine). (Ramdohr) . . . . .	677
Hess, H. H. with Phillips, A. H.	
Metamorphic differentiation at contacts between serpentinite and siliceous country rocks . . . . .	333
— . . . . .	194, 198
Ho, T. L. . . . .	214
Hobbs, W. H. Book review . . . . .	676
Holmes, R. J. . . . .	202
Honest, A. P. Book review . . . . .	676
Howell, D. H. with Kennard, T. G.	
Spectrographic examination of Siamese zircons . . . . .	721
Howland, A. L. Occurrence of bariite in red beds of Colorado . .	584
Hunt, W. F., Kraus, E. H. and Ramsdell, L. S. Mineralogy. [Book review] . . . . .	676
Hunt, W. F. Book reviews . . . . .	74, 535, 815
Hurlbut, C. S., Jr. A new phosphate, bermanite, occurring with triplite in Arizona . . . . .	656
— X-ray determination of the silica minerals in submicroscopic intergrowths . . . . .	727
— . . . . .	198
Hutton, C. O. . . . .	268
Hydrothermal alteration of montmorillonite to feldspar at 245°–300°C. (Gruner) . . . . .	201, 511

Hydroxylapatite. (Burri, Jakob, Parker, Strunz).....	269	Khazanovich, I. K.....	269
Hypersthene, optical data.....	220	Khibnite (Khazanovich).....	269
Identification of minerals by reflected light. (Wright).....	200	Klockmann's Lehrbuch der Mineralogie. (Ramdohr) [Book review].....	535
Igneous rock names and their evaluation (Haff).....	427	Colbeckine (Ramdohr).....	677
Immersion liquids of high refractive index. (West).....	194, 245	Kraus, E. H., Hunt, W. F. and Ramsdell, L. S. Mineralogy. [Book review].....	676
Ingerson, E.....	194	——— Book reviews.....	535, 611, 814
Interpretive petrology of the igneous rocks. (Alling) [Book review].....	813	Krennerite, calaverite and sylvanite, relation between structural and morphological elements of. (Tunnell, Ksanda).....	203
Iron orthoclase, fusion relations of, with discussion of evidence for the existence of an iron-orthoclase molecule in feldspar. (Faust).....	735	Krieger, P. with Balk, R. Devitrified dikes from Ascutney Mt., Vermont.....	516
Iron strigovite. (Palmquist).....	269	Ksanda, C. J.....	203
Irving, J. with Larsen, E. S., Gonyer, F. A. and Larsen, E. S. 3rd. Petrologic results of a study of the minerals from the Tertiary volcanic rocks of the San Juan region, Colo.....	679	Kyanite-eclogites, paragenesis of. (Tilley).....	612
Ishkylidite, a new structural variety of chrysotile. (Syromyatnikov).....	48	Laboratory museum collection. (Rogers).....	196
Jacob, J.....	269	Lapparent, J. de.....	678
Keller, W. D. with Tarr, W. A. Dickite in Missouri.....	109, 195	Lapparentite. (Ungemach).....	332
Kelley, V. C. Occurrence of claudite in Imperial Valley, Calif. 137		Larsen, E. S., Irving, J. Gonyer, F. A. and Larsen, E. S., 3rd. Petrologic results of a study of the minerals from the Tertiary volcanic rocks of the San Juan region, Colo.....	679
Kennard, T. G. and Howell, D. H. Spectrographic examination of Siamese zircons.....	721	Laudermilk, J. D. with Merriam, R. Two diopsides from southern California.....	715
Kernite and borax in the Kramer borate field, Calif., origin of. (Schaller).....	192	Lee, O. Ivan. A new property of matter: Reversible photosensitivity in hackmanite from Bancroft, Ont.....	764
Kerr, P. F. Improved specific gravity balance.....	121	Leech, J. G. C.....	388
