

AUTHOR INDEX TO VOLUME 57

- Akimoto, Syun-iti.** High pressure transformations in $MnSiO_3$ 1-2 76
- Akizuki, Mizuhiko.** Electron-microscopic investigation of microcline twinning 5-6 797
- Albee, Arden L.** Chemical composition and physical, optical, and structural properties of benitoite, neptunite, and joaquinite 1-2 85
- Alietti, Andrea.** Polymorphism and crystal-chemistry of heulandites and clinoptilolites 9-10 1448
- Anderson, A. T.** Phenocrysts and glass inclusions and their bearing on oxidation and mixing of basaltic magmas, Kilauea Volcano, Hawaii 1-2 188
- Anthony, John W.** The disordered, "zeolite-like" structure of connellite 3-4 426
- Anthony, John W.** The crystal structure of yavapaiite; a discussion 9-10 1546
- Anthony, John W.** Mineralogy for students [book review] 9-10 1563
- Aoki, Ken-Ichiro.** Tremolite with high richterite-molecule content in kimberlite from Buell Park, Arizona 11-12 1889
- Appleman, Daniel E.** Crystal structure of a lunar plagioclase of composition An_{84} [abstr.] 1-2 324
- Araki, T.** The crystal structure of a babingtonite [abstr.] 1-2 323
- Araki, Takaharu.** Atomic arrangement of merwinite, $Ca_3Mg[SiO_4]_2$, an unusual dense-packed structure of geophysical interest 9-10 1355
- Bachechi, F.** Synthesis and stability of montbrayite, Au_2Te_3 1-2 146
- Bailey, Arthur C., Jr.** Beryl from the Oxford mine, Troup County, Georgia 1-2 272
- Bailey, Roy A.** Volcanism and the upper mantle; investigations in the Kurile island arc [book review] 3-4 604
- Bailey, S. W.** Twin and pseudotwin intergrowths in kaolinite 3-4 411
- Bailey, S. W.** Antiphase domain structure of the intermediate composition plagioclase feldspars; addendum 7-8 1309
- Banerjee, Subir.** Landolt-Boernstein; magnetic and other properties of oxides and related compounds [book review] 3-4 607
- Baronnet, A.** Growth mechanisms and polytypism in synthetic hydroxyl-bearing phlogopite 7-8 1272
- Baronnet, A.** Die Resultate der Aetzmethode an Kristallen der Glimmergruppe [Results of etching methods on crystals of the mica group] [book review] 11-12 1917
- Barrett, Charles S.** Microstructural investigation of ballas diamond 11-12 1664
- Barron, L. M.** Thermodynamic multicomponent silicate equilibrium phase calculations 5-6 809
- Bartell, L. S.** Correlations between Si-O bond length, Si-O-Si angle and bond overlap populations calculated using extended Hueckel molecular orbital theory 11-12 1578
- Baur, Werner H.** Crystal chemistry of milarite-type minerals 3-4 463
- Baur, Werner H.** Computer-simulated crystal structures of observed and hypothetical Mg_2SiO_4 polymorphs of low and high density 5-6 709
- Bayliss, P.** Differential thermal analysis of siderite-kaolinite mixtures 5-6 960
- Beall, Joseph J.** Pseudo-rhythmic layering in the Square Butte alkali-gabbro laccolith 7-8 1294

- Beeson, Marvin H.** Crystallography and crystal chemistry [book review] 5-6 1010
- Bennett, C. E. G.** New observations on natural pyrrhotites; part I, Mineragraphic techniques 3-4 445
- Bennett, C. E. G.** New observations on natural pyrrhotites 11-12 1876
- Berner, Robert A.** Acceptance of the Mineralogical Society of America Award for 1971 3-4 627
- Bladh, Kenneth W.** The crystal structure of tilasite 11-12 1880
- Blanchard, Frank N.** Physical and chemical data for crandallite from Alachua County, Florida 3-4 473
- Boles, James R.** Composition, optical properties, cell dimensions, and thermal stability of some heulandite group zeolites 9-10 1463
- Brice, William R.** Subsolidus phase relations in aragonite-type carbonates; II, The systems $\text{CaCO}_3\text{-SrCO}_3\text{-PbCO}_3$ and $\text{CaCO}_3\text{-BaCO}_3\text{-PbCO}_3$ 1-2 155
- Briggs, Louis I.** Evolution of sedimentary rocks [book review] 1-2 335
- Brindley, G. W.** The clay mineralogy of British sediments [book review] 1-2 334
- Brindley, G. W.** The crystal structures of pyrophyllite, 1Tc, and of its dehydroxylate 5-6 732
- Brown, Bruce A.** A low-temperature crushing technique applied to manganese nodules 1-2 284
- Brown, G. E.** Crystallography of lunar pyroxenes [abstr.] 1-2 323
- Browne, P. R. L.** Occurrence of teschemacherite in a geothermal well at Broadlands, New Zealand 7-8 1304
- Brunton, G. D.** Crystal structure of a rubidium iron feldspar 11-12 1720
- Bunch, T. E.** Spinel and the petrogenesis of some Apollo 12 igneous rocks 11-12 1729
- Burke, E. A. J.** Westerveldite, $(\text{Fe,Ni,Co})\text{As}$, a new mineral from La Gallega, Spain 3-4 354
- Burns, Roger G.** Cation determinative curves for Mg-Fe-Mn olivines from vibrational spectra 5-6 967
- Busche, F. D.** Spinel and the petrogenesis of some Apollo 12 igneous rocks 11-12 1729
- Cabri, L. J.** Structural investigations of the Cu-Fe-S mineral, talnakhite [abstr.] 1-2 318
- Cabri, Louis J.** Mooihoekite and haycockite, two new copper-iron sulfides, and their relationship to chalcopyrite and talnakhite 5-6 689
- Carmichael, I. S. E.** The equilibration temperature and pressure of various lava types with spinel- and garnet-peridotite 5-6 941
- Carr, R. M.** Stability fields of hydration states of an halloysite 5-6 914
- Casanova, Roger.** A repeated twin in natural diamond from Tortiya, Ivory Coast 11-12 1871
- Chang, Luke L. Y.** Subsolidus phase relations in aragonite-type carbonates; II, The systems $\text{CaCO}_3\text{-SrCO}_3\text{-PbCO}_3$ and $\text{CaCO}_3\text{-BaCO}_3\text{-PbCO}_3$ 1-2 155
- Chao, G. Y.** The crystal structure of carletonite, $\text{KNa}_4\text{Ca}_4\text{Si}_8\text{O}_{18}(\text{CO}_3)_4(\text{F,OH})\cdot\text{H}_2\text{O}$, a double-sheet silicate 5-6 765
- Chi, Richard D.** Olivine content of chondrites measured by X-ray diffraction 3-4 584
- Choudhuri, Asit.** Hornblende-actinolite and hornblende-cummingtonite associations from Cuyuni River, Guyana, South America 9-10 1540
- Christ, C. L.** Gowerite, $\text{CaB}_5\text{O}_8(\text{OH})\cdot\text{B}(\text{OH})_3\cdot 3\text{H}_2\text{O}$; crystal structure and comparison with related borates 3-4 381
- Churchman, G. J.** Stability fields of hydration states of an halloysite 5-6 914
- Cid-Dresdner, Hilda.** Crystallographic study of rashleighite, a member of the turquoise group 11-12 1681
- Cinnamon, C. G.** Antiphase domain structure of the intermediate composition plagioclase feldspars; addendum 7-8 1309
- Clark, Alan H.** Tables for microscopic identification of ore minerals [book review] 11-12 1921
- Clark, Joan R.** Gowerite, $\text{CaB}_5\text{O}_8(\text{OH})\cdot\text{B}(\text{OH})_3\cdot 3\text{H}_2\text{O}$; crystal structure and comparison with related borates 3-4 381
- Condrate, Robert A., Sr.** The infrared spectra of valine adsorbed on Cu-montmorillonite 3-4 494

- Connolly, J. W. D.** The valence of sulfur in glass of basaltic composition formed under conditions of low oxidation potential 9-10 1515
- Constantinescu, Emil.** Metasomatic origin of some micrographic intergrowths 5-6 932
- Cooper, J. F., Jr.** Melanophlogite from Mount Hamilton, Santa Clara County, California 9-10 1494
- Cooper, W. F.** Charge refinement of a light-atom mineral structure; kernite [abstr.] 1-2 320
- Coppens, P.** Charge refinement of a light-atom mineral structure; kernite [abstr.] 1-2 320
- Corbett, Ronald K.** The crystal structure of tilasite 11-12 1880
- Crawford, William A.** Calcite-aragonite equilibrium from 50°C to 150°C 5-6 995
- Currie, K. L.** Petrographie des roches plutoniques dans leur cadre geologique [Petrography of plutonic rocks in their geologic environment] [book review] 3-4 602
- De Waal, S. A.** Nickel minerals from Barberton, South Africa; V, Trevorite, redescribed 9-10 1524
- De Waard, D.** Contribution a l'etude geologique des series cristallophylliennes inverses du Massif Central francais; La Serie de la Sioule (Puy-de-Dome, Allier) [Contribution to the geology of the inverted phyllocrystalline series of the Central Massif of France; the Sioule Series, Puy-de-Dome, Allier] [book review] 7-8 1320
- DeAngelis, Bernardo A.** Factor group analysis of the vibrational spectra of crystals; a review and consolidation 1-2 255
- Dell, C. I.** An occurrence of greigite in Lake Superior sediments 7-8 1303
- Dolcater, D. L.** Cation exchange selectivity in mica and vermiculite 11-12 1823
- Dollase, W. A.** Crystals and X-rays [book review] 7-8 1318
- Donnay, Gabrielle.** Hydroxyl in the mantle 3-4 554
- Donnay, J. D. H.** Acceptance of the Roebling Medal of the Mineralogical Society of America for 1971 3-4 620
- Donnay, J. D. H.** Structure data of elements and intermetallic phases [book review] 9-10 1565
- Dowty, Eric.** Tremolite with high richterite-molecule content in kimberlite from Buell Park, Arizona 11-12 1889
- Drake, Michael J.** Moon rocks and minerals [book review] 1-2 332
- Duncan, Andrew.** Volcanic landforms and surface features; a photographic atlas and glossary [book review] 3-4 603
- Dunning, G. E.** Melanophlogite from Mount Hamilton, Santa Clara County, California 9-10 1494
- Dunning, G. E.** The studio handbook of minerals; a guide to gem and mineral collecting [book review] 11-12 1915
- El-Attar, H. A.** Fluorine loss from silicates on ignition 1-2 246
- Ellis, A. J.** Research techniques for high pressure and high temperature [book review] 11-12 1924
- Emmons, R. C.** Professor Seitaro Tsuboi in petrology and allied fields [book review] 11-12 1916
- Evans, Bernard W.** Composition of liquidus chromite from the 1959 (Kilauea Iki) and 1965 (Makaopuhi) eruptions of Kilauea Volcano, Hawaii 1-2 217
- Eventoff, William.** The crystal structure of heterosite 1-2 45
- Fabbi, Brent P.** A refined fusion X-ray fluorescence technique, and determination of major and minor elements in silicate standards 1-2 237
- Fahey, Joseph J.** The staining mechanism of potassium feldspar and the origin of hieratite 1-2 287
- Fahey, Joseph J.** Analytical geochemistry [book review] 1-2 333
- Fahey, Joseph J.** Manganaxinite from the Mesabi Range, Minnesota 5-6 989
- Fang, J. H.** Crystal structures and mineral chemistry of double-salt hydrates; II, The crystal structure of mendozite, $\text{NaAl}(\text{SO}_4)_2 \cdot 11\text{H}_2\text{O}$ 7-8 1081
- Fang, J. H.** The crystal structure of kainite 9-10 1325
- Fang, J. H.** Redetermination of the crystal structure of eudidykite and its dimorphic relationship to epididykite 9-10 1345

- Fayos, J.** Some aspects of the structural relationship between "Messbach-type" and "Lucin-type" variscites 1-2 36
- Finch, C. B.** Phase stability in the ThGeO₄ system in the range 750-1450° C at 1 ATM 11-12 1894
- Fleet, M. E.** The crystal structure of parammelsbergite (NiAs₂) 1-2 1
- Fleet, M. E.** The crystal structure of αNi₇S₆ [abstr.] 1-2 318
- Fleischer, Michael.** New mineral names 1-2 325
- Fleischer, Michael.** New mineral names 3-4 594
- Fleischer, Michael.** New mineral names 5-6 1003
- Fleischer, Michael.** New mineral names 7-8 1311
- Fleischer, Michael.** New mineral names 9-10 1552
- Fleischer, Michael.** New mineral names 11-12 1909
- Fleischer, Peter.** Sepiolite associated with Miocene diatomite, Santa Cruz Basin, California 5-6 903
- Fodor, R. V.** Tremolite with high richterite-molecule content in kimberlite from Buell Park, Arizona 11-12 1889
- Forbes, Warren C.** Crystal chemistry of milarite-type minerals 3-4 463
- Foster, Helen L.** Memorial of Dorothy Carroll, April 7, 1907-January 30, 1970 3-4 631
- Foster, W. R.** Stability of iron-free pigeonite at atmospheric pressure 7-8 1232
- French, Bevan M.** Manganaxinite from the Mesabi Range, Minnesota 5-6 989
- Frueh, Jonathan.** Handbook of elemental abundances in meteorites [book review] 11-12 1923
- Frueh, A. J.** The origin of plagioclase satellites [abstr.] 1-2 324
- Gabe, E. J.** Structural investigations of the Cu-Fe-S mineral, talnakhite [abstr.] 1-2 318
- Gabe, E. J.** The crystal structure of talnakhite, Cu₁₈Fe₁₆S₃₂ 3-4 368
- Galli, Ermanno.** The crystal chemistry of phillipsites 7-8 1125
- Gardner, Leonard Robert.** Conditions for direct formation of gibbsite from K-feldspar; further discussion 1-2 294
- Gardner, Leonard Robert.** Principles of lithogenesis; Volume 2 [book review] 3-4 605
- Gebbie, H. A.** The use of far infrared interferometric spectroscopy for mineral identification 5-6 998
- Gelb, T.** Metastable quartz-type structures formed from kaolinite by solid state reaction 9-10 1505
- Giardini, A. A.** The observation of nitrogen, water, carbon dioxide, methane and argon as impurities in natural diamonds 9-10 1518
- Gibbs, G. V.** Aluminum-silicon distribution in zunyite 7-8 1089
- Gibbs, G. V.** Correlations between Si-O bond length, Si-O-Si angle and bond overlap populations calculated using extended Hueckel molecular orbital theory 11-12 1578
- Gibbs, G. V.** The effect of tetrahedral angles on Si-O bond overlap populations for isolated tetrahedra 11-12 1614
- Gibbs, G. V.** Variation of Si-O distances in olivines, sodamellite and sodium metasilicate as predicted by semi-empirical molecular orbital calculations 11-12 1663
- Gilbert, M. C.** Stability of acmite-jadeite pyroxenes at low pressure 7-8 1210
- Gilbert, M. C.** Fluorine-hydroxyl substitution in tremolite 9-10 1386
- Goldbery, R.** Dawsonite and analcite in the Singleton Coal Measures of the Sydney Basin 9-10 1437
- Goldsmith, Julian R.** Mineralogical musing 3-4 345
- Gomes, Celso de Barros.** Chemical changes in plagioclases and their bearing on the petrologic history of an amphibolite body 11-12 1860
- Graham, J.** New observations on natural pyrrhotites; part I, Mineragraphic techniques 3-4 445
- Graham, J.** New observations on natural pyrrhotites 11-12 1876
- Grandstaff, David E.** Use of mercuric bromide as a heavy liquid 11-12 1899
- Grazan, A. M.** Microporosity of muscovite sheets 5-6 986

