

# ALPHABETICAL INDEX

Names of authors and countries are in capitals, subjects in lower-case roman, and localities in *italics*; book reviews are placed at the end.

- Absorption spectrum, of blue tourmalines, 553  
ACHARYYA, K. S., manganian andalusite from *Manzabar*, 75  
*Adirondack Lowlands*, see *New York, U.S.A.*  
AHMED, Z. and McCORMICK, G. R., kimberlites from *Pakistan*, 537  
AHMED-SAID Y. and LEAKE, B. E., S-type granite formation, 1  
Albite, experimental study of the equilibrium between pollucite, albite and hydrothermal fluid in pegmatitic systems, 447  
ALPS, fluorite vein mineralization in, 325  
Alstonite, from Brownley Hill Mine, *Nenthead, Cumbria*, 515  
Alvanite, from the *U.S.S.R.*, 609  
Ammonian apophyllite, chemical substitutions and dehydration behaviour, 567  
Ammonium, distribution of, in pegmatites and aprites and their minerals from central northern *Portugal*, 455  
Amphibolite, from the *Old Woman Mountains, SE California*, 393  
Andalusite, in black slate from the Abercrombie beds, *New South Wales*, 381; — manganian, from *West Bengal, India*, 75  
ANDERSEN, T., AUSTRHEIM, H. and BURKE, E. A. J., fluid inclusions from *W. Norway*, 145  
Andesitic melts, forsterite dissolution in, 67  
Ankerite, sector zonation in, 501  
Anthophyllite, in a Mössbauer spectroscopy and TEM study, 547  
Apatite, fluorine-deficient, 508  
Aplite, ammonium in, from *Portugal*, 455  
Apophyllite, chemical substitutions and dehydration behaviour, 547, — etch pits on basal cleavage faces of, 559  
Aragonite, studied using transmission electron microscopy, 589  
AUSTRALIA, an occurrence of lead oxycarbonate as a mine-fire product, 647; *NEW SOUTH WALES*, sapphire dating experiments, 113; *TASMANIA*, ralstonite from the *Cleveland Mine*, 599  
AUSTRHEIM, H., see ANDERSEN, T., 145  
BANK, F. H., see HENN, U., 553  
BANNO, S., see HIRAJIMA, T., 581  
Barium, in black slate from the *Abercrombie beds*, 381  
BARR, H., fluid inclusion studies in *Greece*, 159  
Baryte, found in association with a Ba-silicates and Ba-feldspars, 81; from metamorphosed manganese deposits of the Sausar group, *India*, 511  
Barytocalcite, from metamorphosed manganese deposits of the Sausar group, *India*, 511  
Basaltic melts, forsterite dissolution in, 67  
BASTOUL, A. M., see CATHELINEAU, M., 169  
BASTOUL, J., see BOIRON, M. C., 231  
BASU, A., see ACHARYYA, K. S., 75  
BAYLISS, P. and CLARK, A. H., mineral nomenclature: berndtite polytypes, 137  
BENY, C., see GUILHAUMOU, N., 257  
*Bergen Arcs*, see *Norway*  
BERNARD, C., see CATHELINEAU, M., 169  
Berndtite, polytype nomenclature, 137  
BEUKES, G. J., see VAN DER WESTHUIZEN, W. A., 419  
Biotite, chemical variations in, 355  
BIRCH, W. D. and PRING, A., ralstonite from *Australia*, 599  
Black slate, from the Abercrombie beds, *New South Wales*, 381  
Blueschist terrain, fluid inclusions in, 159  
BODNAR, R. J., petroleum migration in the Miocene Monterey formation, 295  
BOIRON, M. C., CATHELINEAU, M., DUBESSY, J. and BASTOUL, A. M., fluids in Hercynian Au veins from *France*, 231  
BONI, M., RANKIN, A. H. and SALVADORI, M., skarn mineralisation in *Italy*, 279  
BOWELL, R. J., FOSTER, R. P. and STANLEY C. J., telluride mineralization from the *Ashanti gold mine, Ghana*, 617  
BRAITHWAITE, R. S. W. and KNIGHT, J. R., rare minerals in *Dalbeattie, South Scotland*, 129  
BRAZIL, blue tourmalines from, 553; — fluid inclusion trails in intrametamorphic quartz veins, 245  
Breunnerite, from a selection of carbonatite complexes, 407  
Brewsterite, re-investigation of morphology and elongation, 654  
Brine inclusions, associated with oil bearing inclusions in fluorite veins, 335  
*Broken Hill*, see *New South Wales, Australia*  
BROWN, P. E., see HARRISON, T. N., 57  
