

AUTHOR INDEX, VOLUME 76, 1991

- Abbott, R.N., Jr., Burnham, C.W.: Energy calculations bearing on biopyriboles, 728
- Adams, S.J., Hawkes, G.E., Curzon, E.H.: A solid state ²⁹Si nuclear magnetic resonance study of opal and other hydrous silicas, 1863
- Ahn, J.H., Buseck, P.R.: Microstructures and fiber-formation mechanisms of crocidolite asbestos, 1467
- Ahn, J.H., Cho, M., Jenkins, D.M., Buseck, P.R.: Structural defects in synthetic tremolitic amphiboles, 1811
- Aines, R.D., *see* Rossman, G.R., 1153
- Akaogi, M., *see* McMillan, P.F., 354
- Allen, C.M.: Local equilibrium of mafic enclaves and granitoids of the Turtle pluton, southeast California: Mineral, chemical, and isotopic evidence, 574
- Andersen, D.J., Bishop, F.C., Lindsley, D.H.: Internally consistent solution models for Fe-Mg-Mn-Ti oxides: Fe-Mg-Ti oxides and olivine, 427
- Anderson, A.T., Jr.: Hourglass inclusions: Theory and application to the Bishop Rhyolitic Tuff, 530
- Angel, R.J., Burnham, C.W.: Pyroxene-pyroxenoid polysomatism revisited: A clarification, 900
- Angel, R.J., McMullan, R.K., Prewitt, C.T.: Substructure and superstructure of mullite by neutron diffraction, 332
- Anovitz, L.M.: Al zoning in pyroxene and plagioclase: Window on late prograde to early retrograde *P-T* paths in granulite terranes, 1328
- Apps, J.A., *see* Hemingway, B.S., 445
- Arita, K., *see* Maeda, J., 1674
- Armbruster, T., *see* Wenger, M., 1897
- Armbruster, T., Gunter, M.E.: Stepwise dehydration of heulandite-clinoptilolite from Succor Creek, Oregon, U.S.A.: A single-crystal X-ray study at 100 K, 1872
- Asami, M., *see* Grew, E.S., 1990
- Bailey, S.W.: Acceptance of the Roebling Medal of the Mineralogical Society of America for 1990, 1738
- Bakas, T., *see* Coey, J.M.D., 1905
- Ball, N.A., *see* Hawthorne, F.C., 370, 1836
- Bamba, M., *see* Maeda, J., 1674
- Banerjee, H., *see* Dasgupta, S., 241
- Banfield, J.F., Veblen, D.R.: The structure and origin of Fe-bearing platelets in metamorphic rutile, 113
- Banfield, J.F., Veblen, D.R., Smith, D.J.: The identification of naturally occurring TiO₂(B) by structure determination using high-resolution electron microscopy, image simulation, and distance-least-squares refinement, 343
- Barber, J.P., *see* Yardley, B.W.D., 848
- Barnes, C.G., Ensenat, S.E., Hoover, J.D.: Mineralogy and geochemistry of Eocene intrusive rocks and their enclaves, El Paso area, Texas and New Mexico, 1306
- Barnett, D.E., Chamberlain, C.P.: Relative scales of thermal- and fluid infiltration-driven metamorphism in fold nappes, New England, U.S.A., 713
- Barron, B.R., *see* Smith, D., 1950
- Barton, P.B., Jr., *see* Toulmin, P., III, 1038
- Bayliss, P.: Crystal chemistry and crystallography of some minerals in the tetradymite group, 257
- Beaufort, D., *see* Patrier, P., 602
- Bell, D.R., *see* Geiger, C.A., 49
- Benimoff, A.I., Benoit, P.H., Moore, P.B., Sclar, C.B.: A unique manganese-rich silicic edenite in the Grenville marble, Fowler, New York, 1431
- Benoit, P.H., *see* Benimoff, A.I., 1431
- Bény, J., *see* Della Ventura, G., 1134
- Berman, R.G., *see* Mäder, U.K., 1547
- Berman, R.G., Koziol, A.M.: Ternary excess properties of grossular-pyropo-almandine garnet and their influence in geothermobarometry, 1223
- Bertram, M.A., Mackenzie, F.T., Bishop, F.C., Bischoff, W.D.: Influence of temperature on the stability of magnesian calcite, 1889
- Besenbacher, F., *see* Lindgreen, H., 1218
- Bhattacharya, P.K., *see* Dasgupta, S., 241
- Bigi, S., Brigatti, M.F., Capedri, S.: Crystal chemistry of Fe- and Cr-rich warwickite, 1380
- Bischoff, W.D., *see* Bertram, M.A., 1889
- Bishop, F.C., *see* Andersen, D.J., 427
- Bishop, F.C., *see* Bertram, M.A., 1889
- Bodnar, R.J., *see* Hall, D.L., 1344
- Bohlen, S.R., Montana, A., Kerrick, D.M.: Precise determinations of the equilibria kyanite \rightleftharpoons sillimanite and kyanite \rightleftharpoons andalusite and a revised triple point for Al₂SiO₅ polymorphs, 677
- Bohlen, S.R., Peacor, D.R., Lawrence, V.: Report of the Editors for 1990, 1750
- Bonaccorsi, E., *see* Merlino, S., 2003
- Borisovskiy, S.Y., *see* Grew, E.S., 1061
- Boronikhin, V.A., *see* Grew, E.S., 1061
- Bose, M.R., *see* Hovis, G.L., 913
- Brady, J.B., *see* Burnham, C.W., 685
- Brigatti, M.F., *see* Bigi, S., 1380

- Brigatti, M.F., Galli, E., Poppi, L.: Effect of Ti substitution in biotite-*IM* crystal chemistry, 1174
- Buchwald, V.F., *see* Post, J.E., 272
- Bukowinski, M.S.T., *see* Stixrude, L., 1761
- Burke, E.A.J., *see* Jambor, J.L., 2020
- Burkov, K.A., *see* Waizumi, K., 1884
- Burnham, C.W.: LCLSQ: Lattice parameter refinement using correction terms for systematic errors, 663
- Burnham, C.W., *see* Abbott, R.N., Jr., 728
- Burnham, C.W., *see* Angel, R.J., 900
- Burnham, C.W., Brady, J.B.: Introduction to the Thompson issue, 685
- Burns, R.G., Dyar, M.D.: Crystal chemistry and Mössbauer spectra of babingtonite, 892
- Burt, D.M.: Vectors, components, and minerals, 1033
- Buseck, P.R., *see* Ahn, J.H., 1467, 1811
- Buseck, P.R., *see* Self, P.G., 283
- Calas, G., *see* Farges, F., 60
- Calas, G., *see* Galois, L., 1777