- Gude, Arthur J., 3d.** Silhydryte, $3\text{SiO}_2 \cdot \text{H}_2\text{O}$, a new mineral from Trinity County, California 7-8 1053
- Gupta, Alok K.** The system forsterite-diopside-akermanite-leucite and its significance in the origin of potassium-rich mafic and ultramafic volcanic rocks 7-8 1242
- Haas, Herbert.** Diaspore-corundum equilibrium determined by epitaxis of diaspore on corundum 9-10 1375
- Haekli, T. A.** Argentinian pentlandite from some Finnish sulfide deposits 1-2 137
- Hall, S. R.** Structural investigations of the Cu-Fe-S mineral, talnakhite [abstr.] 1-2 318
- Hall, S. R.** The crystal structure of talnakhite, $\text{Cu}_{18}\text{Fe}_{16}\text{S}_{32}$ 3-4 368
- Hall, Sydney R.** Mooihoekite and haycockite, two new copper-iron sulfides, and their relationship to chalcopyrite and talnakhite 5-6 689
- Hamil, M. M.** Correlations between Si-O bond length, Si-O-Si angle and bond overlap populations calculated using extended Hueckel molecular orbital theory 11-12 1578
- Harada, Kazuo.** New data on the analcime-wairakite series 5-6 924
- Harnik, A. B.** Structural chemistry of barysilite-type compounds $\text{XY}_2(\text{Pb}_2\text{Si}_2\text{O}_7)_3$ 1-2 277
- Harris, D. C.** Two fibrous iron sulfides and valleriite from Cyprus with new data on valleriite 7-8 1037
- Harris, L. A.** Crystal structure of a rubidium iron feldspar 11-12 1720
- Harris, L. A.** Phase stability in the ThGeO_4 system in the range 750-1450° C at 1 ATM 11-12 1894
- Haughton, D. R.** The valence of sulfur in glass of basaltic composition formed under conditions of low oxidation potential 9-10 1515
- Hazen, Robert M.** The effect of cation substitutions on the physical properties of trioctahedral micas 1-2 103
- Heald, Emerson F.** Kinetics and mechanism of the anatase/rutile transformation, as catalyzed by ferric oxide and reducing conditions 1-2 10
- Heimlich, R. A.** Zircons from Precambrian gneiss, southern Bighorn Mountains, Wyoming 7-8 1190
- Hemingway, Bruce S.** The heat capacities at low temperatures and entropies at 298.15 K of huntite, $\text{CaMg}_3(\text{CO}_3)_4$, and artinite, $\text{Mg}_2(\text{OH})_2\text{CO}_3 \cdot 3\text{H}_2\text{O}$ 11-12 1754
- Hemingway, Bruce S.** The heat capacities at low-temperatures and entropies at 298.15 K of nesquehonite, $\text{MgCO}_3 \cdot 3\text{H}_2\text{O}$, and hydromagnesite 11-12 1768
- Hoersch, Alice Lynn.** Calcite-aragonite equilibrium from 50°C to 150°C 5-6 995
- Holland, H. D.** Physikalisch-chemische Kristallographie [Physical-chemical crystallography] [book review] 1-2 335
- Holser, William T.** Mass transport in non-metallic solids [book review] 3-4 606
- Holser, William T.** Glossary of mineral species [book review] 5-6 1012
- Holser, William T.** How to know the minerals and rocks [book review] 9-10 1565
- Holser, William T.** Nature of the solid Earth [book review] 11-12 1924
- Hooker, Marjorie.** Memorial of Dorothy Carroll, April 7, 1907–January 30, 1970 3-4 631
- Horwood, J.** Structural investigations of the Cu-Fe-S mineral, talnakhite [abstr.] 1-2 318
- Huang, W. H.** Standard free energies of formation calculated from dissolution data using specific mineral analyses 7-8 1152
- Huang, W. H.** Laboratory dissolution of plagioclase feldspars in water and organic acids at room temperature 11-12 1849
- Huggins, Frank E.** Cation determinative curves for Mg-Fe-Mn olivines from vibrational spectra 5-6 967
- Hurlbut, C. S., Jr.** Memorial of Louis Caryl Gratton, June 10, 1880– July 22, 1970 3-4 638
- Hutchison, Charles S.** Alpine-type chromite in north Borneo, with special reference to Darvel Bay 5-6 835
- Hytoenen, Kai.** Memorial of Vladi Marmo, April 20, 1914–August 23, 1969 3-4 644
- Ingamells, C. O.** Modern methods of geochemical analysis [book review] 3-4 609

- Ito, Jun. Rhodonite-pyroxmangite peritectic along the join $MnSiO_3$ - $MgSiO_3$ in air 5-6 865
- Jackson, M. L. Fluorine loss from silicates on ignition 1-2 246
- Jackson, M. L. Cation exchange selectivity in mica and vermiculite 11-12 1823
- Jackson, M. L. Cation and layer charge effects on blister-like osmotic swelling of micaceous vermiculite 11-12 1832
- Jakes, Petr. Hornblendes from calc-alkaline volcanic rocks of island arcs and continental margins 5-6 887
- Joshi, M. S. Development of (120) prism faces of natural topaz 11-12 1884
- Kays, Alan. Comparative study of low-grade metamorphism in the California Coast Ranges and the outer metamorphic belt of Japan [book review] 5-6 1013
- Keil, Klaus. Spinel and the petrogenesis of some Apollo 12 igneous rocks 11-12 1729
- Keil, Klaus. Tremolite with high richterite-molecule content in kimberlite from Buell Park, Arizona 11-12 1889
- Keller, W. D. Standard free energies of formation calculated from dissolution data using specific mineral analyses 7-8 1152
- Khan, Aijaz A. Crystal chemistry of milarite-type minerals 3-4 463
- Kiang, W. C. Laboratory dissolution of plagioclase feldspars in water and organic acids at room temperature 11-12 1849
- Kieft, C. Westerveldite, $(Fe,Ni,Co)As$, a new mineral from La Gallega, Spain 3-4 354
- Kiggins, B. Electron spin resonance of Mn^{2+} impurities in newberyite 1-2 52
- Kitagawa, Yasuo. An aspect of the water in clay minerals; an application of nuclear magnetic resonance spectrometry to clay mineralogy 5-6 751
- Kohatsu, I. Crystal chemistry of a new sulfosalt mineral, nuffieldite ($Pb_{10}Bi_{10}Cu_4S_{28}$) [abstr.] 1-2 319
- Kokotailo, G. T. Direct observation of stacking faults in the zeolite erionite 3-4 439
- Konnert, Judith A. Gowerite, $CaB_5O_8(OH) \cdot B(OH)_3 \cdot 3H_2O$; crystal structure and comparison with related borates 3-4 381
- Kopp, O. C. Crystal structure of a rubidium iron feldspar 11-12 1720
- Kostiner, Edward. A Moessbauer effect study of triplite and related minerals 7-8 1109
- Koto, Kichiro. Crystal structures of the high pressure polymorphs of Mn_2GeO_4 1-2 62
- Kramer, James R. Principles of chemical sedimentology [book] 1-2 331
- Kudo, Albert M. Chemical equilibria in the Earth [book review] review] 7-8 1318
- Kushiro, Ikuo. Determination of liquidus relations in synthetic silicate systems with electron probe analysis; the system forsterite-diopside-silica at 1 atmosphere 7-8 1260
- Laird, Jo. Chemical composition and physical, optical, and structural properties of benitoite, neptunite, and joaquinite 1-2 85
- Langer, Arthur M. Optical properties of fibrous brucite from Asbestos, Quebec 5-6 857
- Langheinrich, Armin P. X-ray emission wavelengths and key tables for nondiffractive analysis [book review] 3-4 608
- Larsen, F. K. Charge refinement of a light-atom mineral structure; kernite [abstr.] 1-2 320
- Larson, E. E. The use of far infrared interferometric spectroscopy for mineral identification 5-6 998
- Larson, Sylvia J. The use of far infrared interferometric spectroscopy for mineral identification 5-6 998
- Laughon, Robert B. The crystal structure of yavapaiite; a discussion 9-10 1546
- Laughon, Robert B. The crystal structure of tilasite 11-12 1880
- Lawton, S. L. Direct observation of stacking faults in the zeolite erionite 3-4 439
- Leavens, Peter B. Identity of astrolite with muscovite 5-6 993
- Leonard, B. F. Microscopic study of opaque minerals [book review] 11-12 1918
- Leonard, B. F. Modern metallographic techniques and their applications [book review] 11-12 1922
- Li, C. T. Relation between T-O-T angle and stability of $LiAlSi_2O_6$ -III (γ -spodumene) and other high-quartz solid solutions [abstr.] 1-2 321

- Liebling, Richard S.** Optical properties of fibrous brucite from Asbestos, Quebec 5-6 857
- Lindberg, James D.** Diffuse reflectance spectra of several clay minerals 3-4 485
- Lodding, William.** Sample preparation for X-ray fluorescence analysis; Li-borate glass disks 1-2 281
- Lodding, William.** Conditions for direct formation of gibbsite from K-feldspar; discussion 1-2 292
- Loeb, A. L.** Introduction a la cristallographie [Introduction to crystallography] [book review] 9-10 1563
- Loschi Ghittoni, Anna G.** The crystal chemistry of phillipsites 7-8 1125
- Loughnan, F. C.** Dawsonite and analcite in the Singleton Coal Measures of the Sydney Basin 9-10 1437
- Louisnathan, S. J.** Correlations between Si-O bond length, Si-O-Si angle and bond overlap populations calculated using extended Hueckel molecular orbital theory 11-12 1578
- Louisnathan, S. John.** Aluminum-silicon distribution in zunyite 7-8 1089
- Louisnathan, S. John.** The effect of tetrahedral angles on Si-O bond overlap populations for isolated tetrahedra 11-12 1614
- Louisnathan, S. John.** Variation of Si-O distances in olivines, sodamelilite and sodium metasilicate as predicted by semi-empirical molecular orbital calculations 11-12 1663
- Low, William.** ESR spectra of Mn²⁺ in heat-treated aragonite 7-8 1115
- Lyons, Paul C.** Significance of riebeckite and ferrohastingsite in micropertite granites 9-10 1404
- Mackenzie, Fred T.** Rock weathering [book review] 1-2 331
- Makovicky, E.** Crystallography of sinnerite (Cu₆As₄S₉) [abstr.] 1-2 319
- Makovicky, Emil.** Studies of the sulfosalts of copper; II, The crystallography and composition of sinnerite, Cu₆As₄S₉ 5-6 824
- Malcuit, R. J.** Zircon from Precambrian gneiss, southern Bighorn Mountains, Wyoming 7-8 1190
- Manoogian, A.** Electron spin resonance of Mn²⁺ impurities in newberyite 1-2 52
- Mansfield, Charles F.** Twin and pseudotwin intergrowths in kaolinite 3-4 411
- Martin, R. F.** Hydroxyl in the mantle 3-4 554
- Martin, Robert.** The crystal structure of heterosite 1-2 45
- Mason, Brian.** Lunar tridymite and cristobalite 9-10 1530
- McAndrew, John.** Differential dispersion measurement of refraction index 1-2 231
- McCallum, I. S.** Electron probe microanalysis [book review] 11-12 1916
- McLean, W. John.** The disordered, "zeolite-like" structure of connellite 3-4 426
- McLean, W. John.** The crystal structure of yavapaiite; a discussion 9-10 1546
- McLean, W. John.** The crystal structure of tilasite 11-12 1880
- Melton, Charles E.** The observation of nitrogen, water, carbon dioxide, methane and argon as impurities in natural diamonds 9-10 1518
- Merlino, S.** Orizite discredited (= epistilbite) 3-4 592
- Milton, Charles.** Leucosphenite, and its occurrence in the Green River Formation of Utah and Wyoming 11-12 1801
- Mitchell, Roger H.** Composition of perovskite in kimberlite 11-12 1748
- Molin-Case, Joann.** Crystal chemistry of the basic manganese arsenates; V, Mixed manganese coordination in the atomic arrangement of arsenoclasite; Erratum 3-4 593
- Moore, Paul B.** Sarcopside; its atomic arrangement 1-2 24
- Moore, Paul B.** Crystal chemistry of the basic manganese arsenates; V, Mixed manganese coordination in the atomic arrangement of arsenoclasite; Erratum 3-4 593
- Moore, Paul Brian.** Octahedral tetramer in the crystal structure of leucophosphite, K₂[Fe³⁺₄(OH)₂(H₂O)₂(PO₄)₄]·2H₂O 3-4 397
- Moore, Paul Brian.** Natrophilite, NaMn(PO₄), has ordered cations 9-10 1333
- Moore, Paul Brian.** Atomic arrangement of merwinite, Ca₃Mg[SiO₄]₂, an unusual dense-packed structure of geophysical interest 9-10 1355