*Brownley Hill Mine*, see *Cumbria, England*  
BUCKLEY, H. A. and WOOLLEY, A. R., carbonates of the magnesite-siderite series from four carbonatite complexes, 407  
Burial diagenesis, of Metaxades pyroclastic rocks, 95  
BURKE, E. A. J., see ANDERSEN, T., 145  
*Bushveld complex*, see *South Africa*  
BUTCHER, A. R., see EALES, H. V., 23

- Cadmium, in the study of phase transitions, 447  
 Caesium, in pollucite, 447  
 Calcite, from metamorphosed manganese deposits of the Sausar group, *India*, 511  
*Caldbeck fells*, see *Cumbria, England*  
 Caledonides, from the Bergen Arcs, *W. Norway*, 145  
 CANADA, contrasting parageneses in a Grenvillian granitoid pluton, 355; *Francon quarry, Montreal*, voggite from, 495  
 CANALS-SABATE, A., TOURAY, J. C., and FABRE, J., fluid inclusions from northern *Mali*, 305  
 Carbon dioxide, in fluid inclusions in granulites and eclogites from *W. Norway*, 145  
 Carbonates, crystal morphology controlled by sector zonation of ankerite, 501; minerals, from metamorphosed manganese deposits of the Sausar group, *India*, 511; from the magnesite-siderite series, 413  
 Carbonatite, at the Kruidfontein volcanic complex, *Transvaal, South Africa*, 46; complexes containing carbonates from the magnesite-siderite series, 413  
 CATHELINÉAU, M., LESPINASSE, M., BASTOUL, A. M., BERNARD, C., and LEROY, J., fluid migration during contact metamorphism, 169; see also BOIRON, M. C., 231; see also DE ALVARENGA, C. J. S., 245  
*Central Province*, see *New South Wales, Australia*, 113  
 CHAKRABORTI, S., see DASGUPTA, S., 511  
 Chalcopyrite disease, in indium-bearing sphalerite, 109  
 Chalk, host to heulandite in a soil profile, 91  
 Chamosite, in a Mössbauer spectroscopy and TEM study, 547  
 Chert, an organic rich sequence containing Ba-silicates and Ba-feldspars, 81  
 CHINA, *Jiangsu*, coesite from the *Mengzhong* eclogite, 579  
 Chromitite, at RPM Union Section Platinum Mine, *Bushveld Upper Critical Zone*, 23  
 Claringbullite, a metastable phase in the synthesis of connellite, 425  
 CLARKE, L. B. and LE BAS, M. J., carbonatitic volcanic complex, *Transvaal*, 46  
 Cleavage, etch pits on basal cleavage faces of apophyllite crystals, 559  
*Cleveland Mine*, see *Tasmania, Australia*  
 Clinoptilolite, 95  
 Clinopyroxenite, xenoliths of, from the *Transdanubian Volcanic Region of Hungary*, 463  
 CO<sub>2</sub>, fluid inclusions in ultramafic xenoliths from *Sicily*, 183  
 COENRAADS, R. R., SUTHERLAND, F. L. and KINNY P. D., the origin of sapphires, 113  
 Coesite, from the *Mengzhong* eclogite, *China*, 579  
 Compositional convection, in the cyclic unit beneath the UG1 chromitite, 23  
 Concrete degradation, in a concrete road bridge, 639  
 CONG, B., see HIRAJIMA, T., 579  
 Connellite, stability relationships with other secondary copper minerals, 425  
*Connemara, W. Ireland*, S-type granite formation in Dalradian rocks, 1  
 Contact metamorphism, in the study of fluid inclusion trails, 169  
 Copper, in tourmaline, from *Paraiba, Brazil*, 553  
 Cordierite, from the *Old Woman Mountains, S. E. California*, 393  
 Corkite, from Aggeneys, *South Africa*, 603  
 Cornubian granite, compared to the nearby Lundy granite, 431  
 — orefield, the role of metamorphic fluids in the development of, 219  
*Cornwall*, see *England*  
 Corona structures, almandine- and grossular-rich garnets coronas in granitoid rocks, 355  
 CRIDDLE, A. J., KELLER, P., STANLEY, C. and INNES, J., damaraite a new mineral from *Namibia*, 593; see also STANLEY, C. J., 485  
 Crustal melt, in the formation of S-type granite in the Dalradian of *Connemara, W. Ireland*, 1  
 Crystal structure, of kamchatkite, voggite, 613  
 Crystallography, of alvanite, 609  
 CUFF, C. see NESS, S. E.  
