

ALPHABETICAL INDEX

Names of Authors are printed in SMALL CAPITALS, Subjects in lower-case roman, and Localities in *italics*.

The minerals, localities, and authors mentioned in the reports of the I.M.A. Commission on New Minerals and in the 25th List of new mineral names (pp. 131, 1143, and 1146) are not included in this index.

- ABBEY (SIDNEY), The determination of feldspars by flame photometry, 143.
- Absorption spectra, structural interpretation of, 204, 325.
- Acmite, *Uganda*, anal., opt., X-ray, 5.
- Actinolite, *Rajasthan, India*, cryst., anal., opt., X-ray, 22; *Urals*, anal., trace elements, 403.
- ADDISON (W. E.) & WHITE (A. D.), Spectroscopic evidence for the siting of lithium ions in a riebeckite, 743; The oxidation of *Bolivian* crocidolite, 791.
- Albite, structural state in relation to temperature, 83; *Woodbine* meteorite, opt., 120; lithian, synthesis, equilibrium with eucryptite and with β -spodumene, 578.
- Alluaudite, *Rhodesia*, 50.
- Almandine, *Czechoslovakia*, anal., 389.
- Amba Dongar, Gujarat State, India*, melanite, 775.
- Ameletite = nepheline or mixtures, 438.
- Amesite, *Sweden*, anal., 300.
- Amphibole formulae, calculation from analyses of doubtful accuracy in regard to H_2O^+ or F or both, 583.
- Amphibole, see actinolite, anthophyllite, hastingsite, hornblende.
- Amphibolite, *Singbhum, India*, trace elements in, 671.
- Anandite, *Ceylon*, opt., anal., X-ray, 1; anal., 871.
- Andalusite, stability of, 839.
- Andradite, titanian, *Botswana*, anal., opt., X-ray, sp. gr., 775; *Norway* and *Sweden*, anal. (TiO_2 only), opt., X-ray, 775.
- Animas, Atocha, Bolivia*, stannite, 1045.
- Ankerite, *Germany*, thermal decomposition of, 138.
- Ankole, Uganda*, schorlomite, 775.
- Anorthite, *Japan*, orientation of boundaries of domains in, transition to body-centred structure, 814.
- Anorthoclase, ordering in, in relation to temperature, 1061.
- Anthophyllite, *Urals*, anal., trace elements, opt., 403.
- Antimony oxychlorides, $Sb_4O_5Cl_2$ and $Sb_8O_{11}Cl_2$ (onoratoite), 1037.
- Apatite, equilibrium studies of, 539; *Rhodesia* and *Uganda*, opt., Mn content, 50.
- Apatite family, classification of based on ionic radius, 654, 1171; alkaline-earth and rare-earth silicates and germanates in, synthesis, cell dimensions, 411; synthetic members, including silicates, germanates, chromates, and manganates, 654.
- Ardglen, New South Wales*, todorokite, 757.
- Arendal, Norway*, titanian andradite, 775.
- Arltunga* meteorite, metallography, 1139.
- Aroostook County, Maine*, ganophyllite, 893.
- Arrojadite, *Rhodesia*, 50.
- ASARI (H.), anal. by, 451.
- Ascension Island*, vlasovite, 233.
- Assisi*, meteorite, description, mineralogy, 595.
- Astrophyllite, *Azores*, 227.
- Atomic ratios, calculation by computer, 297, 299.
- AUCOTT (J. W.), see EMELEUS (C. H.), xxx.
- Augite, *New Zealand*, anal., opt., 180.
- Auranga-Koel Valley, Palamau, Bihar, India*, chromian vanadian muscovite, 591.
- Axinite, *Eire*, anal., opt., 747.
- AXON (H. J.), The metallographic structure of the *Kodaikanal* meteorite, 687; The metallographic structure of

- AXON (*cont.*)
the iron meteorites *Arltunga, Kopjes Vlei, Murnpeowie, Braunau, and Rancho de la Pila*, 1139.
- BAKER (G.), Micro forms of hay-silica glass and of volcanic glass, 1012.
- BALDOCK (J. W.), Calzirtite and the mineralogy of residual soils from the *Bukusu* carbonatite complex, south-eastern *Uganda*, 770.
- BANERJEE (SUBIR K.), see O'REILLY (W.), 29.
- Bannisterite, *New Jersey*, anal., opt., X-ray, 893; *Wales*, 893.
- Baranchinsk, Urals*, diopside, actinolite, anthophyllite, hornblende, 403.
- Barium-orthoclase, *Japan*, cell dimensions, 914.
- Barium-potassium feldspars, see potassium-barium feldspars, 914.
- Barwell* meteorite, anal., 101.
- Baryte, etching of, 750.
- Basalt, electrolysis of, 1104.
- BAYLISS (P.) & STANDARD (J. C.), Further mineralogical data on native lead balls, 141; — and STEPHENSON (N. C.), The crystal structure of gersdorffite, 38; The crystal structure of gersdorffite (III), a distorted and disordered pyrite structure, 940; —, see LAWRENCE (L. J.), 757, and GOLDING (H. C.), 825.
- Beb, Rhodesia*, fergusonite, 50.
- Beckelite, a Ca-La-Ce silicate apatite, 411.
- Beitbridge, Rhodesia*, enstatite-sillimanite-corundum-cordierite-quartz rock, 1052.
- BELLUOMINI (G.), FORNASERI (M.), & NICOLETTI (M.), Onoratoite, a new antimony oxychloride from *Cetine di Cotorniano, Rosia (Siena), Italy*, 1037.
- Belnhausens, Darmstadt, Germany*, ankerite, 138.
- Benallt mine, Caernarvonshire, Wales*, bannisterite and ganophyllite, 893; celsian, 914.
- Bencubbin* meteorite, descr., descr. and anal. of enclaves in, bearing on origin and history of meteorites, 726; cutting of, 742.
- BENJAMIN (R. K.), An axinite-epidote-tourmaline vein cutting amphibolite, western *Connemara, Eire*, 747.
- Benson, Rhodesia*, montebasite, micro-lite, tantalite, topaz, hafnian zircon, 50.
- Bepe, Rhodesia*, spessartine, 50.
- Bertrandite, *Scotland*, cryst., opt., sp. gr., 60.
- Beryl Rose, Rhodesia*, spessartine, 50.
- BHATTACHARJEE (C. C.), anals. by, 344 ff.
- BHATTACHARJEE (L.), see BHATTACHARJEE (S. B.), 671.
- BHATTACHARJEE (S.), see BHATTACHARJEE (S. B.), 671.
- BHATTACHARJEE (S. B.), BHATTACHARJEE (L.), GHOSH (A. K.), & BHATTACHARJEE (SANTI), Minor elements in some rocks and minerals of the *Rakha* mines area, *Singhbhum, India*, 671.
- Big Creek, Fresno County, California*, celsian, 914.
- BIGGAR (G. M.), Apatite compositions and liquidus phase relationships on the join $\text{Ca}(\text{OH})_2\text{-CaF}_2\text{-Ca}_3(\text{PO}_4)_2\text{-H}_2\text{O}$ from 250 to 4000 bars, 539.
- Bigrigg, Cumberland*, hausmannite, 976.
- Bikita, Rhodesia*, manganese apatite, montebasite, formanite, topaz, rubellite, 50.
- Billygoat Donga* meteorite, description, 694.
- Binnenthal, Valais, Switzerland*, hyalophane, 914.
- BINNS (R. A.), An exceptionally large chondrule in the *Parnallee* meteorite, 319.
- Biotite, infra-red absorption spectrum, 325.
- BIRLE (JOHN D.) & TETTENHORST (RODNEY), Refined muscovite structure, 883.
- Bismutotantalite, *Rhodesia*, 50.
- Bixbyite, *India*, 294; *New Mexico*, thermal decomposition, 976.
- Blackpool clay pit, St. Austell, Cornwall*, tourmaline, 1078.
- Blithfield* meteorite, minor elements in, 740.
- Book reviews:
ADLER (I.), X-ray emission spectroscopy in geology (Methods in geochemistry and geophysics, 4), 151.

- ALBERTUS MAGNUS, Book of minerals (transl. D. Wyckoff), 463.
- BEUS (A. A.), Geochemistry of beryllium, 301.
- BLACK (G. P.), Arthur's Seat: a history of Edinburgh's volcano, 301.
- BOLDT (J. R., JR.), The winning of nickel, 755.
- BRAGG (W. L.) & CLARINGBULL (G. F.), Crystal structures of minerals, 145.
- BURRI (C.), PARKER (R. L.), & WENK (E.), Die optische Orientierung der Plagioklase, 754.
- DEER (W. A.), HOWIE (R. A.), & ZUSSMAN (J.), An introduction to the rock-forming minerals, 150.
- EL-HINNAWI (ESSAM E.), Methods in chemical and mineral microscopy, 302.
- FANG (J. H.) & BLOSS (F. DONALD), X-ray diffraction tables, 147.
- HINTZE (CARL), Handbuch der Mineralogie. CHUDOBA (KARL F.), Ergänzungsband III: Neue Mineralien und neue Mineralnamen (mit Nachträgen, Richtigstellungen, und Ergänzungen), 754.
- KING (L. C.), Morphology of the Earth (2nd edn), 461.
- KRUŽA (TOMÁŠ), Moravské nerosty a jejich literatura 1940-1965, 152.
- MASON (BRIAN), Principles of geochemistry (3rd edn), 462.
- Mineralium Deposita, vol. 1, no. 1, 304.
- SINKANKAS (JOHN), Mineralogy: a first course, 149.
- STEWART (G. H.), ed., Science of ceramics, vol. 2, 618.
- STRAKOV (N. M.), Principles of lithogenesis, vol. 1, 303.
- UBBELOHDE (A. R.), Melting and crystal structure, 148.
- VANDERS (IRIS) & KERR (PAUL F.), Mineralogical recognition, 619.
- VERMA (A. R.) & KRISHNA (P.), Polymorphism and polytypism in crystals, 148.
- WEIBEL (M.), A guide to the minerals of Switzerland, 464.
- ZUSSMAN (J.), Physical methods of determinative mineralogy, 756.
- BORG (I.), On conventional calculations of amphibole formulae from chemical analyses with inaccurate $H_2O(+)$ and F determinations, 583.
- BORISENKO (L. F.), Trace elements in pyroxenes and amphiboles from ultramafic rocks of the *Urals*, 403.
- BORLEY (G. D.), Potash-rich volcanic rocks from southern *Spain*, 364.
- Borolan, Scotland*, clinopyroxene, 5.
- Borolan*, see *Borolan*.
- Bosnia*, hyalophane, 914.
- Boulangerite, *India*, 1174.
- BOWES (D. R.), The petrochemistry of some Lewisian granitic rocks, 342.
- BOWIE (S. H. U.), Quantitative methods of determining opaque minerals (abstr.), xvi.
- Brackebuschite, relation of structure to some other lead minerals, 522.
- BRADSHAW (P. M. D.), Measurement of the modal composition of a granitic rock by point-counting, infra-red spectroscopy, and X-ray diffraction, 94.
- BRADSHAW (R.) & PHILLIPS (F. C.), X-ray studies of natural fabrics. I. Growth-fabrics in hematite kidney-ore and in fibrous calcite, 70.
- BRAITHWAITE (R. S. W.) & KNIGHT (J. R.), Serpierite from *Ecton, Staffordshire*, 882.
- Braunau* meteorite, metallography, 1139.
- Broken Hill, New South Wales*, calcio-celsian, celsian, 914.
- Bronzite, *Assisi* meteorite, 595; *Norway*, in troctolite, anal., 504.
- BROOKINS (DOUGLAS G.), Re-examination of pyrope from the *Stockdale* kimberlite, *Riley County, Kansas*, 450.
- BROUSSE (R.), see LEMAÎTRE (O.), xxviii, xix.
- BROWN (W. L.), A reinterpretation of monalbite, 80; see also GRUNDY (H. D.), 83.
- Brucite, staining tests for, 886.
- Budeda, Uganda*, clinopyroxene, 5.
- BUIST (D. S.), A study of calcium hexaluminate, 676.
- Bukusu, Uganda*, calzirtite, perovskite, 770; clinopyroxene, 5.
- Bulema, Kigezi, Uganda*, apatite, micro-lite, topaz, 50.

