

INDEX, VOLUME 72, 1987

- Ahn, J.H., see Peacor, D.R., 816
 Ahn, J.H., D.R. Peacor: Kaolinitization of biotite: TEM data and implications for an alteration mechanism, 353
 Akaogi, M., see McMillan, P., 361
 Akizuki, M.: Crystal symmetry and order-disorder structure of brewsterite, 645
 Aldridge, L.P., J. Finch, A.R. Gainsford, W.C. Tennant, C.W. Childs: Electric-field gradient in muscovites, 528
 Allen, F.M., see Phillips, B.L., 1190
 Altaner, S.P., see Weiss, C.A., Jr., 935
 Appleman, D.E., see Pagoaga, M.K., 1230
 Applin, K.R., B.D. Hicks: Fibers of dumortierite in quartz, 170
 Armbruster, T., see Lager, G.A., 756
 Armbruster, T., W. Hummel: (Sb,Bi,Pb) ordering in sulfosalts: Crystal-structure refinement of a Bi-rich izoklakeite, 821
 Bailey, S.W., see Juster, T.C., 555
 Bailey, S.W., see Rule, A.C., 1163
 Baker, D.R., D.H. Eggler: Compositions of anhydrous and hydrous melts coexisting with plagioclase, augite, and olivine or low-Ca pyroxene from 1 atm to 8 kbar: Application to the Aleutian volcanic center of Atka, 12
 Baltatzis, E.G., see Stamatakis, M.G., 839
 Barnes, C.G.: Mineralogy of the Wooley Creek batholith, Slinkard pluton, and related dikes, Klamath Mountains, northern California, 879
 Barnes, H.L., see Murowchick, J.B., 1241
 Barton, P.B., Jr., P.M. Bethke: Chalcopyrite disease in sphalerite: Pathology and epidemiology, 451
 Belkin, H.E., E.L. Libelo: Fibers and cylinders of cryptomelane-hollandite in Permian bedded salt, Palo Duro Basin, Texas, 1211
 Bennett, C.E.G., see Graham, J., 599
 Benoit, P.H.: Adaptation to microcomputer of the Appleman-Evans program for indexing and least-squares refinement of powder-diffraction data for unit-cell dimensions, 1018
 Berman, R.G., T.H. Brown, E.H. Perkins: GEØ-CALC: Software for calculation and display of pressure-temperature-composition phase diagrams, 861
 Bethke, P.M., see Barton, P.B., Jr., 451
 Bianchi, R., T. Pilati, G. Mannucci: Crystal structure of grischunite, 1225
 Birch, W.D., see Sarp, H., 1251
 Bird, D.K., see Rosing, M.T., 29
 Bish, D.L., see Docka, J.A., 949
 Bladh, K.W.: New mineral names, 222, 1023
 Bloss, F.D., see Greiner, D.J., 617
 Bloss, F.D., see Julian, M.M., 612
 Bloss, F.D., see Su, S., 1011
 Bodinier, J., C. Dupuy, J. Dostal, C. Merlet: Distribution of trace transition elements in olivine and pyroxenes from ultramafic xenoliths: Application of microprobe analysis, 902
 Boström, D.: Single-crystal X-ray diffraction studies of synthetic Ni-Mg olivine solid solutions, 965
 Bowen, L.H., see Murad, E., 194
 Bowers, T.S.: Review of Fluid-Rock Interactions during Metamorphism edited by J.V. Walther and B.J. Wood, 651
 Brady, J.B.: Coarsening of fine-scale exsolution lamellae, 697
 Brew, D.A., A.B. Ford: Confirmation of the empirical correlation of Al in hornblendes with pressure of solidification of calc-alkaline plutons: Comment on miscorrelation of plutons, 1017
 Brill, K.G.: Memorial of Victor Thomas Allen, 859
 Brown, P.E., see Juster, T.C., 555
 Brown, P.E.: Review of Geology and Geochemistry of Epithermal Systems edited by B.R. Berger and P.M. Bethke, 449
 Brown, T.H., see Berman, R.G., 861
 Burke, E.A.J.: New mineral names, 222, 1023
 Burke, T.M., see Wylie, A.G., 413
 Burnham, C.W., see Docka, J.A., 949
 Burnham, C.W., see Post, J.E., 507
 Burnham, C.W., see Towe, K.M., 663
 Burt, D.M., see Hervig, R.L., 392
 Burt, D.M., see Leavens, P.B., 423
 Burton, B.P., see Davidson, P.M., 337
 Burton, B.P.: Theoretical analysis of cation ordering in binary rhombohedral carbonate systems, 329
 Campana, C.F., see Ghose, S., 365
 Candela, P.A., see Wylie, A.G., 413
 Capobianco, C., A. Navrotsky: Solid-solution thermodynamics in CaCO₃-MnCO₃, 312
 Capobianco, C., see Navrotsky, A., 782
 Carmichael, I.S.E., see Mattioli, G.S., 468
 Chang, Y., see Guggenheim, S., 537
 Childs, C.W., see Aldridge, L.P., 528
 Chou, I.: Calibration of the graphite-methane buffer using the f_{H2} sensors at 2-kbar pressure, 76
 Cooke, G.A., see Maniar, P.D., 433
 Cosca, M.A., D.R. Peacor: Chemistry and structure of esseneite (CaFe³⁺AlSiO₆), a new pyroxene produced by pyrometamorphism, 148
 Czank, M., see Schumacher, J.C., 345
 Davidson, P.M., B.P. Burton: Order-disorder in omphacitic pyroxenes: A model for coupled substitution in the point approximation, 337
 Davis, B.L.: Quantitative determination of mineral content of geological samples by X-ray diffraction: Discussion, 438
 de Jong, B.H.W.S., J. van Hoek, W.S. Veeman, D.V. Manson: X-ray diffraction and ²⁹Si magic-angle-spinning NMR of opals: Incoherent long- and short-range order in opal-CT, 1195
 Docka, J.A., J.E. Post, D.L. Bish, C.W. Burnham: Positional disorder of the A-site cations in C2/M amphiboles: Model energy calculations and probability studies, 949
 Dostal, J., see Bodinier, J., 902

- Dove, P.M., J.D. Rimstidt: Solubility and stability of scorodite, $\text{FeAsO}_4 \cdot 2\text{H}_2\text{O}$: Reply, 845
- Dove, P.M., see Rimstidt, J.D., 852
- Downs, J.W., F.K. Ross: Neutron-diffraction study of bertrandite, 979
- Downs, J.W., G.V. Gibbs: An exploratory examination of the electron density and electrostatic potential of phenakite, 769
- Dunn, P.J., B.D. Sturman, J.A. Nelen: Wendwilsonite, the Mg analogue of roselite, from Morocco, New Jersey, and Mexico, and new data on roselite, 217
- Dunn, P.J., D.R. Peacor, R.A. Ramik, S. Su, R.C. Rouse: Franklinfurnaceite, a $\text{Ca-Fe}^{3+}\text{-Mn}^{3+}\text{-Mn}^{2+}$ zincosilicate isotypic with chlorite, from Franklin, New Jersey, 812
- Dunn, P.J., J.A. Mandarino: Formal definitions of type mineral specimens, 1269
- Dunn, P.J., see Kampf, A.R., 409
- Dunn, P.J., see Leavens, P.B., 423
- Dunn, P.J., see Peacor, D.R., 213
- Dupuy, C., see Bodinier, J., 902
- Dyar, M.D., M.T. Naney, S.E. Swanson: Effects of quench methods on $\text{Fe}^{3+}/\text{Fe}^{2+}$ ratios: A Mössbauer and wet-chemical study, 792
- Dyar, M.D.: A review of Mössbauer data on trioctahedral micas: Evidence for tetrahedral Fe^{3+} and cation ordering, 102
- Dymek, R.F., see Rosing, M.T., 29
- Eberl, D.D., J. Środoń, M. Lee, P.H. Nadeau, H.R. Northrop: Sericite from the Silverton caldera, Colorado: Correlation among structure, composition, origin, and particle thickness, 914
- Eggler, D.H., see Baker, D.R., 12
- Eggleton, R.A., see Guggenheim, S., 724
- Embrey, P.G.: Memorial of Max Hutchinson Hey, 856
- Engler, P., S.S. Iyengar: Analysis of mineral samples using combined instrument (XRD, TGA, ICP) procedures for phase quantification, 832
- Ernst, W.G.: Memorial of Kenneth DePencier Watson, 1273
- Essene, E.J., D.R. Peacor: Petedunnite ($\text{CaZnSi}_2\text{O}_6$), a new zinc clinopyroxene from Franklin, New Jersey, and phase equilibria for zincian pyroxenes, 157
- Essene, E.J., see Peacor, D.R., 319
- Essene, E.J., see Perkins, D., 446
- Evans, H.T., see Konnert, J.A., 637
- Faber, J., see Lager, G.A., 756
- Fayos, J., D.J. Watkin, M. Perez-Mendez: Crystal structure of the apatite-like compound $\text{K}_3\text{Ca}_2(\text{SO}_4)_3\text{F}$, 209
- Ferraris, G., M. Mellini, S. Merlino: Electron-diffraction and electron-microscopy study of balangeroite and gageite: Crystal structures, polytypism, and fiber texture, 382
- Ferry, J.M.: Metamorphic hydrology at 13-km depth and 400–550°C, 39
- Finch, J., see Aldridge, L.P., 528
- Fine, G., see Stolper, E., 1071
- Finger, L.W., see Sharp, Z.D., 748
- Finlayson, B.L., see Webb, J.A., 1204
- Fitzgerald, S., P.B. Leavens, A.L. Rheingold, J.A. Nelen: Crystal structure of a REE-bearing vesuvianite from San Benito County, California, 625
- Flörke, O.W., see Nukui, A., 167
- Foit, F.F., Jr., R.L. Hooper, P.E. Rosenberg: An unusual pyroxene, melilite, and iron oxide mineral assemblage in a coal-fire buchite from Buffalo, Wyoming, 137
- Ford, A.B., see Brew, D.A., 1017
- Fyfe, W.S.: Memorial of Francis John Turner, 649
- Gaines, A.M., see Peacor, D.R., 319
- Gainsford, A.R., see Aldridge, L.P., 528
- Geisinger, K.L., N.L. Ross, P. McMillan, A. Navrotsky: $\text{K}_2\text{Si}_4\text{O}_9$: Energetics and vibrational spectra of glass, sheet silicate, and wadeite-type phases, 984
- Ghose, S., C. Wan, F.P. Okamura: Crystal structures of $\text{CaNiSi}_2\text{O}_6$ and $\text{CaCoSi}_2\text{O}_6$ and some crystal-chemical relations in C_2/c clinopyroxenes, 375
- Ghose, S., P.K.S. Gupta, C.F. Campana: Symmetry and crystal structure of monteregianite, $\text{Na}_4\text{K}_2\text{Y}_2\text{Si}_{16}\text{O}_{38} \cdot 10\text{H}_2\text{O}$, a double-sheet silicate with zeolitic properties, 365
- Ghose, S., P.K.S. Gupta, E.O. Schlemper: Leiteite, ZnAs_2O_4 : A novel type of tetrahedral layer structure with arsenite chains, 629
- Gibbs, G.V., see Downs, J.W., 769
- Gibbs, G.V.: Presentation of the Mineralogical Society of American Award for 1986 to Antonio Castro Lasaga, 656
- Graham, C.M., J.A. Viglino, R.S. Harmon: Experimental study of hydrogen-isotope exchange between aluminous chlorite and water and of hydrogen diffusion in chlorite, 566
- Graham, J., C.D. McKenzie: Oxygen in pyrrhotite: 2. Determination of oxygen in natural pyrrhotites, 605
- Graham, J., C.E.G. Bennett, A. van Riessen: Oxygen in pyrrhotite: 1. Thermomagnetic behavior and annealing of pyrrhotites containing small quantities of oxygen, 599
- Graham, J.: Oxygen in pyrrhotite: 3. A mechanistic model, 610
- Gregorkiewitz, M., J.A. Rausell-Colom: Characterization and properties of a new synthetic silicate with highly charged mica-type layers, 515
- Greiner, D.J., F.D. Bloss: Amblygonite-montebraite optics: Response to (OH^-) orientation and rapid estimation of F from $2V$, 617
- Grew, E.S.: New mineral names, 222
- Grey, I.E., I.C. Madsen, D.C. Harris: Barian tomichite, $\text{Ba}_{0.5}(\text{As}_2)_{0.5}\text{Ti}_2(\text{V},\text{Fe})_5\text{O}_{13}(\text{OH})$, its crystal structure and relationship to derbylite and tomichite, 201
- Grey, I.E., I.C. Madsen, S.E. Haggerty: Structure of a new upper-mantle, magnetoplumbite-type mineral, $\text{Ba}[\text{Ti}_3\text{Cr}_4\text{Fe}_4\text{Mg}]_{10}\text{O}_{19}$, 633
- Grey, I.E., see Nickel, E.H., 1006
- Grice, J.D.: New mineral names, 1023
- Grissom, G.C., see Hollister, L.S., 231
- Guggenheim, S., R.A. Eggleton: Modulated 2:1 layer silicates: Review, systematics, and predictions, 724
- Guggenheim, S., see van Groos, A.F.K., 292, 1170
- Guggenheim, S., Y. Chang, A.F.K. van Groos: Muscovite dehydroxylation: High-temperature studies, 537