*Cumbria*, see *England*  
 Dahllite, 657  
 Dalradian rocks, S-type granite formation in, *Connemara, W. Ireland*, 1  
 Damaraite, a new mineral from *Namibia*, 593  
 DAMMAN, A. H., see KIEFT, K., 109  
 DARDENNE, M., see GUILHAUMOU, N., 257  
 DASGUPTA, S., CHAKRABORTI, S., FUKUOKA, M., SENGUPTA, P. and ROY, S., Ca-Ba-Sr carbonates from metamorphosed manganese deposits, *India*, 511  
 DE ALVARENGA, C. J. S., CATHELINÉAU, M., DUBESSY, J., fluid inclusion trails, 245  
 DE BRUIYN, H., see VAN DER WESTHUIZEN, W. A., 419  
 DE KLERK, W. J., see EALES, H. V., 23  
 DE VIVO, B., LIMA, A. and SCRIBANO, V., CO<sub>2</sub> fluid inclusions from *Italy*, 183  
 Dehydration, effect of chemical substitution on, 569; — of gypsum, 123  
 DELORRAINE, W., see GREW, E. S., 133  
 DENMARK, heulandite found in Danian chalk, 91  
 DIETRICH, H., see EMBEY-ISZTIN, A., 463  
 Diposide, from the Adirondack lowlands, New York, 133  
 Dissolution rate, of forsterite, 67  
 DONALDSON, C. H., forsterite dissolution, 67  
 DUBESSY, J., see BOIRON, M. C., 231  
 DUBESSY, J., see DE ALVARENGA, C. J. S., 245  
 Dufrenite, in iron-formation from *Bushmanland, South Africa*, 419  
 DULSKI, P., see HEIN, U., 323  
 DUNN, P. J., alvanite from the U.S.S.R., 609; PEACOR, D. R., NELEN, J. A. and RAMIK, R. A., Sakhaite-like mineral from *Namibia*, 105  
 EALES, H. V. DE KLERK, W. J., BUTCHER, A. R. and KRUGER, F. J., The cyclic units beneath the UG1 chromitite (UG1FW unit), 23  
 Eclogite, containing coesite, 579; — fluid inclusions in, from the Bergen Arcs, *W. Norway*, 145

- EMBEY-ISZTIN, A., SCHARBERT, H. G., DIETRICH, H., and POULTIDIS, H., mafic granulites and clinopyroxene xenoliths, 463
- EMP analyses, of dufrénite in iron-formation from *Bushmanland, South Africa*, 419
- ENGLAND, north Pennines, metallogenesis of spring water, 629; Cornwall, Cornubian orefield, 219; CUMBRIA, *Brownley Hill Mine*, alstonite from, 513; *Caldbeck Fells*, shultenite from, 659; DEVON, selenide mineralization at Hope's Nose, 485
- Etch pits, on basal cleavage faces of apophyllite crystals, 559
- FABRE, J., see CANAL-SABATE, A., 305
- FALICK A. E., see MACLEOD, G., 637
- Fayalite, from Rapakivi granites of *South Greenland*, 57
- FERNANDEZ-DIAZ, L., see PUTNIS, A., 123
- FERRO, E. and RIPA, M., Mössbauer spectroscopy and TEM study, 547
- FILATOV, S. K., see VARAKSINA, T. V., 613
- FINCH, A. F., zinc minerals associated with alkaline magmatism from *Greenland*, 407
- FINLAND, evolution of a metamorphic fluid, 207
- Fluid inclusion microthermometry, in the study of the Pb-Zn deposit of *Southern Tuscany*, 289
- Fluid inclusion trails, use in a time/space reconstruction, 169; in intrametamorphic quartz veins from *Brazil*, 245
- Fluid inclusions, in granulites and eclogites from *W. Norway*, 145; in a blueschist terrain in *Greece*, 159; in ultramafic xenoliths from *Sicily*, 183; in the evolution of a metamorphic fluid, 207; evidence from, in the development of the Cornubian orefield, 219; methane-rich in gold-bearing quartz, 257; in wolframite-bearing quartz veins, 267; in the development of skarn mineralization in *Sardinia*, 279; characterization by spectrometry, 311; in the nardite from *northern Mali*, 305; in fluorite veins in the *Southern Alps*, 325
- Fluid migration, in the study of fluid inclusion trails, 169; *Transvaal*, 46
- Fluorapatite, 508
- Fluorapophyllite, chemical substitutions and dehydration behaviour, 567
- Fluorescence microspectrometry, in the examination of hydrocarbon fluid inclusions, 311