- Burnabie* meteorite, description, 707.
- BURNS (R. G.) & STRENS (R. G. J.), Structural interpretation of polarized absorption spectra of the Al-Fe-Mn-Cr epidotes, 204.
- Burrika* meteorite, description, 712.
- BUSECK (PETER R.), Mackinawite, pentlandite, and native copper from the *Newport* pallasite, 717.
- Busovaca, Bosnia*, hyalophane, 914.
- Calcioelsian, see celsian, 914.
- Calcite, *Somerset*, fibrous, fabric study of, 70.
- Calcium, distribution between phases of chondritic meteorites, 101.
- Calcium hexaluminate, pure and ferrian, synthesis, X-ray, opt., 676.
- Calcium-iron oxides, synthesis, etch tests, X-ray, 280; reflectivity of CaFe_2O_4 , 422; $\text{CaO}\cdot 6\text{Fe}_2\text{O}_3$, synthesis, 422.
- Calzirtite, *Uganda*, anal., X-ray, 770.
- Camphouse, Ardnamurchan, Scotland*, schorlomite, 775.
- CANN (J. R.), A second occurrence of dalyite and the petrology of some ejected syenite blocks from *São Miguel, Azores*, 227; and see FLEET (S. G.), 233.
- Carbonaceous refractories, reflected light microscopy (abstr.), xvi.
- Cardanumbi* meteorite, description, 712.
- Carneal, Antrim*, ferrian chlorospinel, 948.
- Castle an Dinas quarry, Cornwall*, tourmaline, 1078.
- Catron City, New Mexico*, bixbyite, 976.
- Celsian, *Caernarvonshire, California, New Jersey, New South Wales, and Sweden*, cell dimensions, 914; — orthoclase series, synthesis, opt., X-ray, 43.
- Cerussite, morphology, 632.
- ČERVENÁ, anal. by, 390.
- Cetine di Cotorniano, Rosia, Siena, Italy*, onoratoite, 1037.
- CHAKRABORTY (K. L.), Mineralogical note on the chrome-chlorite (kämmererite) and chrome-garnet (uvarovite) from the chromite deposits of *Kalrangi, Orissa (India)*, 962.
- Chalcopyrite, *Singhbhum, India*, trace elements in, 671.
- CHALLIS (G. A.), X-ray study of deformation lamellae in olivines of metamorphic rocks, 195.
- CHANG (LUKE L. Y.), $\text{Li}_2\text{Zr}(\text{WO}_4)_3$, a wolframite-type compound, 436; Sub-solidus phase relations in the system ZnWO_4 - ZnMoO_4 - MnWO_4 - MnMoO_4 , 992.
- Charnockites, origin of colour of, 1135; *India*, zoned plagioclase in, 805.
- Chert, *Devonshire*, metamorphism of, anal. of products, 260.
- CHESWORTH (WARD), A comparison of Grenville and Lewisian granites, 879.
- CHINNER (G. A.) & SWEATMAN (T. R.), A former association of enstatite and kyanite, 1052.
- Chiwya Claims, Rhodesia*, graffonite, psilomelane, strengite, arrojadite, 50.
- Chlorite, see klementite.
- Chlorite-schist, *Singhbhum, India*, trace elements in, 671.
- Chlorospinel, ferrian, *Antrim*, anal., X-ray, 948.
- Cholquijirca, Dept. Junin, Peru*, hexastannite and mawsonite, 1045.
- Chondrodite, structure, 966.
- Chondrule, large, in *Parnallee* meteorite, descr., anal., 319.
- Chotanagpur granite, India*, trace elements, relation to sulphide ores, 661.
- CHOUDHARY (P. D.), see SATHE (R. V.), 616.
- Chromium, distribution between phases of chondritic meteorites, 101.
- CLARK (A. HORRELL), P-T-x conditions during progressive ore deposition in the *Ylöjärvi* deposit, *Finland*: A test case for the geological application of experimental sub-solidus phase relation equilibrium data (abstr.), xiii; Mackinawite from *The Lizard, Cornwall*, 614; — CLARK (A. M.), & SILLTÖE (R. H.), Supergene alteration of copper deposits, northern *Chile*: I. Chalcopyrite-bornite solid solutions in the system Cu-Fe-S, *Mina Escondida, Andacollo* (abstr.), xxviii.
- CLARK (A. M.), see CLARK (A. H.), xxvii.
- Clayton adit, Ecton Hill, Wotton, Staffordshire*, serpierite, 882.

- CLEVERLEY (W. H.), see McCALL (G. J. H.), 691.
- Clinocllore, *New South Wales*, anal., d.t.a., 825.
- Clinochrysolite, *New South Wales*, 825.
- Clinohumite, structure, 966.
- Clinopyroxene, *Scotland*, anal. opt., 5, *Uganda*, anal., opt., X-ray, 5; *India*, anal., coexisting with ortho-, element distribution in, 153; see also diopside, hedenbergite, sahlite.
- Cobalt, distribution between kamacite and taenite of chondritic meteorites, 101.
- Cochabamba*, *Bolivia*, crocidolite, 743; 791.
- COCKBAIN (A. G.), Lead apatite solid-solution series, 1171; The crystal chemistry of the apatites, 654; — & SMITH (G. V.), Alkaline-earth-rare-earth silicate and germanate apatites, 411; — — Dielectric properties of hydroxyapatite, 1171.
- Coexistence of Mn^{3+} and Fe^{2+} in piemontite, and of Ti^{3+} and Fe^{3+} in titanaugite, 459.
- Coire an Lochain*, *Cairn Gorm*, *Scotland*, bertrandite, genthelvite, 60.
- Columbite, *Rhodesia*, 50.
- COLVILLE (ALAN A.), see RIBBE (P. R.), 814.
- Computer, calculation of rock norms by, 297, 1175; of atomic ratios by, 297, 299; of petrofabric analyses by, 456.
- COOMBS (D. S.) & WILKINSON (J. F. G.), The nature of 'ameletite', 438.
- Copper in meteorites, 855; native —, in the *Newport* pallasite, 717.
- CORBETT (D. W. P.), The *Lake Bonney* and *Nora Creina* meteorites, *South Australia*, 293.
- Cordierite, *Rhodesia*, anal., 1052.
- Cripple's Ease quarry*, *Cornwall*, tourmaline, 1078.
- Crocidolite, *Bolivia*, anal., oxidation, dehydration, 791; and see riebeckite.
- Crystal growth in hematite, 625.
- Dallas* gem mine, *San Benito County*, *California*, melanite, 775.
- Dalyite, *Azores*, opt., 227.
- Dam Site*, *Rhodesia*, montebasite, pol-lucite, 50.
- DASGUPTA (D. R.), Thermal decomposition of dolomite and ankerite, 138; — PODDAR (B. C.), & SEN GUPTA (N. R.), A note on the occurrence of geocronite and boulangerite in the *Rajpura* belt, *Udaipur district*, *Rajasthan*, *India*, 1174.
- DAS GUPTA (S. P.), Paragenesis of the metasomatic actinolite-bearing rocks from the *Khetri* copper belt, *Rajasthan*, *India*, 22.
- Datolite, *Devon*, in metamorphosed chert, 260.
- DAVIDSON (C. F.), Genetic relationship between ore deposits and evaporites (abstr.), xii.
- DAVIS (R. J.), Some manganese oxide pseudomorphs, 274.
- DEARMAN (W. R.), see EL SHARKAWI (M. A.), 260.
- Delafossite, synthesis, anal., Mössbauer effect, 643; *Nevada* and *Nizhnii Tagil*, anal., 651.
- Density separator, continuous, 890.
- DE SILVA, (N. R.) anal. by, 3.
- Determination of opaque minerals from reflectivity (abstr.), xvi.
- Diaboleïte, synthesis, cryst., X-ray, 933; *Arizona*, X-ray, 933.
- Dingo Pup Donga* meteorite, descr., anal., 702, 704.
- Diopside, *Spain*, anal., 364; *Scotland*, anal., 380; *Urals*, anal., trace elements, 403; *India*, anal., trace elements, 153; *Uganda*, anal., opt., X-ray, 5; in iron meteorites with silicate inclusions, 120; chromian, *Woodbine* meteorite, 120.
- Dirbat Well*, *Northern Red Sea Hills*, *Sudan*, schorlomite, 775.
- DIXON (C.), The ore-forming fluid: the clan concept (abstr.), xiii.
- Dolomite, *Tyrol*, thermal decomposition, 138.
- Dongri Buzurg*, *Maharashtra*, *India*, cryptomelane, vredenburghite, 1034.
- Donsa*, *Rhodesia*, yttrotantalite, 50.
- Dundas*, *Montagu County*, *Tasmania*, pyrolusite pseudomorphous after manganite, 274.
- Dunedin*, *New Zealand*, trachytic lavas, titanomagnetite, chromian spinel (picotite), 425.