- Gunter, M., see Su, S., 1011
 Gupta, P.K.S., see Ghose, S., 365, 629
 Gupta, P.K.S., see Moore, P.B., 1176
- Haggerty, S.E., see Grey, I.E., 633
 Harlow, G.E., E.P. Olds: Observations on terrestrial ureyite and ureyitic pyroxene, 126
 Harmon, R.S., see Graham, C.M., 566
 Harris, D.C., see Grey, I.E., 201
 Hartman, J.S., see Raudsepp, M., 580
 Hawthorne, F.C.: New mineral names, 222, 1023
 Hawthorne, F.C., see Raudsepp, M., 580, 959
 Hays, J.F., see Towe, K.M., 663
 Hazen, R.M., see Sharp, Z.D., 748
 Heathcote, R.C., see McCormick, G.R., 59
 Helms, T.S., H.Y. McSween, Jr., T.C. Labotka, E. Jarosewich: Petrology of a Georgia Blue Ridge amphibolite unit with hornblende + gedrite + kyanite + staurolite, 1086
 Hemingway, B.S., see Towe, K.M., 663
 Hemingway, B.S.: Quartz: Heat capacities from 340 to 1000 K and revised values for the thermodynamic properties, 273
 Henry, C.D., see Rubin, J.N., 1122
 Hervig, R.L., W.T. Kortemeier, D.M. Burt: Ion-microprobe analyses of Li and B in topaz from different environments, 392
 Hicks, B.D., see Applin, K.R., 170
 Hlava, P.F., see Sarp, H., 1251
 Hodges, K.V., L.W. McKenna: Realistic propagation of uncertainties in geologic thermobarometry, 671
 Hollister, L.S., G.C. Grissom, E.K. Peters, H.H. Stowell, V.B. Sisson: Confirmation of the empirical correlation of Al in hornblende with pressure of solidification of calc-alkaline plutons, 231
 Hooper, R.L., see Foit, F.F., Jr., 137
 Horiuchi, H., E. Ito, D.J. Weidner: Perovskite-type $MgSiO_3$: Single-crystal X-ray diffraction study, 357
 Howie, R.A.: Memorial of James Phemister, 1275
 Hughes, J.M., S.J. Starkey, M.L. Malinconico, L.L. Malinconico: Lyonsite, $(Cu_3^{2+})Fe_2^{3+}(VO_4)_6^{3-}$, a new fumarolic sublimate from Izalco volcano, El Salvador: Descriptive mineralogy and crystal structure, 1000
 Hughes, J.M., see Robinson, P.D., 397
 Hummel, W., see Armbruster, T., 821
 Hyndman, D.W.: Review of Microtextures of Igneous and Metamorphic Rocks by J.P. Bard, 1029
- Innes, J., see Peacor, D.R., 213
 Ito, E., see Horiuchi, H., 357
 Iyengar, S.S., see Engler, P., 832
- Jambor, J.: New mineral names, 1023
 Jansen, J.B.H., see Voncken, J.H.L., 551
 Jarosewich, E., see Helms, T.S., 1086
 Jenkins, D.M.: Synthesis and characterization of tremolite in the system $H_2O-CaO-MgO-SiO_2$, 707
 Johnson, T., see Stolper, E., 1071
 Julian, M.M., F.D. Bloss: Matrix calculation of optical indicatrix parameters from central cross sections through the index ellipsoid, 612
 Juster, T.C., P.E. Brown, S.W. Bailey: NH_4 -bearing illite in very low grade metamorphic rocks associated with coal, northeastern Pennsylvania, 555
- Kampf, A.R., P.J. Dunn: Ogdensburgite from Mapimi and new data for the species, 409
 Kato, A.: Memorial of Takeo Watanabe, 1277
 Kerrick, D.M.: Fibrolite in contact aureoles of Donegal, Ireland, 240
 Kirby, S.H., see Kronenberg, A.K., 739
 Kirkpatrick, R.J., see Oestrike, R., 788
 Kirkpatrick, R.J., see Phillips, B.L., 1190
 Kirkpatrick, R.J., see Weiss, C.A., Jr., 935
 Kivekäs, R., see Sundberg, M.R., 173
 Klein, C.: Review of Photoatlas of Inclusions in Gemstones by E.J. Gubelin and J.I. Koivula, 1279
 Kojima, H., see Miyake, M., 594
 Konnert, J.A., H.T. Evans: Crystal structure and crystal chemistry of melanovanadite, a natural vanadium bronze, 637
 Koppelaar, D.W., see Rubin, J.N., 1122
 Kortemeier, W.T., see Hervig, R.L., 392
 Kroll, H., P.H. Ribbe: Determining (Al,Si) distribution and strain in alkali feldspars using lattice parameters and diffraction-peak positions: A review, 491
 Kronenberg, A.K., S.H. Kirby: Ionic conductivity of quartz: DC time dependence and transition in charge carriers, 739
 Kullerud, G.: Review of The Quantitative Data File for Ore Minerals of the Commission on Ore Microscopy of the International Mineralogical Association edited by A.J. Criddle and C.J. Stanley, 1030
- Labotka, T.C., see Helms, T.S., 1086
 Lager, G.A., G.R. Rossman, F.J. Rotella, A.J. Schultz: Neutron-diffraction structure of a low-water grossular at 20 K, 766
 Lager, G.A., T. Armbruster, J. Faber: Neutron and X-ray diffraction study of hydrogarnet $Ca_3Al_2(O_4H_4)_3$, 756
 Langley, R.H.: New mineral names, 222
 Lasaga, A.C., see Muncill, G.E., 299
 Lasaga, A.C.: Acceptance of the Mineralogical Society of America Award for 1986, 657
 Leavens, P.B., P.J. Dunn, D.M. Burt: Glaucocroite (olivine, $CaMnSiO_4$) from Franklin, New Jersey: Its composition, occurrence, and formation, 423
 Leavens, P.B., see Fitzgerald, S., 625
 Lee, M., see Eberl, D.D., 914
 Lehtinen, M., see Sundberg, M.R., 173
 Libelo, E.L., see Belkin, H.E., 1211
 Livi, K.J.T., D.R. Veblen: "Eastonite" from Easton, Pennsylvania: A mixture of phlogopite and a new form of serpentine, 113
 Livi, K.J.T., see Rule, A.C., 1163
 London, D., see Morgan VI, G.B., 1097
 Luth, R.W., B.O. Mysen, D. Virgo: Raman spectroscopic study of the solubility behavior of H_2 in the system $Na_2O-Al_2O_3-SiO_2-H_2$, 481
 Luth, W.C.: Memorial of O. Frank Tuttle, 1020
- Ma, X., see Roeder, P.L., 801
 MacArthur, D., see Roeder, P.L., 801
 MacRae, N.D.: Quantitative analysis of REEs by SIMS, 1263
 Madsen, I.C., see Grey, I.E., 201, 633
 Madsen, I.C., see Nickel, E.H., 1006