- Moore, Raymond K.** Interpretation of the spin-allowed bands of Fe^{2+} in silicate garnets 11-12 1692
- Morimoto, Nobuo.** Crystal structures of the high pressure polymorphs of Mn_2GeO_4 1-2 62
- Morimoto, Nobuo.** Crystal structure of a monoclinic pyrrhotite (Fe_7S_8) 7-8 1066
- Morse, S. A.** W. E. Troeger, *Optische Bestimmung der gesteinbildenden Minerale; Teil 1, Bestimmungstabellen*, 4th ed. [W. E. Troeger, *Optical data for the rock-forming minerals; Part 1, Tables*, 4th ed.] [book review] 9-10 1567
- Mueller, Robert F.** Stability of biotite; a discussion 1-2 300
- Nagashima, Koza.** New data on the analcime-wairakite series 5-6 924
- Nakajima, Shigeo.** Crystal structures of the high pressure polymorphs of Mn_2GeO_4 1-2 62
- Nash, W. P.** Apatite chemistry and phosphorus fugacity in a differentiated igneous intrusion 5-6 877
- Newnham, Robert E.** Factor group analysis of the vibrational spectra of crystals; a review and consolidation 1-2 255
- Nichiguchi, Katsuhisa.** Crystal structure of a monoclinic pyrrhotite (Fe_7S_8) 7-8 1066
- Nicholls, J.** The equilibration temperature and pressure of various lava types with spinel- and garnet-peridotite 5-6 941
- Nissen, August L.** Fluorescent hydrogrossular from Nordland, Norway 9-10 1535
- Oen, I. S.** Westerveldite, $(\text{Fe},\text{Ni},\text{Co})\text{As}$, a new mineral from La Gallega, Spain 3-4 354
- Ohya, Y.** The crystal structure of kainite 9-10 1325
- Ohya, Y.** Redetermination of the crystal structure of eudidymite and its dimorphic relationship to epididymite 9-10 1345
- Orville, Philip M.** Elements of mineralogy [book review] 1-2 330
- Pabst, A.** Minerale (Entstehung-Vorkommen-Bestimmung-Verwertung) [Minerals (Origin-occurrence-identification-uses)] [book review] 3-4 601
- Pabst, A.** Presentation of the Roebling Medal of the Mineralogical Society of America for 1971 to J. D. H. Donnay 3-4 615
- Pabst, A.** Leucosphenite, and its occurrence in the Green River Formation of Utah and Wyoming 11-12 1801
- Papunen, Heikki.** Argentinian pentlandite from some Finnish sulfide deposits 1-2 137
- Pardoe, G. W. F.** The use of far infrared interferometric spectroscopy for mineral identification 5-6 998
- Parker, Ronald B.** Hollandite-coronadite in fossil bone 9-10 1527
- Parks, George A.** Free energies of formation and aqueous solubilities of aluminum hydroxides and oxide hydroxides at 25°C 7-8 1163
- Parks, T. C.** New observations on natural pyrrhotites 11-12 1876
- Peacor, Donald R.** New data on graphite 1-2 269
- Peacor, Donald R.** The crystal structure of heterosite 1-2 45
- Peacor, Donald R.** Refinement of the crystal structure of a volcanic nepheline 11-12 1711
- Pluth, J. J.** The crystal structures of three ion-exchanged forms faujasite [abstr.] 1-2 320
- Pollack, Sidney S.** Olivine content of chondrites measured by X-ray diffraction 3-4 584
- Popp, R. K.** Stability of acmite-jadeite pyroxenes at low pressure 7-8 1210
- Prewitt, C. T.** Crystallography of lunar pyroxenes [abstr.] 1-2 323
- Prinz, Martin.** Spinel and the petrogenesis of some Apollo 12 igneous rocks 11-12 1729
- Radcliffe, Dennis.** Beryl from the Oxford mine, Troup County, Georgia 1-2 272
- Reed, S. J. B.** Electron microprobe analysis at low operating voltage; discussion 9-10 1550
- Rhett, Douglas W.** Sample preparation for X-ray fluorescence analysis; Li-borate glass disks 1-2 281
- Robie, Richard A.** The heat capacities at low temperatures and entropies at 298.15 K of huntite, $\text{CaMg}_3(\text{CO}_3)_4$, and artinite, $\text{Mg}_2(\text{OH})_2\text{CO}_3 \cdot 3\text{H}_2\text{O}$ 11-12 1754
- Robie, Richard A.** The heat capacities at low-temperatures and entropies at 298.15 K of nesquehonite, $\text{MgCO}_3 \cdot 3\text{H}_2\text{O}$, and hydromagnesite 11-12 1768

- Robinson, P. D.** Crystal structures and mineral chemistry of double-salt hydrates; II, The crystal structure of mendozite, $\text{NaAl}(\text{SO}_4)_2 \cdot 11\text{H}_2\text{O}$ 7-8 1081
- Robinson, Paul D.** The crystal structure of kainite 9-10 1325
- Robinson, Paul D.** Redetermination of the crystal structure of eudidymite and its dimorphic relationship to epididymite 9-10 1345
- Robinson, Peter.** A petrography of Australian metamorphic rocks [book review] 1-2 330
- Robinson, Peter.** W. E. Troeger, *Optische Bestimmung der gesteinsbildenden Minerale*; Teil I, Bestimmungstabellen, 4th ed. [W. E. Troeger, *Optical data for the rock-forming minerals*; Part 1, Tables, 4th ed.] [book review] 9-10 1567
- Rosenberg, P. E.** Compositional variations in synthetic topaz 1-2 169
- Rosenberg, P. E.** Paragenesis of the topaz-bearing portion of the Brown Derby No. 1 pegmatite, Gunnison County, Colorado 3-4 571
- Roy, Rustum.** Memorial of Chandrasekhara Venkata Raman, November 7, 1888–November 21, 1970 3-4 652
- Salotti, C. A.** The observation of nitrogen, water, carbon dioxide, methane and argon as impurities in natural diamonds 9-10 1518
- Salotti, Charles A.** Monatomic metal vapor pressures from minerals 1-2 130
- Salvador Salvador, P.** Some aspects of the structural relationship between "Messbach-type" and "Lucin-type" variscites 1-2 36
- Sawruk, S.** Direct observation of stacking faults in the zeolite erionite 3-4 439
- Saxena, S. K.** Retrieval of thermodynamic data from a study of inter-crystalline and intra-crystalline ion-exchange equilibrium 11-12 1782
- Schneer, Cecil J.** Short classification and description of the various rocks [book reviews] 3-4 599
- Schneer, Cecil J.** An essay about the origine and virtues of gems [book review] 11-12 1915
- Schomaker, Verner.** The crystal structures of three ion-exchanged forms faujasite [abstr.] 1-2 320
- Sclar, Charles B.** The staining mechanism of potassium feldspar and the origin of hieratite 1-2 287
- Seclaman, Marin.** Metasomatic origin of some micrographic intergrowths 5-6 932
- Segnit, E. R.** Metastable quartz-type structures formed from kaolinite by solid state reaction 9-10 1505
- Sequin, M. K.** Study of the stability of MnCO_3 in inert atmospheres and in air 3-4 511
- Sheppard, Richard A.** Silhydrite, $3\text{SiO}_2 \cdot \text{H}_2\text{O}$, a new mineral from Trinity County, California 7-8 1053
- Shlichta, P. J.** Relation between T-O-T angle and stability of $\text{LiAlSi}_2\text{O}_6\text{-III}$ (γ -spodumene) and other high-quartz solid solutions [abstr.] 1-2 321
- Siever, Raymond.** Presentation of the Mineralogical Society of America Award for 1971 to Robert A. Berner 3-4 626
- Simmons, William B., Jr.** Refinement of the crystal structure of a volcanic nepheline 11-12 1711
- Simmons, Wm. B., Jr.** New data on graphite 1-2 269
- Simon, Blaise.** A repeated twin in natural diamond from Tortiya, Ivory Coast 11-12 1871
- Sinha, A. K.** Lead isotopes [book review] 3-4 608
- Skinner, B. J.** Crystallography of sinnerite ($\text{Cu}_6\text{As}_4\text{S}_9$) [abstr.] 1-2 319
- Skinner, Brian J.** Studies of the sulfosalts of copper; II, The crystallography and composition of sinnerite, $\text{Cu}_6\text{As}_4\text{S}_9$ 5-6 824
- Smith, Deane K.** The crystal structures of uranophane and beta-uranophane [abstr.] 1-2 321
- Smith, Douglas.** Stability of iron-rich pyroxene in the system $\text{CaSiO}_3\text{-FeSiO}_3\text{-MgSiO}_3$ 9-10 1413
- Smyth, Joseph R.** A simple heating stage for single-crystal diffraction studies up to 1000°C 7-8 1305
- Snetsinger, K. G.** Osarsite, a new osmium-ruthenium sulfarsenide from California 7-8 1029

- Snyder, David G. Diffuse reflectance spectra of several clay minerals 3-4 485
- Soerensen, Henning. Memorial of Hans Carl Eisenreich Clausen, May 11, 1898-June 4, 1971 3-4 635
- Sridhar, K. Cation and layer charge effects on blister-like osmotic swelling of micaceous vermiculite 11-12 1832
- Staples, Lloyd W. Color under ground; the mineral picture book [book review] 3-4 600
- Steinfink, Hugo. The electron-optical investigation of clays [book review] 5-6 1011
- Stohl, Frances V. The crystal structures of uranophane and beta-uranophane [abstr.] 1-2 321
- Sung, Do Jang. The infrared spectra of valine adsorbed on Cu-montmorillonite 3-4 494
- Syers, J. K. Cation exchange selectivity in mica and vermiculite 11-12 1823
- Syers, J. K. Cation and layer charge effects on blister-like osmotic swelling of micaceous vermiculite 11-12 1832
- Syono, Yasuhiko. High pressure transformations in $MnSiO_3$ 1-2 76
- Takeda, Hiroshi. Structural characterization of subcalcic aluminan augites [abstr.] 1-2 322
- Taku, R. K. Development of (120) prism faces of natural topaz 11-12 1884
- Tanaka, Kohei. New data on the analcime-wairakite series 5-6 924
- Taylor, Lawrence A. Smythite, $(Fe, Ni)_9S_{11}$; a redefinition 11-12 1571
- Thomssen, Richard W. Identity of astrolite with muscovite 5-6 993
- Thornber, M. R. New observations on natural pyrrhotites; part I, Mineragraphic techniques 3-4 445
- Thornber, M. R. New observations on natural pyrrhotites 11-12 1876
- Tokonami, Masayasu. Crystal structures of the high pressure polymorphs of Mn_2GeO_4 1-2 62
- Tokonami, Masayasu. Crystal structure of a monoclinic pyrrhotite (Fe_7S_8) 7-8 1066
- Toman, K. The origin of plagioclase satellites [abstr.] 1-2 324
- Toots, Heinrich. Hollandite-coronadite in fossil bone 9-10 1527
- Townsend, M. G. Structural investigations of the Cu-Fe-S mineral, talnakhite [abstr.] 1-2 318
- Troll, Georg. Fluorine-hydroxyl substitution in tremolite 9-10 1386
- Trueb, Lucien F. Microstructural investigation of ballas diamond 11-12 1664
- Tschapek, M. Microporosity of muscovite sheets 5-6 986
- Turco, Guy. A repeated twin in natural diamond from Tortiya, Ivory Coast 11-12 1871
- Tushingham, A. D. Memorial of Victor Ben Meen, July 1, 1910-January 7, 1971 3-4 647
- Van Reeuwijk, L. P. High-temperature phases of zeolites of the natrolite group 3-4 499
- Vaughan, D. J. Two fibrous iron sulfides and valleriite from Cyprus with new data on valleriite 7-8 1037
- Vedam, K. Memorial of Chandrasekhara Venkata Raman, November 7, 1888-November 21, 1970 3-4 652
- Villarroel, Hugo S. Crystallographic study of rashleighite, a member of the turquoise group 11-12 1681
- Volk, V. V. Fluorine loss from silicates on ignition 1-2 246
- Vuorelainen, Y. Argentinian pentlandite from some Finnish sulfide deposits 1-2 137
- Waldbaum, D. R. Chemical thermodynamics [book review] 5-6 1007
- Waldbaum, D. R. The computation of chemical equilibria [book review] 5-6 1008
- Waldbaum, D. R. Computer calculations of phase diagrams, with special reference to refractory metals [book review] 5-6 1009
- Walter, F. The crystal structures of uranophane and beta-uranophane [abstr.] 1-2 321
- Wardle, Ronald. The crystal structures of pyrophyllite, 1Tc, and of its dehydroxylate 5-6 732
- Warne, S. St. J. Differential thermal analysis of siderite-kaolinite mixtures 5-6 960
- Weiss, Clair W. Kinetics and mechanism of the anatase/rutile transformation, as catalyzed by ferric oxide and reducing conditions 1-2 10
- Wenden, Henry E. An introduction to crystallography [book review] 9-10 1562

- Westerhof, A. B.** Westerveldite, (Fe,Ni,Co)As, a new mineral from La Gallega, Spain 3-4 354
White, A. J. R. Hornblendes from calc-alkaline volcanic rocks of island arcs and continental margins 5-6 887
White, William B. Factor group analysis of the vibrational spectra of crystals; a review and consolidation 1-2 255
White, William B. Interpretation of the spin-allowed bands of Fe²⁺ in silicate garnets 11-12 1692
Whitney, James A. The effect of reduced H₂O fugacity on the buffering of oxygen fugacity in hydrothermal experiments 11-12 1902
Whitney, Philip R. Spinel inclusions in plagioclase of metagabbros from the Adirondack Highlands 9-10 1429
Whittemore, O. J., Jr. Synthesis of siliceous mordenites 7-8 1146
Whitten, E. H. Timothy. Ratio correlation; a manual for students of petrology and geochemistry [book review] 5-6 1012
Williams, K. L. Smythite, (Fe, Ni)₉S₁₁; a redefinition 11-12 1571
Williams, Sidney A. Elyite, basic lead-copper sulfate, a new mineral from Nevada 3-4 364
Wones, David R. The effect of cation substitutions on the physical properties of trioctahedral micas 1-2 103
Wones, David R. Stability of biotite; a reply 1-2 316
Wright, Thomas L. Phenocrysts and glass inclusions and their bearing on oxidation and mixing of basaltic magmas, Kilauea Volcano, Hawaii 1-2 188
Wright, Thomas L. Composition of liquidus chromite from the 1959 (Kilauea Iki) and 1965 (Makaopuhi) eruptions of Kilauea Volcano, Hawaii 1-2 217
Wuensch, B. J. Crystal chemistry of a new sulfosalt mineral, nuffieldite (Pb₁₀Bi₁₀Cu₄S₂₈) [abstr.] 1-2 319
Wuensch, Bernhardt J. Crystallography and crystal defects [book review] 3-4 601
Yang, Houg-Yi. Stability of iron-free pigeonite at atmospheric pressure 7-8 1232
Yoder, H. S., Jr. Memorial to John Frank Schairer, April 13, 1904–September 26, 1970 3-4 657
Yow, Hsiukang. Correlations between Si-O bond length, Si-O-Si angle and bond overlap populations calculated using extended Hueckel molecular orbital theory 11-12 1578
Yu, Shu-Cheng. Crystallography of a high-temperature phase of realgar 11-12 1873
Zak, Lubor. A contribution to the crystal chemistry of melanophlogite 5-6 779
Zeira, Simcha. ESR spectra of Mn²⁺ in heat-treated aragonite 7-8 1115
Zen, E-an. Gibbs free energy, enthalpy, and entropy of ten rock-forming minerals; calculations, discrepancies, implications 3-4 524
Zoltai, T. The crystal structure of a babingtonite [abstr.] 1-2 323
Zoltai, Tibor. Crystallography of a high-temperature phase of realgar 11-12 1873