- Cameron, E.N.: Presentation of the Roebling Medal of the Mineralogical Society of America for 1990 to Sturges W. Bailey, 1736
- Cameron, M.: Report of the Secretary for 1990, 1746
- Cameron, M., *see* Hughes, J.M., 1165, 1857
- Candela, P.A.: Physics of aqueous phase evolution in plutonic environments, 1081
- Capedri, S., *see* Bigi, S., 1380
- Caporuscio, F.A., *see* Oberti, R., 1141
- Carlson, W.D., Johnson, C.D.: Coronal reaction textures in garnet amphibolites of the Llano Uplift, 756
- Carpenter, M.A.: Mechanisms and kinetics of Al-Si ordering in anorthite: I. Incommensurate structure and domain coarsening, 1110
- Carpenter, M.A.: Mechanisms and kinetics of Al-Si ordering in anorthite: II. Energetics and a Ginzburg-Landau rate law, 1120
- Carroll, G.W., *see* Griffin, B.J., 295
- Carroll, G.W., *see* Rock, N.M.S., 2013
- Casey, W.H., Westrich, H.R., Holdren, G.R.: Dissolution rates of plagioclase at pH = 2 and 3, 211
- Cassidy, K.F., *see* Cawthorn, R.G., 561
- Cawthorn, R.G., de Wet, M., Hatton, C.J., Cassidy, K.F.: Ti-rich chromite from the Mount Ayliff Intrusion, Transkei: Further evidence for high Ti tholeiitic magma, 561
- Černý, P., *see* Hawthorne, F.C., 1836
- Chacko, T., *see* Peterson, J.W., 470
- Chakoumakos, B.C., *see* Murakami, T., 1510
- Chakraborti, S., *see* Dasgupta, S., 241
- Chamberlain, C.P., *see* Barnett, D.E., 713
- Cho, M., *see* Ahn, J.H., 1811
- Cho, M., Ernst, W.G.: An experimental determination of calcic amphibole solid solution along the join tremolite-tschermakite, 985
- Chopelas, A.: Single crystal Raman spectra of forsterite, fayalite, and monticellite, 1101
- Chopelas, A., *see* Hofmeister, A.M., 880
- Circone, S., Navrotsky, A., Kirkpatrick, R.J., Graham, C.M.: Substitution of $^{16,4}\text{Al}$ in phlogopite: Mica characterization, unit-cell variation, ^{27}Al and ^{29}Si MAS-NMR spectroscopy, and Al-Si distribution in the tetrahedral sheet, 1485
- Clare, A.K., *see* Jenkins, D.M., 458
- Clayton, R.N., *see* Karlsson, H.R., 189
- Clowe, C.A., *see* Phillips, M.W., 1502
- Coey, J.M.D., Bakas, T., Guggenheim, S.: Mössbauer spectra of minnesotaite and ferroan talc, 1905
- Cohen, R.E.: Bonding and elasticity of stishovite SiO_2 at high pressure: Linearized augmented plane wave calculations, 733
- Cong, X.-D., *see* Kirkpatrick, R.J., 673
- Congdon, R.D., Nash, W.P.: Eruptive pegmatite magma: Rhyolite of the Honeycomb Hills, Utah, 1261
- Cordier, P., Doukhan, J.C.: Water speciation in quartz: A near infrared study, 361
- Craig, J.R., *see* Hall, D.L., 1344
- Criddle, A., *see* Dunn, P.J., 1708
- Crock, J.G., *see* Foord, E.E., 1998
- Crowley, K.D., *see* Hughes, J.M., 1857
- Curzon, E.H., *see* Adams, S.J., 1863
- Czamanske, G.K., Zientek, M.L., Manning, C.E.: Low-K granophyres of the Stillwater Complex, Montana, 1646
- Dahl, R., *see* Ohnenstetter, D., 1694
- Dasgupta, S., Chakraborti, S., Sengupta, P., Bhattacharya, P.K., Banerjee, H., Roy, S., Fukuoka, M.: Manganese-rich minerals of the pumpellyite group from the Precambrian Sausar Group, India, 241
- Davis, A.M., *see* Steele, I.M., 1985
- Delbove, F., *see* Hovis, G.L., 913
- Della Ventura, G., Robert, J.-L., Bény, J.: Tetrahedrally coordinated Ti^{4+} in synthetic Ti-rich potassic richterite: Evidence from XRD, FTIR, and Raman studies, 1134
- Deubener, J., Sternitzke, M., Müller, G.: Feldspars MAlSi_3O_8 (M = H, Li, Ag) synthesized by low-temperature ion exchange, 1620
- de Wet, M., *see* Cawthorn, R.G., 561
- De Yoreo, J.J., *see* Lange, R.A., 904
- Dickson, F.W., *see* McCormack, J.K., 1715
- Dimitrijević, R., *see* Sen Gupta, P.K., 1400
- Dingwell, D.B.: Redox viscometry of some Fe-bearing silicate melts, 1560
- Dodson, M.H., *see* Wartho, J., 1446

- Dollase, W.A., *see* Reeder, R.J., 661
- Donelick, R.A.: Crystallographic orientation dependence of mean etchable fission track length in apatite: An empirical model and experimental observations, 83
- Doukhan, J.C., *see* Cordier, P., 361
- Dove, M.T., *see* Winkler, B., 313
- Downs, R.T., *see* Gunter, M.E., 293
- Drake, B., Hellmann, R.: Atomic force microscopy imaging of the albite (010) surface, 1773
- Duffield, W.A., *see* Webster, J.D., 1628
- Dujon, S.-C., Lagache, M., Sebastian, A.: Experimental study of Li-rich granitic pegmatites: Part III. Thermodynamic implications of the experiments in the Na-Li-Cs system: Consequences for the properties of solutes, 1614
- Dunn, P.J.: Notices, 308
- Dunn, P.J., *see* Grice, J.D., 1711
- Dunn, P.J., Grice, J.D., Criddle, A., Stanley, C.: Cianciulliite, a new magnesium manganese zinc hydroxide from Franklin, New Jersey, 1708
- Dupree, R., *see* Kohn, S.C., 309
- Dutrow, B.: The effects of Al and vacancies on Li substitution in iron staurolite: A synthesis approach, 42
- Dutrow, B.L., *see* Dyar, M.D., 27
- Dutrow, B.L., *see* Holdaway, M.J., 1910
- Dyar, M.D., *see* Burns, R.G., 892
- Dyar, M.D., *see* Guidotti, C.V., 161
- Dyar, M.D., *see* Holdaway, M.J., 1910
- Dyar, M.D., Perry, C.L., Rebbert, C.R., Dutrow, B.L., Holdaway, M.J., Lang, H.M.: Mössbauer spectroscopy of synthetic and naturally occurring staurolite, 27