- Malinconico, L.L., see Hughes, J.M., 1000
 Malinconico, M.L., see Hughes, J.M., 1000
 Malinconico, M.L., see Robinson, P.D., 397
 Mandarin, J.A., see Dunn, P.J., 1269
 Mandarino, J.A., see Nickel, E.H., 1031
 Maniar, P.D., G.A. Cooke: Modal analyses of granitoids by quantitative X-ray diffraction, 433
 Mannucci, G., see Bianchi, R., 1225
 Manson, D.V., see de Jong, B.H.W.S., 1195
 Mariano, A.N., see Roeder, P.L., 801
 Marumo, F., see Miyake, M., 594
 Mason, B.: Review of Mineral Deposits of Europe, Volume 3: Central Europe by F.W. Dunning and A.M. Evans, 1279
 Mattioli, G.S., B.J. Wood, I.S.E. Carmichael: Ternary-spinel volumes in the system $MgAl_2O_4$ - Fe_3O_4 - γ - $Fe_2/3O_4$: Implications for the effect of P on intrinsic f_{O_2} measurements of mantle-xenolith spinels, 468
 McCormick, G.R., R.C. Heathcote: Mineral chemistry and petrogenesis of carbonatite intrusions, Perry and Conway Counties, Arkansas, 59
 McCormick, T.C., J.R. Smyth: Minor-element distributions in ilmenite and dolomite by electron channeling-enhanced X-ray emission, 778
 McCormick, T.C., see Scambos, T.A., 973
 McKenna, L.W., see Hodges, K.V., 671
 McKenzie, C.D., see Graham, J., 605
 McMillan, P., M. Akaogi: Raman spectra of beta- Mg_2SiO_4 (modified spinel) and gamma- Mg_2SiO_4 (spinel), 361
 McMillan, P., see Geisinger, K.L., 984
 McSween, H.Y., Jr., see Helms, T.S., 1086
 Medenbach, O., see Sieber, N.H.W., 404
 Mellini, M., P.F. Zanazzi: Crystal structures of lizardite-1T and lizardite-2H1 from Coli, Italy, 943
 Mellini, M., see Ferraris, G., 382
 Merlet, C., see Bodinier, J., 902
 Merlino, S., see Ferraris, G., 382
 Merlino, S., see Moore, P.B., 1176
 Meyer, H.O.A.: Proceedings of the Sixty-seventh Annual Meeting of the Mineralogical Society of America in San Antonio, Texas, 659
 Meyer, H.O.A.: Report of the Secretary for 1986, 659
 Miser, D.E., J.S. Swinnea, H. Steinfink: TEM observations and X-ray crystal-structure refinement of a twinned dolomite with a modulated microstructure, 188
 Miyake, M., H. Nakamura, H. Kojima, F. Marumo: Cation ordering in Co-Mg olivine solid-solution series, 594
 Montez, B., see Oestrike, R., 788
 Moore, P.B., P.K.S. Gupta, E.O. Schlemper, S. Merlino: Ashcroftine, ca. $K_{10}Na_{10}(Y,Ca)_{24}(OH)_4(CO_3)_{16}(Si_{56}O_{140}) \cdot 16H_2O$, a structure with enormous polyanions, 1176
 Morgan VI, G.B., D. London: Alteration of amphibolitic wallrocks around the Tanco rare-element pegmatite, Bernic Lake, Manitoba, 1097
 Mumme, W.G., E.H. Nickel: Crystal structure and crystal chemistry of perroudite: A mineral from Coppin Pool, Western Australia, 1257
 Muncill, G.E., A.C. Lasaga: Crystal-growth kinetics of plagioclase in igneous systems: One-atmosphere experiments and application of a simplified growth model, 299
 Munoz, J.L.: Report of the Editor for 1986, 664
 Munoz, J.L.: Review of Geology and Geochemistry of Cenozoic Topaz Rhyolites from the Western United States by E.H. Christiansen, M.F. Sheridan, and D.M. Burt, 1029
 Murad, E., L.H. Bowen: Magnetic ordering in Al-rich goethites: Influence of crystallinity, 194
 Murowchick, J.B., H.L. Barnes: Effects of temperature and degree of supersaturation on pyrite morphology, 1241
 Mysen, B.O., see Luth, R.W., 481
 Nadeau, P.H., see Eberl, D.D., 914
 Nakamura, H., see Miyake, M., 594
 Naney, M.T., see Dyar, M.D., 792
 Navrotsky, A., C. Capobianco: Enthalpies of formation of dolomite and of magnesian calcites, 782
 Navrotsky, A., see Capobianco, C., 312
 Navrotsky, A., see Geisinger, K.L., 984
 Navrotsky, A., see Oestrike, R., 788
 Nelen, J.A., see Dunn, P.J., 217
 Nelen, J.A., see Fitzgerald, S., 625
 Newman, S., see Stolper, E., 1071
 Nickel, E.H., I.E. Grey, I.C. Madsen: Lucasite-(Ce), $CeTi_2(O,OH)_6$, a new mineral from Western Australia: Its description and structure, 1006
 Nickel, E.H., J.A. Mandarino: Procedures involving the IMA Commission on New Minerals and Mineral Names and guidelines on mineral nomenclature, 1031
 Nickel, E.H., see Mumme, W.G., 1257
 Nickel, E.H., see Sarp, H., 1251
 Nickel, E.H.: Danielsite: A new sulfide mineral from Western Australia, 401
 Nixon, G.T., T.H. Pearce: Laser-interferometry study of oscillatory zoning in plagioclase: The record of magma mixing and phenocryst recycling in calc-alkaline magma chambers, Iztaccihuatl volcano, Mexico, 1144
 Nord, G.L., Jr., see Towe, K.M., 663
 Nord, G.L., Jr.: Report of the Treasurer for 1986, 660
 Nordstrom, D.K., G.A. Parks: The solubility and stability of scorodite, $FeAsO_4 \cdot 2H_2O$: Discussion, 849
 Northrop, H.R., see Eberl, D.D., 914
 Nukui, A., O.W. Flörke: Three tridymite structural modifications and cristobalite intergrown in one crystal, 167
 O'Neill, H.S.C.: Quartz-fayalite-iron and quartz-fayalite-magnetite equilibria and the free energy of formation of fayalite (Fe_2SiO_4) and magnetite (Fe_3O_4), 67
 O'Neill, H.S.C.: Free energies of formation of NiO, CoO, Ni_2SiO_4 , and Co_2SiO_4 , 280
 Oestrike, R., A. Navrotsky, G.L. Turner, B. Montez, R.J. Kirkpatrick: Structural environment of Al dissolved in $2PbO \cdot B_2O_3$ glasses used for solution calorimetry: An ^{27}Al NMR study, 788
 Okamura, F.P., see Ghose, S., 375
 Olds, E.P., see Harlow, G.E., 126

- Pagoaga, M.K., D.E. Appleman, J.M. Stewart: Crystal structures and crystal chemistry of the uranyl oxide hydrates becquerelite, billietite, and protasite, 1230
- Palmer, G.R., see Roeder, P.L., 801
- Parks, G.A., see Nordstrom, D.K., 849
- Pattison, D.R.M.: Variations in Mg/(Mg + Fe), F, and (Fe,Mg)Si = 2Al in pelitic minerals in the Ballachulish thermal aureole, Scotland, 255
- Pauling, L.: Determination of ionic radii from cation-anion distances in crystal structures: Discussion, 1016
- Pawloski, G.A.: Quantitative determination of mineral content of geological samples by X-ray diffraction: Reply, 441
- Peacor, D.R., E.J. Essene, A.M. Gaines: Petrologic and crystal-chemical implications of cation order-disorder in kutnahorite [CaMn(CO₃)₂], 319
- Peacor, D.R., P.J. Dunn, S. Su, J. Innes: Ribbeite, a polymorph of alleghanyite and member of the leucophoenicite group from the Kombat mine, Namibia, 213
- Peacor, D.R., R.C. Rouse, J.H. Ahn: Crystal structure of tiptopite, a framework beryllophosphate isotypic with basic cancrinite, 816
- Peacor, D.R., see Ahn, J.H., 353
- Peacor, D.R., see Cosca, M.A., 148
- Peacor, D.R., see Dunn, P.J., 812
- Peacor, D.R., see Essene, E.J., 157
- Pearce, T.H., J.K. Russell, I. Wolfson: Laser-interference and Nomarski interference imaging of zoning profiles in plagioclase phenocrysts from the May 18, 1980, eruption of Mount St. Helens, Washington, 1131
- Pearce, T.H., see Nixon, G.T., 1144
- Perez-Mendez, M., see Fayos, J., 209
- Perkins, D., E.J. Essene, V.J. Wall: THERMO: A computer program for calculation of mixed-volatile equilibria, 446
- Perkins, E.H., see Berman, R.G., 861
- Peters, E.K., see Hollister, L.S., 231
- Phillips, B.L., F.M. Allen, R.J. Kirkpatrick: High-resolution solid-state ²⁷Al NMR spectroscopy of Mg-rich vesuvianite, 1190
- Phillips, D.: New mineral names, 1023
- Pichavant, M.: Effects of B and H₂O on liquidus phase relations in the haplogranite system at 1 kbar, 1056
- Pilati, T., see Bianchi, R., 1225
- Plank, T.: Magmatic garnets from the Cardigan pluton and the Acadian thermal event in southwest New Hampshire, 681
- Popp, R.K.: Memorial of Horace R. Blank, 444
- Post, J.E., C.W. Burnham: Structure-energy calculations on low and high albite, 507
- Post, J.E., see Docka, J.A., 949
- Powell, R.: Darken's quadratic formalism and the thermodynamics of minerals, 1
- Price, J.G., see Rubin, J.N., 1122
- Pring, A., see Sarp, H., 1251
- Puziewicz, J.: New mineral names, 222
- Raade, G.: Davanite, K₂TiSi₆O₁₅, in the Smoky Butte (Montana) lamproites: Discussion of X-ray powder data, 1014
- Rajabali, G.: Importance of the size of the unit in models of ordering behavior for albite, 83
- Ramik, R.A., see Dunn, P.J., 812
- Raudsepp, M., A.C. Turnock, F.C. Hawthorne, B.L. Sherriff, J.S. Hartman: Characterization of synthetic pargasitic amphiboles (NaCa₂Mg₄M³⁺-Si₆Al₂O₂₂(OH,F)₂; M³⁺ = Al, Cr, Ga, Sc, In) by infrared spectroscopy, Rietveld structure refinement, and ²⁷Al, ²⁹Si, and ¹⁹F MAS NMR spectroscopy, 580
- Raudsepp, M., A.C. Turnock, F.C. Hawthorne: Characterization of cation ordering in synthetic scandium-fluor-eckermannite, indium-fluor-eckermannite, and scandium-fluor-nyböite by Rietveld structure refinement, 959
- Rausell-Colom, J.A., see Gregorkiewitz, M., 515
- Rheingold, A.L., see Fitzgerald, S., 625
- Ribbe, P.H., see Kroll, H., 491
- Rimstidt, J.D., P.M. Dove: The solubility and stability of scorodite, FeAsO₄·2H₂O: Reply, 852
- Rimstidt, J.D., see Dove, P.M., 845
- Roberts, A.C.: New mineral names, 222, 1023
- Robins, R.G.: Solubility and stability of scorodite, FeAsO₄·2H₂O: Discussion, 842
- Robinson, P.D., J.M. Hughes, M.L. Malinconico: Blossite, alpha-Cu₂⁺V₂⁵⁺O₇, a new fumarolic sublimate from Izaico volcano, El Salvador, 397
- Roedder, E.: Acceptance of the Roebling Award of the Mineralogical Society of America for 1986, 654
- Roeder, P.L., D. MacArthur, X. Ma, G.R. Palmer, A.N. Mariano: Cathodoluminescence and microprobe study of rare-earth elements in apatite, 801
- Rosenberg, P.E., see Foit, F.F., Jr., 137
- Rosenberg, P.E.: Synthetic muscovite solid solutions in the system K₂O-Al₂O₃-SiO₂-H₂O, 716
- Rosenberg, P.E.: Synthesis of metastable Ca-Mg carbonates, 1239
- Rosing, M.T., D.K. Bird, R.F. Dymek: Hydration of corundum-bearing xenoliths in the Qôrqut Granite Complex, Godthaabsfjord, West Greenland, 29
- Ross, F.K., see Downs, J.W., 979
- Ross, N.L., see Geisinger, K.L., 984
- Rossman, G.R., see Lager, G.A., 766
- Rotella, F.J., see Lager, G.A., 766
- Rouse, R.C., see Dunn, P.J., 812
- Rouse, R.C., see Peacor, D.R., 816
- Rubin, J.N., J.G. Price, C.D. Henry, D.W. Koppenaal: Cryolite-bearing and rare metal-enriched rhyolite, Sierra Blanca Peaks, Hudspeth County, Texas, 1122
- Rule, A.C., S.W. Bailey, K.J.T. Livi, D.R. Veblen: Complex stacking sequences in a lepidolite from Tørdal, Norway, 1163
- Russell, J.K., see Pearce, T.H., 1131
- Sarp, H., W.D. Birch, P.F. Hlava, A. Pring, D.K.B. Sewell, E.H. Nickel: Perrouditite, a new sulfide-halide of Hg and Ag from Cap-Garonne, Var, France, and from Broken Hill, New South Wales, and Coppin Pool, Western Australia, Australia, 1251
- Scambos, T.A., J.R. Smyth, T.C. McCormick: Crystal-structure refinement of high sanidine from the upper mantle, 973
- Schedler, R.A.: New mineral names, 222, 1023
- Schlemper, E.O., see Ghose, S., 629
- Schlemper, E.O., see Moore, P.B., 1176