- DUNHAM (K. C.), Evidence bearing on the nature of the mineralizing fluids in the *English Pennines* (abstr.), xiii. *Dun Mountain, New Zealand*, olivine, 195.
- EASTON (A. J.), anal. by, 322; — & HEY (M. H.), Minor elements present in the silicate phase of enstatite chondrites, 740; see also HEY (M. H.), 855, and MOSS (A. A.), 101.
- Ecolite facies, *South Harris*, status of, 380.
- EDGAR (A. D.) & PIOTROWSKI (J. M.), $\Delta 2\theta_{131-131}$ for albites crystallized in the systems $\text{NaAlSi}_3\text{O}_8$ - β - $\text{LiAlSi}_2\text{O}_6$ - H_2O and $\text{NaAlSi}_3\text{O}_8$ - LiAlSiO_4 - H_2O , 578.
- EHLERS (E. G.), On the determination of $2V$, 299. *Eifel, Rhineland*, barian sanidine, 914. *Elgersburg, Thuringia, Germany*, pyrolusite pseudomorphous after manganite, 274.
- ELLIOTT (C. J.), see MOSS (A. A.), 101.
- EL SHARKAWI (M. A.) & DEARMAN (W. R.), Metasomatism of cherts on the north-west margin of *Dartmoor, Devonshire*, 260.
- EMELEUS (C. H.) & AUCOTT (J. W.), Olivines from the *Igaliko* nepheline-syenite complex, south *Greenland* (abstr.), xxx.
- Enstatite, *India*, anal., trace elements, 153; *Rhodesia*, anal., 1052; *Woodbine* meteorite, opt., 120; other iron meteorites with silicate inclusions, 120; see also bronzite.
- Enstatite chondrites, partition of P, Ti, Mn, Cr between phases in, 740.
- Epidiorite, *Singhbhum, India*, trace elements, relation to sulphide ores, 661, 671.
- Epidote, structural interpretation of absorption spectrum, 204; *Eire*, anal., opt., alteration, 747.
- Epistilbite, *Iceland*, crystal structure, 480.
- Equivibration curves determined with a variable-axis spindle-stage, 127.
- Ernabella Mission, Musgrave Ranges, Australia*, taaffeite (9R polytype), 305.
- Eucryptite, equilibrium with albite in synthetic systems, 578.
- Euxenite, *Rhodesia*, 50.
- EVANS (W. H.), anal. by, 54.
- Evaporites, relation to ore deposits (abstr.), xii.
- EWART (A.), Pyroxene and magnetite phenocrysts from the *Tauapo* quaternary rhyolite deposits, *New Zealand*, 180.
- Extinction curves, determined with a variable-axis spindle-stage, 127.
- FANFANI (L.) & ZANAZZI (P. F.), Structural similarities of some secondary lead minerals, 522.
- FANG (J. H.), Fortran IV programme for molecular norm calculation, 1175.
- Fayalite, synthetic, X-ray, 955, 1123.
- Feldspars, determination of by flame photometry, 143.
- Fen* complex, *Norway*, schorlomite, 775.
- Fergusonite, *Rhodesia*, 50.
- Fianuis, North Rona, Scotland*, granite (anal.), 342.
- FINNEY (J. J.), see KUMBASAR (I.), 621.
- Fiskernaesset, West Greenland*, sapphire, 449.
- Flame photometry, determination of feldspars by, 143.
- FLEET (S. G.), Non-space-group absences in sapphire, 449; — & CANN (J. R.), Vlasovite: a second occurrence and a triclinic to monoclinic inversion, 233.
- Fluorapatite, equilibrium studies of, 539.
- FONSEKA (J. P. R.), anal. by, 3.
- Formanite, *Rhodesia*, 50.
- Fornacite, relation of structure to some other lead minerals, 522.
- FORNASERI (M.), see BELLUOMINI (G.), 1037.
- Forsterite, *Woodbine* meteorite, opt., 120; other iron meteorites with silicate inclusions, 120.
- FÖRTSCH (E. B.), 'Plumbogummite' from *Roughten Gill, Cumberland*, 530.
- Foshagite, stability in the system $\text{CaO-SiO}_2\text{-H}_2\text{O}$, 1090.
- Framework structures built from 4- and 8-membered rings, 640.

- Franklin, New Jersey*, ganophyllite and bannisterite, 893.
- Franklin Furnace, New Jersey*, hyalophane, 914.
- Frascati, Rome, Italy*, melanite, 775.
- FRONDEL (C.), Quartz twin on {3032}, 861; see also SMITH (M. L.), 893.
- FROST (M. J.), Oriented lamellae in the *Gibeon* meteorite, 607; Cutting of stony meteorites, 742.
- Fungwe Gem, Mtoko, Rhodesia*, samarskite, 50.
- Furnace, high-temperature, 684.
- Gairloch, Scotland*, granite, anal., 342.
- GALLAGHER (M. J.), Phosphates and other minerals in pegmatites of *Rhodesia* and *Uganda*, 50.
- Gallium, distribution between phases of chondritic meteorites, 101.
- Ganophyllite, *Maine, New Jersey, Sweden, and Wales*, opt., X-ray, 893.
- Garnet, *Norway*, in schist, origin of S-shaped inclusion trails in, 453; $(\text{FeO} + \text{MgO})/(\text{CaO} + \text{MnO})$ in, as an index of metamorphic grade, 89; and see almandine, grossular, pyrope, grandite, pyralpsite; titanian, see andradite, melanite, and schorlomite.
- Garnet-peridotite, *Scotland*, anal., 380.
- Garrucha, Almeria, Spain*, verites, 364.
- GAY (P.) & ROY (N. N.), The mineralogy of the potassium-barium feldspar series III: Subsolidus relationships, 914.
- Genthelvite, *Scotland*, anal., opt., sp. gr., X-ray, 60.
- Geocronite, *India*, anal., 1174.
- Germanate apatites, synthetic, 411.
- Germanium, distribution between phases of chondritic meteorites, 101.
- Gersdorffite, *Germany*, crystal structure, 38.
- Gersdorffite (III), *Germany*, anal., crystal structure, 940.
- GHALY (T. S.), *anal.* by, 347.
- GHOSH (A. K.), see BHATTACHERJEE (S. B.), 671.
- GIBB (F. G. F.), On the origin of translation lamellae in olivine, 988.
- GIBBS (G. V.), see RIBBE (P. H.), 966.
- Gibeon* meteorite (siderite), twinning in, 607, 613; thermal history of, 613.
- Gjerestad, Nedenaes, Norway*, titanian andradite, 775.
- Glass, examination of inclusions in by reflected light (abstr.), xvi.
- GLASSER (L. S. D.) & SMITH (I. B.), Oriented transformations in the system $\text{MnO}-\text{O}-\text{H}_2\text{O}$, 976.
- Gnarkeet, Lismore, Victoria, Australia*, hay-silica glass, 1012.
- GOLDING (H. C.) & BAYLISS (P.), Compact chlorite associated with lizardite from *New South Wales, Australia*, 825.
- Goldongri, Panchmahal, Gujarat State, India*, manganooan grossular, 1032.
- GOLDRING (D. C.), see HUGHES (H.), 280.
- Gombe, Nigeria*, oligoclase-andesine, titanaugite, spinel, 1024.
- GOÏI (J.), Étude de la localisation et de la distribution des éléments en trace dans les minéraux et les roches granitiques (abstr.), xxix; and see LEMAÎTRE (O.), xxviii, xxix.
- Gooddays, Rhodesia*, metatorbernite, phosphuranylite, spessartine, β -uranophane, grayite, thorogummite, 50.
- Gopla, Singhbhum, India*, granite, trace elements in, 661.
- Gorceixite, *Tanzania*, 1167.
- Graftonite, *Rhodesia*, 50.
- Grandite and pyralpsite, miscibility of, 389.
- Granites, *Scotland*, anal., genesis, 342; Grenville and Lewisian compared, 879.
- Grayite, *Rhodesia and Uganda*, 50.
- Great Zawn, Zennor, Cornwall*, tourmaline, 1078.
- Greiner, Tyrol*, dolomite, 138.
- Grenville granite compared with Lewisian, 879.
- Grossular, manganooan, *India*, anal., opt., 1032; *Moravia*, anal., 389.
- Grossularite, *Devon*, formed by metamorphism of chert, anal., 260.
- Groutellite, formation in the system $\text{MnO}-\text{O}-\text{H}_2\text{O}$, 976.
- Grainard Bay, Scotland*, granite, anal., 342.