- Fluorine-deficient apatite, 508
- Fluorite, containing oil-bearing fluid inclusions, *Pakistan*, 335; vein mineralization in the *southern Alps*, 323
- Forsterite, dissolution of, in basaltic, andesitic and rhyolitic melts, 67
- FOSTER, R. P., see BOWELL, R. J., 617
- FRANCE, fluid migration during contact metamorphism, 169; study of fluids in Hercynian Au veins, 231
- Francolite, 508
- Francon quarry*, see *Montreal, Canada*
- FUKUOKA, M., see DASGUPTA, S., 511
- FUNDAMESKY, V. S., see VARAKSINA, T. V., 613
- Gardar Province*, see *Greenland*
- Garnet, fluid inclusion measurements on, 159; in the *Mengzhong* eclogite containing coesite, 579; contrasting parageneses in a Grenvillian granitoid pluton, 355
- Gasborn*, see *Sweden*
- Gedrite, in a Mössbauer spectroscopy and TEM study, 547
- Genthelvite, a zinc mineral from the *Motzfeldt centre, South Greenland*, 407
- Geochemistry, in the comparison of the Lundy granite with Hercynian and Tertiary granites, 431
- GHANA, telluride from the *Ashanti gold mine*, 617
- GIAMELLO, M., RICCIBONO F. and SABATINI, G., Pb-Zn deposit in *Italy*, 295
- Gold deposit, multiphase methane-rich fluid inclusions in, 257
- , from the *Ashanti mine, Ghana*, 617
- Gold-bearing carbonate veins, from *Torquay*, 485
- Granierite, occurrences in *Madagascar*, 131
- Granite, ammonium in, from *Portugal*, 455; silicate melt inclusions, 195; S-type, in Dalradian rocks of *Connemara, W. Ireland*, 1
- Granulites, fluid inclusions in, from the Caledonides of *W. Norway*, 145; from the Transdanubian Volcanic Region in *Hungary*, 463
- GREECE, *Syros*, fluid inclusions in a blueschist terrain in, 159; fluid inclusions in a blueschist terrain, 159
- GREENBANK, L., see YOUNG, B., 515
- GREENLAND, alkaline dyke swarms from the *Gardar Province*, 585; zinc minerals associated with alkaline magmatism from *Motzfeldt centre*, 407; *Igaliko* dyke swarm, zirconium and niobium-bearing ilmenites in, 585; Rapakivi granites from the *Prins Christian Sund*, 57
- Grenvillian granites, contrasting, garnet parageneses in, 367
- GREW, E. S., YATES, M. G. and DELORRAINE, W., serendibite from the *Adirondack Lowlands*, 133
- GUILHAUMOU, N., SANTOS, M., TOURAY, J. C., BENY, C. and DARDENNE, M., multiphase methane-rich inclusions in gold-bearing quartz from *Brazil*, 257; —, SZYDLOWSKII, N. and PRADIER, B., characterization of hydrocarbon fluid inclusions, 311
- Gypsum, spectroscopic and gravimetric study of dehydration of, 123
- HALL, A. and NEIVA, A. M. R., distribution of ammonium in pegmatites and aplites and their minerals from *Portugal*, 455
- HALL, A. J., see MACLEOD, G., 637
- HANSTEEN, T. H. and LUSTENHOUWER, W. J., silicate melt inclusions in a peralkaline granite in *Norway*, 195
- HARRISON, T. N., PARSONS, I., and BROWN, P. E., Rapakivi granites from *South Greenland*, 57; —, chemical variations in mcias from *Cairngorm pluton, Scotland*, 355
- HAYWICK, D. W., see NESS, S. E., 589
- HEIN, U. F., LUDERS, V., and DULSKI, P., fluorite vein mineralization in the *southern Alps*, 323
- HENN, U., VON PLATEN, H. and HOFMEISTER, W., tourmalines from *Brazil*, 553
- Hercynian Au veins from the French Variscan belt, 231
- Heulandite, a potassium-rich zeolite from Danian chalk, 91; from Oligocene rocks, *Greece*, 95

- HIRAJIMA, T., ISHIWATARI, A., CONG, B., ZHANG, R., BANNO, S. and NOZAKA, T., coesite from the *Meng-zhong* eclogite, *China*, 579
- HODGE, B. L., see RANKIN, A. H., 335
- HOFMEISTER, W., see HENN, U., 553