SUBJECT INDEX TO VOLUME 57

- Aluminum**
Analysis
 Electron probe, techniques
 (Reed, S. J. B.) 9-10 1550
- Argentina**
Mineralogy
 Sulfosalts, new minerals
 (Fleischer, Michael.) 1-2 325
- Argon**
Occurrence
 Diamond, impurities
 (Melton, Charles E., *et al.*) 9-10 1518
- Arizona**
Mineralogy
 Tremolite, Buell Park
 (Aoki, Ken-Ichiro., *et al.*) 11-12 1889
- Associations**
Mineralogical Society of America
 Award, 1971, Berner, Robert A.,
 acceptance
 (Berner, Robert A.) 3-4 627
 Award, 1971, Berner, Robert A.,
 presentation
 (Siever, Raymond.) 3-4 626
 Roebling Medal, 1971, Donnay, J. D. H.,
 presentation
 (Pabst, A.) 3-4 615
 Roebling Medal, 1971, Donnay, J. D. H.,
 acceptance
 (Donnay, J. D. H.) 3-4 620
- Australia**
Petrology
 Metamorphic rocks, book reviews
 (Robinson, Peter.) 1-2 330
- Bibliography**
Petrology
 Tsuboi, Seitaro, book reviews
 (Emmons, R. C.) 11-12 1916
- Biography**
Carroll, Dorothy
 (Hooker, Marjorie., *et al.*) 3-4 631
Clausen, Hans Carl Eisenreich
 Bibliography, mineralogy
 (Soerensen, Henning.) 3-4 635
- Graton, Louis Caryl*
 --
 (Hurlbut, C. S., Jr.) 3-4 638
Marmo, Vladi
 --
 (Hytoenen, Kai.) 3-4 644
Meen, Victor Ben
 --
 (Tushingham, A. D.) 3-4 647
Raman, Chandrasekhara Venkata
 --
 (Vedam, K., *et al.*) 3-4 652
Schairer, John Frank
 Bibliography
 (Yoder, H. S., Jr.) 3-4 657
Tsuboi, Seitaro
 Bibliography, book reviews
 (Emmons, R. C.) 11-12 1916
- Book reviews**
Chemical analysis
 Modern methods of geochemical analysis
 (Ingamells, C. O.) 3-4 609
Clay mineralogy
 The clay mineralogy of British sediments
 (Brindley, G. W.) 1-2 334
 The electron-optical investigation of clays
 (Steinfink, Hugo.) 5-6 1011
Crystallography
 An introduction to crystallography
 (Wenden, Henry E.) 9-10 1562
 Crystallography and crystal chemistry
 (Beeson, Marvin H.) 5-6 1010
 Crystallography and crystal defects
 (Wuensch, Bernhard J.) 3-4 601
 Crystals and X-rays
 (Dollase, W. A.) 7-8 1318
 Introduction a la cristallographie
 (Loeb, A. L.) 9-10 1563
 Physikalisch-chemische kristallographie
 (Holland, H. D.) 1-2 335
Extraterrestrial geology
 Moon rocks and minerals
 (Drake, Michael J.) 1-2 332
Geochemistry
 Analytical geochemistry
 (Fahey, Joseph J.) 1-2 333

Book Reviews

- Chemical equilibria in the Earth
(Kudo, Albert M.) 7-8 1318
- Electron probe microanalysis
(McCallum, I. S.) 11-12 1916
- Handbook of elemental abundances in meteorites
(Fruchter, Jonthan.) 11-12 1923
- Mass transport in non-metallic solids
(Holser, William T.) 3-4 606
- Ratio correlation; a manual for students of petrology and geochemistry
(Whitten, E. H. Timothy.) 5-6 1012
- Research techniques for high pressure and high temperature
(Ellis, A. J.) 11-12 1924
- Geomorphology*
Volcanic landforms and surface features; a photographic atlas and glossary
(Duncan, Andrew.) 3-4 603
- Geophysics*
Nature of the solid Earth
(Holser, William T.) 11-12 1924
- Isotopes*
Lead isotopes
(Sinha, A. K.) 3-4 608
- Materials, properties*
Structure data of elements and intermetallic phases
(Donnay, J. D. H.) 9-10 1565
- Metamorphism*
Comparative study of low-grade metamorphism in the California Coast Ranges and the outer metamorphic belt of Japan
(Kays, Alan.) 5-6 1013
- Mineralogy*
An essay about the origine and virtues of gems
(Schneer, Cecil J.) 11-12 1915
- Color underground, the mineral picture book
(Staples, Lloyd W.) 3-4 600
- Die Resultate der Aetzmethode an Kristallen der Glimmergruppe
(Baronnet, A.) 11-12 1917
- Elements of mineralogy
(Orville, Philip M.) 1-2 330
- Glossary of mineral species
(Holser, William T.) 5-6 1012
- How to know the minerals and rocks
(Holser, William T.) 9-10 1565
- Landolt-Boernstein; magnetic and other properties of oxides and related compounds
(Banerjee, Subir.) 3-4 607
- Microscopic study of opaque minerals
(Leonard, B. F.) 11-12 1918

SUBJECT INDEX TO VOLUME 57

- Minerale*
(Entscheidung-Vorkommen-Bestimmung-Verwertung)
(Pabst, A.) 3-4 601
- Mineralogy for students
(Anthony, John W.) 9-10 1563
- Modern metallographic techniques and their applications
(Leonard, B. F.) 11 12 1922
- Optische Bestimmung der gesteinbildenen Minerale
(Morse, S. A., *et al.*) 9-10 1567
- Studio handbook of minerals; a guide to gem and mineral collecting
(Dunning, G. E.) 11-12 1915
- Tables for microscopic identification of ore minerals
(Clark, Alan H.) 11-12 1921
- Petrology*
A petrography of Australian metamorphic rocks
(Robinson, Peter.) 1-2 330
- Europe, France, Sioule Series
(De Waard, D.) 7-8 1320
- How to know the minerals and rocks
(Holser, William T.) 9-10 1565
- Petrographie des roches plutoniques dans leur cadre geologique
(Currie, K. L.) 3-4 602
- Professor Seitaro Tsuboi in petrology and allied fields
(Emmons, R. C.) 11-12 1916
- Short classification and description of the various rocks
(Schneer, Cecil J.) 3-4 599
- Phase equilibria*
Chemical thermodynamics
(Waldbaum, D. R.) 5-6 1007
- Computer calculations of phase diagrams, with special reference to refractory metals
(Waldbaum, D. R.) 5-6 1009
- The computation of chemical equilibria
(Waldbaum, D. R.) 5-6 1008
- Sedimentary petrology*
Evolution of sedimentary rocks
(Briggs, Louis I.) 1-2 335
- Principles of chemical sedimentology
(Kramer, James R.) 1-2 331
- Principles of lithogenesis; Volume 2
(Gardner, Leonard Robert.) 3-4 605
- Soils*
Rock weathering
(Mackenzie, Fred T.) 1-2 331
- Spectroscopy*
X-ray emission wavelengths and key tables for nondiffractive analysis
(Langheinrich, Armin P.) 3-4 608

- Volcanology*
Volcanism and upper mantle; investigations
in the Kurile island arc
(Bailey, Roy A.) 3-4 604
- Borneo**
Mineralogy
Chromite, Darvel Bay
(Hutchison, Charles S.) 5-6 835
- Brazil**
Mineralogy
Ballas, Bahia
(Trueb, Lucien F., *et al.*) 11-12 1664
Plagioclase, Jaragua
(Gomes, Celso de Barros.) 11-12 1860
- California**
Mineralogy
Artinite, Coalinga
(Hemingway, Bruce S., *et al.*) 11-12 1754
Melanophlogite, Santa Clara County,
Mount Hamilton
(Cooper, J. F., Jr., *et al.*) 9-10 1494
Osarsite, Humboldt County, Gold Bluff
(Snetsinger, K. G.) 7-8 1029
Sepiolite, Santa Cruz Basin
(Fleischer, Peter.) 5-6 903
Silhydrite, Trinity County, Bonanza King
Quadrangle
(Gude, Arthur J., 3d., *et al.*) 7-8 1053
- Petrology*
Metamorphic rocks, book reviews
(Kays, Alan.) 5-6 1013
- Chemical analysis**
Instruments
Mass spectrometers, sample preparation
(Melton, Charles E., *et al.*) 9-10 1518
- Methods*
Electron probe, applications, phase
equilibria
(Kushiro, Ikuo.) 7-8 1260
Electron probe, book reviews
(McCallum, I. S.) 11-12 1916
Electron probe, magnesium, aluminum,
silicon, sulfur, techniques.
(Reed, S. J. B.) 9-10 1550
General, book reviews
(Ingamells, C. O.) 3-4 609
X-ray fluorescence
(Fabbi, Brent P.) 1-2 237
- Techniques*
Sample preparation, X-ray fluorescence
(Lodding, William., *et al.*) 1-2 281
- Chile**
Mineralogy
Seeligerite, new mineral, Caracoles
(Fleischer, Michael.) 1-2 325
- Chromite**
Malay Archipelago
Borneo, Darvel Bay, mineralogy, genesis
(Hutchison, Charles S.) 5-6 835
- Clay mineralogy**
Areal studies
Europe, Great Britain, book reviews
(Brindley, G. W.) 1-2 334
- Experimental studies*
Halloysite, hydration, dehydration, P-T
conditions
(Churchman, G. J., *et al.*) 5-6 914
Kaolinite, oxides, reactions, solid state
(Segnit, E. R., *et al.*) 9-10 1505
Vermiculite, swelling, effects, dissociation,
cations, charge density
(Sridhar, K., *et al.*) 11-12 1832
- Methods*
Book reviews
(Steinfink, Hugo.) 5-6 1011
- Colorado**
Petrology
Pegmatite, Gunnison County, Quartz Creek
District
(Rosenberg, P. E.) 3-4 571
- Crystal chemistry**
Borates
Gowerite
(Konnerd, Judith A., *et al.*) 3-4 381
- Chain silicates, amphibole group*
Tremolite, fluorine, hydroxyl, substitution,
experimental studies
(Troll, Georg., *et al.*) 9-10 1386
- Chain silicates, pyroxene group*
Pigeonite
(Prewitt, C. T., *et al.*) 1-2 323
- Framework silicates, silica minerals*
Melanophlogite
(Zak, Lubor.) 5-6 779
Melanophlogite, United States, California
(Cooper, J. F., Jr., *et al.*) 9-10 1494
- Framework silicates, zeolite group*
Heulandite, clinoptilolite
(Alietti, Andrea.) 9-10 1448
Phillipsite
(Galli, Ermanno., *et al.*) 7-8 1125
- Native elements and alloys*
Diamond, impurities, nitrogen, water,
carbon dioxide, methane, argon
(Melton, Charles E., *et al.*) 9-10 1518
- Orthosilicates*
Barysillite
(Harnik, A. B.) 1-2 277

Crystal chemistry

- Merwinite
(Moore, Paul Brian., *et al.*) 9-10 1355
- Zunyite, aluminum, silicon, hydrogen,
distribution, bonding
(Louisnathan, S. John., *et al.*) 7-8 1089
- Orthosilicates, garnet group*
- Ugrandite, pyralspite, spectra, infrared,
interpretation
(White, William B., *et al.*) 11-12 1692
- Phosphates*
- Natrophilite, order-disorder
(Moore, Paul Brian.) 9-10 1333
- Ring silicates*
- Milarite, roedderite, merrihueite, sodgianite,
osumilite, yagiite, armenite
(Forbes, Warren C., *et al.*) 3-4 463
- Sheet silicates, clay minerals*
- Vermiculite, selectivity, ion exchange,
potassium
(Dolcater, D. L., *et al.*) 11-12 1823
- Vermiculite, swelling, effects, dissociation,
cations, charge density
(Sridhar, K., *et al.*) 11-12 1832
- Sheet silicates, mica group*
- Biotite, muscovite, selectivity, ion exchange,
potassium
(Dolcater, D. L., *et al.*) 11-12 1823
- Trioctahedral mica, synthetic
(Hazen, Robert M., *et al.*) 1-2 103
- Sulfates*
- Connellite
(McLean, W. John., *et al.*) 3-4 426
- Mendozite
(Fang, J. H., *et al.*) 7-8 1081
- Sulfides*
- Smythite, chemical composition, electron
probe analysis, revision
(Taylor, Lawrence A., *et al.*) 11-12 1571
- Talnakhite
(Hall, S. R., *et al.*) 3-4 368
- Valleriite
(Harris, D. C., *et al.*) 7-8 1037
- Sulfosalts*
- Nuffieldite
(Kohatsu, I., *et al.*) 1-2 319
- Sinnerite, synthetic
(Makovicky, E., *et al.*) 1-2 319
- Textbooks*
- Book reviews
(Beeson, Marvin H.) 5-6 1010
- Crystal growth**
- Native elements and alloys*
- Ballas, orientation, patterns, crystallites,
Brazil, Bahia
(Trueb, Lucien F., *et al.*) 11-12 1664
- Diamond, twinning, Ivory Coast, Tortiya
(Casanova, Roger., *et al.*) 11-12 1871

SUBJECT INDEX TO VOLUME 57

- Orthosilicates*
- Topaz, mechanism, genesis, prism faces
(Joshi, M. S., *et al.*) 11-12 1884
- Processes*
- Granite, graphic, Europe, Romania
(Seclaman, Marin., *et al.*) 5-6 932
- Sheet silicates, clay minerals*
- Kaolinite, twinning
(Mansfield, Charles F., *et al.*) 3-4 411
- Sheet silicates, mica group*
- Phlogopite, mechanism, defects, polytypism,
electron microscopy
(Baronnet, A.) 7-8 1272
- Sulfides*
- Germanates, ThGeO₄, polymorphs,
synthesis
(Harris, L. A., *et al.*) 11-12 1894
- Sulfides*
- Montbrayite
(Bachechi, F.) 1-2 146
- Pyrrhotite, twinning, exsolution
(Bennett, C. E. G., *et al.*) 3-4 445
- Realgar, high temperature, synthesis,
twinning
(Yu, Shu-Cheng., *et al.*) 11-12 1873
- Crystal structure**
- Borates*
- Gowerite, symmetry, cell dimensions
(Konnert, Judith A., *et al.*) 3-4 381
- Chain silicates*
- Babingtonite
(Araki, T., *et al.*) 1-2 323
- MnSiO₃, transformation
(Akimoto, Syun-iti., *et al.*) 1-2 76
- Chain silicates, pyroxene group*
- Augite, diopside
(Takeda, Hiroshi.) 1-2 322
- Spodumene
(Li, C. T., *et al.*) 1-2 321
- Framework silicates, feldspar group*
- Microcline, synthetic
(Brunton, G. D., *et al.*) 11-12 1720
- Plagioclase
(Appleman, Daniel E.) 1-2 324
- Plagioclase
(Cinnamon, C. G., *et al.*) 7-8 1309
- Framework silicates, nepheline group*
- Nepheline, volcanic, cell dimensions,
factors, temperature, refinement, X-ray
diffraction analysis
(Simmons, William B., Jr., *et al.*)
11-12 1711
- Framework silicates, zeolite group*
- Erionite, offretite, stacking
(Kokotailo, G. T., *et al.*) 3-4 439
- Faujasite, ion exchange, potassium, barium,
cesium, effects
(Pluth, J. J., *et al.*) 1-2 320