——— and Cameron, E. N. Fuller's earth of bentonitic origin from Tehachapi, Calif.....	198	Lehrbuch der Mineralogie. (Klockmann, Ramdohr) [Book review].....	535
Key to precious stones. (Spencer) [Book review].....	611	Lehrbuch der Mineralogie. (Schmidt, Baier) [Book review].....	267
		Leucoglaucite. (Ungemach).....	271
		Lithium molybdo-tellurate, crystallography of. (Donnay, Mélon) 125	
		Livingstonite, crystallography of. (Richmond).....	204, 719

Lokka, L.....	269	Meteoric stones from S. Australia —Lake Labyrinth and Kap-pakoola. (Spencer).....	388
Lukesh, J. C. with Buerger, M. J. Preparation of oriented pol- ished sections of small single crystals.....	667	<b>Microchemical methods in deter- minative mineralogy. (Staples)</b> .....	195, 613
<b>Magnesian clay-mineral. (Foshag, Woodford)</b> .....	240	<b>Microscope with universally mov- able tube. (Sueno)</b> .....	295
<b>Magnetite metacrysts. (Schwartz)</b>	635	Mine dust, determination of min- eral composition by means of <i>x</i> -rays. (Walker).....	193
Magnetite-plagioclase rocks of Magnet Heights, Bushveld, Transvaal. (Wells).....	268	Mineral classification according to cleavage and crystal habit. (Seaman) [Book review].....	139
<b>Magnetite, separation planes in.</b> (Greig, Merwin, Posnjak).193, 504		<b>Mineral determination by micro- chemical methods. (Staples)</b> .....	195, 613
Malvernian hornblendes; their genetic relationship. (Bram- mall, Leech).....	388	Mineral gallery, how to make the public observe and think. (Walker, Parsons).....	196
Marble, J. P. Possible age of mona- zite from Mars Hill, N. Car.	456	Mineral museum and the people. (Whitlock).....	197
Marmolite.....	463	<b>Mineralized spherulitic limestone in the Cheltenham fireclay.</b> (Allen).....	369
McAdams, R. E. Accessory miner- als of Wolf Mt. granite, Llano Co., Texas.....	128, 207	Mineralogie. (Brauns) [Book re- view].....	815
Mélon, J. with Donnay, J. D. H. Crystallography of ammonium molybdo-ditellurate.....	250	Mineralogy. (Kraus, Hunt, Rams- dell) [Book review].....	676
——— Crystallography of caesium molybdo-tellurates.....	299	Mineralogy in the commercial mu- seum. (Toothaker).....	196
——— Crystallography of lithium molybdo-tellurate.....	125	Mineraloids. (Rogers).....	194
——— Essai de détermination des propriétés optiques d'un mi- néral par la mesure, en lumiére parallèle oblique, des retards en différents points d'une lame cristalline. [Book review]....	331	Mineralogical Society of America. Constitutional amendments and changes in By-Laws.....	272, 460
Merriam, R. and Laudermilk, J. D. Two diopsides from southern California.....	715	List of former officers and meet- ings.....	209
Merritt, C. A. Castellated dolo- mites from Major Co., Okla...	604	Nominations for officers for 1937	611
Merwin, H. E., with Greig, J. W., and Posnjak, E. Separation planes in magnetite.....	193, 504	Preliminary list of titles for 17th annual meeting.....	817
Metamorphic differentiation at contacts between serpentinite and siliceous country rock. (Phillips, Hess).....	333	Proceedings of 16th annual meet- ing.....	183
Metaxite.....	463	Report of auditing committee..	271
		Report of committee on nomen- clature.....	188
		Mineralogical Society of Great Britain and Ireland.....	