- Honesite, from *Craignure mine*, *Argyllshire*, and *Carnarvonshire*, 649
- Hornfels, in the formation of S-type granite in the Dalradian of *Connemara, W. Ireland*, 1
- HUNGARY, granulites and xenoliths of clinopyroxenite from the Transdanubian Volcanic Region, 463
- Hyalophane, a Ba-feldspar found in association with a new Ba-silicate, 81
- Hydrocarbon, fluid inclusions, 311
- Hydrohonesite, from *Craignure mine*, *Argyllshire*, and *Carnarvonshire*, 649
- Hydroxyapophyllite, chemical substitutions and dehydration behaviour, 567
- Iblean Plateau*, see *Italy*, 183
- Igaliko*, see *Greenland*
- Ihosity*, see *Madagascar*, 131
- Ilmenite, from the *Igaliko* dyke swarm, *Greenland*, 585
- Inclusions, dating of, in the origin of sapphires, 113
- INDIA, manganian andalusite from *Manzabar 75*; manganese deposits, from the Sausar group, 509
- Indium, chalcopyrite bearing, from *central Sweden*, 109
- Infrared spectroscopy, in the dehydration of gypsum, 123; —, microspectrometry of fluid inclusions, 311
- INNES, J., see CRIDDLE, A. J., 595; see also DUNN, P. J., 105
- IRELAND, S-type granite formation in the Dalradian of *Connemara*, 1
- Iron-formation, containing dufrenite, *South Africa*, 419
- ISHIWATARI, A., see HIRAJIMA, T., 579
- ITALY, fluid inclusion evidence for the development of skarn mineralization in, 279; *Iblean Plateau*, CO<sub>2</sub> fluid inclusions in ultramafic xenoliths, 183; Pb-Zn deposit in *Southern Tuscany*, 295
- JAKOBSEN, U. H., hydrated barium silicate, 81
- Jiangsu*, see *China*
- Kamchatkite, a new naturally occurring oxychloride sulphate of potassium and copper, 613
- KATAGAS, C., see TSOLIS-KATAGAS, P., 95
- Kazakhstan*, see *U.S.S.R.*
- Kehoeite, an aluminophosphate isotype of analcime, 657
- KELLER, P., see CRIDDLE, A. J., 593
- KIEFT, K. and DAMMAN, A. H., indium-bearing minerals from *Sweden*, 109
- Kimberlites, from *Pakistan*, 537
- KINNY, P. D., see COENRAADS, R. R., 113
- KNIGHT, J. R., see BRAITHWAITE, R. S. W., 129
- Kombat Mine*, see *Namibia*
- KRUGER, F. J., see EALES, H. V., 23
- Kruidfontein, see *Transvaal, South Africa*
- LAGACHE, M., see SEBASTIAN, A., 447
- Langbenite, phase transition in, 525
- LANGFORD, J. I., see MARRINER, G. F., 567
- LE BAS, M. J. and CLARKE, L. B., carbonatitic volcanic complex, *Transvaal*, 46
- Lead oxycarbonate, as a mine fire product at *Broken Hill, New South Wales*, 647
- Lead oxychloride, damaraite from *Namibia*, 105
- LEAKE, B. E. see AHMED-SAID, Y., 1
- LEROY, J., see CATHELINÉAU, M., 169
- LESPINASSE, M., see CATHELINÉAU, M., 169
- LIMA, A., see DE VIVO, B., 183
- LIVINGSTONE, A., copper-aluminium analogues of hydrohonesite, 649
- Lizardite, in a Mössbauer spectroscopy and TEM study, 547
- LLOYD, D., see STANLEY, C. J., 485
- LUDERS, V., see HEIN, U., 323
- Lundy Granite, a comparison with Hercynian and Tertiary granites, 431
- LUSTENHOUWER, W. J., see HANSTEEN, T. H., 195
- MACLEOD, G., HALL, A. J. and FALICK, A. E., concrete degradation in road bridge in *Strathclyde*, 637
- MADAGASCAR, occurrences of grandierite, serendibite and tourmaline in the *Ihosity* formation, 131
- Magma mixing, at the Kruidfontein carbonatitic volcanic complex, *Transvaal*, 46
- Magnesite, from carbonatite complexes, 407
- MALI, fluid inclusions from, 305
- Manganese deposits, from the Sausar group, *India*, 511
- Manganian andalusite, from *West Bengal, India*, 75
- MANNING, D. A. C., metallogenesis of springwater from the *North Pennines*, 629
- Manzabar*, see *West Bengal, India*
- MARR, R. A., see OWEN, J. V., 367