- Heulandite, polymorphism
(Alietti, Andrea.) 9-10 1448
- Halides*
- Kainite
(Robinson, Paul D., *et al.*) 9-10 1325
- Tilasite, mineral data, X-ray diffraction analysis
(Bladh, Kenneth W., *et al.*) 11-12 1880
- Miscellaneous minerals*
- Mn₂GeO₄, synthetic
(Morimoto, Nobuo., *et al.*) 1-2 62
- Native elements and alloys*
- Ballas, electron microscopy, X-ray diffraction analysis, Brazil
(Trueb, Lucien F., *et al.*) 11-12 1664
- Book reviews
(Donnay, J. D. H.) 9-10 1565
- Orthosilicates*
- Barysilite
(Harnik, A. B.) 1-2 277
- Olivine, sodamelilite, sodium metasilicate, bond lengths, Si-O, variations
(Louisnathan, S. John., *et al.*) 11-12 1663
- Uranophane, β -uranophane
(Smith, Deane K., *et al.*) 1-2 321
- Orthosilicates, garnet group*
- Ugrandite, pyralspite, cell dimensions, interpretation, spectra, infrared
(White, William B., *et al.*) 11-12 1692
- Orthosilicates, olivine group*
- Fayalite
(Moore, Paul B.) 1-2 24
- Forsterite, polymorphs, theoretical studies
(Baur, Werner H.) 5-6 709
- Oxides*
- Anatase, rutile, transformation
(Heald, Emerson F., *et al.*) 1-2 10
- Phosphates*
- Heterosite
(Eventoff, William., *et al.*) 1-2 45
- Leucophosphate, tetramers
(Moore, Paul Brian.) 3-4 397
- Rashleighite, cell dimensions, correlation, turquoise, X-ray diffraction analysis
(Cid-Dresdner, Hilda., *et al.*) 11-12 1681
- Sarcopside, triphylite
(Moore, Paul B.) 1-2 24
- Variscite
(Salvador Salvador, P., *et al.*) 1-2 36
- Sheet silicates*
- Carletonite
(Chao, G. Y.) 5-6 765
- Eudidymite
(Fang, J. H., *et al.*) 9-10 1345
- Pyrophyllite
(Wardle, Ronald., *et al.*) 5-6 732
- Sheet silicates, mica group*
- Methods, etching, book reviews
(Baronnet, A.) 11-12 1917
- Silicates*
- Correlation, bond lengths, angles, Si-O
(Louisnathan, S. John., *et al.*) 11-12 1614
- Correlation, bond lengths, Si-O, angles, Si-O-Si, overlap, experimental studies
(Gibbs, G. V., *et al.*) 11-12 1578
- Sulfates*
- Amarantite, tetramers
(Moore, Paul Brian.) 3-4 397
- Connellite, order-disorder
(McLean, W. John., *et al.*) 3-4 426
- Kainite, langbeinite, leonite, picromerite
(Robinson, Paul D., *et al.*) 9-10 1325
- Mendozite, bonding
(Fang, J. H., *et al.*) 7-8 1081
- Yavapaiite
(Anthony, John W., *et al.*) 9-10 1546
- Sulfides*
- α Ni₇S₆, synthetic
(Fleet, M. E.) 1-2 318
- Pararamelsbergite
(Fleet, M. E.) 1-2 1
- Pyrrhotite, bonding
(Tokonami, Masayasu., *et al.*) 7-8 1066
- Smythite, symmetry, cell dimensions, X-ray diffraction analysis, revision
(Taylor, Lawrence A., *et al.*) 11-12 1571
- Talnakhite
(Hall, S. R., *et al.*) 1-2 318
- Talnakhite, symmetry, cell dimensions
(Hall, S. R., *et al.*) 3-4 368
- Sulfosalts*
- Sinnerite, synthetic
(Makovicky, E., *et al.*) 1-2 319
- Crystallography**
- Materials, properties*
- Vibrational spectra, factor group analysis
(DeAngelis, Bernardo A., *et al.*) 1-2 255
- Textbooks*
- Book reviews
(Holland, H. D.) 1-2 335
- Book reviews
(Wuensch, Bernhardt J.) 3-4 601
- Book reviews
(Beeson, Marvin H.) 5-6 1010
- Book reviews
(Dollase, W. A.) 7-8 1318
- Book reviews
(Wenden, Henry E.) 9-10 1562
- Book reviews
(Loeb, A. L.) 9-10 1563
- Cyprus**
- Mineralogy*
- Sulfides, Pefkos
(Harris, D. C., *et al.*) 7-8 1037

Czechoslovakia*Mineralogy*

- Heyvrovskyite, new mineral, Hurky
(Fleischer, Michael.) 1-2 325

Diamonds*Africa*

- Ivory Coast, Tortiya, occurrence, crystal
growth
(Casanova, Roger., *et al.*) 11-12 1871

Differential thermal analysis*Methods*

- Kaolinite, siderite
(Bayliss, P., *et al.*) 5-6 960

Earth*Interior*

- Composition, concepts, mineralogy,
petrology
(Goldsmith, Julian R.) 3-4 345

Properties

- Geophysical properties, geochemical
properties, symposia, book reviews
(Holser, William T.) 11-12 1924

Electron microscopy*Observations*

- Microcline, twinning
(Akizuki, Mizuhiko.) 5-6 797
Phlogopite, crystal growth
(Baronnet, A.) 7-8 1272
Structure, ballas, Brazil, Bahia
(Trueb, Lucien F., *et al.*) 11-12 1664

Eocene*United States*

- Wyoming, Utah, Uinta Basin, leucosphenite,
Green River Formation
(Pabst, A., *et al.*) 11-12 1801

Finland*Mineralogy*

- Pentlandite, Outokumpu, Vuonos, Miihkali,
Kerimaeki
(Vuorelainen, Y., *et al.*) 1-2 137

Florida*Mineralogy*

- Crandallite, Alachua County
(Blanchard, Frank N.) 3-4 473

Fluorine*Analysis*

- Ignition, effects, hectorite
(El-Attar, H. A., *et al.*) 1-2 246

France*Petrology*

- Metamorphic rocks, book reviews, Sioule
Series, Central Massif
(De Waard, D.) 7-8 1320

Gems*General*

- Collecting, book reviews
(Dunning, G. E.) 11-12 1915

Properties, genesis, book reviews

- (Schneer, Cecil J.) 11-12 1915

Geochemistry*Concepts*

- Ratios, correlation, book reviews
(Whitten, E. H. Timothy.) 5-6 1012

Methods

- High temperature, high pressure, book
reviews
(Ellis, A. J.) 11-12 1924
Spectrophotometry, atomic absorption,
applications
(Salotti, Charles A.) 1-2 130

Processes

- Diffusion, book reviews
(Holser, William T.) 3-4 606
Ion exchange, potassium, selectivity,
vermiculite, biotite, muscovite
(Dolcater, D. L., *et al.*) 11-12 1823

Properties

- Entropy, enthalpy, free energy, corundum,
diaspore
(Haas, Herbert.) 9-10 1375
Fugacity, oxygen, effects, variations,
fugacity, H₂O, experimental studies
(Whitney, James A.) 11-12 1902
Solubility, plagioclase, water, organic acid,
applications, interpretation, weathering
(Huang, W. H., *et al.*) 11-12 1849
Thermodynamic properties, free energy of
formation, olivine, augite, labradorite,
microcline, muscovite
(Huang, W. H., *et al.*) 7-8 1152
Thermodynamic properties, free energy of
formation, corundum, diaspore, boehmite,
gibbsite, bayerite
(Parks, George A.) 7-8 1163
Thermodynamic properties, fugacity,
phosphorous
(Nash, W. P.) 5-6 877
Thermodynamic properties, phase equilibria,
silicates
(Barron, L. M.) 5-6 809
Valence, sulfur, experimental studies
(Connolly, J. W. D., *et al.*) 9-10 1515

Textbooks

- Book reviews
(Fahey, Joseph J.) 1-2 333
Book reviews
(Kudo, Albert M.) 7-8 1318
Chemical analysis, methods, electron probe,
book reviews
(McCallum, I. S.) 11-12 1916
Phase equilibria, thermodynamics, book
reviews
(Waldbaum, D. R.) 5-6 1007

- Geomorphology**
Volcanic features
 Atlases, glossaries, book reviews
 (Duncan, Andrew.) 3-4 603
- Georgia**
Mineralogy
 Beryl, Troup County
 (Radcliffe, Dennis., *et al.*) 1-2 272
- Great Britain**
Mineralogy
 Clay mineralogy, book reviews
 (Brindley, G. W.) 1-2 334
- Great Lakes**
Mineralogy
 Greigite, sediments, Lake Superior
 (Dell, C. I.) 7-8 1303
- Guyana**
Mineralogy
 Hornblende, actinolite, cummingtonite,
 Cuyuni River, Matope Falls
 (Choudhuri, Asit.) 9-10 1540
- Hawaii**
Mineralogy
 Chromite, olivine, Kilauea
 (Evans, Bernard W., *et al.*) 1-2 217
Petrology
 Magmas, Kilauea
 (Anderson, A. T., *et al.*) 1-2 188
- Igneous rocks**
Alkali gabbro family
 Intrusions, layered, petrography, chemical
 composition, Montana
 (Beall, Joseph J.) 7-8 1294
Alkalic
 Pegmatite, dikes, genesis, paragenesis,
 Colorado
 (Rosenberg, P. E.) 3-4 571
Alteration
 Pegmatite, metasomatism
 (Moore, Paul Brian.) 9-10 1333
Andesite-rhyolite family
 Andesite, mineralogy, chemical
 composition, island arcs, continental
 margin
 (Jakes, Petr., *et al.*) 5-6 887
Basalt family
 Genesis, occurrence, chemical composition,
 spinel, Moon, Apollo 12
 (Busche, F. D., *et al.*) 11-12 1729
Genesis
 Interpretation, biotite, stability
 (Mueller, Robert F.) 1-2 300
Granite-granodiorite family
 Granite, chemical composition, mineral
 composition, riebeckite, ferrohastingsite,
 genesis, Massachusetts, east
 (Lyons, Paul C.) 9-10 1404
- Textures, graphic; metasomatism, Romania
 (Seclaman, Marin., *et al.*) 5-6 932
- Plutonic**
 Petrography, book reviews
 (Currie, K. L.) 3-4 602
- Ultramafic family**
 Genesis, emplacement, Borneo
 (Hutchison, Charles S.) 5-6 835
 Kimberlite, occurrence, genesis, tremolite,
 United States, Arizona, Buell Park
 (Aoki, Ken-Ichiro., *et al.*) 11-12 1889
 Kimberlite, occurrence, paragenesis,
 perovskite
 (Mitchell, Roger H.) 11-12 1748
 Peridotite, genesis, occurrence, chemical
 composition, spinel, Moon, Apollo 12
 (Busche, F. D., *et al.*) 11-12 1729
 Peridotite, magmas, phase equilibria, P-T
 conditions
 (Nicholls, J., *et al.*) 5-6 941
 Volcanic, leucite, melilitite, katungite,
 genesis, mineral composition
 (Gupta, Alok K.) 7-8 1242
- Volcanic**
 Genesis, book reviews
 (Bailey, Roy A.) 3-4 604
- Inclusions**
Mineral inclusions
 Ballas, occurrence, composition, Brazil,
 Bahia
 (Trueb, Lucien F., *et al.*) 11-12 1664
 Plagioclase, metagabbro, United States,
 New York
 (Whitney, Philip R.) 9-10 1429
- Intrusions**
Dikes
 Petrology, paragenesis, pegmatite, Colorado
 (Rosenberg, P. E.) 3-4 571
Laccoliths
 Geochemistry, phosphorus, United States,
 Montana
 (Nash, W. P.) 5-6 877
 Layered, petrography, United States,
 Montana
 (Beall, Joseph J.) 7-8 1294
- Iron**
Geochemistry
 Biotite
 (Mueller, Robert F.) 1-2 300
- Isotopes**
Lead
 Book reviews
 (Sinha, A. K.) 3-4 608
- Japan**
Mineralogy
 Analcime, Sugashima
 (Harada, Kazuo., *et al.*) 5-6 924

Japan

- Petrology*
 Metamorphic rocks, book reviews
 (Kays, Alan.) 5-6 1013
- Lead**
Isotopes
 Book reviews
 (Sinha, A. K.) 3-4 608
- Magmas**
Crystallization
 Chromite, olivine, chemical composition,
 United States, Hawaii
 (Evans, Bernard W., *et al.*) 1-2 217
- Geochemistry*
 Phase equilibria, P-T conditions, basalt,
 andesite, tholeiite, ugandite
 (Nicholls, J., *et al.*) 5-6 941
- Temperature, composition, fugacity, United
 States, Hawaii
 (Anderson, A. T., *et al.*) 1-2 188
- Magnesium**
Analysis
 Electron probe, techniques
 (Reed, S. J. B.) 9-10 1550
- Geochemistry*
 Biotite
 (Mueller, Robert F.) 1-2 300
- Manganese**
Geochemistry
 Deposition, mechanism, bone
 (Parker, Ronald B., *et al.*) 9-10 1527
- Properties*
 Magnetic properties, electron spin
 resonance, newberyite, struvite
 (Manoogian, A., *et al.*) 1-2 52
- Mantle**
Mineralogy
 Water, hydroxyl, occurrence
 (Martin, R. F., *et al.*) 3-4 554
- Processes*
 Volcanism, book reviews
 (Bailey, Roy A.) 3-4 604
- Massachusetts**
Mineralogy
 Riebeckite, ferrohastingsite, east
 (Lyons, Paul C.) 9-10 1404
- Metamorphic rocks**
Amphibolites
 Genesis, interpretation, chemical
 composition, plagioclase, Brazil, Jaragua
 (Gomes, Celso de Barros.) 11-12 1860
- Facies*
 Book reviews, France
 (De Waard, D.) 7-8 1320
- Genesis*
 Interpretation, biotite, stability
 (Mueller, Robert F.) 1-2 300