		.....140, 268, 388, 612	
		Minéraux et les roches, études pratique de cristallographie,	

pétrographie et minéralogie. (Buttgenbach) [Book review]	211	Northrop, S. A. Analysis of thulite.....	73
Models illustrating arrangement and packing of atoms in crystals, technique for construction of. (Buerger, Butler)....	150	Nuolate. (Lokka).....	269
Moehlman, R. S. Amygdaloidal dikes.....	329	Oborite. (Ho).....	214
Mohler, N. M. Spectrophotometric study of smoky quartz.....	258	Olivine.....	198, 701
Monazite from Mars Hill, N. Carolina, possible age of. (Marble)	456	Opalized spherules, locality for. (Alexander).....	266
Montmorillonite, hydrothermal alteration to feldspar at 245°–300°C. (Gruner)....	201, 511	Oriented polished sections of small single crystals. (Buerger, Lukesh).....	667
Moore Co., N. Carolina, meteorite —A new eucrite. (Henderson, Davis).....	215	Pabst, A. Orientation of minerals in "autoliths.".....	68
Morey, G. W.....	194	—— Vesuvianite from George- town, Calif.....	1
Morse, H. W. and Donnay, J. D. H. Optics and structure of three- dimensional spherulites... 201, 391		Palache, C. Babingtonite and epi- dote from Westfield, Mass... .....	193, 652
Morven meteorite, an aerolite from S. Canterbury, New Zealand. (Hutton).....	268	.....	195
Mounting minerals for exhibition. (Palache).....	195	Paleozoic pegmatites in the Penn- sylvania highlands. (Fraser)...	662
Muench, O. B. Sulfur in cyrtolite and its indication of galena..	374	Palmquist, S.....	269
Murdoch, J. Adamite from Chloride Cliff, Calif.....	811	Paracochimbite. (Ungemach)....	332
—— Andalusite in pegmatite...	68	Parker, R. L.....	269
—— Silica-fluorite pseudo- morphs.....	18	Parsons, A. L.....	196
—— and Webb, R. W. Bustamite from Inyo Co., Calif....	69	Payne, C. J.....	140
Natural resins, refractive indices of. (Alexander).....	199	Peacock, M. A. Crystal form of sternbergite.....	103
Nepheline contrasts. (Bowen, Ellestad).....	363	—— Cyclic permutation of crys- tallographic axes.....	136
New Haven Mineral Club.....	461	—— Morphological description of diopside crystals.....	318
New Mineral names.....		—— Roselite and the rule of highest pseudo-symmetry.. 202, 589	
..... 214, 269, 270, 332, 677		—— and Yatsevitch, G. M. Cubanite from Sudbury, Ont.	55
New York Mineralogical Club....		Peck, A. B. with Slawson, C. B. Determination of refractive in- dices of minerals by the im- mersion method.....	523
..... 140, 141, 390, 536, 612, 816		Philadelphia Mineralogical Society ..... 74, 142, 267, 389, 461, 536, 815	
Nitrogen sulfide, symmetry, unit cell and space group of (Buer- ger).....	575	Phillips, A. H. and Hess, H. H. Metamorphic differentiation at contacts between serpentinite and siliceous country rocks	333
		.....	194
		Phosphatic concretions near Junc- tion City, Ky. (Edmundson)	529

Picrolite.....	463	Quartz, smoky, spectrophotometric study of. (Mohler).....	258
Picrosmine.....	463	Quartz.....	682
Pigeonite, optical data.....	221		
Plagioclase feldspars, heat effects on optical orientation of. (Barber).....	388	Ramdohr, P.....	535, 677
Plagioclase, pyroxene and olivine variation in the Stillwater complex. (Hess).....	198	Ramsdell, L. S., Kraus, E. H. and Hunt, W. F. Mineralogy. [Book review].....	676
Poggendorff, J. C. Biographisch-Literarisches Handwörterbuch für Mathematik, Astronomie, Physik mit Geophysik, Chemie, Kristallographie und verwandte Wissenschaften. [Book review].....	535	Refractive indices of minerals, determination by the immersion method. (Slawson, Peck).....	523