- MARRINER, G. F., TARNEY, J. and LANGFORD, J. I., chemical substitutions in the apophyllite group, 567
- McARTHUR, J. M., fluorine deficient apatite, 508
- McCONNELL, D., kehoeite and viséite reviewed; with comments on dahllite and francolite, 657
- McCormick, G. R., see AHMED, Z., 537
- Metallogenesis, in a *North Pennine* springwater, 629
- Metamorphic fluid, evolution of, in progressive metamorphism, 207; —, in the development of the Cornubian orefield, 219
- Metamorphism, in the *Ihosity* formation in *southern Madagascar*, 131
- Metasediments, containing andalusite porphyroblasts from *West Bengal, India*, 75
- Metasomatic reaction, at the Kruidfontein carbonatitic volcanic complex, *Transvaal*, 46; leaching of Be from willemite, 407
- Mica, in black slate from the Abercrombie beds, *New South Wales*, 381
- Microthermometry, in the examination of methane-rich fluid inclusions, 257; in the investigation of fluid inclusions from northern *Mali*, 305
- Migration, of petroleum in the Miocene Monterey formation, *California*, 295
- MILLER, C. F., see STODDARD, E. F., 395
- Mineral chemistry, of kimberlites from *Pakistan*, 559
- Mont Lozere* pluton, metamorphic to hydrothermal fluids from, 169
- Monticellite, in kimberlites from *Pakistan*, 559
- Montreal*, see *Canada*

- MORAND, V. J., black slate from the Abercrombie beds, *New South Wales*, 381
- Mordenite, in Oligocene pyroclastic rocks from *Greece*, 95
- MOSER, M., see RANKIN, A. H., 335
- Mössbauer spectroscopy, on Al-poor and Al-rich orthoamphiboles, 547
- MUKHERJEE, S., see ACHARYYA, K. S., 75
- Muscovite, chemical variations in, 355
- NAMIBIA, a new sakhaite-like mineral, 105
- NANCARROW, P. H. A., see YOUNG, B., 515
- NAWAZ, R., brewsterite from *Scotland*, 654
- NEIVA, A. M. R., see HALL, A., 455
- NELEN, J. A., see DUNN, P. J., 105
- NESS, S. E., HAYWICK, D. W. and CUFF, C., transmission electron microscopy of biogenic aragonite, 589
- New mineral, damaraite from *Namibia*, 593; voggite, 495
- New South Wales*, see *Australia*
- New York*, see *U.S.A*
- Newfoundland*, see *Canada*
- NICOLLET, C., grandierite, serendibite and tourmaline from *southern Madagascar*, 131
- Niobium, from the Igaliko dyke swarm, *Greenland*, 585
- Nitrogen, with carbon dioxide forming fluid inclusions in granulites and eclogites from *W. Norway*, 145
- NORNBERG, P., zeolite from Danian chalk, 91
- NORWAY, fluid inclusions from the *Bergen Arcs*, 145; silicate melt inclusions in a peralkaline granite in, 195
- NOZAKA, T., see HIRAJIMA, T., 579
- Oil-bearing inclusions, in fluorite, from *Pakistan*, 335
- Olivine, in kimberlites from *Pakistan*, 537
- Orthoamphiboles, from the *Old Woman Mountains, SE California*, 393
- OWEN, J. V. and MARR, R. A., contrasting parageneses in a Grenvillian granitoid pluton in *Newfoundland*, 367
- PAKISTAN, kimberlites from, 537; *Baluchistan*, oil-bearing fluid inclusions from, 335
- PANDE, D. R. and VADRABADE, S. R., etch pits on apophyllite crystals, 537
- Pannolian Basin, mafic granulites and clinopyroxenite xenoliths, 463
- PARSONS, I., see HARRISON, T. N., 57
- PbCO<sub>3</sub>.PbO, lead oxycarbonate, as a mine fire product, 647
- Pb-Zn deposit, genesis of, at *Sant' Antonio di Val D'Aspra, Italy*, 289
- PEACOR, D. R. see DUNN, P. J., 105
- PEARCE, N. J. G., ilmenites from the *Igaliko* dyke swarm, 585
- Pegmatite, ammonium in, from *Portugal*, 455; experimental study of the equilibrium between pollucite, albite and hydrothermal fluid in pegmatitic systems, 447
- PERCIVAL, M. J. L., optical absorption spectroscopy, 525