- Eckert, J.O., Jr., Newton, R.C., Kleppa, O.J.: The ΔH of reaction and recalibration of garnet-pyroxene-plagioclase-quartz geobarometers in the CMAS system by solution calorimetry, 148
- Eggleston, C.M., *see* Johnsson, P.A., 1442
- Elbert, D.C., *see* Robinson, P., 689
- Ensenat, S.E., *see* Barnes, C.G., 1306
- Ercit, T.S., *see* Hawthorne, F.C., 370
- Ernst, W.G., *see* Cho, M., 985
- Essene, E.J., *see* Grew, E.S., 1990
- Evans, H.T., Jr., *see* Hemingway, B.S., 1597
- Ewing, R.C., *see* Hawthorne, F.C., 370
- Ewing, R.C., *see* Murakami, T., 1510
- Eymery, J.-P., *see* Patrier, P., 602
- Farges, F., Calas, G.: Structural analysis of radiation damage in zircon and thorite: An X-ray absorption spectroscopic study, 60
- Ferry, J.M., *see* Léger, A., 1002
- Ferry, J.M., *see* Rumble, D., III, 857
- Finger, L.W., Hazen, R.M., Prewitt, C.T.: Crystal structures of $Mg_{12}Si_4O_{19}(OH)_2$ (phase B) and $Mg_{14}Si_5O_{24}$ (phase AnhB), 1
- Fiore, S., Laviano, R.: Brushite, hydroxylapatite, and taranakite from Apulian caves (southern Italy): New mineralogical data, 1722
- Fitzpatrick, J.J., *see* Foord, E.E., 1998
- Fleet, M.E.: Structures of low gallium albite ($NaGaSi_3O_8$) and intermediate germanium albite ($NaAlGe_3O_8$): Tetrahedral-site ordering in sodium feldspar, 92
- Fleet, M.E., *see* Hawthorne, F.C., 370
- Fleet, M.E., *see* Stone, W.E., 1363
- Florence, F.P., *see* Spear, F.S., 2009
- Fockenber, T., Schreyer, W.: Yoderite, a mineral with essential ferric iron: Its lack of occurrence in the system $MgO-Al_2O_3-SiO_2-H_2O$, 1052
- Foitt, F.F., Jr.: Review of *Manual of Mineralogy*, 20th edition. By C. Klein and C.S. Hurlbut, Jr., 1759
- Foley, J., *see* McMillan, P.F., 354
- Foord, E.E., Martin, R.F., Fitzpatrick, J.J., Taggart, J.E., Jr., Crock, J.G.: Boromuscovite, a new member of the mica group, from the Little Three mine pegmatite, Ramona district, San Diego County, California, 1998
- Fritsch, E., *see* Rossman, G.R., 1479
- Fukuoka, M., *see* Dasgupta, S., 241
- Gaba, R., *see* Hawthorne, F.C., 370
- Galbreath, K.C., *see* Papike, J.J., 1662
- Galli, E., *see* Brigatti, M.F., 1174
- Galoisy, L., Calas, G.: Spectroscopic evidence for five-coordinated Ni in $CaNiSi_2O_6$ glass, 1777
- García-González, T., *see* Wiewióra, A., 647
- Garnæs, J., *see* Lindgreen, H., 1218
- Gault, R.A., *see* Grice, J.D., 1701
- Geiger, C.A., *see* Wenger, M., 1897
- Geiger, C.A., Langer, K., Bell, D.R., Rossman, G.R., Winkler, B.: The hydroxide component in synthetic pyrope, 49
- Ghiorso, M.S., *see* Sack, R.O., 827
- Gil Ibarguchi, J.I., *see* Madon, M., 1249
- Gil Ibarguchi, J.I., Mendia, M., Girardeau, J.: Mg- and Cr-rich staurolite and Cr-rich kyanite in high-pressure ultrabasic rocks (Cabo Ortegal, northwestern Spain), 501
- Girardeau, J., *see* Gil Ibarguchi, J.I., 501
- Girardeau, J., *see* Madon, M., 1249
- Gould, S.A.C., *see* Lindgreen, H., 1218
- Graham, C.M., *see* Circone, S., 1485
- Grambling, J.A., *see* Holdaway, M.J., 1910
- Greggor, R.B., *see* Hawthorne, F.C., 370
- Grew, E.S., *see* Jambor, J.L., 299
- Grew, E.S., *see* Klaska, R., 1824

- Grew, E.S., Essene, E.J., Peacor, D.R., Su, S.-C., Asami, M.: Dissakisite-(Ce), a new member of the epidote group and the Mg analogue of allanite-(Ce), from Antarctica, 1990
- Grew, E.S., Pertsev, N.N., Boronikhin, V.A., Borisovskiy, S.Y., Yates, M.G., Marquez, N.: Serendibite in the Tayozhnoye deposit of the Aldan Shield, eastern Siberia, U.S.S.R., 1061
- Grice, J.D., *see* Dunn, P.J., 1708
- Grice, J.D., *see* Hawthorne, F.C., 1836
- Grice, J.D., Dunn, P.J.: The crystal structure of cianciulliite, $Mn(Mg,Mn)_2Zn_2(OH)_{10} \cdot 2-4H_2O$, 1711
- Grice, J.D., Nickel, E.H., Gault, R.A.: Ashburtonite, a new bicarbonate-silicate mineral from Ashburton Downs, Western Australia: Description and structure determination, 1701
- Griffin, B.J., Muhling, J.R., Carroll, G.W., Rock, N.M.S.: RECALC2—A package for processing mineral analyses produced by electron microprobe, 295
- Groat, L.A., *see* Hawthorne, F.C., 370
- Grover, J.: Review of *Minerals and Rocks: Exercises in Crystallography, Mineralogy, and Hand Specimen Petrology*. By Cornelis Klein, 1759
- Guggenheim, S., *see* Coey, J.M.D., 1905
- Guggenheim, S., *see* Miller, A.K., 106
- Guggenheim, S., *see* Tyrna, P.L., 266
- Guidotti, C.V., Dyar, M.D.: Ferric iron in metamorphic biotite and its petrologic and crystallochemical implications, 161
- Guidotti, C.V., Teichmann, F., Henry, D.J.: Chlorite-bearing polymetamorphic metapelites in the Rangeley area, Maine: Evidence for equilibrium assemblages, 867
- Guise, P.G., *see* Wartho, J., 1446
- Gunter, M.E., *see* Armbruster, T., 1872
- Gunter, M.E., Downs, R.T.: Drill: A computer program to aid in building ball and spoke crystal models, 293
- Halden, N.M., *see* Hawthorne, F.C., 370
- Hall, D.L., Bodnar, R.J., Craig, J.R.: Evidence for postentrapment diffusion of hydrogen into peak metamorphic fluid inclusions from the massive sulfide deposits at Ducktown, Tennessee, 1344
- Hansen, P.L., *see* Lindgreen, H., 1218
- Hansma, P.K., *see* Lindgreen, H., 1218
- Hatton, C.J., *see* Cawthorn, R.G., 561
- Hawkes, G.E., *see* Adams, S.J., 1863