- Schultz, A.J., see Lager, G.A., 766
- Schumacher, J.C., M. Czank: Mineralogy of triple- and double-chain pyroboles from Orijarvi, southwest Finland, 345
- Scott, K.M.: Significance of a lithiophorite interface between cryptomelane and florencite, 429
- Scott, K.M.: Solid solution in, and classification of, gossan-derived members of the alunite-jarosite family, northwest Queensland, Australia, 178
- Sewell, D.K.B., see Sarp, H., 1251
- Sharp, Z.D., R.M. Hazen, L.W. Finger: High-pressure crystal chemistry of monticellite, CaMgSiO_4 , 748
- Sherman, D.M.: Review of Chemical Bonding and Spectroscopy in Mineral Chemistry, edited by Frank J. Berry and David J. Vaughan, 448
- Sherriff, B.L., see Raudsepp, M., 580
- Shigley, J.E.: New mineral names, 222, 1023
- Sieber, N.H.W., E. Tillmanns, O. Medenbach: Hentschelite, $\text{CuFe}_2(\text{PO}_4)_2(\text{OH})_2$, a new member of the lazulite group, and reichenbachite, $\text{Cu}_5(\text{PO}_4)_2(\text{OH})_4$, a polymorph of pseudo-malachite, two new copper phosphate minerals from Reichenbach, Germany, 404
- Sisson, V.B., see Hollister, L.S., 231
- Skinner, B.J.: Presentation of the Roebling Medal of the Mineralogical Society of America for 1986 to Edwin Roedder, 652
- Skounakis, S.B., see Stamatakis, M.G., 839
- Smyth, J.R., see McCormick, T.C., 778
- Smyth, J.R., see Scambos, T.A., 973
- Smyth, J.R.: Beta- Mg_2SiO_4 : A potential host for water in the mantle?, 1051
- Solie, D.N., S. Su: An occurrence of Ba-rich micas from the Alaska Range, 995
- Speer, J.A.: Evolution of magmatic AFM mineral assemblages in granitoid rocks: The hornblende + melt = biotite reaction in the Liberty Hill pluton, South Carolina, 863
- Środoń, J., see Eberl, D.D., 914
- Stamatakis, M.G., E.G. Baltatzis, S.B. Skounakis: Sulfate minerals from a mud volcano in Katakolo area, western Peloponnesus, Greece, 839
- Starkey, S.J., see Hughes, J.M., 1000
- Steinfink, H., see Miser, D.E., 188
- Stewart, J.M., see Pagoaga, M.K., 1230
- Stolper, E., G. Fine, T. Johnson, S. Newman: Solubility of carbon dioxide in albitic melt, 1071
- Stowell, H.H., see Hollister, L.S., 231
- Sturman, B.D., see Dunn, P.J., 217
- Su, S., F.D. Bloss, M. Gunter: Procedures and computer programs to refine the double variation method, 1011
- Su, S., see Dunn, P.J., 812
- Su, S., see Peacor, D.R., 213
- Su, S., see Solie, D.N., 995
- Sundberg, M.R., M. Lehtinen, R. Kivekäs: Refinement of the crystal structure of ramsayite (lorenzenite), 173
- Swanson, S.E., see Dyar, M.D., 792
- Swinnea, J.S., see Miser, D.E., 188
- Tennant, W.C., see Aldridge, L.P., 528
- Tillmanns, E., see Sieber, N.H.W., 404
- Towe, K.M., C.W. Burnham, B.S. Hemingway, G.L. Nord, Jr., J.F. Hays: Report of the Financial Advisory Committee for 1986, 663
- Turner, G.L., see Oestrike, R., 788
- Turnock, A.C., see Raudsepp, M., 580, 959
- van der Eerden, A.M.J., see Voncken, J.H.L., 551
- van Hoek, J., see de Jong, B.H.W.S., 1195
- Vanko, D.A.: New mineral names, 222
- van Riessen, A., see Graham, J., 599
- Veblen, D.R., see Livi, K.J.T., 113
- Veblen, D.R., see Rule, A.C., 1163
- Veeman, W.S., see de Jong, B.H.W.S., 1195
- Velde, D., see Wagner, C., 689
- Viglino, J.A., see Graham, C.M., 566
- Virgo, D., see Luth, R.W., 481
- van Groos, A.F.K., S. Guggenheim: Dehydration of a Ca- and a Mg-exchanged montmorillonite (SWy-1) at elevated pressures, 292
- van Groos, A.F.K., S. Guggenheim: High-pressure differential thermal analysis (HP-DTA) of the dehydroxylation of Na-rich montmorillonite and K-exchanged montmorillonite, 1170
- van Groos, A.F.K., see Guggenheim, S., 537
- Voncken, J.H.L., A.M.J. van der Eerden, J.B.H. Jansen: Synthesis of a Rb analogue of 2M_1 muscovite, 551
- Wagner, C., D. Velde: Aluminous spinels in lamproites: Occurrence and probable significance, 689
- Wall, V.J., see Perkins, D., 446
- Wan, C., see Ghose, S., 375
- Warner, L.A.: Memorial of Ogden L. Tweto, 1271
- Watkin, D.J., see Fayos, J., 209
- Watson, E.B.: Diffusion and solubility of C in Pt, 487
- Waychunas, G.A.: Synchrotron radiation XANES spectroscopy of Ti in minerals: Effects of Ti bonding distances, Ti valence, and site geometry on absorption edge structure, 89
- Webb, J.A., B.L. Finlayson: Incorporation of Al, Mg, and water in opal-A: Evidence from speleothems, 1204
- Weidner, D.J., see Horiuchi, H., 357
- Weiss, C.A., Jr., S.P. Altaner, R.J. Kirkpatrick: High-resolution ^{29}Si NMR spectroscopy of 2:1 layer silicates: Correlations among chemical shift, structural distortions, and chemical variations, 935
- Wolfson, I., see Pearce, T.H., 1131
- Wondratschek, H.: Determination of ionic radii from cation-anion distances in crystal structures, 82
- Wood, B.J., see Mattioli, G.S., 468
- Wylie, A.G., P.A. Candela, T.M. Burke: Compositional zoning in unusual Zn-rich chromite from the Sykesville district of Maryland and its bearing on the origin of "ferrit-chromit," 413
- Zanazzi, P.F., see Mellini, M., 943

- A site in $C2/m$ amphiboles, 949
 Al in $2PbO \cdot B_2O_3$ glasses, 788
 ^{27}Al and ^{11}B in $2PbO \cdot B_2O_3$ glasses, 788
 As $^{5+}$ in aqueous solution, 849
 As, scorodite, 842, 845, 849, 852
 Activity-composition relations, 1
 Alaska
 aluminous hornblende, 1017
 andesite, 12
 augite, 12
 high-alumina basalt, 12
 hornblende, 231
 micas, Ba-rich, 995
 tonalite, 231
 Albite, 83, 507
 Albitic glass, 1071
 Allen, Victor Thomas, memorial of, 859
 Algeria, peridotite xenoliths, 902
 Alkali feldspar, 1, 491, 879
 diffusion in, 697
 Aluminous hornblende, 1017
 Alunite, 178
 Alunogen, 839
 Amblygonite, 617
 Amphibole, 39, 580, 863, 879, 949, 1086
 See also individual amphiboles
 Amphibolite, 1097
 Analysis, chemical (mineral)
 alkali feldspar, 879
 alunogen, 839
 amphibole, 39, 863, 879, 1086
 andalusite, 240
 ankerite, 39
 anthophyllite, 345
 apatite, 801
 ashcroftine, 1176
 augite, 12, 1263
 bannisterite, 724
 barian tomichite, 201
 barkevikite, 89
 becquerelite, 1230
 billietite, 1230
 biotite, 29, 39, 89, 240, 255, 681, 863, 879, 1097
 blossite, 397
 Ca-exchanged montmorillonite, 292
 calcic amphibole, 39, 1086
 calcite, 39
 chlorite, 39, 255, 566, 863, 1086
 chromite (zoned), 413
 clinopyroxene, 89, 863, 902
 clinozoisite, 39
 cordierite, 255
 corkite, 178
 cryptomelane, 429
 danielsite, 401
 diopside, 39
 "eastonite," 113
 eckermannite, 126
 epidote, 863
 esseneite, 148
 feldspar, 1122
 fibrolite, 240
 florencite, 178, 429
 franklinfurnaceite, 812
 ganophyllite, 724
 garnet, 89, 240, 681, 766
 glaucochroite, 423
 goethite, 429
 goyazite, 178
 grischunite, 1225
 grossular, 766
 gypsum, 839
 halotrichite, 839
 hematite, 137
 hentschelite, 404
 hinsdalite, 178
 holmquistite, 1097
 hornblende, 231, 1097
 illite, 914
 iron oxide, 137
 jadeite, 126
 jarosite, 178
 jimthompsonite, 345
 kutnahorite, 319
 Li-rich trioctohedral mica, 1122
 lithiophorite, 429
 lizardite, 943
 lusungite, 178
 lyonsite, 1000
 Mg-exchanged montmorillonite, 292
 magnesioferrite, 137
 margarite, 29
 melanite, 89
 melanovanadite, 637
 melanterite, 839
 melilite, 137
 mica, 515, 995, 1122
 minnesotaitite, 724
 montmorillonite, 292
 muscovite, 29, 39, 255, 537, 716, 863
 muscovite, Rb analogue of, 551
 Na-4-mica (synthetic), 515
 neptunite, 89
 ogdensburgite, 409
 olivine, 902
 opal, 959, 1204
 orthoamphibole, 1086
 orthopyroxene, 902
 pargasite, 59
 perroudite, 1251, 1257
 petedunnite, 157
 phengite, 914
 phlogopite, 59, 113, 345, 689
 plagioclase, 12, 240, 879, 1086, 1097, 1131, 1144
 plumbian alunite, 178
 plumbogummite, 178
 protasite, 1230
 pyrite, 1241
 pyroxene, 137, 879, 902
 pyrrhotite, 605
 reichenbachite, 404
 ribbeite, 213
 roselite, 217
 rutile, 89
 schorlomite, 89
 sericite, 914
 serpentine, 113
 sphalerite, 451
 spinel, 345, 689
 staurolite, 1086
 stilpnomelane, 724
 Ti-rich biotite, 89
 titanite, 89
 topaz, 392
 tourmaline, 1097
 tremolite, 707
 ureyite, 126
 vesuvianite, 625, 1190
 voltaite, 839
 wendwilsonite, 217
 zussmanite, 724
 Analysis, chemical (rock)
 andesite, 12, 879
 basalt, 12, 879
 buchite, 137
 carbonate rocks, metamorphosed impure, 39
 carbonatite, 59
 coal-fire buchite, 137
 dacite, 1131
 high-alumina basalt, 12
 mafic schist, 1086
 oil shale, 832
 pelitic schist, 671
 rhyolite, 1122
 Anatase, 89
 Andalusite, 240
 Andesite, 12, 879, 1144
 Ankerite, 39
 Anthophyllite, 345
 Antigorite, 113
 Apatite, REEs in, 801
 Appleman-Evans LSQ refinement of powder data, 1018
 Archimedean solid, 1176
 Arizona
 ongonite, 392
 topaz, 392
 topazite, 392
 Arkansas
 carbonatite, 59
 quartz, 170
 Ashcroftine, 1176
 Augite, 12, 1263
 Australia
 alunite, 178
 amblygonite, 617
 cryptomelane, 429
 danielsite, 401
 florencite, 429
 jarosite, 178
 lithiophorite, 429
 lucasilite-(Ce), 1006
 opal, 959, 1204
 perroudite, 1251, 1257
 tomichite, 201
 B in topaz, 392
 B $_2$ O $_3$, effects on melts, 1056
 Ba-Mn-U mineral, 228
 Ba-rich micas, 995
 Baghdadite, 222
 Balangeroite, 382
 Bannisterite, 724
 Barian tomichite, 201