- Perovskite, in kimberlites from *Pakistan*, 537
- Petroleum, migration of, in the Miocene Monterey formation, *California*, 295
- Phlogopite, in kimberlites from *Pakistan*, 537
- POLLARD, A. M., THOMAS, R. G. and WILLIAMS, P. A., connellite: stability relationships with other secondary copper minerals, 425
- Pollucite, experimental study of the equilibrium between pollucite, albite and hydrothermal fluid in pegmatitic systems, 447
- PORTUGAL, distribution of ammonium in pegmatites and aplites and their minerals, 455
- POULTIDIS, H., see EMBEY-IZTIN, A., 463
- POUTAINEN, M., evolution of a metamorphic fluid using fluid inclusions, *Finland*, 207
- PRADIER, B., see GUILHAUMOU, N., 311
- PRING, A., lead oxycarbonate as a mine fire product, *New South Wales*, 647; see also BIRCH, W. D., 599
- Prins Christian Sund*, see *Greenland*
- PUTNIS, A., WINKLER, B., and FERNANDEZ-DIAZ, L., dehydration of gypsum, 123
- Quartz, fluid inclusion measurements on, 159; —, lode, gold bearing with methane-rich fluid inclusions, 25; veins, containing fluid inclusion trails, 245; bearing wolframite in the *Spanish Central System*, 267
- Quebec*, see *Canada*
- QUILEZ, E., SIERRA, J. and VINDEL, E., a fluid inclusion study from the *Spanish Central System*, 267
- Ralstonite, from the *Cleveland Mine, Tasmania, Australia*, 559
- Raman microprobe, used in the examination of methane-rich fluid inclusions, 257
- RAMIK, R. A., see DUNN, P. J., 105
- RANKIN, A. H., HODGE, B. L. and MOSER, M., oil-bearing fluid inclusions from *Pakistan*, 335; see also BONI, M., 274
- Rapakivi granites, *Greenland*, mineralogical evolution of, 57
- Rare earth elements, in fluorite veins in the *Southern Alps*, 323
- RELLER, A., see PRING, A., 647
- Rhyolitic melts, forsterite dissolution in, 67
- RICCOBONO, F., see GIAMELLO, M., 295
- RIPA, M., see FERROW, E., 547
- ROY, S., see DASGUPTA, S., 511
- Russell*, see *New York, U.S.A.*
- SABATINI, G., see GIAMELLO M., 295
- Sakhaite, from the *Kombat Mine, Namibia*, 105
- Saline water, metallogenic significance of, 631
- SALVADORI, M., see BONI, M., 279
- SANTOS, M., see GUILHAUMOU, N., 257
- Sapphires, origin of, 113
- SCHARBERT, H. G., see EMBEY-ISZTIN, A., 463
- Schultenite, first British occurrence, 659
- SCOTLAND, brewsterite from *Strontian*, 654; rare minerals from *Dalbeattie*, 129; chemical variations in micas from *Cairngorm* pluton, 355; *Strathclyde*, concrete degradation in a road bridge, 637
- SCRIBANO, V., see DE VIVO, B., 183
- SEARL, A., complex sector zonation in ankerite, 501
- SEBASTIAN, A. and LAGACHE, M., experimental study of the equilibrium between pollucite, albite and hydrothermal fluid in pegmatitic systems, 447

- Selenide mineralization at *Hope's Nose, Devon*, 475  
 SENGUPTA, P., see DASGUPTA, S., 511  
 Serendibite, from the *Adirondack Lowlands, U.S.A.*, 133; occurrences in *Madagascar*, 131  
*Sicily*, see *Italy*  
 Siderite, from carbonatite complexes, 413  
 SIERRA, J., see QUILEZ, E., 267  
 Skarn mineralization, fluid inclusion evidence in the development of, 279  
 SOUTH AFRICA, *Bushmanland*, corkite from *Aggeneys*, 603; Bushveld Complex, the cyclic unit beneath the UG1 chromitite, 23; TRANSVAAL Kruidfontein carbonatitic volcanic complex, 46  
*South Greenland*, see *Greenland*  
 SPAIN, *Central System*, a fluid inclusion study in wolframite-bearing quartz veins in *Garganta de los Montes*, 267  
 Sphalerite, from central *Sweden*, 109  
 Spring-water, metallogenic significance of, 629  