- Hawthorne, F.C., Groat, L.A., Raudsepp, M., Ball, N.A., Kimata, M., Spike, F.D., Gaba, R., Halden, N.M., Lumpkin, G.R., Ewing, R.C., Gregor, R.B., Lytle, F.W., Ercit, T.S., Rossman, G.R., Wicks, F.J., Ramik, R.A., Sherriff, B.L., Fleet, M.E., McCammon, C.: Alpha-decay damage in titanite, 370
- Hawthorne, F.C., Kimata, M., Černý, P., Ball, N., Rossman, G.R., Grice, J.D.: The crystal chemistry of the milarite-group minerals, 1836
- Hazen, R.M., *see* Finger, L.W., 1
- Hazen, R.M., *see* Jeanloz, R., 1765
- Heaney, P.J., Veblen, D.R.: Observation and kinetic analysis of a memory effect at the α - β quartz transition, 1459
- Heaney, P.J., Veblen, D.R.: Observations of the α - β phase transition in quartz: A review of imaging and diffraction studies and some new results, 1018
- Hellmann, R., *see* Drake, B., 1773
- Hemingway, B.S.: Thermodynamic properties of anthophyllite and talc: Corrections and discussion of calorimetric data, 1589
- Hemingway, B.S., Hewitt, D.A., James, O.B., Stout, J.H., Whitney, J.A.: Report of the Financial Advisory Committee for 1990, 1750
- Hemingway, B.S., Robie, R.A., Apps, J.A.: Revised values for the thermodynamic properties of boehmite, $AlO(OH)$, and related species and phases in the system Al-H-O, 445
- Hemingway, B.S., Robie, R.A., Evans, H.T., Jr., Kerrick, D.M.: Heat capacities and entropies of sillimanite, fibrolite, andalusite, kyanite, and quartz and the Al_2SiO_5 phase diagram, 1597
- Hemley, R.J.: Acceptance of the Mineralogical Society of America Award for 1990, 1741
- Henderson, C.M.B., *see* Kohn, S.C., 309
- Henry, D.J., *see* Guidotti, C.V., 867
- Herrington, C.R., *see* McGee, J.J., 681
- Hesse, R., *see* Vali, H., 1973
- Hewitt, D.A., *see* Hemingway, B.S., 1750
- Hirschmann, M.: Thermodynamics of multicomponent olivines and the solution properties of $(Ni,Mg,Fe)_2SiO_4$ and $(Ca,Mg,Fe)_2SiO_4$ olivines, 1232
- Hitterman, R.L., *see* Peterson, R.C., 1455
- Hochella, M.F., Jr., *see* Johnsson, P.A., 1442
- Hoering, T.C., *see* Rumble, D., III, 857
- Hofmeister, A.M., Chopelas, A.: Thermodynamic properties of pyrope and grossular from vibrational spectroscopy, 880
- Holdaway, M.J., *see* Dyar, M.D., 27
- Holdaway, M.J., Mukhopadhyay, B., Dyar, M.D., Dutrow, B.L., Rumble, D., III, Grambling, J.A.: A new perspective on staurolite crystal chemistry: Use of stoichiometric and chemical end-members for a mole fraction model, 1910
- Holdren, G.R., *see* Casey, W.H., 211
- Holland, T.J.B., *see* Jenkins, D.M., 458
- Hollocher, K.: Prograde amphibole dehydration reactions during high-grade regional metamorphism, central Massachusetts, U.S.A., 956

- Hoover, J.D., *see* Barnes, C.G., 1306
- Hossain, M.B., *see* Sen Gupta, P.K., 1400
- Housh, T.B., Luhr, J.F.: Plagioclase-melt equilibria in hydrous systems, 477
- Hovis, G.L., Delbove, F., Bose, M.R.: Gibbs energies and entropies of K-Na mixing for alkali feldspars from phase equilibrium data: Implications for feldspar solvi and short-range order, 913
- Howell, D., *see* Kirkpatrick, R.J., 673
- Hughes, J.M., Cameron, M., Crowley, K.D.: Ordering of divalent cations in the apatite structure: Crystal structure refinements of natural Mn- and Sr-bearing apatite, 1857
- Hughes, J.M., Cameron, M., Mariano, A.N.: Rare-earth-element ordering and structural variations in natural rare-earth-bearing apatites, 1165
- Inoue, A., Utada, M.: Smectite-to-chlorite transformation in thermally metamorphosed volcanoclastic rocks in the Kamikita area, northern Honshu, Japan, 628
- Ito, E., *see* Kirkpatrick, R.J., 673
- Jambor, J.L., Burke, E.A.J.: New mineral names, 2020
- Jambor, J.L., Grew, E.S.: New mineral names, 299
- Jambor, J.L., Puziewicz, J.: New mineral names, 665, 1728
- Jambor, J.L., Vanko, D.A.: New mineral names, 1434
- James, O.B., *see* Hemingway, B.S., 1750
- Jamtveit, B.: Oscillatory zonation patterns in hydrothermal grossular-andradite garnet: Nonlinear dynamics in regions of immiscibility, 1319
- Jeanloz, R., Hazen, R.M.: Finite-strain analysis of relative compressibilities: Application to the high-pressure wadsleyite phase as an illustration, 1765
- Jenkins, D.M., *see* Ahn, J.H., 1811
- Jenkins, D.M., Holland, T.J.B., Clare, A.K.: Experimental determination of the pressure-temperature stability field and thermochemical properties of synthetic tremolite, 458
- Joesten, R.: Local equilibrium in metasomatic processes revisited: Diffusion-controlled growth of chert nodule reaction rims in dolomite, 743
- Johnson, C.D., *see* Carlson, W.D., 756
- Johnsson, P.A., Eggleston, C.M., Hochella, M.F., Jr.: Imaging molecular-scale structure and microtopography of hematite with the atomic force microscope, 1442
- Jones, R.H., MacKenzie, W.S.: Liquidus phase relationships in the system $KAlSi_3O_8$ - $CaAl_2Si_2O_8$ - $KAlSiO_4$ at $P(H_2O) = 5$ kbar, 200
- Kampf, A.R.: Grandreefite, $Pb_2F_2SO_4$: Crystal structure and relationship to the lanthanide oxide sulfates, $Ln_2O_2SO_4$, 278
- Kanzaki, M., *see* Xue, X., 8
- Karlsson, H.R., Clayton, R.N.: Analcime phenocrysts in igneous rocks: Primary or secondary?, 189
- Keith, T.E.C., *see* Papike, J.J., 1662
- Kerrick, D.M., *see* Bohlen, S.R., 677