"Polaroid" for photographing large thin sections in crossed polarized light. (Shaub).....	384	Resins, natural, refractive indices of. (Alexander).....	199
Porcellophite.....	463	Retinalite.....	463
Posnjak, E., and Merwin, H. E. with Greig, J. W. Separation planes in magnetite.....	193, 504	Reversible photosensitivity in hackmanite from Bancroft, Ont.: A new property of matter (Lee).....	764
Potash-feldspars from Good-springs, Nevada, unusual twin laws. (Drugman).....	612	Rhodonite, iron rich; analysis, x-ray and optical data.....	287
Pough, F. H. Bertrandite and epistilbite from Bedford, N.Y. ....	264	Richardson, C. H., memorial of. (Currier).....	178
Powellite. (Pough).....	536	Richmond, W. E. Crystallography of livingstonite.....	204, 719
"Pseudo-copiapite." (Ungemach). Pseudowollastonite and wollastonite solid solutions with diopside and akermanite. (Schairer, Bowen).....	536	Rogers, A. F.....	194, 196, 207
Psilomelane, pyrolusite and hollandite, x-ray studies on. (Vaux).....	271	Roselite and the rule of highest pseudo-symmetry. (Peacock).....	202, 589
Pucherite, x-ray study of. (De-Jong, DeLange).....	193	Rosenholtz, J. L. and Smith, D. T. Dielectric constant of mineral powders.....	115
Pyroidesine.....	809	Ross, C. S. Mineralization of the Virginia titanium deposits..	143, 192
Pyroxenes.....	463	Rule of highest pseudo-symmetry. (Peacock).....	202, 589
Pyroxmangite, new locality; identity of sobralite and pyroxmangite. (Henderson, Glass) .....	389	Rutherford, R. L. Optically positive cordierite in Kisseyenew gneiss at Sherridon, Manitoba .....	386
Quartz, method for distinguishing from untwinned oligoclase-andesine. (Dodge).....	531	San Juan region, Colo., petrologic study of the minerals from Tertiary volcanic rocks. (Larsen, Irving, Gonyer, Larsen) .....	679
Saponite.....		Schaller, W. T.....	467
Schairer, J. F.....		Scheelite-leuchtenbergite deposit in the Paradise Range, Nev. (Kerr, Callaghan).....	193
Schaller, W. T.....			202

Schmidt, W. and Baier, E. Lehrbuch der Mineralogie. [Book review].....	267	Specific gravity balance, improved. (Kerr).....	121
Schwartz, G. M. Magnetite metacrysts.....	635	Spencer, L. J. Key to precious stones. [Book review].....	611
Schweizerite.....	463	_____ ..... 388, 389, 612	
Seaman, W. A. Mineral classification according to cleavage and crystal habit. [Book review]..	139	Spinels, gem, from Ceylon. (Anderson, Payne).....	140
Selfridge, G. C., Jr. X-ray and optical investigation of serpentine minerals.....	463	Staples, L. W. Mineral determination by microchemical methods.....	195, 613
Seligman, G. Snow structure and ski fields. [Book review].....	676	_____ Simple microchemical test for silicon.....	379
Sepiolite, chemical composition of. (Schaller).....	202	_____ Book review.....	139
Serpentine minerals, x-ray and optical investigation of. (Selfridge).....	463	Sternbergite, crystal form of. (Peacock).....	103
Serpentinite.....	501	Stillwater complex, plagioclase, pyroxene and olivine variation in. (Hess).....	198
Shappell, M. D. Cleavage of ionic minerals.....	75, 390	Stilpnomelane, structure of. (Gruner).....	204
Shaub, B. M. Use of "polaroid" for photographing large thin sections in crossed polarized light	384	Story of gems. (Whitlock) [Book review].....	814
Shonkin Sag laccolith, differentiation in. (Hurlbut).....	198	Stringham, B. ....	200
Silica-fluorite pseudomorphs. (Murdoch).....	18	Strunz, H. ....	269
Silica minerals in submicroscopic intergrowths, x-ray determination of. (Hurlbut).....	727	Sueno, T. Microscope with universally movable tube.....	295