- GRUNDY (H. D.), BROWN (W. L.), & MACKENZIE (W. S.), On the existence of monoclinic $\text{NaAlSi}_3\text{O}_8$ at elevated temperatures, 83.
- GUPTA (B. P.), anal. by, 963.
- GUPTA (M. P.) & GUPTA (N. P.), An X-ray investigation of green mica in khondalite from *Auranga-Koel Valley, Palamau, Bihar, India*, 591.
- GUPTA (N. P.), see GUPTA (M. P.), 591.
- Gura, Singhbhum, India*, granite, trace elements in, 661.
- Gussevogorsk, U.S.S.R.*, diopside, hornblende, 403.
- Gyrolite, stability in the system $\text{CaO-SiO}_2\text{-H}_2\text{O}$, 1090.
- Hafnium, content in *Rhodesian zircon*, 50.
- HAINES (MICHAEL), Two staining tests for brucite in marble, 886.
- HALL (K. M.) & QUARENI (S.), A note on monalbite, 78.
- Hällefors, Sweden*, amesite, 300.
- HAMILTON (D. L.) & HENDERSON (C. M. B.), The preparation of silicate compositions by a gelling method, 832.
- Hanging Rock, Nundle, New South Wales*, pseudophite, lizardite, clinochrysolite, 825.
- HARBOARD (N. H.), Microprobe analysis in mineralogical problems of chemical diffusion and corrosion (abstr.), xxix.
- Harmotome, *Finland*, cryst., anal., opt., X-ray, 444.
- Harstig mine, Sweden*, ganophyllite, bannisterite, 893.
- Hastingsite, *Scotland*, anal., 380.
- Hausmannite, *Cumberland*, thermal decomposition, 976.
- Häüyne, thermal expansion, 761.
- Hawkesbury sandstone, New South Wales*, native lead, 141.
- HAYHURST (A.), The role of titanium in high-alumina refractories (abstr.), xvii.
- Hay-silica glass, *Australia*, anal., opt., micro forms, resemblance to 'microtektites', 1012.
- Hedenbergite, *Uganda*, anal., opt., X-ray, 5.
- Hematite, *Switzerland*, crystal growth in, 625; fabric study of, 70; titanian, *New Zealand*, 180; and see titanhematite.
- HENDERSON (C. M. B.), see HAMILTON (D. L.), 832.
- Hendra clay pit, St. Austell, Cornwall*, tourmaline, 1078.
- Heterosite, *Rhodesia*, anal., 50.
- Heulandite, *Washington state, U.S.A.*, water-rich, anal., opt., sp. gr., X-ray, also normal, opt., X-ray, 64.
- Hexastannite, *Bolivia and Peru*, anal., 1045.
- HEY (M. H.), On the composition of natural delafossite, 651; 25th list of new mineral names, 1146;—& EASTON (A. J.), Copper in various phases of several olivine-hypersthene and olivine-bronzite chondrites, 855; see also EASTON (A. J.), 740, MOSS (A. A.), 101, and SMITH (W. CAMPBELL), 1164.
- High-alumina refractories, Ti in (abstr.), xvii.
- Hillebrandite, stability in the system $\text{CaO-SiO}_2\text{-H}_2\text{O}$, 1090.
- Hornblende, *Eire*, anal., opt., alteration, 747; *Urals*, anal., trace elements, opt., 403; *Norway*, in troctolite, anal., 504.
- Horse Creek meteorite*, anal., 850.
- HOWIE (R. A.) & WOOLLEY (A. R.), The role of titanium and the effect of TiO_2 on the cell-size, refractive index, and specific gravity in the andradite-melanite-schorlomite series, 775.
- Hübnerite, solid solution of ZnWO_4 and of MnMoO_4 in, 992.
- HUDSON (D. R.), WILSON (ALLAN F.), & THREADGOLD (IAN M.), A new polymorph of taaffeite—a rare beryllium mineral from the granulites of central *Australia*, 305.
- HUGHES (H.), ROOS (P.), & GOLDRING (D. C.), X-ray data on some calcium-iron-oxygen compounds, 280.
- Humite, structure, 966.
- Hvittis meteorite*, minor elements in, 740.
- Hyalophane, *Japan, Sweden, New Jersey, Switzerland*, and *Yugoslavia*, cell dimensions, 914; kinetics of low-high transformation in, 914.

- Hydroxyapatite, equilibrium studies of, stability under igneous and metamorphic conditions, 539; dielectric properties of, 1169, 1171.
- Hypersthene, *India*, anal., trace elements, 153; *New Zealand*, anal., opt., 180.
- Ialltaig*, *Scotland*, myrmekitic gneiss, 491.
- Idocrase, *Devon*, in metamorphosed chert, 260.
- Igaliko*, *Greenland*, olivine, xxx.
- Iglika*, *Elhovo district*, *Bulgaria*, thau-
masite, 1003.
- Iivaara*, *Finland*, schorlomite, 775.
- Ilmenau*, *Thuringia*, pyrolusite, 976.
- Indarch* meteorite, minor elements in, 740.
- Infra-red spectroscopy to determine mode of a granite, 94.
- INGRAM (L.) & TAYLOR (H. F. W.), The crystal structures of sjögrenite and pyrolusite, 465.
- International Mineralogical Association, Commission on New Minerals and Mineral Names, report for 1961-64, 131; report for 1965-66, 1143.
- Iridosmine, *Ethiopia*, xxx.
- Iron Hill*, *Colorado*, melanite, 775.
- ITO (J.), anal. by, 897.
- Jajh deh Kot Lalu* meteorite, minor elements in, 740.
- Jakobsberg*, *Wernmland*, *Sweden*, hyalophane, celsian, 914.
- JAMES (F.), see JENKINS (D. A.), xxix.
- JARESOWICH (E.), analyses by, 702, 733.
- JENKINS (D. A.) & JAMES (F.), A preliminary study of the geochemistry of rock weathering using micro-probe analysis (abstr.), xxix.
- JOEL (N.), see VILLAROEI (H.), 127.
- Joemithite, *Sweden*, crystal structure of, 876.
- JONES (M. P.), Microprobe analysis in applied mineralogy (abstr.), xxx.
- JONES (N. W.), see RIBBE (P. H.), 966.
- Jublatala*, *Singhbhum*, *India*, epidiorite, trace elements in, 661.
- Jumilla*, *Murcia*, *Spain*, jumillites, diopside, phlogopite, 364.
- Jumillites, *Spain*, anal., 364.
- Kadov*, *Moravia*, grossular, 389.
- Kaersutite, *Arizona*, anal., opt., X-ray, 997; paragenesis and nomenclature of, 997; *Cornwall*, anal., opt., X-ray, 874; *New Zealand*, anal., 997.
- Kaiserstuhl*, *Baden*, *Germany*, K-rich trachyte, 334; melanite, 775.
- Kajlidongri*, *Jhabua district*, *Madhya Pradesh*, *India*, bixbyite, manganophyllite, 294.
- Kakanui*, *New Zealand*, kaersutite, 997.
- Kalajhor*, *Singhbhum*, *India*, epidiorite, trace elements in, 661.
- KALOCSAI (G. I. Z.), anal. by, 438.
- Kalrangi*, *Cuttack District*, *Orissa*, *India*, kämmererite and uvarovite, 962.
- Kamacite, *Horse Creek*, *Kota Kota*, and *South Oman* meteorites, anal., 850.
- Kamativi*, *Rhodesia*, apatite, cassiterite, columbite, sicklerite, spodumene, 50.
- Kämmererite, *India*, anal., opt., X-ray, 962.
- Kangaroo West mine*, *Honeysuckle Range*, *New South Wales*, pseudophite, lizardite, clinochrysotile, 825.
- Kangerdlugssuaq*, *East Greenland*, melanite, 775.
- Kaso mine*, *Totiki prefecture*, *Japan*, kasoite, 914.
- Kasoite, *Japan*, cell dimensions, 914.
- Kasolite, *Rhodesia*, 50.
- Kazumu Main*, *Kigezi*, *Uganda*, apatite, lithiophorite, 50.
- KELLY (T. K.) & KINGSTON (G. A.), The occurrence of two new rhodium sulphide minerals in alluvial platinum grains from the *Yubdo* district of *Ethiopia* (abstr.), xxx.
- KEMPE (D. R. C.), Some topaz-, sillimanite-, and kyanite-bearing rocks from *Tanzania*, 515; kaersutite from the minverite of *Cornwall*, 874; A magnesioriebeckite-gorceixite schist from southern *Tanzania*, 1167; and see SMITH (W. CAMPBELL), 1164.
- Khairpur* meteorite, anal., 101.
- Kharudih*, *Singhbhum*, *India*, epidiorite, trace elements in, 661.
- Kigezi*, *Uganda*, apatite, samarskite, 50.
- Kimberly*, *Nevada*, delafossite, 651.
- KING (B. C.), see TYLER (R. C.), 5.
- KINGSTON (G. A.), see KELLY (T. K.), xxx.

- KIROV (G. N.) & POULIEFF (C. N.) [PULIEV, KH. N.], On the infra-red spectrum and thermal decomposition products of thaumasite, $\text{Ca}_3\text{H}_2(\text{CO}_3/\text{SO}_4)_2\text{SiO}_4 \cdot 13\text{H}_2\text{O}$, 1003.
- Kirschsteinite, synthesis, X-ray, 955.
- KISS (E.), anal. by, 871.
- Klementite, *India*, anal., opt., 752.
- KNIGHT (J. R.), see BRAITHWAITE (R. S. W.), 882.
- Knills Steeple, St. Ives, Cornwall*, tourmaline, 1078.
- KNORRING (O. VON), anal. by, 3.
- Kodaikamal meteorite*, metallography of, 687.
- Koegas, South Africa*, crocidolite, 743.
- Kondapalli, Krishna district, Andhra Pradesh, India*, charnockite, plagioclase, 805; diopside, enstatite, sahlite, hypersthene, 153.
- Kopjes Vlei meteorite*, metallography, 1139.
- Korsnäs, Finland*, harmotome, 444.
- Kota Kota meteorite*, minor elements in, 740; perryite in, 850.
- KUMBASAR (ISIK) & FINNEY (J. J.), The crystal structure of parahopeite, 621.
- Kuemahambalawe, Lushoto, Tanzania*, sillimanite-kyanite quartzite, sillimanite-kyanite topazfels, topaziferous quartzite, 515.
- Kyanite, stability of, 839; *Tanzania*, 515.
- Lake Bonney meteorite*, descr., 293.
- Långban, Sweden*, joesmithite, 876; hyalophane, 914.
- Laurite, *Ethiopia*, xxx.
- Laverock Braes, Grandholm, Aberdeen*, manganite, 976.
- LAWRENCE (L. J.), BAYLISS (P.), & TONKIN (PAUL), An occurrence of todorokite in the deuteric stage of a basalt, 757.
- Laxford, Scotland*, myrmekitic gneiss, 491.
- Laytonville, Mendocino County, California*, zussmanite, 292.
- LEA (S. G.) & MACKAY (A. L.), The structure of a nickeliferous magnesium hydroxide and the crystal chemistry of the green rust class of materials (abstr.), xxxiv.
- Lead, native, *New South Wales*, 141.
- LEAKE (BERNARD E.), Optical properties and composition in the orthopyroxene series, 745.
- LEELANANDAM (C.), Chemical study of pyroxenes from the charnockites of *Kondapalli (Andhra Pradesh), India*, with emphasis on the distribution of elements in coexisting pyroxenes, 153; Zoned plagioclase from the charnockites of *Kondapalli, Krishna district, Andhra Pradesh, India*, 805.
- Lee Moor clay pit, Dartmoor*, tourmaline, 1078.
- LEHTINEN (M.), see SAHAMA (TH. G.), 444.
- Leichtenberg, Fichtelgebirge, Germany*, gersdorffite (III), 940.
- LEMAÎTRE (O.), BROUSSE (R.), GOÑI (J.), & RÉMOND (G.), Sur l'importance de l'apport de Fe dans la transformation de l'olivine en iddingsite (abstr.), xxviii; Étude de la répartition des éléments dans les augites (abstr.), xxix.
- Lessingite, a Ca-La-Ce-silicate apatite, 411.
- Leverburgh, South Harris*, garnet-amphibole pyroxenite, pyrope, hastingsite, 380.
- LEVI-DONATI (G. R.), The mineralogical composition and structure of the *Assisi meteorite*, 595.
- Lewisian granites compared with Grenville, 879.
- Lithiophorite, *Rhodesia and Uganda*, 50.
- LIVINGSTONE (A.), A garnet peridotite and a garnet-amphibole-pyroxenite from *South Harris, Outer Hebrides*, and their bearing on the South Harris eclogite facies, 380.
- Lizardite, *New South Wales*, d.t.a., partial anal., 825.
- $\text{Li}_2\text{Zr}(\text{WO}_4)_3$, synthesis, X-ray, 436.
- Loch Borolan, Scotland*, melanite, 775; myrmekitic intergrowths, 491.
- Loch Laxford, Scotland*, granite, anal., 342.
- Loch Ossigary, South Harris*, orthopyroxene-olivine-amphibole rock, 380.