- Kerrick, D.M., *see* Hemingway, B.S., 1597
- Kesler, S.E.: Review of *Sediment-hosted Stratiform Copper Deposits*. By R.W. Boyle, A.C. Brown, E.C. Jowett, and R.V. Kirkham, 1441
- Kim, S.J.: New characterization of takanelite, 1426
- Kimata, M., *see* Hawthorne, F.C., 370, 1836
- Kinnunen, K.A.: Three-dimensional microscope image using anaglyphic filters: A new aid to fluid inclusion petrography, 657
- Kirkpatrick, R.J., *see* Circone, S., 1485
- Kirkpatrick, R.J., Howell, D., Phillips, B.L., Cong, X.-D., Ito, E., Navrotsky, A.: MAS NMR spectroscopic study of $Mg^{29}SiO_3$ with the perovskite structure, 673
- Kisch, H.J., van den Kerkhof, A.M.: CH_4 -rich inclusions from quartz veins in the Valley-and-Ridge province and the anthracite fields of the Pennsylvania Appalachians, 230
- Klaska, R., Grew, E.S.: The crystal structure of B-free kornerepine: Conditions favoring the incorporation of variable amounts of B through $[^4]B \rightleftharpoons [^4]Si$ substitution in kornerepine, 1824
- Kleppa, O.J., *see* Eckert, J.O., Jr., 148
- Knitter, R., *see* Kroll, H., 928
- Kohler, E.E., *see* Vali, H., 1973
- Kohn, M.J., *see* Spear, F.S., 2009
- Kohn, M.J., Spear, F.S.: Error propagation for barometers: 1. Accuracy and precision of experimentally located end-member reactions, 128
- Kohn, M.J., Spear, F.S.: Error propagation for barometers: 2. Application to rocks, 138
- Kohn, S.C., Dupree, R., Mortuza, M.G., Henderson, C.M.B.: NMR evidence for five- and six-coordinated aluminum fluoride complexes in F-bearing aluminosilicate glasses, 309
- Koster van Groos, A.F., *see* Miller, A.K., 106
- Koster van Groos, A.F., *see* van der Laan, S.R., 1940
- Kozioł, A.M., *see* Berman, R.G., 1223
- Kroll, H., Knitter, R.: Al,Si exchange kinetics in sanidine and anorthoclase and modeling of rock cooling paths, 928
- Kuehner, S.M., *see* Peterson, J.W., 470
- Lagache, M., *see* Dujon, S.-C., 1614
- Lagache, M., *see* Sebastian, A., 205
- Lagache, M., Sebastian, A.: Experimental study of Li-rich granitic pegmatites: Part II. Spodumene + albite + quartz equilibrium, 611

- Lager, G.A., *see* Peterson, R.C., 1455
 Lægsgaard, E., *see* Lindgreen, H., 1218
 Lang, H.M., *see* Dyar, M.D., 27
 Lange, R.A., De Yoreo, J.J., Navrotsky, A.: Scanning calorimetric measurement of heat capacity during incongruent melting of diopside, 904
 Langer, K., *see* Geiger, C.A., 49
 Laul, J.C., *see* Papike, J.J., 1662
 Laviano, R., *see* Fiore, S., 1722
 Lawrence, V., *see* Bohlen, S.R., 1750
 Léger, A., Ferry, J.M.: Highly aluminous hornblende from low-pressure metacarbonates and a preliminary thermodynamic model for the Al content of calcic amphibole, 1002
 Leoni, L., *see* Merlino, S., 2003
 Le Page, Y., *see* Moore, P.B., 1408
 Leshendok, M.P., *see* McCormack, J.K., 1715
 Leslie, M., *see* Winkler, B., 313
 Lindgreen, H., Garnæs, J., Hansen, P.L., Besenbacher, F., Lægsgaard, E., Stensgaard, I., Gould, S.A.C., Hansma, P.K.: Ultrafine particles of North Sea illite/smectite clay minerals investigated by STM and AFM, 1218
 Lindsley, D.H.: Presentation of the Distinguished Public Service Medal for 1990 to Malcolm Ross, 1743
 Lindsley, D.H., *see* Andersen, D.J., 427
 Longhi, J.: Comparative liquidus equilibria of hypersthene-normative basalts at low pressure, 785
 Loucks, R.R.: The bound interlayer H₂O content of potassic white micas: Muscovite-hydromuscovite-hydropyrophyllite solutions, 1563
 Luhr, J.F., *see* Housh, T.B., 477
 Lumpkin, G.R., *see* Hawthorne, F.C., 370
 Lumpkin, G.R., *see* Murakami, T., 1510
 Lytle, F.W., *see* Hawthorne, F.C., 370
 a Carlin-type gold deposit in China, 1964
 Mariano, A.N., *see* Hughes, J.M., 1165
 Marquez, N., *see* Grew, E.S., 1061
 Martin, R.F., *see* Foord, E.E., 1998
 Masuda, H., *see* Waizumi, K., 1884
 Matesanz, E., *see* Rausell-Colom, J.A., 1373
 McCammon, C., *see* Hawthorne, F.C., 370
 McCormack, J.K., Dickson, F.W., Leshendok, M.P.: Radtkeite, Hg₃S₂Cl₂, a new mineral from the McDermitt mercury deposit, Humboldt County, Nevada, 1715
 McGee, J.J., Slack, J.F., Herrington, C.R.: Boron analysis by electron microprobe using MoB₄C layered synthetic crystals, 681
 McMillan, P.F., *see* Xue, X., 8
 McMillan, P.F., Akaogi, M., Sato, R.K., Poe, B., Foley, J.: Hydroxyl groups in β-Mg₂SiO₄, 354
 McMullan, R.K., *see* Angel, R.J., 332
 McSween, H.Y., Jr., *see* Vyhnal, C.R., 176
 Mellini, M., *see* Merlino, S., 2003
 Menard, T., *see* Spear, F.S., 2009
 Mendia, M., *see* Gil Ibarguchi, J.I., 501
 Merlino, S., Mellini, M., Bonaccorsi, E., Pasero, M., Leoni, L., Orlandi, P.: Pitiglianoite, a new feldspathoid from southern Tuscany, Italy: Chemical composition and crystal structure, 2003
 Meunier, A., *see* Patrier, P., 602
 Miller, A.K., Guggenheim, S., Koster van Groos, A.F.: The incorporation of "water" in a high-pressure 2:1 layer silicate: A high pressure differential thermal analysis of the 10 Å phase, 106
 Mills, J.G., Jr., Rose, T.P.: Manganoan fayalite [(Fe,Mn)₂SiO₄]: A new occurrence in rhyolitic ash-flow tuff, southwestern Nevada, U.S.A., 288
 Montana, A., *see* Bohlen, S.R., 677
 Moore, J.M., *see* Niven, M.L., 246
 Moore, P.B., *see* Benimoff, A.I., 1431