- Barkevikite, 89
 Basalt, 12, 879
 Becquerelite, 1230
 Beidellite, 935
 Benitoite, 89
 Bertrandite, 979
 Beta-Mg₂SiO₄, 361, 1051
 Billietite, 1230
 Biotite, 29, 39, 89, 240, 255, 353, 681, 863, 879, 1097
 Blank, Horace R., memorial of, 444
 Blossite, 397
 Book reviews
 Bowers, T.S.: Fluid-Rock Interactions during Metamorphism edited by J.V. Walther and B.J. Wood, 651
 Brown, P.E.: Geology and Geochemistry of Epithermal Systems edited by B.R. Berger and P.M. Bethke, 449
 Hyndman, D.W.: Microtextures of Igneous and Metamorphic Rocks by J.P. Bard, 1029
 Klein, C.: Photoatlas of Inclusions in Gemstones by E.J. Gubelin and J.I. Koivula, 1279
 Kullerud, G.: The Quantitative Data File for Ore Minerals of the Commission on Ore Microscopy of the International Mineralogical Association edited by A.J. Criddle and C.J. Stanley, 1030
 Mason, B.: Mineral Deposits of Europe, Volume 3: Central Europe by F.W. Dunning and A.M. Evans, 1279
 Munoz, J.L.: Geology and Geochemistry of Cenozoic Topaz Rhyolites from the Western United States by E.H. Christiansen, M.F. Sheridan, and D.M. Burt, 1029
 Sherman, D.M.: Chemical Bonding and Spectroscopy in Mineral Chemistry, edited by Frank J. Berry and David J. Vaughan, 448
 Brazil
 opal, 959
 quartz, 273
 Brewsterite, 645
 Buchite, 137
 Buffers
 graphite-methane, 76
 oxygen, 29, 67
 Burma
 jadeite, 126
 ureyite, 126
 Ca-exchanged montmorillonite, 292
 Ca-Mg carbonates, 1239
 (Ca,Mn)CO₃, 312
 Ca₃Al₂(O₄H₄)₃, 756
 CaCO₃-MgCO₃, 782
 CaCO₃-MgCO₃-MnCO₃, 319
 CaCoSi₂O₆, CaNiSi₂O₆, 375
 CaO-MgO-SiO₂-H₂O, 707
 CaO-MnO-SiO₂-CO₂, 423
 CO₂ in albitic melt, 1071
 CO₂ solubility in albitic melt, 1071
 Co-Mg olivine, 594
 Co-Si-O, Co₂SiO₄, 280
 Cu-bearing mineral, 228
 Cu-Ni-Sn mineral, 227
 (Cu,Ag)₂As, 227
 CuCr₂S₄, 227
 Cu₂Fe₂Sn₃S₇, 227
 Cu₃Sn, 227
 Cu₆Sn₅, 227
 Cs metasomatism, 1097
 Calc-alkaline andesite and dacite, 1144
 Calcic amphibole, 39, 1086
 Calcite, 39
 California
 amphibole, 879
 andesite, 879
 biotite, 879
 grossular, 766
 pelite, 671
 plagioclase, 879
 quartz diorite, 879
 vesuvianite, 625, 1190
 Calorimetry, 273, 312
 Cameronite, 1023
 Cameron, peridotite xenoliths, 902
 Canada
 amphibolite, 1097
 barian tomichite, 201
 biotite (zinnwaldite), 1097
 granodiorite, 231
 holmquistite, 1097
 hornblende, 231
 monteregianite, 365
 tonalite, 231
 tourmaline, 1097
 vesuvianite, 1190
 Cancrinite, 816
 Cannizzarite, 229
 Carbonate, 1239
 Carbonate rocks, metamorphosed impure, 39
 Carbonatite, 59
 Cathodoluminescence, 801
 Cesstibtantite, 1027
 Chalcopyrite, 451
 Chenite, 222, 1279
 Chesterite, 345
 Chlorite, 39, 255, 566, 863, 935, 1086
 Chromite (zoned), 413
 Chvaliteite, 1023
 Classification of alunite-jarosite family, 178
 Clinoamphibole, 949
 Clinopyroxene, 1, 89, 863, 902, 949
 diffusion in, 697
 interfacial free energy for, 697
 Clinzoisite, 39
 CNMMN policies on new minerals and mineral names, 1031
 Coal-fire buchite, 137
 Coatings on weathered siltstone, 429
 Colorado
 chalcopyrite, 451
 illite, 914
 montebrasite, 617
 phengite, 914
 sericite, 914
 sphalerite, 451
 Compressibility measurements, monticellite, 748
 Computer modeling, 1051
 Computer programs
 Appleman-Evans LSQ refinement of powder data, 1018
 mineral equilibria, 446
 P-T-X phase diagrams, 861
 Configurational entropy, 83
 Contact metamorphism, 240, 255
 Cordierite, 255
 Corkite, 178
 Corundum, 29
 Cotype, 1269
 Creede, 451
 Cryolite, 1122
 Cryptomelane, 429
 Cryptomelane-hollandite, 1211
 Crystal chemistry, modulated layer silicate structures, 724
 Crystal growth
 antigorite, 113
 brewsterite, 645
 Ca₃Al₂(O₄H₄)₃, 756
 Co-Mg olivine, 594
 K₃Ca₂(SO₄)₃F (apatite-like), 209
 lizardite, 113
 Ni-Mg olivine, 965
 olivine, 594, 965
 phlogopite, 113
 plagioclase, 299, 1131, 1144
 pyrite, 1241
 Crystal structure
 amphibole, pargasitic, 580
 ashcroftine, 1176
 balangeroite, 382
 barian tomichite, 201
 becquerelite, 1230
 bertrandite, 979
 billietite, 1230
 blossite, 397
 brewsterite, 645
 Ca₃Al₂(O₄H₄)₃, 756
 CaCoSi₂O₆, 375
 CaNiSi₂O₆, 375
 Co-Mg olivine, 594
 clinoamphibole, 949
 clinopyroxene, 949
 dolomite, 188
 eckermannite, synthetic In-F and Sc-F analogues, 959
 esseneite, 148
 gageite, 382

- Crystal structure--continued
 garnet, 766
 grischunite, 1225
 grossular, 766
 high sanidine, 973
 izoklakeite, 821
 $K_3Ca_2(SO_4)_3F$ (apatite-like), 209
 kutnahorite, 319
 leiteite, 629
 lepidolite, 1163
 lizardite, 943
 lucasite-(Ce), 1006
 lyonsite, 1000
 magnetoplumbite-type phase, 633
 melanovanadite, 637
 mica, 515
 monticellite, 748
 montmorillonite dehydroxylate, 1170
 monteregianite, 365
 muscovite, high-temperature, 537
 Na-4-mica (synthetic), 515
 Ni-Mg olivine, 965
 nybõite, sythetic Sc-F analogue, 959
 olivine, 594
 perovskite-type $MgSiO_3$, 357
 perroudite, 1257
 phenakite, 769
 protasite, 1230
 ramsayite, 173
 tiptopite, 816
 tomichite, 201
 vesuvianite, REE-bearing, 625
- Crystal synthesis
 amphibole, pargasitic, 580
 Ca-Mg carbonates, 1239
 $CaCoSi_2O_6$, $CaNiSi_2O_6$, 375
 carbonate, 1239
 eckermannite, synthetic In-F and Sc-F analogues, 959
 $K_3Ca_2(SO_4)_3F$ (apatite-like), 209
 $MgAl_2O_4 - Fe_3O_4 - \gamma-Fe_8/3O_4$ spinels, 468
 mica, 515
 muscovite solid solutions, 716
 muscovite, Rb analogue of, 551
 Na-4-mica (synthetic), 515
 Ni-Mg olivine, 965
 nybõite, sythetic Sc-F analogue, 959
 pyrite, 1241
 tourmaline, 1097
 tremolite, 707
 Cumengéite, 229
- Dacite, 1131, 1144
 Danielsite, 401
 Darken's quadratic formalism, 1
 Davanite, 1014
 Differential thermal analysis, thermogravimetric analysis
 Ca-exchanged montmorillonite, 292
- franklinfurnaceite, 812
 K-exchanged montmorillonite, 1170
 Mg-exchanged montmorillonite, 292
 muscovite, 537
 muscovite, Rb analogue of, 551
 Na-rich montmorillonite, 1170
 ogdensburgite, 409
 Diffusion of C in Pt, 487
 Diopside, 39
 Discredited minerals, pseudo-mesolite (= mesolite), 230
 Dolomite, 188, 782
 Dolomite, electron channeling, 778
 Double variation method, refinement of, 1011
 Double- and triple-chain pyriboles, 345
 Dumortierite, 170
- "Eastonite," 113
 Eckermannite, 126
 synthetic In-F and Sc-F analogues, 959
 Effects of H_2 , 481
 El Salvador
 blossomite, 397
 lyonsite, 1000
 Electric-field gradients, 528
 Electrical properties
 muscovite, 528
 quartz, 739
 Electron channeling
 dolomite, 778
 ilmenite, 778
 Electron diffraction
 anthophyllite, 345
 antigorite, 113
 balangeroite, 382
 chesterite, 345
 dolomite, 188
 gageite, 382
 gonyerite, 724
 jimthompsonite, 345
 lepidolite, 1163
 lizardite, 113
 mixed-layer kaolinite - biotite, 353
 parsettensite, 724
 phlogopite, 113
 Electron microscopy
 amphibole, pargasitic, 580
 anthophyllite, 345
 antigorite, 113
 balangeroite, 382
 biotite, 353
 chlorite, 566
 dolomite, 188
 dolomite, electron channeling, 778
 dumortierite, 170
 "eastonite," 113
 eckermannite, synthetic In-F and Sc-F analogues, 959
 electron channeling, 778
 exsolution lamellae, 697
 gageite, 382
- goethite, 194
 illite, 914
 ilmenite, electron channeling, 778
 jimthompsonite, 345
 kaolinite, 353
 lepidolite, 1163
 lizardite, 113
 mica, 515
 muscovite, 716
 muscovite, Rb analogue of, 551
 Na-4-mica (synthetic), 515
 nybõite, sythetic Sc-F analogue, 959
 opal, 1204
 perroudite, 1251
 phengite, 914
 phlogopite, 113
 pyrite, 1241
 quartz, 170
 sericite, 914
- Electron paramagnetic resonance, paramagnetic centers in opals, 959
 Electrostatic energies, beta-forsterite, 1051
 Electrostatic potential, phenakite, 769
 Epidote, 29, 863
 Erlianite, 1023
 Errata, 1279
 Esseneite, 148
 Expandibilities of illite/smectite, 914
 Experimental petrology
 andesite, 12
 basalt, 12
 chlorite, 566
 CO_2 in albitic melt, 1071
 graphite-methane buffer, 76
 haplogranite system, 1056
 H_2 -bearing glasses, 481
 K-exchanged montmorillonite, 1170
 $K_2Si_4O_9$, 984
 muscovite, Rb analogue of, 551
 Na-rich montmorillonite, 1170
 plagioclase, 299
 solubility of C in Pt, 487
 tourmaline synthesis and stability, 1097
 tremolite - magnesio-cumingtonite join, 707
 Exsolution lamellae, 697
- F in micas, 255
 Fe^{3+} in aqueous solution, 849
 $IVFe^{3+}$ in trioctahedral micas, 102
 Fe^{3+}/Fe^{2+} ratios in quenched silicate glasses, 792
 Fayalite, 67
 Feldspar, 1122
 "Ferritchromit," 413
 Fibrolite, 240
 Finland
 chesterite, 345
 jimthompsonite, 345