- Loch Rodil, South Harris*, garnet-peridotite, 380.
- Loch Tollie, Scotland*, granite, anal., 342.
- Loch Torridon, Scotland*, granite, anal., 342.
- Locks Cross, Sherberton Common, Dartmoor*, tourmaline, 1078.
- Logan Point quarry, Dunedin, New Zealand*, phonolite, 'ameletite', 438.
- LOPES-VIEIRA (A.) & ZUSSMAN (J.), The crystal structure of zussmanite, 292.
- LOUISNATHAN (S. J.) & SMITH (J. V.), Cell dimensions of olivine, 1123.
- LOVERING (J. F.) & WIDDOWSON (J. R.), Electron-microprobe analysis of anandite, 871.
- Low-high transformation in hyalophane, 914.
- Luisa, Giessen, Hesse, Germany*, pyrolusite pseudomorphous after manganite, 274.
- MCCALL (G. J. H.), The *Bencubbin* meteorite: further details including microscopic character of host material and two chondritic enclaves, 726; The *Avoca* octahedrite, 859; — & CLEVERLEY (W. H.), New stony meteorite finds including two ureilites from the *Nullarbor Plain, Western Australia*, 691.
- MACDONALD (J. G.), Modification of calculation of mineral unit cell contents, 299.
- MACKAY (A. L.), see LEA (S. G.), xxxiv.
- MACKENZIE (W. S.), see GRUNDY (H. D.), 83.
- Mackinawite, Cornwall*, partial anal., 614; *Newport meteorite*, 717.
- Magnesioriebeckite, Tanzania*, opt., anal., X-ray, 1167.
- Magnet Cove, Arkansas*, schorlomite, 775.
- Magnetite, titanian, New Zealand*, 180; and see titanomagnetite.
- Mammoth mine, Tiger, Arizona*, diabolite, 933.
- Manganapatite, Uganda and Rhodesia*, opt., Mn content, 50.
- Manganese, distribution between phases of chondritic meteorites, 101.
- Manganese oxides, thermal decomposition, 976.
- Manganite, Scotland*, thermal decomposition, 976; *Brazil and Germany*, pseudomorphs of pyrolusite after, 274.
- Manganophyllite, India*, opt., 294.
- Manhattan, Riley County, Kansas*, pyrope, 450.
- Mankidih, Singhbhum, India*, epidiorite, trace elements in, 661.
- Maria Cabeza, Almeria, Spain*, verites, 364.
- MASON (BRIAN), The *Woodbine* meteorite, with notes on silicates in iron meteorites, 120; *Kaersutite from San Carlos, Arizona*, with comments on the paragenesis of this mineral, 997.
- MASON (ROGER), Electron-probe microanalysis of coronas in a troctolite from *Sulitjelma, Norway*, 504.
- Mauve, Salisbury, Rhodesia*, montebrasite, topaz, 50.
- Mawsonite, Bolivia and Peru*, anal., 1045.
- MAZANEK (E.), see WYDERKO (M.), 955.
- Melador clay pit, St. Austell, Cornwall*, tourmaline, 1078.
- Melanite, Italy, Scotland, Colorado, California, India*, anal., opt., sp. gr., X-ray, 775; *Norway, Greenland, Germany, Botswana*, opt., X-ray, TiO₂ content, 775.
- Meldon railway quarry, Devon*, metamorphosed chert, 260.
- Mells quarry, Frome, Somerset*, calcite, 70.
- Melsetter, Rhodesia*, bismutotantalite, microlite, 50.
- Merrivale quarry, Dartmoor*, tourmaline, 1078.
- Meta-ankoleïte, Uganda*, 50.
- Metamorphic grade, (FeO + MgO)/(CaO + MnO) of garnets as an index of, 89.
- Metatorbernite, Rhodesia*, 50.
- Meteorites, history and origin, 726; cutting of, 742; iron, twinning in, 607, 613; thermal history of iron, 687; iron with silicate inclusions, nature of silicates in, 120; methods for analysis of chondritic, 101; olivine-pyroxene-metal ratio in, 311; partition of Mn, P, Cr, Ti between phases of, 740; copper in the metal and silicate phases of, 855.

Meteorites:

- Arltunga, 1139.
 Assisi, 595.
 Avoca, 859.
 Barwell, 101, 855.
 Bencubbin, 726.
 Billygoat Donga, 694.
 Blithfield, 740.
 Braunau, 1139.
 Burnabbie, 707.
 Burrika, 712.
 Cardanumbi, 712.
 Cocklebidy, 707.
 Dingo Pup Donga, 704.
 Gibeon, 607, 613.
 Haig, 691.
 Horse Creek, 850.
 Hvittis, 740.
 Indarch, 740.
 Jajh deh Kot Lalu, 740.
 Khairpur, 101, 740.
 Kodaikanal, 687.
 Kopjes Vlei, 1139.
 Kota Kota, 740, 850.
 Lake Bonney, 293.
 La Porte, 607.
 Mulga (north), 694.
 Mulga (south), 697.
 Murnpeowie, 1139.
 Newport, 717.
 Nora Creina, 293.
 North Haig, 700.
 Oakley, 101, 855.
 Ohuma, 101, 855.
 Pannikin, 710.
 Parnallee, 319.
 Rancho de la Pila, 1139.
 Rawlinna (pallasite), 693.
 Rawlinna (stone), 704.
 River, 702.
 Sleeper Camp, 699.
 South Oman, 740, 850.
 Wold Cottage, 101, 855.
 Woodbine, 120.
 Yayjinna, 709.
Mezilesi at Měděnc, Krušné Hory, Czechoslovakia, almandine, anal., 389.
Miami, Rhodesia, manganon apatite, graftonite, uraninite, 50.
 Mica schist, *Singhbhum, India*, trace elements in, 671.
 Microlite, *Rhodesia and Uganda*, 50.
 Microscope slide holder, rotatable, 888.
 'Microtektites' may be volcanic glass or derived from bush fires, 1012.
 Mimetite, limited solubility of pyromorphite and, 1171; *Cumberland*, 1171.
Mina Escondida, Andacollo, Chile, pyrite, djurleite, unnamed Cu-Fe-S mineral, xxviii.
 Mineral separator, continuous density, 890.
 Minerals new to *Britain*: mackinawite, 614.
 Minverite, *Cornwall*, 874.
Miyake, Japan, anorthite, 814.
 Mn_2O_3 , formation, formula, X-ray, 976.
 Mode of a granitic rock, determination by X-ray powder diffractometer, 94.
 Monalbite, nature of material supposed to be, non-existence at room temperature, 78, 80; existence at high temperatures, 83.
 Montebasite, *Uganda*, opt., 50; *Rhodesia*, opt., anal., 50.
Monte Somma, Vesuvius, melanite, 775.
 MOORE (P. B.), The crystal structure of joersmithite: a preliminary note, 876; — & SMITH (J. V.), Erratum to paper on Archimedean polyhedra (*Min. Mag.*, **33**, 1008), 144.
 MORGAN (W. C.), Genthelvitte and bertrandite from the *Cairngorm mountains, Scotland*, 60.
 MORGAN (W. R.), Computer programmes for the calculation of Niggli values, C.I.P.W. norms, and variation diagram data, 891.
Morvah, Cornwall, tourmaline, 1078.
Mosaboni mine, Singhbhum, India, epidiorite, soda-granite, and chlorite-schist, trace elements in, 661.
 MOSS (A. A.), HEY (M. H.), ELLIOTT (C. J.), & EASTON (A. J.), Methods for the chemical analysis of meteorites: II. The major and some minor constituents of chondrites, 101; — anals. by, 61.
Mount Patterson quadrangle, Fresno County, California, celsian, 914.
Mousehole, Cornwall, tourmaline, 1078.
Mterikati, Rhodesia, montebasite, alluaudite, 50.
Mtoko, Rhodesia, polycrase, 50.
 MUELLER (ROBERT F.) & OLSEN (EDWARD J.), The olivine, pyroxene, and