Silicates, classification of. (Berman).....	201	Sulfur in cyrtolite and its indication of galena. (Muench).....	374
Silicon, simple microchemical test for. (Stables).....	379	Sylvanite. (Tunell, Ksanda).....	203
Simpson, E. S. ....	140	Syromyatnikov, F. V. Mineralogy of asbestos; Ishkyldite, a new structural variety of chrysotile.....	48
Slawson, C. B. and Peck, A. B. Determination of refractive indices of minerals by the immersion method.....	523	Table for polishing ores, inexpensive. (Hatton).....	800
Smith, D. T. with Rosenholtz, J. L. Dielectric constant of mineral powders.....	115	Tabulation of crystal forms and discussion of form names. (Rogers).....	207
Snow structure and ski fields. (Seligman) [Book review]....	676	Taosite. (deLapparent).....	678
Sobralite, identity with pyroxmangite. (Henderson, Glass)....	273	Tarr, W. A. and Keller, W. D. Dickite in Missouri.....	109, 195
_____ .....		_____ .....	194
Taylor, W. H. ....		Taylor, W. H. ....	140
Teaching museum, and aid to class instruction. (Slawson, Denny).....		Teaching museum, and aid to class instruction. (Slawson, Denny).....	197
Tenham, Queensland, meteoritic shower of 1879 (or 1869?) (Spencer).....		Tenham, Queensland, meteoritic shower of 1879 (or 1869?) (Spencer).....	612
Thermophyllite.....		Thermophyllite.....	463

Thiesmeyer, L. R.	198	Walker, T. L.	193, 196
<b>Three-dimensional spherulites, optics and structure of. (Morse, Donnay).</b>	201, 391	Watson, E. H.	200
Thulite, analysis.	73	Wayland, R. G. Cummingtonite from Black Hills, S. Dakota..	607
Tilley, C. E.	268, 612	Webb, R. W. with Murdoch, J. Bus- tamite from Inyo Co., Calif...	69
<b>Titanium deposits, Virginia, min- eralization of. (Ross)</b>	143, 192	Wells, A. K.	268
Toothaker, C. R.	196	<b>West, C. D. Immersion liquids of high refractive index</b>	194, 245
Tourmaline, high iron, from Mar- quette Iron range. (Slawson)	195	Whitlock, H. P. Story of gems. [Book review].	197
<b>Tourmaline inclusions, oriented in muscovite. (Frondel)</b>	777	-----	197
Trefethen, J. M. Peculiar type of zoning in feldspar.....	327	Wilcox, R. Occurrence of large zircon needles in basic pegmatite....	459
Tridymite.....	687	Williamsite.....	463
Trielite. (De Leenheer).....	270	<b>Winchell, A. N. Third study of chlorite</b> .....	194, 642
Triplite, analysis.....	656	<b>Wolf Mountain granite, accessory minerals of. (McAdams)</b> .....	128, 207
Tunell, G.....	203	Wollastonite.....	193
Ungemach, H.....	270, 271, 332	Woodford, A. O. with Foshag, W. F. Bentonitic magnesian clay-mineral.....	238
Uraninite from Hottah Lake (anal- ysis). (Bruner).....	265	Wright, F. E.....	200
Valentinite, crystal structure of. (Buerger).....	206	<b>Xenoliths in the Organ batholith, N. Mex. (Dunham)</b> .....	312
Vanderwilt rock saw, improved. (Emigh).....	670	<b>X-ray powder camera. (Buerger)</b> ..	11
Vaux, G.....	389	<b>Yatsevitch, G. M. with Peacock, M. A. Cubanite from Sudbury, Ont.</b> .....	55
Vein quartz pseudomorphous after asbestiform actinolite from Blue Ridge of Fauquier Co., Va. (Thiesmeyer).....	198	<b>Zincian amphibole from Franklin Furnace, N.J. (Foshag)</b> .....	63
Vesuvianite from Georgetown, Calif. (Pabst).....	1, 213	Zircon needles, large, in basic peg- matite. (Wilcox).....	459
Virginia titanium deposits, min- eralization of. (Ross).....	143, 192	<b>Zircon, Siamese, spectrographic examination of. (Kennard, Howell)</b> .....	721
Vivianite group, crystallography of. (Barth).....	204	Zoning in feldspar, peculiar type of. (Trefethen).....	327
Vorhauserite.....	463		
Waldo, A. W.....	71		