SUBJECT INDEX TO VOLUME 57

- Gneisses*
 Mineral composition, zircon, evolution,
 Wyoming
 (Malcuit, R. J., *et al.*) 7-8 1190
- Metaigneous*
 Metagabbro, petrography, New York
 (Whitney, Philip R.) 9-10 1429
- Metasedimentary*
 Metagraywacke, petrology, South America,
 Guyana
 (Choudhuri, Asit.) 9-10 1540
- Petrology*
 Book reviews, Australia
 (Robinson, Peter.) 1-2 330
- Metamorphism**
Grade
 Indicators, chemical composition,
 plagioclase, Brazil, Jaragua
 (Gomes, Celso de Barros.) 11-12 1860
- Regional*
 Asia, Japan, United States, California, book
 reviews
 (Kays, Alan.) 5-6 1013
- Metasomatism**
Materials
 Granite, textures, graphic, Romania
 (Seclaman, Marin., *et al.*) 5-6 932
- Processes*
 Hydrothermal alteration, pegmatite
 (Moore, Paul Brian.) 9-10 1333
- Meteorites**
Composition
 Chemical composition, book reviews
 (Fruchter, Jonathan.) 11-12 1923
- Mineral composition, tridymite, cristobalite,
 Mt. Padbury, Haraiya, Steinbach
 (Mason, Brian.) 9-10 1530
- Mineralogy*
 Olivine, abundance, methods, chondrites
 (Pollack, Sidney S., *et al.*) 3-4 584
- Mineral deposits, genesis**
Processes
 Igneous processes, chromite, Borneo
 (Hutchison, Charles S.) 5-6 835
- Igneous processes, paragenesis, topaz,
 pegmatite, Colorado
 (Rosenberg, P. E.) 3-4 571
- Paragenesis, metals, vapor pressure
 (Salotti, Charles A.) 1-2 130
- Mineralogy**
General
 Book reviews
 (Holser, William T.) 9-10 1565
- Glossaries*
 General, book reviews
 (Holser, William T.) 5-6 1012

History

Research, Tsuboi, Seitaro, book reviews
(Emmons, R. C.) 11-12 1916

Methods

Index of refraction, measurement
(McAndrew, John.) 1-2 231
Metallography, book reviews
(Leonard, B. F.) 11-12 1922
Separation, minerals, high density, HgBr₂
(Grandstaff, David E.) 11-12 1899

Philosophy

Research, education
(Goldsmith, Julian R.) 3-4 345

Textbooks

Book reviews
(Orville, Philip M.) 1-2 330
Book reviews
(Anthony, John W.) 9-10 1563

Minerals

Arsenates

Arsenoclasite, errata
(Moore, Paul B., *et al.*) 3-4 593
Ludlockite, new mineral, mineral data
(Fleischer, Michael.) 5-6 1003
Sodium betpakdalite, unnamed iron
arsenate, new mineral
(Fleischer, Michael.) 7-8 1311
Tsumcorite, new mineral, mineral data
(Fleischer, Michael.) 9-10 1552

Borates

Congolite, new mineral
(Fleischer, Michael.) 7-8 1311
Gowerite, crystal structure, crystal
chemistry
(Konnert, Judith A., *et al.*) 3-4 381
Kernite, charge refinement
(Cooper, W. F., *et al.*) 1-2 320

Carbonates

Aragonite, calcite, manganese, spectroscopy,
electron spin resonance
(Low, William., *et al.*) 7-8 1115
Calcite, aragonite, phase equilibria, P-T
conditions
(Crawford, William A., *et al.*) 5-6 995
Dawsonite, petrography, genesis, New
South Wales
(Loughnan, F. C., *et al.*) 9-10 1437
Huntite, artinite, chemical analysis, heat
capacity, thermodynamic properties,
Australia, South Australia, United States,
California
(Hemingway, Bruce S., *et al.*) 11-12 1754
Indigirite, new mineral, mineral data, USSR
(Fleischer, Michael.) 1-2 325
Nesquehonite, synthetic, hydromagnesite,
chemical analysis, heat capacity, Asia,
Pakistan
(Robie, Richard A., *et al.*) 11-12 1768

Phase equilibria

(Chang, Luke L. Y., *et al.*) 1-2 155

Rhodochrosite, stability, decomposition
(Sequin, M. K.) 3-4 511

Siderite, differential thermal analysis,
methods
(Bayliss, P., *et al.*) 5-6 960

Teschemacherite, occurrence, genesis, New
Zealand
(Browne, P. R. L.) 7-8 1304

Yttrian bastnaesite, new mineral, new data
(Fleischer, Michael.) 3-4 594

Chain silicates

Babingtonite, crystal structure
(Araki, T., *et al.*) 1-2 323

Bisbeeite, discredited
(Fleischer, Michael.) 5-6 1003

Cesium kupletskite, new mineral, mineral
data, USSR
(Fleischer, Michael.) 1-2 325

MnSiO₃, crystal structure
(Akimoto, Syun-iti., *et al.*) 1-2 76

Neptunite, chemical composition, physical
properties, optical properties, cell
parameters
(Laird, Jo., *et al.*) 1-2 85

Pyroxmangite, rhodonite, phase equilibria
(Ito, Jun.) 5-6 865

Chain silicates, amphibole group

Hornblende, actinolite, cummingtonite,
mineral assemblages, optical properties,
Guyana
(Choudhuri, Asit.) 9-10 1540

Hornblende, chemical composition
(Jakes, Petr., *et al.*) 5-6 887

Riebeckite, ferrohastingsite, chemical
composition, phase equilibria, genesis,
granite, Massachusetts, east
(Lyons, Paul C.) 9-10 1404

Tremolite, crystal chemistry, synthesis
(Troll, Georg., *et al.*) 9-10 1386

Tremolite, genesis, chemical composition,
occurrence, kimberlite, Arizona
(Aoki, Ken-Ichiro., *et al.*) 11-12 1889

Tremolite, thermodynamic properties, Gibbs
free energy, entropy, enthalpy
(Zen, E-an.) 3-4 524

Chain silicates, pyroxene group

Acmite, jadeite, phase equilibria
(Popp, R. K., *et al.*) 7-8 1210

Augite, diopside, crystal structure
(Takeda, Hiroshi.) 1-2 322

Augite, thermodynamic properties, free
energy of formation
(Huang, W. H., *et al.*) 7-8 1152

Diopside, phase equilibria
(Gupta, Alok K.) 7-8 1242

- Diopside, phase equilibria
(Kushiro, Ikuo.) 7-8 1260
- Orthopyroxene, phase equilibria,
thermodynamic properties, theoretical
studies
(Saxena, S. K.) 11-12 1782
- Phase equilibria
(Smith, Douglas.) 9-10 1413
- Pigeonite, crystal chemistry, lunar samples
(Prewitt, C. T., *et al.*) 1-2 323
- Pigeonite, phase equilibria
(Yang, Houngh-Yi., *et al.*) 7-8 1232
- Spodumene, crystal structure
(Li, C. T., *et al.*) 1-2 321
- Water, occurrence
(Martin, R. F., *et al.*) 3-4 554
- Framework silicates*
- Analcime, wairakite, chemical analysis,
spectroscopy, infrared, differential
thermal analysis, thermogravimetric
analysis, Asia, Japan
(Harada, Kazuo., *et al.*) 5-6 924
- Ashtonite, discredited
(Fleischer, Michael.) 9-10 1552
- Leifite, new data, karpinskyite, discredited
(Fleischer, Michael.) 5-6 1003
- Leucite, phase equilibria
(Gupta, Alok K.) 7-8 1242
- Wairakite, thermodynamic properties, Gibbs
free energy, entropy, enthalpy
(Zen, E-an.) 3-4 524
- Framework silicates, feldspar group*
- K-feldspar, identification techniques,
staining, mechanism
(Sclar, Charles B., *et al.*) 1-2 287
- K-feldspar, plagioclase, water, occurrence
(Martin, R. F., *et al.*) 3-4 554
- K-feldspar, weathering, gibbsite, genesis
(Lodding, William.) 1-2 292
- K-feldspar, weathering, gibbsite, genesis
(Gardner, Leonard Robert.) 1-2 294
- Labradorite, microcline, thermodynamic
properties, free energy of formation
(Huang, W. H., *et al.*) 7-8 1152
- Microcline, synthetic, crystal structure
(Brunton, G. D., *et al.*) 11-12 1720
- Microcline, twinning, electron microscopy
(Akizuki, Mizuhiko.) 5-6 797
- Plagioclase, chemical composition,
correlation, grade, metamorphism,
amphibolites, Brazil, Jaragua
(Gomes, Celso de Barros.) 11-12 1860
- Plagioclase, crystal structure
(Cinnamon, C. G., *et al.*) 7-8 1309
- Plagioclase, crystal structure, lunar samples
(Appleman, Daniel E.) 1-2 324
- Plagioclase, dissolution, experimental
studies

- (Huang, W. H., *et al.*) 11-12 1849
- Plagioclase, satellite reflections
(Toman, K., *et al.*) 1-2 324
- Framework silicates, nepheline group*
- Nepheline, volcanic, crystal structure,
refinement
(Simmons, William B., Jr., *et al.*)
11-12 1711
- Water, occurrence
(Martin, R. F., *et al.*) 3-4 554
- Framework silicates, scapolite group*
- Scapolite, sulfur, valence
(Connolly, J. W. D., *et al.*) 9-10 1515
- Framework silicates, silica minerals*
- Melanophlogite, crystal chemistry, optical
properties, physical properties, thermal
properties, X-ray diffraction analysis
(Zak, Lubor.) 5-6 779
- Melanophlogite, physical properties, optical
properties, morphology, X-ray diffraction
analysis, thermogravimetric analysis,
crystal chemistry, California
(Cooper, J. F., Jr., *et al.*) 9-10 1494
- Tridymite, cristobalite, chemical
composition, lunar samples, Apollo 15
(Mason, Brian.) 9-10 1530
- Framework silicates, zeolite group*
- Analcite, petrography, New South Wales
(Loughnan, F. C., *et al.*) 9-10 1437
- Erionite, offretite, crystal structure
(Kokotailo, G. T., *et al.*) 3-4 439
- Faujasite, crystal structure
(Pluth, J. J., *et al.*) 1-2 320
- Heulandite, clinoptilolite, chemical
composition, optical properties, cell
dimensions, stability, relation, Australasia,
New Zealand
(Boles, James R.) 9-10 1463
- Heulandite, clinoptilolite, crystal chemistry,
polymorphism
(Alietti, Andrea.) 9-10 1448
- Laumontite, thermodynamic properties,
Gibbs free energy, entropy, enthalpy
(Zen, E-an.) 3-4 524
- Mordenite, synthesis
(Whittemore, O. J., Jr.) 7-8 1146
- Natrolite, mesolite, scolecite, thomsonite,
gonnardite, edingtonite, differential
thermal analysis, thermogravimetric
analysis, differential scanning calorimetry
(Van Reeuwijk, L. P.) 3-4 499
- Orizite, discredited
(Merlino, S.) 3-4 592
- Phillipsite, chemical composition, density,
cell dimensions, index of refraction,
correlation
(Galli, Ermanno., *et al.*) 7-8 1125

- General*
 Glossaries
 (Holser, William T.) 5-6 1012
- Halides*
 Bideauxite, new mineral, mineral data
 (Fleischer, Michael.) 5-6 1003
 Hieratite, genesis
 (Sclar, Charles B., *et al.*) 1-2 287
 Kainite, crystal structure
 (Robinson, Paul D., *et al.*) 9-10 1325
 Tilasite, crystal structure
 (Bladh, Kenneth W., *et al.*) 11-12 1880
 Trudellite, discredited
 (Fleischer, Michael.) 7-8 1311
- Iodates*
 Bruegggenite, new data
 (Fleischer, Michael.) 3-4 594
 Bruegggenite, new mineral
 (Fleischer, Michael.) 11-12 1909
 Seeligerite, new mineral, mineral data, Chile
 (Fleischer, Michael.) 1-2 325
- Miscellaneous minerals*
 Book reviews
 (Staples, Lloyd W.) 3-4 600
 Collecting, book reviews
 (Dunning, G. E.) 11-12 1915
 Genesis, occurrence, identification,
 applications, book reviews
 (Pabst, A.) 3-4 601
 Mn₂GeO₄, synthetic, crystal structure
 (Morimoto, Nobuo., *et al.*) 1-2 62
 Opaque minerals, microscopy, book reviews
 (Leonard, B. F.) 11-12 1918
 Ore minerals, identification, tables, book
 reviews
 (Clark, Alan H.) 11-12 1921
- Molybdates*
 Sodium betpakdalite, new mineral
 (Fleischer, Michael.) 7-8 1311
- Native elements and alloys*
 Ballas, crystal structure, inclusions, South
 America, Brazil, Bahia
 (Trueb, Lucien F., *et al.*) 11-12 1664
 Carlsbergite, new mineral
 (Fleischer, Michael.) 7-8 1311
 Diamond, crystal chemistry, impurities,
 gases
 (Melton, Charles E., *et al.*) 9-10 1518
 Diamond, crystal growth, Ivory Coast,
 Tortiya
 (Casanova, Roger., *et al.*) 11-12 1871
 Unnamed Pd-Pt-Sn-Pb mineral, unnamed
 Pt-Pd-Sn mineral, new mineral, mineral
 data
 (Fleischer, Michael.) 3-4 594
- Orthosilicates*
 Bafertsite, new data
 (Fleischer, Michael.) 5-6 1003
 Barysilite, crystal chemistry, crystal
 structure
 (Harnik, A. B.) 1-2 277
 Joaquinite, chemical composition, physical
 properties, optical properties, cell
 parameters, spectroscopy, infrared
 (Laird, Jo., *et al.*) 1-2 85
 Komarovite, new mineral, keldyshite, new
 data
 (Fleischer, Michael.) 7-8 1311
 Merwinite, synthesis, crystal chemistry,
 X-ray diffraction analysis
 (Moore, Paul Brian., *et al.*) 9-10 1355
 Olivine, sodamelilite, sodium metasilicate,
 crystal structure
 (Louisnathan, S. John., *et al.*) 11-12 1663
 Topaz, crystal growth
 (Joshi, M. S., *et al.*) 11-12 1884
 Topaz, paragenesis, pegmatite, Colorado
 (Rosenberg, P. E.) 3-4 571
 Topaz, synthetic, chemical composition,
 variation
 (Rosenberg, P. E.) 1-2 169
 Uranophane, β -uranophane, crystal
 (Smith, Deane K., *et al.*) 1-2 321
 Zircon, morphology, color, inclusions,
 evolution, Wyoming
 (Malcuit, R. J., *et al.*) 7-8 1190
 Zunyite, crystal chemistry
 (Louisnathan, S. John., *et al.*) 7-8 1089
- Orthosilicates, epidote group*
 Zoisite, thermodynamic properties, Gibbs
 free energy, entropy, enthalpy
 (Zen, E-an.) 3-4 524
- Orthosilicates, garnet group*
 Hydrogrossular, fluorescence, Europe,
 Norway
 (Nissen, August L.) 9-10 1535
 Lagoriolite, discredited
 (Fleischer, Michael.) 7-8 1311
 Ugrandite, pyralispite, cell dimensions,
 crystal chemistry
 (White, William B., *et al.*) 11-12 1692
 Water, occurrence
 (Martin, R. F., *et al.*) 3-4 554
- Orthosilicates, melilite group*
 Akermanite, phase equilibria
 (Gupta, Alok K.) 7-8 1242
- Orthosilicates, olivine group*
 Abundance, meteorites, methods
 (Pollack, Sidney S., *et al.*) 3-4 584
 Fayalite, crystal structure
 (Moore, Paul B.) 1-2 24
 Forsterite, phase equilibria
 (Gupta, Alok K.) 7-8 1242
 Forsterite, phase equilibria
 (Kushiro, Ikuo.) 7-8 1260