- metal content of chondritic meteorites as a consequence of Prior's rule, 311.
- MUIR (A. H., JR.), see WIEDERSICH (H.), 643.
- MUKHERJEE (BIBHUTI), Genetic significance of trace elements in certain rocks of *Singhbhum, India*, 661.
- Mulga (north) meteorite*, descr., 694.
- Mulga (south) meteorite*, descr., 697.
- Mungenyi, Uganda*, meta-ankoleïte, grayite, phosphuranylite, zircon, 50.
- Murnpeowie meteorite*, metallography, 1139.
- Muscovite, chromian vanadian, *India*, anal., opt., X-ray, 591.
- Musellburgh Rise, Dunedin, New Zealand*, 'ameletite', 438.
- Myrmekite, *Scotland*, origin, 491.
- NANDI (KAMAL), Garnets as indices of progressive regional metamorphism, 89.
- Napak, Uganda*, clinopyroxene, 5; — complex, *Uganda*, schorlomite, 775.
- NAYAK (V. K.), Bixbyite and mangano-phyllite from *Kajlidongri, India*, 294.
- Nelson Creek, Skamania County, Washington*, heulandite, 64.
- NĚMEC (D.), The miscibility of the pyralspite and grandite molecules in garnets, 389.
- Newberyite, formed by decomposition of struvite, X-ray, 820.
- New Hampshire*, lithian riebeckite, 743.
- New mineral names, 25th List of, 1146; report of I.M.A. Commission on acceptability of, 131, 1143.
- New minerals: anandite, 1; bannisterite, 893; joesmithite, 876; onoratoïte, 1037; rhodostannite, 1045.
- NICOLETTI (M.), see BELLUOMINI (G.), 1037.
- Niggl values, computer programme for, 891.
- Nizhniï Tagil, Urals*, diopside, 403; delafossite, 643, 653.
- No Beer, Rhodesia*, fergusonite, 50.
- Nodo-tamagawa, Iwate prefecture, Japan*, barium-orthoclase, 914.
- Nora Creina meteorite*, descr., 293.
- Norbergite, structure, 966.
- Norms of rocks, calculation by computer, 297, 891; molecular, computer programme for, 1175.
- Norseman, Western Australia*, wood-silica glass, 1012.
- North Haig meteorite*, descr., anal., 700.
- Nosean, thermal expansion of, 761.
- Ntebini, Rhodesia*, uranothorite, kaso-lite, orangite, zircon, 50.
- Nyanga Main, Ankole, Uganda*, monte-brasite, lithiophorite, 50.
- Nya Zealand, Långban, Sweden*, hyalophane, 914.
- Oakley meteorite*, anal., 101.
- O'BIERNE, anal. by, 702.
- Ohuma meteorite*, anal., 101.
- Oligoclase-andesine, *Nigeria*, opt., origin of, 1024.
- OLIVER (R. L.) & SCHULTZ (P. K.), Colour in charnockites, 1135.
- Olivine, in meteorites, anal., 101; *New Zealand*, deformation lamellae in, 195; *Skye*, origin of translation lamellae in, 988; *Norway*, in troctolite, anal., 504; *Assisi meteorite*, opt., 595; cell dimensions of, in relation to composition, 955, 1123; calcium-iron, synthetic, X-ray, 955.
- OLSEN (E. J.), see MUELLER (R. F.), 311.
- Onoratoïte, *Italy* and synthetic, anal., opt., X-ray, 1037.
- OPPENHEIM (M. J.), On the electrolysis of basalt, 1104.
- Optic axial angle, determination of, a correction, 299.
- Orangite, *Rhodesia*, 50.
- Orberg, Kaiserstuhl, Baden*, K-rich trachyte, 334.
- Ore deposits, relation to evaporites (abstr.), xii; the clan concept (abstr.), xiii; nature of mineralizing fluids in the *English Pennines* (abstr.), xiii.
- O'REILLY (W.) & BANERJEE (SUBIR K.), The mechanism of oxidation in titanomagnetites: a magnetic study, 29.
- Orthoclase-celsian series, syntheses, opt., X-ray, 43.
- Orthopyroxene, optical properties and composition in, 745; *India*, anal., coexisting with clino-, element distribution in, 153; see also enstatite, hypersthene.

- ØSTERGAARD (TROELS V.), A continuous density separator for mineral separation, 890.
- Palaeomagnetism of *New Zealand* rocks, 425.
- PANDE (I. C.) & VERMA (P. K.), A klementite from chlorite-sericite schist, *Wajula, Distr. Almora, U.P., India*, 752.
- PANDYA (J. R.) & SARAF (C. L.), Etching of baryte, 750.
- Pannikin* meteorite, descr., 710.
- Parahopeite, crystal structure, 621.
- PARK (R. G.), anal. by, 344 ff.
- Parnallee* meteorite, large chondrule in, descr., anal., 319.
- PARSONS (IAN), Homogeneity in alkali feldspars, 797; An experimental study of ordering in sodium-rich alkali feldspars, 1061.
- Partition coefficients between coexisting pyroxenes, for Mg, Fe, Mn, Ti, Cr, Ni, Co, and V, 153.
- PARWEL (ALEXANDER), see SUNDIUS (N.), 300.
- PATTIARATCHI (D. B.), SAARI (ESKO), & SAHAMA (TH. G.), Anandite, a new barium iron silicate from *Wilagedera, North-Western Province, Ceylon*, 1.
- PAYNE (G. H.), anal. by, 860.
- Peda men Du, Sennen Cove, Cornwall*, tourmaline, 1078.
- Pennine, *New South Wales*, anal., d.t.a., 825.
- Pennines*, England, nature of mineralizing fluid (abstr.), xiii.
- Pentlandite, *Newport* meteorite, 717.
- Perovskite, *Uganda*, 770.
- PERROTTA (A. J.), The crystal structure of epistilbite, 480.
- Perryite, *Horse Creek, Kota Kota, and South Oman* meteorites, anal., 850.
- Perthite, homogenization of, X-ray determination, 797.
- Petrofabric analysis of uniaxial minerals, computer programme for, 456.
- Philipstad, Wernland, Sweden*, titanian andradite, 775.
- PHILLIPS (F. C.), see BRADSHAW (R.), 70.
- PHILLIPS (R.) & WARE (N. G.), The spectral reflectivity of synthetic calcium monoferrite, 422.
- Phlogopite, *Jumilla, Spain*, anal., 364.
- Phonolite, *New Zealand*, anal., 438.
- Phosphorus, distribution between phases of chondritic meteorites, 101.
- Phosphuranylite, *Rhodesia and Uganda*, 50.
- Phulberia, Singhbhum, India*, epidiorite, trace elements in, 661.
- Picotite, *New Zealand*, 433.
- Piemontite, structural interpretation of absorption spectrum, 204; coexistence of Fe²⁺ and Mn³⁺ in, 459.
- PILLER (HORST), Influence of light reflection at the objective in the quantitative measurement of reflectivity with the microscope, 242.
- PIOTROWSKI (J. M.), see EDGAR (A. D.), 578.
- Plagioclase, *India*, zoning, electron-probe trace, 805; *Norway*, in troctolite, anal., 504; in iron meteorites with silicate inclusions, 120; altered, *Eire*, anal., 747; see also oligoclase-andesine, 1024.
- Platinum, *Ethiopia*, xxx.
- Plumbogummite, carbonatian, *Cumberland*, opt., infra-red spectrum, X-ray, 530.
- PODDAR (B. C.) see DASGUPTA (D. R.), 1174.
- POLLARD (C. O.), Dielectric properties of hydroxyapatite, 1169.
- Polycrase, *Rhodesia*, 50.
- Polymorphism and polytypism, symmetry-entropy-volume relationships in, 565.
- Polytypism and polymorphism, relation of, 565.
- Porthmeor Cove, Cornwall*, tourmaline, 1078.
- Portree, *Rhodesia*, petalite, tantalite, 50.
- Potassium, mechanism of concentration in the upper mantle, 997; in sulphide phase of enstatite chondrites, 119.
- Potassium-barium feldspars, *Japan, Germany, Sweden, New Jersey, Yugoslavia, New South Wales, California, Caernarvonshire*, and synthetic, cell dimensions, anal., 914.
- POULIEFF (C. N.), see KIROV (G. N.), 1003.

- POWELL (DEREK) & TREAGUS (J. E.),
On the geometry of S-shaped inclusion trails in garnet porphyroblasts, 453.
- POWER (G. M.), Chemical variation in tourmalines from *south-west England*, 1078.
- Prehnite, stability field of, 864.
- Priderite, *Corsica*, 867.
- Prior's rule for meteorites, 311.
- Pseudophite, *New South Wales*, anal., d.t.a., 825.
- Psilomelane, *Rhodesia*, 50.
- PULLEV (K. H. N.), see KIROV (G. N.), 1003.
- Punda, Singhbhum, India*, granite, trace elements in, 661.
- Purnapani, Singhbhum, India*, epidiorite, trace elements in, 661.
- Pyralspite and grandite, miscibility of, 389.
- Pyrite, *Singhbhum, India*, trace elements in, 671.
- Pyroaurite, *Sweden*, crystal structure, 465.
- Pyrolusite, *Germany*, thermal decomposition, 976; pseudomorphous after manganite, *Brazil, Germany, and Tasmania*, relative orientation, 274.
- Pyromorphite, *Cumberland*, 1171; limited solubility of mimetite and, 1171.
- Pyrope, *Kansas*, anal., 450; *Scotland*, anal., 380.
- Pyroxenes, *Uganda*, anal., opt., X-ray, 5; and see orthopyroxene, clinopyroxene.
- Pyrrhite, *Azores*, 227.
- Python Eggs, Rhodesia*, topaz, 50.
- QUARENI (S.), see HALL (K. M.), 78.
- Quartz, twin on {30 $\bar{3}$ 2}, 861.
- Raipur, Singhbhum, India*, granite, trace elements in, 661.
- Rajpura, Udaipur district, Rajasthan, India*, boulangerite and geocronite, 1174.
- Rakha mines, Singhbhum, India*, amphibolite, epidiorite, chlorite-schist, mica-schist, trace elements in, 671.
- Rancho de la Pila meteorite, metallography*, 1139.
- RAO (S. SUBBA), Meteoric origin of secondary minerals of the *Deccan Trap lavas*, 296.
- Rawlinna* (stone) meteorite, descr., 704.
- Red-a-Yen mine, Meldon, Okehampton, Devon*, calc-flinta, 260.
- REED (S. J. B.), Perryite in the *South Oman* and *Kota Kota* meteorites, 850.
- Reflectivity, effect of reflections in the objective on measurements of, 242.
- Refractories, carbonaceous (abstr.), xvi; high-alumina (abstr.), xvi.
- Reichenbach lamellae in the *Gibeon meteorite*, 613.
- RÉMOND (G.), see LEMAÎTRE (O.), xxviii, xxix.
- Restrowrack clay pit, St. Austell, Cornwall*, tourmaline, 1078.
- Rhodium sulphides, two new, *Ethiopia*, xxx.
- Rhodostannite, *Bolivia* and *Peru*, anal., X-ray, opt., 1045.
- RIBBE (PAUL H.) & COLVILLE (ALAN A.), Orientation of the boundaries of out-of-step domains in anorthite, 814; — GIBBS (G. V.), & JONES (N. W.), Cation and anion substitutions in the humite minerals, 966.
- Riebeckite, *S. Africa, W. Australia, and Bolivia*, infra-red spectrum, 743; lithian, *New Hampshire*, infra-red spectrum, siting of Li ions in, 743; *Kenya*, anal., opt., 1164; and see magnesioriebeckite.
- River meteorite*, descr., 702.
- Riversideite, see tobermorite, 1090.
- Roam, Singhbhum, India*, pyrite, chalcopyrite, trace elements in, 671.
- Roche Rock, St. Austell, Cornwall*, tourmaline, 1078.
- Ronman, Mtoko, Rhodesia*, montebra-site, 50.
- ROOS (P.), see HUGHES (H.), 280.
- Roughten Gill, Cumberland*, carbonatian plumbogummite, 530; mimetite and pyromorphite, 1171.
- Roundstone, Co. Galway, Eire*, amphibolite, axinite, epidote, plagioclase, tourmaline, 747.
- ROY (N. N.), The mineralogy of the potassium-barium feldspar series. II. Studies on hydrothermally synthesized members, 43; and see GAY (P.), 914.