- Florencite, 178, 429
 Fluid flow, 39
 Fluid inclusions in halite, 1211
 Fluid-rock interaction, 39
 Fluorophlogopite, 935
 Forsterite, 1051
 Fourmariérite, 229
 France
 peridotite xenoliths, 902
 perroudite, 1251
 Franklinfurnaceite, 812

 Gageite, 382
 Ganomalite, 1028
 Ganophyllite, 724
 Garnet, 1, 89, 240, 681, 766
 See also individual garnets
 Garnet-biotite geothermometer, 681, 1086, 1097
 Geochemistry
 As, scorodite, 845, 852
 andesite, calc-alkaline, 1144
 apatite, 801
 biotite, 255, 353
 Ca-exchanged montmorillonite, 292
 calc-alkaliine andesite and dacite, 1144
 chlorite, 255
 coatings on weathered siltstone, 429
 cordierite, 255
 dacite, calc-alkaline, 1144
 granitoids, 433
 greisens, topaz in, 392
 illite, 914
 Mg-exchanged montmorillonite, 292
 montmorillonite, 292
 muscovite, 255
 opal, 1204
 oxygen buffer, epidote + plagioclase + corundum + margarite + biotite + muscovite + fluid, 29
 partition coefficients of transition elements, 902
 pegmatites, topaz in, 392
 phengite, 914
 rare-element pegmatite, 1097
 rhyolites, topaz in, 392
 sericite, 914
 tourmaline synthesis and stability, 1097
 xenolith dehydration, 29
 Georgia
 Mg-rich staurolite, 1086
 orthoamphibole, 1086
 Geothermometry-geobarometry
 garnet-biotite, 681
 garnet-biotite geothermometer, 1086, 1097
 GRAIL geobarometer, 1086
 granitoid, 863
 hornblende, 231
 metapelite, 240
 oxygen geobarometry, 879
 phase transformation, opal, 959
 pyroxene geothermometry, 879
 transition-metal trace elements, using, 902
 uncertainties in, 671
 Germany
 amblygonite, 617
 tridymite, 167
 Giessenite, 229
 Glaucocerinite, 1028
 Glaucochroite, 423
 Goethite, 194, 429
 Gonyerite, 724
 Goyazite, 178
 GRAIL geobarometer, 1086
 Granite, 681
 Granitoid, 863
 Granitoids, modal analysis of, 433
 Granodiorite, 231
 Graphite-methane buffer, 76
 Greece
 alunogen, 839
 halotrichite, 839
 melanterite, 839
 voltaite, 839
 Greenland
 ashcroftine, 1176
 biotite, 29
 corundum, 29
 epidote, 29
 muscovite, 29
 plagioclase, 29
 Greisens, topaz in, 392
 Grischunite, 1225
 Grospydite nodule, sanidine in, 973
 Grossular, 766
 Guatemala, omphacite, 126
 Gypsum, 839

 H isotopes, chlorite, 566
 H₂, effects on mechanical properties, 481
 H₂-bearing glasses, 481
 H₂O, effects on melts, 1056
 HgS-Ag(Cl,Br,I), 1257
 Halite, inclusions in, 1211
 Halotrichite, 839
 Haplogranite system, 1056
 Hectorite, 935
 Hematite, 137
 Hentschelinite, 404
 Hey, Max Hutchinson, memorial of, 856
 High sanidine, 973
 High-alumina basalt, 12
 High-pressure differential thermal analysis, 1170
 High-pressure structure, monoticecellite, 748
 Hinsdalite, 178
 Historical usage of "eastonite," 113
 Hochelagaite, 1024
 Holmquistite, 1097
 Holotype, 1269
 Hornblende, 231, 1097
 Hydration properties of Na-4-mica (synthetic), 515
 Hydrodelhayelite, 1024
 Hydrogen bonding in bertrandite, 979
 Hydrous sulfates from a mud volcano, 839

 Illite, 914
 NH₄ in, 555
 Ilmenite, 89
 electron channeling, 778
 Immersion media, calibration of, 1011
 Indexing and refinement, computer program for, 1018
 Indicatrix, 612
 Infrared spectroscopy
 albitic glass, 1071
 amphibole, pargasitic, 580
 grossular, 766
 illite, 555, 914
 mica, 515
 muscovite, Rb analogue of, 551
 Na-4-mica (synthetic), 515
 opal, 1204
 phengite, 914
 sericite, 914
 Intersite distribution coefficients, double- and triple-chain pyriboles, 345
 Ion exchange of Na-4-mica (synthetic), 515
 Ion-microprobe analysis, topaz, 392
 Ionic radii, 82
 determination of, 1016
 Ireland
 fibrolite, 240
 metapelite, 240
 Iron oxide, 137
 Italy
 balangeroite, 382
 lizardite, 943
 ureyite, 126
 Izoklakeite, 222, 229, 821

 Jadeite, 126
 Jarosite, 178
 Jimthompsonite, 345
 Johnwalkite, 223

 K-exchanged montmorillonite, 1170
 K₃Ca₂(SO₄)₃F (apatite-like), 209
 K₂O-Al₂O₃-SiO₂-H₂O, 716
 K₂O-FeO-MgO-Al₂O₃-SiO₂-H₂O (KFMASH), 255
 K₂Si₄O₉ (wadeite-type), 984
 Kaersutite, 89
 Kalininite, 223
 Kaolinite, 353
 Kashinite, 223
 Kimrobinsonite, 1024
 Kinetics
 alkali feldspar, diffusion in, 697
 brewsterite, 645
 chlorite, 566
 clinopyroxene, diffusion in, 697