- Forsterite, polymorphs, crystal structure
(Baur, Werner H.) 5-6 709
- Identification, methods, spectroscopy,
infrared
(Burns, Roger G., *et al.*) 5-6 967
- Olivine, chemical composition, Hawaii
(Evans, Bernard W., *et al.*) 1-2 217
- Olivine, phase equilibria, chloride,
thermodynamic properties, theoretical
studies
(Saxena, S. K.) 11-12 1782
- Olivine, thermodynamic properties, free
energy of formation
(Huang, W. H., *et al.*) 7-8 1152
- Water, occurrence
(Martin, R. F., *et al.*) 3-4 554
- Oxides*
- Anatase, rutile, crystal structure
(Heald, Emerson F., *et al.*) 1-2 10
- Bariandite, romarchite, hydromarchite,
holtite, schoenfliesite, takovite, new
mineral, mineral data, pisekite, new data
(Fleischer, Michael.) 9-10 1552
- Bruceite, optical properties, Canada, Quebec
(Liebling, Richard S., *et al.*) 5-6 857
- Chromite, chemical analysis, petrography,
physical properties, optical properties,
Borneo
(Hutchison, Charles S.) 5-6 835
- Chromite, chemical composition, Hawaii
(Evans, Bernard W., *et al.*) 1-2 217
- Cliffordite, new data
(Fleischer, Michael.) 3-4 594
- Corundum, diaspore, boehmite, gibbsite,
bayerite, thermodynamic properties, free
energy of formation
(Parks, George A.) 7-8 1163
- Corundum, diaspore, phase equilibria,
thermodynamic properties, entropy,
enthalpy, free energy
(Haas, Herbert.) 9-10 1375
- Diaspore, thermodynamic properties, Gibbs
free energy, entropy, enthalpy
(Zen, E-an.) 3-4 524
- Gibbsite, genesis
(Lodding, William.) 1-2 292
- Gibbsite, genesis
(Gardner, Leonard Robert.) 1-2 294
- Hollandite, coronadite, occurrence, bone
(Parker, Ronald B., *et al.*) 9-10 1527
- Magnetic properties, book reviews
(Banerjee, Subir.) 3-4 607
- Manganosite, hausmannite, bixyite,
partridgeite, γ -Mn₂O₃, genesis,
rhodochrosite, decomposition
(Sequin, M. K.) 3-4 511
- New mineral, mineral data
(Fleischer, Michael.) 5-6 1003
- Perovskite, chemical composition,
occurrence, paragenesis, kimberlite
(Mitchell, Roger H.) 11-12 1748
- Roubaultite, new mineral
(Fleischer, Michael.) 11-12 1909
- Spinel, chemical composition, genesis,
electron probe analysis, Moon, Apollo 12
(Busche, F. D., *et al.*) 11-12 1729
- Spinel, inclusions, chemical analysis,
genesis, New York
(Whitney, Philip R.) 9-10 1429
- Trevorite, new data, physical properties,
optical properties, chemical composition,
cell dimensions, Africa, South Africa
(De Waal, S. A.) 9-10 1524
- Wermlandite, new mineral, mineral data,
Sweden, kholpinite, discredited
(Fleischer, Michael.) 1-2 325
- Phosphates*
- Apatite, britholite, chemical analysis,
geologic thermometry
(Nash, W. P.) 5-6 877
- Crandallite, occurrence, chemical analysis,
X-ray diffraction analysis, electron
microscopy, differential thermal analysis,
United States, Florida
(Blanchard, Frank N.) 3-4 473
- Dittmarite, new data
(Fleischer, Michael.) 7-8 1311
- Griphite, X-ray diffraction analysis,
symmetry, United States, South Dakota
(Peacor, Donald R., *et al.*) 1-2 269
- Heterosite, crystal structure
(Eventoff, William., *et al.*) 1-2 45
- Leucophosphate, crystal structure
(Moore, Paul Brian.) 3-4 397
- Natrophilite, crystal chemistry, paragenesis
(Moore, Paul Brian.) 9-10 1333
- Newberyite, struvite, spectroscopy, electron
spin resonance, manganese
(Manoogian, A., *et al.*) 1-2 52
- Rashleighite, chemical composition, crystal
structure
(Cid-Dresdner, Hilda., *et al.*) 11-12 1681
- Sarcopside, triphylite, crystal structure
(Moore, Paul B.) 1-2 24
- Triplite, triploidite, zwieselite, wolfeite, iron,
spectroscopy, Mossbauer
(Kostiner, Edward.) 7-8 1109
- Variscite, crystal structure
(Salvador Salvador, P., *et al.*) 1-2 36
- Zapatallite, new mineral, lacroixite, new data
(Fleischer, Michael.) 11-12 1909
- Properties*
- Optical properties, book reviews
(Morse, S. A., *et al.*) 9-10 1567

Ring silicates

Axinite, manganaxinite, chemical composition, physical properties, cell dimensions, occurrence, United States, Minnesota
(French, Bevan M., *et al.*) 5-6 989

Benitoite, chemical composition, physical properties, optical properties, cell parameters
(Laird, Jo., *et al.*) 1-2 85

Beryl, morphology, composition, cell parameters, United States, Georgia
(Radcliffe, Dennis., *et al.*) 1-2 272

Leucosphenite, occurrence, paragenesis, mineral data, Eocene, Green River Formation, Utah, Wyoming
(Pabst, A., *et al.*) 11-12 1801

Milarite, roedderite, merrihueite, sodgianite, osumilite, yagiite, armenite, crystal chemistry
(Forbes, Warren C., *et al.*) 3-4 463

Selenates and selenites

Derriksite, new mineral
(Fleischer, Michael.) 11-12 1909

Sheet silicates

Carletonite, crystal structure
(Chao, G. Y.) 5-6 765

Eudidymite, crystal structure
(Fang, J. H., *et al.*) 9-10 1345

Prehnite, pyrophyllite, thermodynamic properties, Gibbs free energy, entropy, enthalpy
(Zen, E-an.) 3-4 524

Pyrophyllite, crystal structure, X-ray diffraction analysis
(Wardle, Ronald., *et al.*) 5-6 732

Sepiolite, genesis, authigenesis, diatomite, chemical analysis, Pacific Ocean, Santa Cruz Basin
(Fleischer, Peter.) 5-6 903

Sheet silicates, chlorite group

Clinocllore, thermodynamic properties, Gibbs free energy, entropy, enthalpy
(Zen, E-an.) 3-4 524

Sheet silicates, clay minerals

Halloysite, hydration, dehydration, P-T conditions
(Churchman, G. J., *et al.*) 5-6 914

Hectorite, chemical analysis, fluorine
(El-Attar, H. A., *et al.*) 1-2 246

Identification, methods, spectroscopy, infrared
(Larson, Sylvia J., *et al.*) 5-6 998

Kaolinite, crystal growth
(Mansfield, Charles F., *et al.*) 3-4 411

Kaolinite, differential thermal analysis, methods
(Bayliss, P., *et al.*) 5-6 960

Kaolinite, halloysite, montmorillonite, spectroscopy, nuclear magnetic resonance
(Kitagawa, Yasuo.) 5-6 751

Kaolinite, oxides, reactions, solid state, X-ray diffraction analysis
(Segnit, E. R., *et al.*) 9-10 1505

Methods, book reviews
(Steinfink, Hugo.) 5-6 1011

Montmorillonite, hectorite, nontronite, kaolinite, halloysite, dickite, spectroscopy, ultraviolet, optical, infrared
(Lindberg, James D., *et al.*) 3-4 485

Montmorillonite, organic materials, spectroscopy, infrared
(Sung, Do Jang., *et al.*) 3-4 494

Murgocite, mrazekite, new mineral, allietite, new data
(Fleischer, Michael.) 3-4 594

Vermiculite, crystal chemistry
(Sridhar, K., *et al.*) 11-12 1832

Vermiculite, selectivity, ion exchange, potassium
(Dolcater, D. L., *et al.*) 11-12 1823

Sheet silicates, mica group

Astrolite, muscovite, identity
(Leavens, Peter B., *et al.*) 5-6 993

Biotite, geochemistry, magnesium, iron, stability, solubility
(Mueller, Robert F.) 1-2 300

Biotite, muscovite, selectivity, ion exchange, potassium
(Dolcater, D. L., *et al.*) 11-12 1823

Biotite, stability
(Wones, David R.) 1-2 316

Crystal structure, interpretation, methods, etching, book reviews
(Baronnet, A.) 11-12 1917

Identification, methods, spectroscopy, infrared
(Larson, Sylvia J., *et al.*) 5-6 998

Muscovite, paragonite, thermodynamic properties, Gibbs free energy, entropy, enthalpy
(Zen, E-an.) 3-4 524

Muscovite, porosity
(Tschapek, M., *et al.*) 5-6 986

Muscovite, thermodynamic properties, free energy of formation
(Huang, W. H., *et al.*) 7-8 1152

Phlogopite, crystal growth
(Baronnet, A.) 7-8 1272

Trioctahedral mica, synthetic, crystal chemistry
(Hazen, Robert M., *et al.*) 1-2 103

Silicates

Crystal structure, correlation, bond lengths, Si-O, angles, Si-O-Si, overlap, experimental studies

- (Gibbs, G. V., *et al.*) 11-12 1578
 Crystal structure, correlation, bond lengths, angles, Si-O
 (Louisnathan, S. John., *et al.*) 11-12 1614
 Germanates, ThGeO₄, polymorphs, stability, synthesis
 (Harris, L. A., *et al.*) 11-12 1894
 Lemoyneite, new mineral, sogdianite, new data
 (Fleischer, Michael.) 11-12 1909
 Pellyite, new data
 (Fleischer, Michael.) 3-4 594
 Silhydrite, new mineral, chemical composition, physical properties, optical properties, X-ray diffraction analysis, differential thermal analysis, thermogravimetric analysis, genesis, United States, California
 (Gude, Arthur J., 3d., *et al.*) 7-8 1053
- Sulfates**
 Amaranthite, crystal structure
 (Moore, Paul Brian.) 3-4 397
 Connellite, crystal structure, crystal chemistry
 (McLean, W. John., *et al.*) 3-4 426
 Elyite, new mineral, occurrence, mineral assemblages, physical properties, chemical analysis, crystal forms, symmetry, X-ray diffraction analysis, optical properties, nomenclature, United States, Nevada
 (Williams, Sidney A.) 3-4 364
 Kainite, langbeinite, leonite, picromerite, crystal structure
 (Robinson, Paul D., *et al.*) 9-10 1325
 Mendozite, crystal structure, crystal chemistry
 (Fang, J. H., *et al.*) 7-8 1081
 New mineral, mineral data
 (Fleischer, Michael.) 5-6 1003
 Trudellite, discredited
 (Fleischer, Michael.) 7-8 1311
 Yavapaiite, crystal structure
 (Anthony, John W., *et al.*) 9-10 1546
- Sulfides**
 αNi₇S₆, synthetic, crystal structure
 (Fleet, M. E.) 1-2 318
 Greigite, occurrence, X-ray diffraction analysis, North America, Great Lakes
 (Dell, C. I.) 7-8 1303
 Iron sulfide, valleriite, chemical composition, X-ray diffraction analysis, differential thermal analysis, spectroscopy, Mossbauer, infrared, mineral associations, Middle East, Cyprus
 (Harris, D. C., *et al.*) 7-8 1037
 Kawazulite, kittlite, new mineral, chilénite, new data
 (Fleischer, Michael.) 7-8 1311
- Montbrayite, synthesis, stability
 (Bachechi, F.) 1-2 146
 Mooihoekite, haycockite, new mineral, X-ray diffraction analysis, optical properties, physical properties, chemical analysis, occurrence, Africa, South Africa, United States, Minnesota
 (Cabri, Louis J., *et al.*) 5-6 689
 Pararammelsbergite, crystal structure
 (Fleet, M. E.) 1-2 1
 Pentlandite, chemical analysis, X-ray diffraction analysis, physical properties, optical properties, Europe, Finland
 (Vuorelainen, Y., *et al.*) 1-2 137
 Picotpaulite, pierrotite, bukovite, langisite, new mineral
 (Fleischer, Michael.) 11-12 1909
 Pyrrhotite, crystal growth, magnetic properties
 (Bennett, C. E. G., *et al.*) 3-4 445
 Pyrrhotite, crystal structure
 (Tokonami, Masayasu., *et al.*) 7-8 1066
 Pyrrhotite, occurrence, genesis, lamella, magnetite, Australia, Western Australia
 (Bennett, C. E. G., *et al.*) 11-12 1876
 Realgar, high temperature, crystal growth, cell dimensions
 (Yu, Shu-Cheng., *et al.*) 11-12 1873
 Smythite, chemical composition, crystal structure, density, genesis, revision
 (Taylor, Lawrence A., *et al.*) 11-12 1571
 Talnakhite, crystal structure, chemical composition
 (Hall, S. R., *et al.*) 1-2 318
 Talnakhite, crystal structure, crystal chemistry
 (Hall, S. R., *et al.*) 3-4 368
 Tochilinite, clinosafflorite, oosterboschite, fischesserite, new mineral, mineral data, eskebornite, alloclasite, new data
 (Fleischer, Michael.) 9-10 1552
 Westerveldite, new mineral, occurrence, mineral assemblages, paragenesis, chemical analysis, X-ray diffraction analysis, optical properties, cell dimensions, nomenclature, Europe, Spain
 (Oen, I. S., *et al.*) 3-4 354
- Sulfosalts**
 Hakite, permingeatite, new mineral, mineral data, ramdohrite, new data
 (Fleischer, Michael.) 9-10 1552
 Heyrovskyite, new mineral, Czechoslovakia, unnamed sulfosalts, Argentina, bursaite, new data
 (Fleischer, Michael.) 1-2 325
 Nuffieldite, crystal chemistry
 (Kohatsu, I., *et al.*) 1-2 319