 Moore, P.B., Sen Gupta, P.K., Le Page, Y.: The remarkable lāngbanite structure type: Crystal structure, chemical crystallography, and relation to some other cation close-packed structures, 1408
 Moore, P.B., Sen Gupta, P.K., Shen, J., Schlemper, E.O.: The kentrolite-melanotekite series, 4Pb₂(Mn, Fe)₂³⁺O₂[Si₂O₇]: Chemical crystallographic relations, lone-pair splitting, and cation relation to 8URe₂, 1389
 Morrison, J.: Compositional constraints on the incorporation of Cl into amphiboles, 1920
 Mortuza, M.G., *see* Kohn, S.C., 309
 Muhling, J.R., *see* Griffin, B.J., 295
 Mukhopadhyay, B.: Garnet-clinopyroxene geobarometry: The problems, a prospect, and an approximate solution with some applications, 512

- Mukhopadhyay, B., *see* Holdaway, M.J., 1910
 Müller, G., *see* Deubener, J., 1620
 Murakami, T., Chakoumakos, B.C., Ewing, R.C., Lumpkin, G.R., Weber, W.J.: Alpha-decay event damage in zircon, 1510
 Murata, M., *see* Maeda, J., 1674
- Nakada, S.: Magmatic processes in titanite-bearing dacites, central Andes of Chile and Bolivia, 548
 Nash, W.P., *see* Congdon, R.D., 1261
 Navrotsky, A., *see* Circone, S., 1485
 Navrotsky, A., *see* Kirkpatrick, R.J., 673
 Navrotsky, A., *see* Lange, R.A., 904
 Nekvasil, H.: Ascent of felsic magmas and formation of rapakivi, 1279
 Nell, J., Wood, B.J.: High-temperature electrical measurements and thermodynamic properties of Fe_3O_4 - FeCr_2O_4 - MgCr_2O_4 - FeAl_2O_4 spinels, 405
 Newton, R.C., *see* Eckert, J.O., Jr., 148
 Nickel, E.H., *see* Grice, J.D., 1701
 Niven, M.L., Waters, D.J., Moore, J.M.: The crystal structure of werdingite, $(\text{Mg,Fe})_2\text{Al}_{12}(\text{Al,Fe})_2\text{Si}_4(\text{B,Al})_4\text{O}_{37}$, and its relationship to sillimanite, mullite, and grandidierite, 246
 Nyman, M.W., *see* Smelik, E.A., 1184
- Oberti, R., Caporuscio, F.A.: Crystal chemistry of clinopyroxenes from mantle eclogites: A study of the key role of the M2 site population by means of crystal-structure refinement, 1141
 Ohnenstetter, D., Watkinson, D.H., Dahl, R.: Zoned hollingworthite from the Two Duck Lake intrusion, Coldwell complex, Ontario, 1694
 Ohtaki, H., *see* Waizumi, K., 1884
 Oliver, N.H.S., *see* Rumble, D., III, 857
 Olsen, E., *see* Steele, I.M., 1985
 O'Neill, H.S.C., *see* Pownceby, M.I., 1580
 Orlandi, P., *see* Merlini, S., 2003
 Osanai, Y., *see* Maeda, J., 1674
 Oshagan, A., *see* Stixrude, L., 1761
- Papike, J.J., Keith, T.E.C., Spilde, M.N., Galbreath, K.C., Shearer, C.K., Laul, J.C.: Geochemistry and mineralogy of fumarolic deposits, Valley of Ten Thousand Smokes, Alaska: Bulk chemical and mineralogical evolution of dacite-rich protolith, 1662
 Pasero, M., *see* Merlini, S., 2003
 Patrier, P., Beaufort, D., Meunier, A., Eymery, J.-P., Petit, S.: Determination of the nonequilibrium ordering state in epidote from the ancient geothermal field of Saint Martin: Application of Mössbauer spectroscopy, 602
 Pawley, A.R., *see* Welch, M.D., 1931
- Peacock, S.M., *see* Spear, F.S., 2009
 Peacor, D.R., *see* Bohlen, S.R., 1750
 Peacor, D.R., *see* Grew, E.S., 1990
 Peacor, D.R., *see* Shau, Y.-H., 1205
 Perry, C.L., *see* Dyar, M.D., 27
 Pertsev, N.N., *see* Grew, E.S., 1061
 Peterson, J.W., Chacko, T., Kuehner, S.M.: The effects of fluorine on the vapor-absent melting of phlogopite + quartz: Implications for deep-crustal processes, 470
 Peterson, R.C., Lager, G.A., Hitterman, R.L.: A time-of-flight neutron powder diffraction study of MgAl_2O_4 at temperatures up to 1273 K, 1455
 Petit, S., *see* Patrier, P., 602
 Phillips, B.L., *see* Kirkpatrick, R.J., 673
 Phillips, M.W., Popp, R.K., Clowe, C.A.: A structural investigation of oxidation effects in air-heated grunerite, 1502
 Pluth, J., *see* Steele, I.M., 1985
 Poe, B., *see* McMillan, P.F., 354
 Poe, B., *see* Xue, X., 8
 Popp, R.K., *see* Phillips, M.W., 1502
 Poppi, L., *see* Brigatti, M.F., 1174
 Post, J.E., Buchwald, V.F.: Crystal structure refinement of akaganéite, 272
 Pownceby, M.I., Wall, V.J., O'Neill, H.S.C.: An experimental study of the effect of Ca upon garnet-ilmenite Fe-Mn exchange equilibria, 1580
 Prewitt, C.T.: Presentation of the Mineralogical Society of America Award for 1990 to Russell J. Hemley, 1740
 Prewitt, C.T., *see* Angel, R.J., 332
 Prewitt, C.T., *see* Finger, L.W., 1
 Prewitt, C.T., *see* Zhang, J., 100
 Puziewicz, J., *see* Jambor, J.L., 665, 1728
- Ramik, R.A., *see* Hawthorne, F.C., 370
 Raudsepp, M., *see* Hawthorne, F.C., 370
 Rausell-Colom, J.A., *see* Wiewióra, A., 647
 Rausell-Colom, J.A., Wiewióra, A., Matesanz, E.: Relationship between composition and d_{001} for chlorite, 1373
 Rebbert, C.R., *see* Dyar, M.D., 27
 Reeder, R.J., Dollase, W.A.: Structural variation in the dolomite-ankerite solid-solution series: An X-ray, Mössbauer, and TEM study—Reply, 661
 Rex, D.C., *see* Wartho, J., 1446
 Robert, J.-L., *see* Della Ventura, G., 1134
 Robie, R.A., *see* Hemingway, B.S., 445, 1597
 Robinson, P.: The eye of the petrographer, the mind of the petrologist, 1781
 Robinson, P., Thompson, P.J., Elbert, D.C.: The nappe theory in the Connecticut Valley region: Thirty-five years since Jim Thompson's first proposal, 689