- Kinetics--continued
 diffusion of C in Pt, 487
 muscovite dehydroxylation, 537
 Ostwald ripening, 697
 plagioclase, 299
 quartz, diffusion in, 739
 Kitaibelite, 1027
 Kolarite, 1279
 Kutnahorite, 319
- Li in pegmatite, 1097
 Li in topaz, 392
 Li-rich trioctohedral mica, 1122
 Lamproites, 689
 Laphamite, 1024
 Laser interference microscopy, 1131, 1144
 Leiteite, 629
 Lepidolite, 1163
 Likasite, 1028
 Lithiophorite, 429
 Lizardite, 113, 943
 Lucasite-(Ce), 1006
 Lusungite, 178
 Lyonsite, 1000
- Mg-exchanged montmorillonite, 292
 Mg-rich staurolite, 1086
 Mg-rich vermiculite, 935
 MgAl₂O₄ - Fe₃O₄ - gamma-Fe₃O₄ spinels, 468
 Mg₂SiO₄, 361, 1051
 MgSiO₃, perovskite-type, 357
 Mn-Zn arsenate-hydroxide, 228
 Mafic schist, 1086
 Magnesian calcite, 782
 Magnesioferrite, 137
 Magnetic properties
 goethite, 194
 pyrrhotite, 599
 Magnetite, 67
 Magnetoplumbite-type phase, 633
 Maine
 amblygonite, 617
 carbonate rocks, metamorphosed, 39
 montebasite, 617
 Mantle petrology, 1051
 Margarite, 29
 Maryland, chromite (zoned), 413
 Mathewrogersite, 1025
 Matrix solution of optical indicatrix parameters, 612
 Mechanical properties
 effects of H₂, 481
 monticellite, 748
 Melanite, 89
 Melanovanadite, 637
 Melanterite, 839
 Melilite, 137
 Melt structure
 Al in 2PbO·B₂O₃ glasses, 788
 B₂O₃, effects on melts, 1056
 H₂O, effects on melts, 1056
 K₂Si₄O₉ (wadeite-type), 984
 Memorials
 Allen, Victor Thomas, 859
 Blank, Horace R., 444
 Hey, Max Hutchinson, 856
 Phemister, James, 1275
 Turner, Francis John, 649
 Tuttle, Orville Frank, 1020
 Tweto, Ogden L., 1271
 Watanabe, Takeo, 1277
 Watson, Kenneth DePencier, 1273
 Mesolite, 230
 Metamorphic mineral reactions, 39
 Metapelite, 240
 Metasomatism, 126, 1097
 Metavivianite, 230
 Mexico
 dacite, 1144
 ogdensburgite, 409
 opal, 959
 plagioclase, 1144
 wendwilsonite, 217
 Mica, 515, 995, 1122
 See also individual micas
 Mineral equilibria, 446
 Mineral nomenclature, 1031
 Minnesotaite, 724
 Miscorrelation of plutons, 1017
 Mixed-layer kaolinite -
 biotite, 353
 Modal analysis, 438, 441
 of granitoids, 433
 Modulated layer silicate structures, 724
 Modulated microstructure in dolomite, 188
 Montana
 davanite, 1014
 dumortierite, 170
 rose quartz, 170
 Montebasite, 617
 Monticellite, high-pressure structure of, 748
 Montmorillonite, 292, 935
 Montmorillonite-H₂O, 1170
 Monteregianite, 365
 Montroyalite, 1025
 Moolooite, 1025
 Morocco, wendwilsonite, 217
 Mössbauer spectroscopy
 goethite, 194
 mica, 102, 528
 silicate glasses BCR-1, RGM, K-2B, 792
 Motukoreaite, 1028
 Muscovite, 29, 39, 255, 528, 863, 935
 dehydroxylation, 537
 high-temperature, 537
 Rb analogue of, 551
 solid solutions, 716
 synthetic, 716
 Na-rich montmorillonite, 1170
 Na-4-mica (synthetic), 515
 NaAlSi₂O₆-CaMgSi₂O₆, 337
 NaAlSi₃O₈-KAlSi₃O₈, 491
 NaTi³⁺Si₂O₆, 89
 Na₂O-Al₂O₃-SiO₂-H₂, 481
 Na₂O-K₂O-CaO-FeO-Fe₂O₃-MgO-SiO₂-H₂O, 29
 NH₄-rich mica, 935
 Ni carbonate, 228
 Ni-Mg olivine, 965
 Ni-O-SiO₂, 280
 Ni₂SiO₄, 280
 Nambulite, 230
 Namibia, ribbeite, 213
 Natalyite, 223
 Natronambulite, 224
 NBS glasses, 1263
 Neotype, 1269
 Nepheline syenite, 173
 Neptunite, 89
 Neutron diffraction
 bertrandite, 979
 Ca₃Al₂(O₄H₄)₃, 756
 Nevada, vesuvianite, 1190
 New Hampshire, granite, 681
 New Jersey
 franklinfurnaceite, 812
 gageite, 382
 glaucocroite, 423
 kutnahorite, 319
 petedunnite, 157
 wendwilsonite, 217
 New mineral data (abstracts)
 cannizzarite, 229
 cesstibtantite, 1027
 cumengéite, 229
 fourmariérite, 229
 ganomalite, 1028
 giessenite, 229
 glaucocerinite, 1028
 izoklakeite, 229
 likasite, 1028
 metavivianite, 230
 motukoreaite, 1028
 nambulite, 230
 rancieite, 230
 rhodizite, 1028
 rosasite, 1028
 santafeite, 1028
 schneiderhöhnite, 1028
 wehrilite, 230
 New minerals (abstracts)
 baghdadite, 222
 cameronite, 1023
 chenite, 222, 1279
 chvaleticeite, 1023
 erlianite, 1023
 hochelagaite, 1024
 hydrodelhayelite, 1024
 izoklakeite, 222
 johnwalkite, 223
 kalininite, 223
 kashinite, 223
 kimrobinsonite, 1024
 kitaibelite, 1027
 kolarite, 1279
 laphamite, 1024
 mathewrogersite, 1025
 montroyalite, 1025
 moolooite, 1025
 natalyite, 223
 natronambulite, 224
 obradovicite, 1026
 orthoserpierite, 1026
 otjissimeite, 1026
 padřraite, 224
 protasite, 224

- New minerals (abstracts)--
 continued
 radhakrishnaite, 1279
 ramsbeckite, 225
 rapidcreekite, 225
 selenostephanite, 225
 slawsonite, 225
 sobolevite, 1279
 spheniscidite, 1027
 strolonsite, 226
 sztrokayite, 1027
 taikanite, 226
 ye'elimite, 226
 yecoraite, 1279
 zoubekite, 227
- New minerals (descriptions)
 blossomite, 397
 danielsite, 401
 esseneite, 148
 franklinfurnaceite, 812
 hentschelinite, 404
 lucasite-(Ce), 1006
 lyonsite, 1000
 perroudite, 1251, 1257
 petedunnite, 157
 reichenbachite, 404
 ribbeite, 213
 wendwilsonite, 217
- New minerals and mineral names,
 CNMMN policies on 1031
- New York, monticellite, 748
- New Zealand
 biotite, 353
 kaolinite, 353
- North Carolina, kutnahorite,
 319
- Norway, lepidolite, 1163
- Nuclear magnetic resonance
 spectroscopy
 ^{27}Al and ^{11}B in $2\text{PbO}\cdot\text{B}_2\text{O}_3$
 glasses, 788
 amphibole, pargasitic, 580
 beidellite, 935
 chlorite, 935
 fluorophlogopite, 935
 hectorite, 935
 Mg-rich vermiculite, 935
 montmorillonite, 935
 muscovite, 935
 NH_4 -rich mica, 935
 opal, 959, 1204
 paragonite, 935
 pyrophyllite, 935
 saponite, 935
 talc, 935
 vesuvianite, 1190
- Nybböite, synthetic Sc-F
 analogue, 959
- Obradovicite, 1026
 Ogdensburgite, 409
 Oil shale, 832
 Oklahoma, granitoids, 433
 Olivine, 1, 594, 902, 965
 See also individual olivines
- Omphacite, 126
 Omphacitic pyroxenes, 337
 Ongonite, 392
 Opal, 959, 1204
 Optical properties
- amblygonite, 617
 amphibole, pargasitic, 580
 brewsterite, 645
 chromite (zoned), 413
 cryptomelane-hollandite, 1211
 danielsite, 401
 double variation method, 1011
 esseneite, 148
 franklinfurnaceite, 812
 hentschelinite, 404
 immersion media, calibration
 of, 1011
 indicatrix, 612
 lucasite-(Ce), 1006
 lyonsite, 1000
 matrix solution of optical
 indicatrix parameters, 612
 mica, 515
 micas, Ba-rich, 995
 montebrasite, 617
 Na-4-mica (synthetic), 515
 ogdensburgite, 409
 opal, 959
 perroudite, 1251
 petedunnite, 157
 reichenbachite, 404
 ribbeite, 213
 wendwilsonite, 217
 See also New minerals
 (abstracts)
- Order-disorder
 A site in C_2/m amphiboles,
 949
 albite, 83, 507
 alkali feldspar, 491
 ashcroftine, 1176
 omphacitic pyroxenes, 337
 rhombohedral carbonates, 329
 (Sb,Bi,Pb) in sulfosalts, 821
 trioctahedral micas, 102
- Ore textures, 451
 Orthoamphibole, 1086
 Orthopyroxene, 902
 Orthoserpierite, 1026
 Ostwald ripening, 697
 Otjiseumite, 1026
- Oxygen buffers
 epidote + plagioclase +
 corundum + margarite +
 biotite + muscovite +
 fluid, 29
 quartz + fayalite + iron, 67
- Oxygen geobarometry, 879
 Oxygen in pyrrhotite, 599, 605,
 610
- Pd(Bi,Sb), 228
 Pt-C, 487
 Pt-group minerals, 1027
 Padēraite, 224
 Paragonite, 935
 Paramagnetic centers in opals,
 959
 Pargasite, 59
 Parsettensite, 724
 Partition coefficients of
 transition elements, 902
- Pegmatites
 alteration of wallrock, 1097
 topaz in, 392
- Pelitic schist, 671
 Pennsylvania
 "eastonite," 113
 illite, NH_4 in, 555
- Peridotite minerals, zoning in,
 902
 Peridotite xenoliths, 902
 Perovskite-type MgSiO_3 , 357
 Perroudite, 1251, 1257
 Peru, melanovanadite, 637
 Petedunnite, 157
 Phase-diagram calculations, 329
 Phase equilibria
 CaO-MnO-SiO₂-CO₂, 423
 computer program, 446, 861
 zincian pyroxenes, 157
- Phase transformation, opal, 959
- Phemister, James, memorial of,
 1275
- Phenakite, electrostatic poten-
 tial of, 769
- Phengite, 914
 Phlogopite, 59, 113, 345, 689
 Plagioclase, 1, 12, 29, 240,
 299, 879, 1086, 1097
 zoning in, 1131, 1144
 See also individual
 plagioclases
- Plumbian alunite, 178
 Plumbogummite, 178
 Polytypism
 in gageite, 382
 in lizardite, 943
- Portugal, muscovite, 537
 Proceedings for 1986, 659
 Protasite, 224, 1230
 Proton microprobe, 801
 Pseudomesolite (= mesolite),
 discredited mineral, 230
- Pyriboles, 345
 Pyrite, 1241
 Pyrophyllite, 935
 Pyroxene, 137
 geothermometry, 879
 See also individual pyroxenes
- Pyrrhotite, oxygen in, 599,
 605, 610
- Quantitative analysis, 832
 Quartz diorite, 879
 Quartz, 170, 273
 diffusion in, 739
 Quartz-fayalite-iron, 67
 Quartz-fayalite-magnetite, 67
- Rb metasomatism, 1097
 $\text{Rb}_2\text{O}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{H}_2\text{O}$, 551
 Radhakrishnaite, 1279
 Raman spectroscopy
 Mg_2SiO_4 , beta and gamma, 361
 H₂-bearing glasses, 481
 $\text{K}_2\text{Si}_4\text{O}_9$ (wadeite-type), 984
- Ramsayite, 173
 Ramsbeckite, 225
 Rancieite, 230
 Rapidcreekite, 225
 Rare-earth elements
 apatite, 801
 ashcroftine, 1176
 augite, 1263