- Osarsite, new mineral, chemical composition, physical properties, optical properties, X-ray diffraction analysis, synthesis, United States, California (Snetsinger, K. G.) 7-8 1029
- Sinnerite, synthetic, crystal structure, crystal chemistry, twinning (Makovicky, E., *et al.*) 1-2 319
- Sinnerite, synthetic, stability, X-ray diffraction analysis, chemical composition, twinning (Makovicky, Emil., *et al.*) 5-6 824
- Wakabayashilite, unnamed CuAg sulfobismuthide, unnamed CuPbAg sulfobismuthide, new mineral, benjaminite, new data (Fleischer, Michael.) 7-8 1311
- Tungstates**
Cerotungstite, new mineral, mineral data (Fleischer, Michael.) 9-10 1552
- Vanadates**
Schubnelite, new mineral, mineral data (Fleischer, Michael.) 9-10 1552
- Vanalite, new data (Fleischer, Michael.) 3-4 594
- Minnesota**
Mineralogy
Axinite, manganaxinite, occurrence, Mesabi Range (French, Bevan M., *et al.*) 5-6 989
- Mooihoekite, haycockite, new mineral, occurrence, Duluth Gabbro (Cabri, Louis J., *et al.*) 5-6 689
- Montana**
Mineralogy
Apatite, britholite, Shonkin Sag laccolith (Nash, W. P.) 5-6 877
- Petrology*
Gabbro, laccoliths, Big Belt Mountains, Square Butte laccolith (Beall, Joseph J.) 7-8 1294
- Moon**
Mineralogy
Book reviews, Apollo 11 (Drake, Michael J.) 1-2 332
- Pigeonite, Apollo 11, Apollo 12 (Prewitt, C. T., *et al.*) 1-2 323
- Plagioclase, Apollo 12 (Appleman, Daniel E.) 1-2 324
- Spinel, chemical analysis, genesis, Ocean of Storms, Apollo 12 (Busche, F. D., *et al.*) 11-12 1729
- Tridymite, cristobalite, Hadley Rille, Apollo 15 (Mason, Brian.) 9-10 1530
- Petrology*
Book reviews, Apollo 11 (Drake, Michael J.) 1-2 332
- Nevada**
Mineralogy
Elyite, new mineral, Ward (Williams, Sidney A.) 3-4 364
- New South Wales**
Mineralogy
Dawsonite, analcite, nordstrandite, Sydney Basin (Loughnan, F. C., *et al.*) 9-10 1437
- New York**
Mineralogy
Spinel, inclusions, Essex County, Newcomb Quadrangle, Schroon Lake Quadrangle, Ausable Quadrangle (Whitney, Philip R.) 9-10 1429
- New Zealand**
Mineralogy
Heulandite, clinoptilolite, Southland Syncline (Boles, James R.) 9-10 1463
- Teschemacherite, Broadlands (Browne, P. R. L.) 7-8 1304
- Nitrogen**
Occurrence
Diamond, impurities (Melton, Charles E., *et al.*) 9-10 1518
- Nodules**
Manganese
X-ray diffraction analysis, sample preparation (Brown, Bruce A.) 1-2 284
- Norway**
Mineralogy
Hydrogrossular, Mosjoen (Nissen, August L.) 9-10 1535
- Organic materials**
Amino acids
Valine, montmorillonite, spectroscopy (Sung, Do Jang., *et al.*) 3-4 494
- Hydrocarbons*
Methane, impurities, diamond (Melton, Charles E., *et al.*) 9-10 1518
- Oxygen**
Geochemistry
Properties, fugacity, effects, variations, fugacity, H₂O, experimental studies (Whitney, James A.) 11-12 1902
- Pakistan**
Mineralogy
Hydromagnesite, Hindubagh (Robie, Richard A., *et al.*) 11-12 1768
- Paleozoic**
Europe
France, Central Massif, Sioule Series, petrology, book reviews (De Waard, D.) 7-8 1320

Paragenesis

Paragenesis

- Minerals*
 Leucosphenite, Wyoming, Utah
 (Pabst, A., *et al.*) 11-12 1801
- Oxides*
 Perovskite, kimberlite
 (Mitchell, Roger H.) 11-12 1748
- Pegmatite*
 Natrophilite
 (Moore, Paul Brian.) 9-10 1333
- Pegmatite**
United States
 Colorado, Gunnison County, paragenesis
 (Rosenberg, P. E.) 3-4 571
- Permian**
Australia
 New South Wales, Sydney Basin, petrology,
 Singleton Coal Measures
 (Loughnan, F. C., *et al.*) 9-10 1437
- Petrology**
Classification
 Book reviews
 (Schneer, Cecil J.) 3-4 599
- General*
 Book reviews
 (Holser, William T.) 9-10 1565
- History*
 Research, Tsuboi, Seitaro, book reviews
 (Emmons, R. C.) 11-12 1916
- Philosophy*
 Research, education
 (Goldsmith, Julian R.) 3-4 345
- Principles*
 Ratios, correlation, book reviews
 (Whitten, E. H. Timothy.) 5-6 1012
- Phase equilibria**
Acmite-jadeite
 Experimental studies, stability, low pressure
 (Popp, R. K., *et al.*) 7-8 1210
- Al₂O₃-AlO(OH)*
 Corundum, diaspore, stability, P-T
 conditions
 (Haas, Herbert.) 9-10 1375
- CaCO₃-BaCO₃-PbCO₃*
 Subsolidus relations, solid solution
 (Chang, Luke L. Y., *et al.*) 1-2 155
- CaCO₃-SrCO₃-PbCO₃*
 Subsolidus relations, solid solution
 (Chang, Luke L. Y., *et al.*) 1-2 155
- Calcite-aragonite*
 P-T conditions
 (Crawford, William A., *et al.*) 5-6 995
- CaSiO₃-FeSiO₃-MgSiO₃*
 Pyroxene, stability
 (Smith, Douglas.) 9-10 1413
- Forsterite-diopside-akermanite-leucite*
 Experimental studies, low pressure
 (Gupta, Alok K.) 7-8 1242

SUBJECT INDEX TO VOLUME 57

- Forsterite-diopside-silica*
 Liquidus relations, low pressure
 (Kushiro, Ikuo.) 7-8 1260
- Granite magma*
 Experimental studies, riebeckite,
 ferrohastingsite, P-T conditions, United
 States, Massachusetts
 (Lyons, Paul C.) 9-10 1404
- Mechanism*
 Vapor pressure, metals
 (Salotti, Charles A.) 1-2 130
- Methods*
 Electron probe
 (Kushiro, Ikuo.) 7-8 1260
- MgSiO₃-CaMgSi₂O₆*
 Experimental studies, pigeonite, stability,
 low pressure
 (Yang, Houn-Yi., *et al.*) 7-8 1232
- MnSiO₃-MgSiO₃*
 Pyroxmangite, rhodonite, peritectic
 (Ito, Jun.) 5-6 865
- Olivine-chloride*
 Theoretical studies, thermodynamic
 properties, ion exchange, intercrystalline,
 intracrystalline
 (Saxena, S. K.) 11-12 1782
- Orthopyroxene*
 Theoretical studies, thermodynamic
 properties, ion exchange, intercrystalline,
 intracrystalline
 (Saxena, S. K.) 11-12 1782
- Principles*
 Analysis, book reviews
 (Waldbaum, D. R.) 5-6 1009
- Textbooks, book reviews
 (Waldbaum, D. R.) 5-6 1007
- Textbooks, book reviews
 (Waldbaum, D. R.) 5-6 1008
- Silicates*
 Analysis, thermodynamic properties,
 theoretical studies
 (Barron, L. M.) 5-6 809
- ThGeO₄*
 Experimental studies, stability
 (Harris, L. A., *et al.*) 11-12 1894
- Phosphorus**
Geochemistry
 Igneous rocks, fugacity
 (Nash, W. P.) 5-6 877
- Potassium**
Geochemistry
 Ion exchange, selectivity, vermiculite,
 biotite, muscovite
 (Dolcater, D. L., *et al.*) 11-12 1823
- Precambrian**
South America
 Brazil, Jaragua, metamorphism,
 amphibolites

SUBJECT INDEX TO VOLUME 57

Utah

- (Gomes, Celso de Barros.) 11-12 1860
- United States*
- Wyoming, Bighorn Mountains, petrology
(Malcuit, R. J., *et al.*) 7-8 1190
- Quebec**
- Mineralogy*
- Brucite, Asbestos
(Liebling, Richard S., *et al.*) 5-6 857
- Romania**
- Petrology*
- Granite, Sebes Mountains, Banat
(Seclaman, Marin., *et al.*) 5-6 932
- Sedimentary petrology**
- Textbooks*
- Book reviews
(Briggs, Louis I.) 1-2 335
- Sedimentary rocks**
- Clastics, nonterrigenous*
- Diatomite, diagenesis, sepiolite,
authigenesis, Pacific Ocean, Santa Cruz
Basin
(Fleischer, Peter.) 5-6 903
- Clastics, terrigenous*
- Mineralization, dawsonite, analcite, New
South Wales
(Loughnan, F. C., *et al.*) 9-10 1437
- Weathering, gibbsite, genesis
(Lodding, William.) 1-2 292
- Weathering, gibbsite, genesis
(Gardner, Leonard Robert.) 1-2 294
- Genesis*
- Book reviews
(Gardner, Leonard Robert.) 3-4 605
- Sedimentation**
- Interpretation*
- Chemical processes, book reviews
(Kramer, James R.) 1-2 331
- Sediments**
- Composition*
- Mineral composition, greigite, Great Lakes
(Dell, C. I.) 7-8 1303
- Mineralogy*
- Clay mineralogy, book reviews, Great
Britain
(Brindley, G. W.) 1-2 334
- Silicon**
- Analysis*
- Electron probe, techniques
(Reed, S. J. B.) 9-10 1550
- Soils**
- Erosion*
- Weathering, genesis, book reviews
(Mackenzie, Fred T.) 1-2 331
- South Africa**
- Mineralogy*
- Mooihoekite, haycockite, new mineral,
occurrence, Transvaal
(Cabri, Louis J., *et al.*) 5-6 689
- Trevorite, Barberton
(De Waal, S. A.) 9-10 1524
- South Australia**
- Mineralogy*
- Huntite, Tea Tree Gully
(Hemingway, Bruce S., *et al.*) 11-12 1754
- South Dakota**
- Mineralogy*
- Griphite, Custer
(Peacor, Donald R., *et al.*) 1-2 269
- Spain**
- Mineralogy*
- Westerveldite, new mineral, La Gallega
(Oen, I. S., *et al.*) 3-4 354
- Spectroscopy**
- General*
- X-ray, tables, book reviews
(Langheinrich, Armin P.) 3-4 608
- Methods*
- Infrared, mica group, clay minerals,
identification
(Larson, Sylvia J., *et al.*) 5-6 998
- Infrared, olivine group, analysis
(Burns, Roger G., *et al.*) 5-6 967
- Standard rocks**
- Composition*
- Chemical analysis
(Fabbi, Brent P.) 1-2 237
- Sulfur**
- Analysis*
- Electron probe, techniques
(Reed, S. J. B.) 9-10 1550
- Experimental studies*
- Valence, scapolite, basaltic glass
(Connolly, J. W. D., *et al.*) 9-10 1515
- Sweden**
- Mineralogy*
- Wermlandite, new mineral, Vaermland
(Fleischer, Michael.) 1-2 325
- Symposia**
- Geophysics*
- Nature of the solid Earth, book reviews
(Holser, William T.) 11-12 1924
- Thermal waters**
- Australasia*
- New Zealand, Broadlands, carbonates,
crystallization
(Browne, P. R. L.) 7-8 1304
- USSR**
- Mineralogy*
- Indigirite, cesium kupletskite, new minerals
(Fleischer, Michael.) 1-2 325
- Utah**
- Mineralogy*
- Leucospheinit, Uinta Basin
(Pabst, A., *et al.*) 11-12 1801

Vertebrata

Vertebrata

Fossilization

- Manganese, deposition, mechanism, bone
(Parker, Ronald B., *et al.*) 9-10 1527

Volcanology

Volcanism

- Processes, USSR, Kuril Islands, book
reviews
(Bailey, Roy A.) 3-4 604

Weathering

Environment

- Gibbsite, genesis
(Lodding, William.) 1-2 292
Gibbsite, genesis
(Gardner, Leonard Robert.) 1-2 294

General

- Book reviews
(Mackenzie, Fred T.) 1-2 331

Western Australia

Mineralogy

- Pyrrhotite, Norseman
(Bennett, C. E. G., *et al.*) 11-12 1876

SUBJECT INDEX TO VOLUME 57

Wyoming

Mineralogy

- Leucosphenite, Uinta Basin
(Pabst, A., *et al.*) 11-12 1801
Zircon, gneiss, Bighorn Mountains
(Malcuit, R. J., *et al.*) 7-8 1190

X-ray diffraction analysis

Applications

- Olivine, abundance, meteorites
(Pollack, Sidney S., *et al.*) 3-4 584

Instruments

- Heating stage
(Smyth, Joseph R.) 7-8 1305

Methods

- Sample preparation
(Brown, Bruce A.) 1-2 284

Textbooks

- Book reviews
(Dollase, W. A.) 7-8 1318

Zinc

Geochemistry

- Mineral deposits, vapor pressure, phase
equilibria
(Salotti, Charles A.) 1-2 130

INDEX TO NEW MINERAL NAMES

Bariandite	9-10 1552	Osarsite	7-8 1029
Bideauxite	5-6 1003	Permingeatite	9-10 1552
Bukovite	11-12 1909	Picotpaulite	11-12 1909
Carlsbergite	7-8 1311	Pierrotite	11-12 1909
Cerungstite	9-10 1552	Romarchite	9-10 1552
Cesium kupletskite	1-2 325	Roubaultite	11-12 1909
Clinosafflorite	9-10 1552	Schoenfliesite	9-10 1552
Congolite	7-8 1311	Schubnelite	9-10 1552
Derriksite	11-12 1909	Seeligerite	1-2 325
Elyite	3-4 364	Sodium betpakdalite	7-8 1311
Fischesserite	9-10 1552	Sogdianite	11-12 1909
Hakite	9-10 1552	Takovite	9-10 1552
Haycockite	5-6 689	Tochilinite	9-10 1552
Heyrovskyite	1-2 325	Tsumcorite	9-10 1552
Holtite	9-10 1552	Unnamed copper aluminum sulfate	5-6 1003
Hydromarchite	9-10 1552	Unnamed copper iron arsenate-sulfate	5-6 1003
Indigirite	1-2 325	Unnamed Cu,Ag sulfobismuthide	7-8 1311
Kawazulite	7-8 1311	Unnamed Cu-Bi-V mineral	7-8 1311
Kittlite	7-8 1311	Unnamed Cu,Pb,Ag sulfobismuthide	7-8 1311
Komarovite	7-8 1311	Unnamed iron arsenate	7-8 1311
Lacroixite, unnamed phosphate	11-12 1909	Unnamed molybdenum sulfide	9-10 1552
Langisite, Bruegggenite	11-12 1909	Unnamed Pd, Pt, Sn, Pb mineral	3-4 594
Lemoynite	11-12 1909	Unnamed Pt, Pd, Sn mineral	3-4 594
Ludlockite	5-6 1003	Unnamed sulfosalts	1-2 325
Molybdenum silicate?	9-10 1552	Unnamed Ti, V, Cr, Fe oxide	5-6 1003
Mooihoekite	5-6 689	Wakabayashilite	7-8 1311
Mrazekite	3-4 594	Wermlandite	1-2 325
Murgocite	3-4 594	Westerveldite	3-4 354
Oosterboschite	9-10 1552	Yttrian bastnaesite	3-4 594
		Zapatalite	11-12 1909