 Robinson, P.D., *see* Wilson, J.R., 653

- Rock, N.M.S., *see* Griffin, B.J., 295
- Rock, N.M.S., Carroll, G.W., Wheatley, M.R., Williams, K.L.: MacSuite: An integrated compendium of geoscientific programs for the Apple Macintosh, 2013
- Rose, T.P., *see* Mills, J.G., Jr., 288
- Rosenberg, P.E.: Structural variation in the dolomite-ankerite solid-solution series: An X-ray, Mössbauer, and TEM study—Discussion, 659
- Ross, M.: Acceptance of the Distinguished Public Service Medal for 1990, 1744
- Rossmann, G.R., *see* Geiger, C.A., 49
- Rossmann, G.R., *see* Hawthorne, F.C., 370, 1836
- Rossmann, G.R., *see* Woodhead, J.A., 74, 1533
- Rossmann, G.R., Aines, R.D.: The hydrous components in garnets: Grossular-hydrogrossular, 1153
- Rossmann, G.R., Fritsch, E., Shigley, J.E.: Origin of color in cuprian elbaite from São José de Batalha, Paraíba, Brazil, 1479
- Roy, S., *see* Dasgupta, S., 241
- Rubin, A.E.: Euhedral awaruite in the Allende meteorite: Implications for the origin of awaruite- and magnetite-bearing nodules in CV3 chondrites, 1356
- Rumble, D., III, *see* Holdaway, M.J., 1910
- Rumble, D., III, Oliver, N.H.S., Ferry, J.M., Hoering, T.C.: Carbon and oxygen isotope geochemistry of chlorite-zone rocks of the Waterville limestone, Maine, U.S.A., 857
- Sack, R.O., Ghiorso, M.S.: Chromian spinels as petrogenetic indicators: Thermodynamics and petrological applications, 827
- Salmon, G.L., *see* Wilson, J.R., 653
- Sato, R.K., *see* McMillan, P.F., 354
- Schlemper, E.O., *see* Moore, P.B., 1389
- Schmitt, H.H.: Evolution of the Moon: Apollo model, 773
- Schneiderman, J.S.: Petrology and mineral chemistry of the Ascutney Mountain igneous complex, 218
- Schneiderman, J.S., Tracy, R.J.: Petrology of orthoamphibole-cordierite gneisses from the Orijärvi area, southwest Finland, 942
- Schreyer, W., *see* Fockenberg, T., 1052
- Sclar, C.B., *see* Benimoff, A.I., 1431
- Scripkin, M.Y., *see* Waizumi, K., 1884
- Sebastian, A., *see* Dujon, S.-C., 1614
- Sebastian, A., *see* Lagache, M., 611
- Sebastian, A., Lagache, M.: Experimental study of lithium-rich granitic pegmatites: Part I. Petalite + albite + quartz equilibrium, 205
- Self, P.G., Buseck, P.R.: Structure model for kassite, $\text{CaTi}_2\text{O}_4(\text{OH})_2$, 283
- Sengupta, P., *see* Dasgupta, S., 241
- Sen Gupta, P.K., *see* Moore, P.B., 1389, 1408
- Sen Gupta, P.K., Swihart, G.H., Dimitrijević, R., Hossain, M.B.: The crystal structure of lüneburgite, $\text{Mg}_3(\text{H}_2\text{O})_6[\text{B}_2(\text{OH})_6(\text{PO}_4)_2]$, 1400
- Sharma, S.K., *see* Urmos, J., 641
- Shau, Y.-H., Yang, H.-Y., Peacor, D.R.: On oriented titanite and rutile inclusions in sagenitic biotite, 1205
- Shearer, C.K., *see* Papike, J.J., 1662
- Shen, J., *see* Moore, P.B., 1389
- Sherman, D.M.: Hartree-Fock band structure, equation of state, and pressure-induced hydrogen bonding in brucite, $\text{Mg}(\text{OH})_2$, 1769
- Sherriff, B.L., *see* Hawthorne, F.C., 370
- Shigley, J.E., *see* Rossmann, G.R., 1479
- Shimura, T., *see* Maeda, J., 1674
- Silver, L.T., *see* Woodhead, J.A., 74
- Slack, J.F., *see* McGee, J.J., 681
- Smelik, E.A., Nyman, M.W., Veblen, D.R.: Pervasive exsolution within the calcic amphibole series: TEM evidence for a miscibility gap between actinolite and hornblende in natural samples, 1184
- Smelik, E.A., Veblen, D.R.: Exsolution of cummingtonite from glaucophane: A new orientation for exsolution lamellae in clinoamphiboles, 971
- Smith, D., Barron, B.R.: Pyroxene-garnet equilibration during cooling in the mantle, 1950
- Smith, D.J., *see* Banfield, J.F., 343
- Sorensen, S.S.: Petrogenetic significance of zoned allanite in garnet amphibolites from a paleo-subduction zone: Catalina Schist, southern California, 589
- Spear, F.S., *see* Kohn, M.J., 128, 138
- Spear, F.S., Peacock, S.M., Kohn, M.J., Florence, F.P., Menard, T.: Computer programs for petrologic *P-T-t* path calculations, 2009
- Speer, J.A., *see* Vyhnal, C.R., 176
- Spike, F.D., *see* Hawthorne, F.C., 370
- Spilde, M.N., *see* Papike, J.J., 1662
- Stanger, L.W., *see* Wilson, J.R., 653
- Stanley, C., *see* Dunn, P.J., 1708
- Stebbins, J.F., *see* Xue, X., 8
- Steele, I.M., Olsen, E., Pluth, J., Davis, A.M.: Occurrence and crystal structure of Ca-free beusite in the El Sempal IIIA iron meteorite, 1985
- Stensgaard, I., *see* Lindgreen, H., 1218
- Sternitzke, M., *see* Deubener, J., 1620
- Stixrude, L., Oshagan, A., Bukowinski, M.S.T.: Coordination changes and the vibrational spectrum of SiO_2 glass at high pressure, 1761
- Stone, W.E., Fleet, M.E.: Nickel-copper sulfides from the 1959 eruption of Kilauea Volcano, Hawaii: Contrasting compositions and phase relations in eruption pumice and Kilauea Iki lava lake, 1363
- Stout, J.H., *see* Hemingway, B.S., 1750

- Su, S.-C., *see* Grew, E.S., 1990
- Suetake, S., *see* Maeda, J., 1674
- Swihart, G.H., *see* Sen Gupta, P.K., 1400
- Taggart, J.E., Jr., *see* Foord, E.E., 1998
- Teichmann, F., *see* Guidotti, C.V., 867
- Thomas, A.P., *see* Woodhead, J.A., 1533
- Thompson, P.J., *see* Robinson, P., 689
- Toulmin, P., III, Barton, P.B., Jr., Wiggins, L.B.:
 Commentary on the sphalerite geobarometer, 1038
- Tracy, R.J.: Ba-rich micas from the Franklin Marble, Lime
 Crest and Sterling Hill, New Jersey, 1683
- Tracy, R.J., *see* Schneiderman, J.S., 942
- Treiman, A.H.: Review of *Origins of Igneous Rocks*. By
 Paul C. Hess, 672
- Trembath, L.T., *see* MacLellan, H.E., 1291
- Tyrna, P.L., Guggenheim, S.: The crystal structure of
 norrishite, $\text{KLiMn}_2^{3+}\text{Si}_4\text{O}_{12}$: An oxygen-rich mica, 266
- Urmos, J., Sharma, S.K., Mackenzie, F.T.:
 Characterization of some biogenic carbonates with
 Raman spectroscopy, 641
- Utada, M., *see* Inoue, A., 628
- Vali, H., Hesse, R., Kohler, E.E.: Combined freeze-etch
 replicas and HRTEM images as tools to study
 fundamental particles and the multiphase nature of 2:1
 layer silicates, 1973
- van den Kerkhof, A.M., *see* Kisch, H.J., 230
- van der Laan, S.R., Koster van Groos, A.F.: Pt-Fe alloys in
 experimental petrology applied to high-pressure
 research on Fe-bearing systems, 1940
- Vanko, D.A., *see* Jambor, J.L., 1434
- Veblen, D.R.: Polysomatism and polysomatic series: A
 review and applications, 801
- Veblen, D.R., *see* Banfield, J.F., 113, 343
- Veblen, D.R., *see* Heaney, P.J., 1018, 1459
- Veblen, D.R., *see* Smelik, E.A., 971, 1184
- Veblen, D.R., Wiechmann, M.J.: Domain structure of low-
 symmetry vesuvianite from Crestmore, California,
 397
- Via, J., *see* Madon, M., 1249
- Vyhnal, C.R., McSween, H.Y., Jr., Speer, J.A.:
 Hornblende chemistry in southern Appalachian
 granitoids: Implications for aluminum hornblende
 thermobarometry and magmatic epidote stability, 176
- Waizumi, K., Masuda, H., Ohtaki, H., Scripkin, M.Y.,
 Burkov, K.A.: Crystallographic investigations of
 $[\text{Mg}(\text{H}_2\text{O})_6]\text{XCl}_3$ double salts ($\text{X}^+ = \text{K}^+, \text{Rb}^+, \text{Cs}^+, \text{NH}_4^+$):
 Crystal structure of $[\text{Mg}(\text{H}_2\text{O})_6]\text{CsCl}_3$, 1884
- Walker, D.: Lubrication, gasketing, and precision in
 multianvil experiments, 1092
- Wall, V.J., *see* Pownceby, M.I., 1580
- Wartho, J., Dodson, M.H., Rex, D.C., Guise, P.G.:
 Mechanisms of Ar release from Himalayan
 metamorphic hornblende, 1446
- Waters, D.J., *see* Niven, M.L., 246
- Watkinson, D.H., *see* Ohnenstetter, D., 1694
- Webb, S.L.: Shear and volume relaxation in $\text{Na}_2\text{Si}_2\text{O}_5$,
 1449
- Weber, W.J., *see* Murakami, T., 1510
- Webster, J.D., Duffield, W.A.: Volatiles and lithophile
 elements in Taylor Creek Rhyolite: Constraints from
 glass inclusion analysis, 1628
- Welch, M.D., Pawley, A.R.: Tremolite: New enthalpy and
 entropy data from a phase equilibrium study of the
 reaction tremolite = 2 diopside + 1.5 orthoenstatite +
 β -quartz + H_2O , 1931
- Wenger, M., Armbruster, T., Geiger, C.A.: Cation
 distribution in partially ordered columbite from the
 Kings Mountain pegmatite, North Carolina, 1897
- Westrich, H.R., *see* Casey, W.H., 211
- Wheatley, M.R., *see* Rock, N.M.S., 2013
- White, D.E.: Memorial of Charles A. Anderson, 306
- Whitney, D.L.: Calcium depletion halos and Fe-Mn-Mg
 zoning around faceted plagioclase inclusions in garnet
 from a high-grade pelitic gneiss, 493
- Whitney, J.A.: Report of the Treasurer for 1990, 1747
- Whitney, J.A., *see* Hemingway, B.S., 1750
- Wicks, F.J., *see* Hawthorne, F.C., 370
- Wiechmann, M.J., *see* Veblen, D.R., 397
- Wiewióra, A., *see* Rausell-Colom, J.A., 1373
- Wiewióra, A., Rausell-Colom, J.A., García-González, T.:
 The crystal structure of amesite from Mount Sobotka:
 A nonstandard polytype, 647
- Wiggins, L.B., *see* Toulmin, P., III, 1038
- Williams, K.L., *see* Rock, N.M.S., 2013
- Wilson, J.R., Robinson, P.D., Wilson, P.N., Stanger,
 L.W., Salmon, G.L.: Gillulyite, $\text{Tl}_2(\text{As,Sb})_8\text{S}_{13}$, a new
 thallium arsenic sulfosalt from the Mercur gold
 deposit, Utah, 653
- Wilson, P.N., *see* Wilson, J.R., 653
- Winkler, B., *see* Geiger, C.A., 49
- Winkler, B., Dove, M.T., Leslie, M.: Static lattice energy
 minimization and lattice dynamics calculations on
 aluminosilicate minerals, 313
- Wood, B.J., *see* Nell, J., 405
- Woodhead, J.A., Rossman, G.R., Silver, L.T.: The
 metamictization of zircon: Radiation dose-dependent
 structural characteristics, 74
- Woodhead, J.A., Rossman, G.R., Thomas, A.P.: Hydrous
 species in zircon, 1533

- Xue, X., Stebbins, J.F., Kanzaki, M., McMillan, P.F., Poe, B.: Pressure-induced silicon coordination and tetrahedral structural changes in alkali oxide–silica melts up to 12 GPa: NMR, Raman, and infrared spectroscopy, 8
- Yang, H.-Y., *see* Shau, Y.-H., 1205
- Yardley, B.W.D., Barber, J.P.: Melting reactions in the Connemara Schists: The role of water infiltration in the formation of amphibolite facies migmatites, 848
- Yates, M.G., *see* Grew, E.S., 1061
- Ye, D., *see* Zhang, J., 100
- Zenger, D.H.: Memorial of Alfred O. Woodford, 2027
- Zhang, J., Ye, D., Prewitt, C.T.: Relationship between the unit-cell volumes and cation radii of isostructural compounds and the additivity of the molecular volumes of carbonates, 100
- Zientek, M.L., *see* Czamanske, G.K., 1646
- Zingg, A.J.: Mineral reactions in closed systems involving amphibole and plagioclase, 617