- ROY (S. S.), Vredenburgite in the peroxide manganese ores of *Dongri Buzurg, Maharashtra, India*, 1034.
- Rubellite, *Rhodesia*, 50.
- Rusinga Island, Kenya*, schorlomite, 775.
- RUTTER (F. P.), Carbonaceous refractories in reflected light (abstr.), xvi.
- RYBACK (G.) & SAVILLE (G.), Wulfenite from *Ysbyty Ystwyth, Cardiganshire*, 457.
- SAARI (ESKO), see PATTIARATCHI (D. B.), 1.
- SABINE (P. A.) YOUNG (B. R.) Ferrian chlorospinel from *Carneal, Co. Antrim*, 948.
- Sabi Star, Rhodesia*, heterosite, 50.
- SAHAMA (TH. G.) & LEHTINEN (MARTTI), Harmotome from *Korsnäs, Finland*, 444; and see PATTIARATCHI (D. B.), 1.
- Sahlite, *India*, anal., trace elements, 153.
- St. Gotthard, Switzerland*, hematite, 625.
- St. Mewan Beacon, Cornwall*, tourmaline, 1078.
- St. Michael's Mount, Cornwall*, tourmaline, 1078.
- St. Minver, Cornwall*, minverite, kaersutite, 874.
- Salwari, Khetri copper belt, Rajasthan, India*, actinolite, 22.
- Samarskite, *Rhodesia*, 50.
- San Carlos, Arizona*, kaersutite, 997.
- Sanidine, barian, *Germany*, cell dimensions, 914.
- San Jose, Oruro, Bolivia*, stannite, 1045.
- Sanmartinite, solubility of $MnWO_4$ and $ZnMoO_4$ in, 992.
- Sapphirine, non-space-group absences, 449; *Greenland*, cell dimensions, 449.
- SARAF (C. L.), see PANDYA (J. R.), 750.
- Sasagora, Singhbhum, India*, granite, trace elements in, 661.
- SATHE (R. V.), Grossular-spessartine garnet from *Goldongri, Panchmahal, Gujarat State, India*, 1032; — & CHOUDHARY (P. D.), Stellate wollastonite from calc-silicate skarns of *Jothwad Hill, Panchmahal district, Gujarat, India*, 616.
- SAVAGE (J. W.), see WIEDERSICH (H.), 643.
- SAVILLE (G.), see RYBACK (G.), 457.
- Sceapull, North Rona, Scotland*, granite, anal., 342.
- Schorlomite, *Arkansas, Kenya, Morocco, Scotland, Sudan*, anal., opt., sp. gr., X-ray, 775; *Norway, Finland, Uganda*, opt., X-ray, TiO_2 content, 775.
- Schreibersite, *Woodbine meteorite*, anal., 120.
- SCHULTZ (P. K.), see OLIVER (R. L.), 1135.
- SCOON (J. H.), anal. by, 234, 778.
- SEAGER (A. F.), The morphology of cerussite, 632.
- SEELYE (F. T.), anal. by, 439.
- Semarule, Botswana*, titanian andradite and melanite, 775; clinopyroxene, 5.
- SEN GUPTA (N. R.), see DASGUPTA (D. R.), 1174.
- SEN SARMA (R. N.), anal. by, 26.
- SERGEANT (G. A.), anal. by, 54, 950.
- Serpierite, *Staffordshire*, 882.
- Serra de Agua de Pau, São Miguel, Azores*, syenite, dalryte, astrophyllite, pyrrhite, 227.
- Serro do Navio, Amapa, Brazil*, pyro-lusite pseudomorphous after manganese, 274.
- SHELLEY (D.), Myrmekite and myrmekite-like intergrowths, 491.
- Sheltor, Dartmoor*, tourmaline, 1078.
- Sheshe, Uganda*, montebrasite, 50.
- Silaghati, Singhbhum, India*, epidiorite, trace elements in, 661.
- Silicates of known composition, method for synthesis, 832.
- Silicate inclusions in iron meteorites, nature of, 120.
- Silicon in kamacite of *Horse Creek, Kota Kota*, and *South Oman* meteorites, 850.
- Sillimanite, stability of, 839; *Rhodesia*, anal., 1052; *Tanzania*, cell dimensions, opt., 515.
- SILLITOE (R. H.), see CLARK (A. H.), xxviii.
- Singhbhum* granite, *India*, trace elements, relation to sulphide ores, 661, 671.
- Sisco, Bastia, Corsica*, priderite, 867.
- Sjögrenite, *Sweden*, crystal structure, 465.
- Sjogrufevan, Vastmanland, Sweden*, hyalophane, 914.

- SKINNER (D. L.), *anals. by*, 344 ff.
Sleeper Camp meteorite, *descr.*, 699.
- SMITH (G. V.), *see* COCKBAIN (A. G.), 411, 1171.
- SMITH (I. B.), *see* GLASSER (L. S. D.), 976.
- SMITH (J. V.), Further discussion of framework structures built from four- and eight-membered rings, 640; and *see* LOUISNATHAN (S. J.), 1123, and MOORE (P. B.), 144.
- SMITH (M. L.) & FRONDEL (C.), The related layer minerals ganophyllite, bannisterite, and stilpnomelane, 893.
- SMITH (W. CAMPBELL), HEY (M. H.), and KEMPE (D. R. C.), Riebeckite from *Sultan Hamud, Machakos district, Kenya*, 1164.
- Soda-granite, *Singhbhum, India*, trace elements, relation to sulphide ores, 661.
- Sodalite, thermal expansion, 761.
- Sodium in sulphide phase of enstatite chondrites, 119.
- Sorøy, Norway*, clinopyroxene, 5; melanite, 775.
- South Oman* meteorite, minor elements in, 740; perryite in, 850.
- SPEAKMAN (K.), The stability of tobermorite in the system $\text{CaO-SiO}_2\text{-H}_2\text{O}$ at elevated temperatures and pressures, 1090.
- Spessartine, *Rhodesia*, 50.
- Spindle-stage, variable-axis, for optical determinations, 127.
- Spinel, *Nigeria*, opt., 1024; chromian, *New Zealand*, 425; ferroan, *Norway*, *anal.*, 504.
- SPRINGER (G.), Electron-probe analyses of stannite and related tin minerals, 1045.
- STANDARD (J. C.), *see* BAYLISS (P.), 141.
- Stannite, *Bolivia, Bohemia, and Cornwall*, *anal.*, 1045.
- Staple Tor, Dartmoor*, tourmaline, 1078.
- Star Turn, Rhodesia*, microlite, samarskite, tantalite, 50.
- Stawell, Victoria*, wood-silica glass, 1012.
- STEPHENSON (N. C.), *see* BAYLISS (P.), 38, 940.
- Stereographic projection, model to illustrate principle of, 137.
- Stilpnomelane, unit cell relation to bannisterite and ganophyllite, 893.
- Stockdale* kimberlite, *Kansas*, re-examination of pyrope in, 450.
- Strengite, *Rhodesia*, 50.
- STRENS (R. G. J.), Structural origins of optical anisotropy in minerals (abstr.), xxxiii; Coexistence of 'incompatible' ions and concentration processes in two mineral systems, 459; Symmetry-entropy-volume relationships in polymorphism, 565; Stability of Al_2SiO_5 solid solutions, 839; Reconnaissance of the prehnite stability field, 864; and *see* BURNS (R. G.), 204.
- Struvite, decomposition, 820.
- Sulitjelma, Norway*, troctolite, olivine, bronzite, plagioclase, hornblende, ferroan spinel, 504.
- Sultan Hamud, Machakos district, Kenya*, riebeckite, 1164.
- SUNAGAWA (ICHIRO), Preferential crystal growth along tilt and twist boundaries in hematite, 625.
- SUNDIUS (NILS) & PARWEL (ALEXANDER), Amesite from the silver mines of *Hällefors, central Sweden*, 300.
- Surda, Singhbhum, India*, epidiorite, trace elements in, 661.
- SUTHERLAND (D. S.), A note on the occurrence of potassium-rich trachytes in the *Kaiserstuhl* carbonatite complex, *West Germany*, 334.
- SUTHERLAND (L. J.), *anal. by*, 307.
- SWARTHOUT (D. G.), *see* WIEDERSICH (H.), 643.
- SWEATMAN (T. R.), *see* CHINNER (G. A.), 1052.
- Syenite, *Azores*, with dalyite and astrophyllite, *anal.*, 227.
- System: $\text{CaO-Al}_2\text{O}_3$, 676; Ca-Fe-O , 280; $\text{CaO-SiO}_2\text{-H}_2\text{O}$, 1090; $\text{Ca}(\text{OH})_2\text{-CaF}_2\text{-Ca}_3(\text{PO}_4)_2\text{-H}_2\text{O}$, 539; $\text{Ca}_2\text{SiO}_4\text{-Fe}_2\text{SiO}_4$, 955; $\text{NaAlSi}_3\text{O}_8\text{-LiAlSiO}_4\text{-H}_2\text{O}$, 578; $\text{NaAlSi}_3\text{O}_8\text{-}\beta\text{-LiAlSi}_2\text{O}_6\text{-H}_2\text{O}$, 578; $\text{SbCl}_3\text{-Sb}_2\text{O}_3\text{-HCl-H}_2\text{O}$, 1037; $(\text{Zn,Mn})(\text{W,Mo})\text{O}_4$, 992.
- Taaffeite, new polytype of, *Australia*, opt., *anal.*, X-ray, 305.
- Taguchi mine, Sidaru, Japan*, hyalophane, 914.
- Tainui Road, Dunedin, New Zealand*, trachyte, 'ameletite', 438.