 STANLEY, C. J., see BOWELL, R. J., 617; —, CRIDDLE, A. J. and LLOYD, D., precious and base metal mineralization at *Hope's Nose, Torquay, Devon*, 485; see also CRIDDLE, A. J., 593  
 STODDARD, E. F. and MILLER, C. F., chemistry and phase petrology of amphiboles and orthoamphibole-cordierite rocks from, 367  
 STONE, M., a comparison of the Lundy granite with Hercynian and Tertiary granites, 431  
*Strathclyde*, see *Scotland*  
*Strontian*, see *Scotland*  
 Strontianite, from metamorphosed manganese deposits of the Sausar group, *India*, 511  
 STRYDOM, D., see VAN DER WESTHUIZEN, W. A., 419  
 SUTHERLAND F. L., see COENRAADS, R. R., 113  
 SWEDEN, *Gasborn*, indium-bearing minerals from, 109  
 SYMES, R. F., WIRTH, M. and YOUNG, B., schultenite from the *Caldbeck Fells, Cumbria*, 659  
*Syros*, see *Greece*  
 SZYDŁOWSKII, N., see GUILHAUMOU, N., 311  
 TARNEY, J., see MARRINER, G. F., 567  
*Tasmania*, see *Australia*  
 Telluride, mineralization from *Ghana*, 617  
 Thermogravimetry, in the dehydration of gypsum, 123  
 Thenardite, from *northern Mali*, 305  
 THOMAS, R. G., see POLLARD, A. M., 425  
*Thrace*, see *Greece*  
*Torquay*, see *Devon, England*  
 TOURAY, J. C., see GUILHAUMOU, N., 25; see also CANALS-SABATE, A., 305  
 Tourmaline, occurrences in *Madagascar*, 131; —, copper-bearing, from *Brazil*, 553  
 Transmission electron microscopy, of biogenic aragonite, 589; — study on Al-poor and Al-rich orthoamphiboles, 547  
 TSOLIS-KATAGAS, P. and KATAGAS, C., zeolitic diagenesis, 95  
 Ultramafic xenoliths, containing fluid inclusions from *Sicily*, 183  
 Uranium lead dating, of zircon inclusions in sapphires, 113  
 U.S.A., CALIFORNIA, migration of petroleum in the Miocene Monterey formation, 295; chemistry and phase petrology of amphiboles and orthoamphibole-cordierite rocks from, 369; serendibite from the *Adirondack lowlands, Russell, New York*, 133  
 U.S.S.R., *Kazakhstan*, alvanite from, 609  
 VADRABADE, S. R., see PANDE, D. R., 559  
 VAN DER WESTHUIZEN, W. A., DE BRUIYN H., BEUKES, G. J. and STRYDOM, D., duferenite from *South Africa*, 419  
 VARAKSINA, T. V., FUNDAMENSKY, V. S., FILATOV, S. K. and VERGASOVA, L. P., the crystal structure of kamchatkite, 613  
 VERGASOVA, L. P., see VARAKSINA, T. V., 613  
 VINDEL, E., see QUILEZ, E., 267  
 Viseite, an aluminosilicophosphate isotype of analcime, 657  
 Voggitte, a new hydrated Na-Zr-hydroxide-phosphate-carbonate mineral, 495  
 VON PLATEN, H., see HENN, U., 553  
 WILKINSON, J. J., metamorphic fluids in the development of the Cornubian orefield, 219  
 Willemite, a zinc mineral from the Motzfeldt centre, *South Greenland*, 407  
 WILLIAMS, P. A., see POLLARD, A. M., 425  
 WINKLER, B., see PUTNIS, A., 123  
 WIRTH, M., see SYMES, R. F., 659  
 Wolframite, in quartz veins containing fluid inclusions, 267  
 Wollastonite, thermally induced reactions in the apophyllite group, 567  
 Woodwardite, relationships between copper aluminium analogues of hydrohonesite and honessite, 649  
 WOOLLEY, A. R., see BUCKLEY, H. A., 413  
 Xenoliths, of clinopyroxenite, from the *Pannonian Basin in Hungary*, 463  
 YATES, M. G., see GREW, E. S., 133  
 YOUNG, B., GREENBANK, L. and NANCARROW, P. H. A., alstonite at Brownley Hill Mine, *Nenthead, Cumbria*, 515; see also SYMES, R. F., 659  
 Zeolite, in pyroclastic rocks *Greece*, 95; found in a soil profile in Danian chalk, 91  
 ZHANG, R., see HIRAJIMA, T., 579  
 Zircon, dating of inclusions in sapphires, 113  
 Zirconium, from the *Igaliko dyke swarm, Greenland*, 585