- Rare-earth elements--continued
 NBS glasses, 1263
 rhyolite, 1122
 vesuvianite, 625
 whole rocks, 1263
 Rare-element pegmatite, 1097
 REEs in apatite, 801
 Reichenbachite, 404
 Reports for 1986
 Editor, 664
 Financial Advisory Committee, 663
 Proceedings, 659
 Secretary, 659
 Treasurer, 660
 Rhodizite, 1028
 Rhombohedral carbonates, 329
 Rhyolite, 1122
 topaz in, 392
 Ribbeite, 213
 Rietveld structure refinement,
 eckermannite (synthetic Sc-F
 analogue), 959
 Rosasite, 1028
 Rose quartz, 170
 Roselite, 217
 Rutile, 89
 (Sb,Bi,Pb) in sulfosalts, 821
 SiO₂-NaAlSi₃O₈-KAlSi₃O₈, 1056
 Sn mineral, 1027
 Sanidine in groszpydite nodule,
 973
 Santafeite, 1028
 Saponite, 935
 Scanning electron microscopy,
 amphibole, 580
 Schneiderhohnite, 1028
 Schorlomite, 89
 Scorodite solubility, 842, 845,
 849, 852
 Scotland
 biotite, 255
 brewsterite, 645
 chlorite, 255
 cordierite, 255
 muscovite, 255
 Selenostephanite, 225
 SEM, chlorite, 566
 Sericite, 914
 Serpentine, 113
 Silicate glasses BCR-1, RGM, K-
 2B, 792
 SIMS, quantitative analysis
 using, 1263
 Slawsonite, 225
 Sobolevite, 1279
 Solubility of C in Pt, 487
 Solution calorimetry in
 2PbO·B₂O₃ glasses, 788
 South Africa
 ambygonite, 617
 magnetoplumbite-type phase,
 633
 peridotite xenoliths, 902
 sanidine in groszpydite
 nodule, 973
 South Carolina, granitoid, 863
 South Dakota
 muscovite, 537
 tiptopite, 816
 Spain
 phlogopite, 689
 spinel, 689
 Sphalerite, 451
 Spheniscidite, 1027
 Spinel, 345, 689
 Stable isotopes
 chlorite, 566
 illite, 914
 phengite, 914
 sericite, 914
 Staurolite, 1086
 Stilpnomelane, 724
 Stronalsite, 226
 Structural distortions of 2:1
 layer silicates, 935
 Structure-energy calculations,
 507, 949
 Switzerland, izoklakeite, 821
 System
 CaCO₃-MgCO₃, 782
 CaCO₃-MgCO₃-MnCO₃, 319
 CaO-MgO-SiO₂-H₂O, 707
 CaO-MnO-SiO₂, 423
 Co-Si-O, 280
 HgS-Ag(Cl,Br,I), 1257
 K₂O-Al₂O₃-SiO₂-H₂O, 716
 K₂O-FeO-MgO-Al₂O₃-SiO₂-H₂O
 (KFMASH), 255
 montmorillonite-H₂O, 1170
 NaAlSi₂O₆-CaMgSi₂O₆, 337
 NaAlSi₃O₈-KAlSi₃O₈, 491
 Na₂O-Al₂O₃-SiO₂-H₂, 481
 Na₂O-K₂O-CaO-FeO-Fe₂O₃-MgO-
 SiO₂-H₂O, 29
 Ni-O-SiO₂, 280
 Pt-C, 487
 Rb₂O-Al₂O₃-SiO₂-H₂O, 551
 SiO₂-NaAlSi₃O₈-KAlSi₃O₈, 1056
 Sztrokayite, 1027
 Ti in minerals, 89
 Ti-rich biotite, 89
 Ti₂O₃, 89
 Taikanite, 226
 Talc, 935
 Texas
 cryolite, 1122
 cryptomelane-hollandite in
 halite, 1211
 zinnwaldite-polyolithionite
 micas, 1122
 Thermodynamic data
 alkali feldspar, 1
 Ca-exchanged montmorillonite,
 292
 (Ca,Mn)CO₃, 312
 CO₂ in albitic melt, 1071
 Co₂SiO₄, 280
 clinopyroxene, 1
 clinopyroxene, interfacial
 free energy for, 697
 computer program, 446, 861
 configurational entropy, 83
 dolomite, 782
 fayalite, 67
 garnet, 1
 K-exchanged montmorillonite,
 1170
 K₂Si₄O₉ (wadeite-type), 984
 Mg-exchanged montmorillonite,
 292
 MgAl₂O₄ - Fe₃O₄ -
 gamma-Fe₃O₄ spinels, 468
 magnesian calcite, 782
 magnetite, 67
 monticellite, 748
 montmorillonite, 292
 Na-rich montmorillonite, 1170
 Ni₂SiO₄, 280
 olivine, 1
 plagioclase, 1
 quartz, 273
 scorodite solubility, 842,
 845, 849, 852
 solution calorimetry in
 2PbO·B₂O₃ glasses, 788
 Zn minerals, 157
 Thermogravimetric analysis
 of oil shale, 832
 See also Differential thermal
 analysis
 Tiptopite, 816
 Titanite, 89
 Tomichite, 201
 Tonalite, 231
 Topaz rhyolite, 392
 Topaz, B and Li in, 392
 Topazite, 392
 Tourmaline synthesis and
 stability, 1097
 Trace elements
 As⁵⁺ in aqueous solution, 849
 apatite, REEs in, 801
 B in topaz, 392
 Ba-rich micas, 995
 Cs metasomatism, 1097
 cryptomelane, 429
 Fe³⁺ in aqueous solution, 849
 florencite, 429
 goethite, 429
 hydrous sulfates from mud
 volcano, 839
 Li metasomatism, 1097
 Li in topaz, 392
 lithiophorite, 429
 micas, Ba-rich, 995
 peridotite minerals, zoning
 in, 902
 pyrrhotite, oxygen in, 599,
 605, 610
 quartz, 739
 Rb metasomatism, 1097
 REEs in apatite, 801
 rhyolite, 1122
 topaz, B and Li in, 392
 Transition-metal trace ele-
 ments, using, 902
 Tremolite, 707
 Tremolite - magnesio-
 cummingtonite join, 707
 Tridymite modifications,
 coherent intergrowths of,
 167
 Tridymite, 167
 Trioctahedral micas, 102
 Truncated cuboctahedron, 1176
 Turner, Francis John, memorial
 of, 649

- Tuttle, Orville Frank, memorial of, 1020
- Tweto, Ogdén L., memorial of, 1271
- Twinned dolomite, 188
- Type specimen, holotype, 1269
- Uncertainties in geothermobarometry, 671
- Unit-cell data
- alkali feldspar, 491
 - amphibole, pargasitic, 580
 - antigorite, 113
 - ashcroftine, 1176
 - becquerelite, 1230
 - billietite, 1230
 - blossite, 397
 - $\text{Ca}_3\text{Al}_2(\text{O}_4\text{H}_4)_3$, 756
 - $\text{CaCoSi}_2\text{O}_6$, 375
 - $\text{CaNiSi}_2\text{O}_6$, 375
 - davanite, 1014
 - dolomite, 188, 782
 - eckermannite, synthetic In-F and Sc-F analogues, 959
 - esseneite, 148
 - franklinfurnaceite, 812
 - garnet, 766
 - grossular, 766
 - hentschelinite, 404
 - kutnahorite, 319
 - leiteite, 629
 - lepidolite, 1163
 - lizardite, 113, 943
 - lucasite-(Ce), 1006
 - lyonsite, 1000
 - $\text{MgAl}_2\text{O}_4 - \text{Fe}_3\text{O}_4 - \text{gamma-Fe}_8/3\text{O}_4$ spinels, 468
 - magnesian calcite, 782
 - magnetoplumbite-type phase, 633
 - melanovanadite, 637
 - melillite, 137
 - mica, 515
 - monteregianite, 365
 - muscovite, high-temperature, 537
 - muscovite, Rb analogue of, 551
 - Na-4-mica (synthetic), 515
 - Ni-Mg olivine, 965
 - nyböite, synthetic Sc-F analogue, 959
 - ogdensburgite, 409
 - perroudite, 1251, 1257
 - petedunnite, 157
 - phenakite, 769
 - phlogopite, 113
 - protasite, 1230
 - pyroxene, 137
 - ramsayite, 173
 - reichenbachite, 404
 - ribbeite, 213
 - tiptopite, 816
 - tridymite, 167
 - vesuvianite, REE-bearing, 625
 - wendwilsonite, 217
- Unnamed minerals
- Ba-Mn-U mineral, 228
 - Cu-bearing mineral, 228
 - Cu-Ni-Sn mineral, 227
 - $(\text{Cu}, \text{Ag})_2\text{As}$, 227
 - CuCr_2S_4 , 227
 - $\text{Cu}_2\text{Fe}_2\text{Sn}_3\text{S}_7$, 227
 - Cu_3Sn , 227
 - Cu_6Sn_5 , 227
 - Mn-Zn arsenate-hydroxide, 228
 - magnetoplumbite-type phase, 633
 - Ni carbonate, 228
 - $\text{Pd}(\text{Bi}, \text{Sb})$, 228
 - Pt-group minerals, 1027
 - Sn mineral, 1027
 - Zn carbonate, 228
 - Zn-Mg carbonate, 228
 - Zn-U mineral, 228
- Uranium minerals, secondary, 1230
- Ureyite, 126
- USSR
- davanite, 1014
 - nepheline syenite, 173
 - ramsayite, 173
- Utah
- topaz rhyolite, 392
 - topaz, 392
- Vesuvianite, 625, 1190
- Voltaite, 839
- Wadeite-type $\text{K}_2\text{Si}_4\text{O}_9$, 984
- Wallrock alteration, 1097
- Washington
- dacite, 1131
 - plagioclase, 1131
- Watanabe, Takeo, memorial of, 1277
- Watson, Kenneth DePencier, memorial of, 1273
- Wehrlite, 230
- Wendwilsonite, 217
- West Germany
- hentschelinite, 404
 - reichenbachite, 404
- Wyoming
- buchite, 137
 - esseneite, 148
 - montmorillonite, 292
 - phlogopite, 689
 - spinel, 689
- XANES spectroscopy, benitoite, 89
- Xenolith dehydration, 29
- X-ray diffraction data
- alkali feldspar, 491
 - amphibole, pargasitic, 580
 - barian tomichite, 201
 - becquerelite, 1230
 - billietite, 1230
 - blossite, 397
 - Ca-exchanged montmorillonite, 292
 - cryptomelane-hollandite, 1211
 - danielsite, 401
 - davanite, 1014
 - dolomite, 188
 - esseneite, 148
 - franklinfurnaceite, 812
 - granitoids, modal analysis of, 433
 - hentschelinite, 404
 - illite, 914
 - illite, NH_4 in, 555
 - indexing and refinement, 1018
 - kutnahorite, 319
 - lyonsite, 1000
 - $\text{MgAl}_2\text{O}_4 - \text{Fe}_3\text{O}_4 - \text{gamma-Fe}_8/3\text{O}_4$ spinels, 468
 - melanovanadite, 637
 - melillite, 137
 - Mg-exchanged montmorillonite, 292
 - modal analysis, 438, 441
 - modal analysis of granitoids, 433
 - monticellite, 748
 - montmorillonite, 292
 - muscovite, high-temperature, 537
 - muscovite, Rb analogue of, 551
 - muscovite, synthetic, 716
 - Ni-Mg olivine, 965
 - ogdensburgite, 409
 - oil shale, 832
 - opal, 959
 - perroudite, 1251, 1257
 - petedunnite, 157
 - phengite, 914
 - protasite, 1230
 - pyroxene, 137
 - quantitative analysis, 832
 - ramsayite, 173
 - reichenbachite, 404
 - ribbeite, 213
 - sericite, 914
 - tiptopite, 816
 - tomichite, 201
 - tridymite, 167
 - wendwilsonite, 217
- X-ray fluorescence data
- illite, 914
 - mafic schist, 1086
 - opal, 1204
 - phengite, 914
 - rhyolite, 1122
 - sericite, 914
- Yecoraite, 1279
- Ye'elimite, 226
- Zn carbonate, 228
- Zn minerals, 157
- Zn-Mg carbonate, 228
- Zn-U mineral, 228
- Zaire
- becquerelite, 1230
 - billietite, 1230
 - protasite, 1230
- Zincian pyroxenes, 157
- Zinnwaldite-polyolithionite micas, 1122
- Zoubekite, 227
- Zussmanite, 724