- Tamazert, Haut Atlas de Midelt, Morocco*, schorlomite, 775.
- Tantalite, *Rhodesia*, 50.
- Tanzania*, magnesioriebeckite, gorceixite, 1167.
- Tawpo, New Zealand*, augite, hypersthene, titanian magnetite, titanhematite, 180.
- Tawmawite, structural interpretation of absorption spectrum, 204.
- TAYLOR (D.), The thermal expansion of the sodalite group of minerals, 761.
- TAYLOR (H. F. W.), see INGRAM (L.), 465.
- Teigarhorn, Iceland*, epistilbite, 480.
- Tektites, 'micro-', possibly volcanic glass or derived from bush fires, 1012.
- TETTENHORST (RODNEY), see BIRLE (JOHN D.), 883.
- Thaumasite, *Bulgaria*, infra-red spectrum, thermal decomposition, 1003.
- The Rill, Kynance Cove, The Lizard, Cornwall*, mackinawite, 614.
- Thermomagnetic study of titanian magnetites, 180, 425.
- Thorogummite, *Rhodesia*, 50.
- THREADGOLD (I. M.), see HUDSON (D. R.), 305.
- Titanaugite, *Nigeria*, opt., 1024; coexistence of Ti^{3+} and Fe^{3+} in, 459.
- Titanhematite, *New Zealand*, exsolution from magnetite, 180.
- Titanium, mechanism of concentration in the upper mantle, 997; place of in garnet structure, 775; distribution between phases of chondritic meteorites, 101.
- Titanomagnetite, oxidation mechanism, magnetization, 29; *New Zealand*, 180, 425; and see magnetite.
- Tobermorite, synthesis and stability, 1090.
- TOCHER (F. E.), A point-counting computer programme for petrofabric analysis of uniaxial mineral orientations, 456.
- Todorokite, *New South Wales*, anal., X-ray, 757.
- TONKIN (PAUL), see LAWRENCE (L. J.), 757.
- Topaz, *Rhodesia*, opt., 50; *Tanzania*, opt., cell dimensions, 515.
- Topotactic reactions in the system $MnO-O-H_2O$, 976.
- Tororo, Uganda*, clinopyroxene, 5.
- Tourmaline, *Cornwall and Devon*, anal., 1078; *Eire*, anal., opt., 747; *Rhodesia*, 50; and see rubellite.
- Trachyte, *Germany*, K-rich, anal., 334; *New Zealand*, anal., 438.
- Translation lamellae in olivine, origin of, 988.
- TREAGUS (J. E.), see POWELL (D.), 453.
- Tregarden quarry, Luzulyan, Cornwall*, tourmaline, 1078.
- TREHAN (J. C.), anal. by, 753.
- Trelavour clay pit, St. Austell, Cornwall*, tourmaline, 1078.
- Tremearne, Cornwall*, tourmaline, 1078.
- Tresayes, Cornwall*, tourmaline, 1078.
- Troctolite, *Norway*, anal., mode, coronas in, 504.
- Truscottite, hydrothermal synthesis, stability, 1090.
- Tsumebite, structural relation to some other lead minerals, 522.
- TYLER (RUTH C.) & KING (B. C.), The pyroxenes of the alkaline igneous complexes of eastern *Uganda*, 5; anals. by, 8 ff., 778.
- Uncia, Potosi, Bolivia*, stannite, 1045.
- Unidentified manganese oxide formed during heat treatment of manganite, 274, 976.
- Unnamed minerals: Cu-Fe sulphides, xxviii; Rh sulphides, xxx.
- Uraninite, *Rhodesia*, 50.
- β -Uranophane, *Rhodesia*, 50.
- Uranothorite, *Rhodesia*, 50.
- Ureilites, two new (*North Haig, Dingo Pup Donga*), anal., descr., 691.
- Uvarovite, *India*, anal., opt., X-ray, 962.
- Variation diagram data, computer programme for, 891.
- Vauquelinite, structural relation to some other lead minerals, 522.
- VELDE (DANIELLE), A new occurrence of priderite, 867.
- Vera, Spain*, verites, 364.
- Verites, *Spain*, anal., 364.
- VERMA (P. K.), see PANDE (I. C.), 752.
- VERMA (R.), anal. by, 592.

- Vesuvianite, see idocrase.
- Vila Apacheta, Bolivia*, stannite, hexastannite, mawsonite, rhodostannite, 1045.
- VILLAROEL (H.) & JOEL (N.), Extinction curves and equivibration curves obtained with a variable-axis spindle-stage, 127.
- VIRGOE (J. M.), The examination of crystalline inclusions in glass by reflected light microscopy (abstr.), xvi.
- Viridine, stability of, 839.
- Vlasovite, *Ascension Island*, anal., opt., crystal structure, anorthic-monoclinic inversion, 233.
- Vredenburgite, *India*, 1034.
- Wajula, Almora, India*, klementite, 752.
- WALSH (J. N.), anals. by, 778.
- WARE (N. G.), see PHILLIPS (R.), 422.
- WENDEN (H. E.), see WINCHELL (R. E.), 933.
- Wheat Agar, Cornwall*, stannite, 1045.
- WHITAKER (A.), The decomposition of struvite, 820.
- WHITE (A. D.), see ADDISON (W. E.), 743, 791.
- WIDDOWSON (J. R.), see LOVERING (J. F.), 871.
- WIEDERSICH (H.), SAVAGE (J. W.), MUIR (A. H., JR.), & SWARTHOUT (D. G.), On the composition of delafossite, 643.
- WIK (H. B.), anals. by, 446, 998.
- Wilagedera, North-Western Province, Ceylon*, anandite, 1, 871.
- WILKINS (R. W. T.), The hydroxyl-stretching region of the biotite mica spectrum, 325.
- WILKINSON (J. F. G.), see COOMBS (D. S.), 438.
- WILKINSON (P.), Computer programmes for the recalculation of rock and mineral analyses, 297.
- WILLARD (R. J. A.), A rotatable microscope slide ring holder for petrographic analysis, 888.
- WILSON (A. F.), see HUDSON (D. R.), 305.
- WINCHELL (R. E.) & WENDEN (H. E.), Synthesis and study of diaboleite, 933.
- WISE (W. S.), A heulandite with excess water, 64.
- Wittenoom, Western Australia*, crocidolite, 743.
- Wold Cottage meteorite*, anal., 101.
- Wolfsberg, Germany*, gersdorffite, 38.
- Wollastonite, *India*, opt., 616; — hornfels, *Devon*, formed by metamorphism of chert, anal., 260.
- Woodbine meteorite*, descr., anal., 120.
- Wood-silica glass, *Australia*, opt., sp. gr., 1012.
- WOOLLEY (A. R.), see HOWIE (R. A.), 775.
- WRIGHT (J. B.), The iron-titanium oxides of some *Dunedin (New Zealand)* lavas, in relation to their palaeomagnetic and thermomagnetic character (with an appendix on an associated chromiferous spinel), 425; Oligoclase-andesine phenocrysts and related inclusions in basalts from part of the *Nigerian* Cenozoic province, 1024.
- Wulfenite, *Wales*, 457.
- WYDERKO (M.) & MAZANEK (E.), The mineralogical characteristics of calcium-iron olivines, 955.
- Xonotlite, hydrothermal synthesis, stability, 1090.
- X-ray powder diffractometry to determine mode of a granite, 94.
- X-ray powder data: anandite, 1; bannisterite, 900; $\text{CaO.6Al}_2\text{O}_3$, 679; CaFe_2O_4 , 280; $\text{Ca}_2\text{Fe}_3\text{O}_5$, 280; CaFe_4O_7 , 280; $(\text{Ca}, \text{Fe}^{2+})_8\text{Fe}_{30}^{3+}\text{O}_{53}$, 280; $\beta\text{-(Ca, Fe}^{2+}, \text{Mg})_4\text{Fe}_{14}^{3+}\text{O}_{25}$, 280; $\gamma\text{-(Ca, Fe}^{2+}, \text{Mg})_4\text{Fe}_{14}^{3+}\text{O}_{25}$, 280; $\text{CaO.6(Al, Fe)}_2\text{O}_3$, 679; $\text{Ca}_2\text{La}_2(\text{SiO}_4)_3\text{OH}$, 415; chlorospinel, ferrian, 951; diaboleite, 936; fayalite, 958; ganophyllite, 900; genthelvite, 60; groutellite, 981; harmotome, 447; heulandite, 64; k ammererite, 963; kirschsteinite, 958; $\text{Li}_2\text{Zr(WO}_4)_3$, 437; muscovite, chromian vanadian, 591; newberyite, 823; onoratoite, 1039; plumbogummitite, carbonatian, 530; rhodostannite, 1050; taaffeite (9R polytype), 305; todorokite, 758.
- Yayjinna meteorite*, descr., 709.

- Ylöjärvi, Finland*, Cu-W ore deposit (abstr.), xiii.
- YOUNG (B. R.), see SABINE (P. A.), 948.
- Ysbyty Ystwyth, Cardiganshire*, wulfenite, 457.
- Yttrotantalite, *Rhodesia*, 50.
- Yubdo, Ethiopia*, platinum, iridosmine, laurite, unnamed Rh sulphides, xxx.
- ZANAZZI (P. F.), see FANFANI (L.), 522.
- Zinnwald, Bohemia*, stannite, 1045.
- Zircon, *Rhodesia*, Hf content, 50.
- ZUSSMAN (J.), A model to illustrate the principle of the stereographic projection, 137; and see LOPES-VIEIRA (A.), 292.
- Zussmanite, *California*, crystal structure, 292.