

COMPREHENSIVE SUBJECT, AUTHOR, TITLE INDEX
VOLUME 47, 1999

15 Crown Ether 5 44
2:1 Layer 181
 α -Fe₂O₃ 375

A

- Acid-Base Interfacial Interactions (Kaolinite) 36
Adak, Amit (with Durjoy Mallik, Swapan Khanra, and Swades K. Chaudhuri), Alum Mud: Phase Identification and Catalytic Potential for Aqueous-Phase Decomposition of Hydrogen Peroxide 234
Adsorbed Water (Montmorillonite) 192
Adsorption 567, 761, 777
Adsorption (Mechanism) 777
Alcaraz, J.J. (with P.A. Crozier, M. Pan, C. Bateman, and J.S. Holmgren), Direct Imaging of Zirconia Pillars in Montmorillonite by Analytical Electron Microscopy 683
Al-Hydroxy Sulfates 658
Alkylammonium Cations (Illitic Materials) 96
Alkylammonium Method 113
Allard, Thierry (with Etienne Balan, Bruno Boizot, Guillaume Morin, and Jean-Pierre Muller), Structural Fe³⁺ in Natural Kaolinites: New Insights from Electron Paramagnetic Resonance Spectra Fitting at X and Q-Band Frequencies 605
Allen, Patrick G. (with Eric A. Hudson, Louis J. Terminello, Brian E. Viani, Melissa Denecke, Tobias Reich, Jerome J. Bucher, David K. Shuh, and Norman M. Edelstein), The Structure of U⁶⁺ Sorption Complexes on Vermiculite and Hydrobiotite 439
Allophane 64
Alteration 144, 241
Alteration Markers 582
Alteration Mechanism of Volcanic Tuff 769
Al₁₃ Tridecamer 658
Aluminum Substitution 466
Alum Mud 234
Alum Mud: Phase Identification and Catalytic Potential for Aqueous-Phase Decomposition of Hydrogen Peroxide by Amit Adak, Durjoy Mallik, Swapan Khanra, and Swades K. Chadhuri 234
Ambient-Temperature Synthesis, Evolution, and Characterization of Cobalt-Aluminum Hydroxalcalite-Like Solids by Hillary A. Thompson, George A. Parks, and Gordon E. Brown, Jr. 425
Amino Acid 793
Ammonia Electrode 688
Ammonium Acetate Saturation (AMAS) Method 688
Amonette, James E. (with J. Theo Klopogge and Sridhar Komarneni), Synthesis of Smectite Clay Minerals: A Critical Review 529
Amorphous Derivative 647
Analcime 348
Analytical Electron Microscopy 119
Anderson, Michael A. (with Frans R. Trouw and Cheok N. Tam), Properties of Water in Calcium- and Hexadecyltrimethylammonium-Exchanged Bentonite 28
A New Approach to Compositional Limits for Sepiolite and Palygorskite by Emilio Galan and M^a Isabel Carretero 399
A Nickel Hydroxide-Vermiculite Complex: Preparation and Characterization by Motoki Uehara, Atsushi Yamzaki, Taku Umezawa, Koichiro Takahashi, and Sadao Tsutsumi 726
Anion Exchange 312
Anionic Clay 425
Annite 784
Antigorite 417
Aparicio, Patricia (with Emilio Galán), Mineralogical Interference on Kaolinite Crystallinity Index Measurements 12
Application of an Internal Standard Technique by Transmission X-ray Diffraction to Assess Layer Charge of a Montmorillonite by Using the Alkylammonium Method by M. Janek and L. Smrčok 113
Applying X-Ray Geothermometer Diffraction to a Chlorite by Stefano Battaglia 54
Aromatic Cations 358
Arsenate 474
Arsenite 474
A Synthetic Na-Rich Mica: Synthesis and Characterization by ²⁷Al and ²⁹Si Magic Angle Spinning Nuclear Magnetic Resonance Spectroscopy by Sridhar Komarneni, Rajyalakshmi Pidugu, W. Hoffbauer, and Hartmut Schneider 410
Asbestos 697
Atomic Force Microscopy 573

B

- Baja California 252
Balan, Etienne (with Thierry Allard, Bruno Boizot, Guillaume Morin, and Jean-Pierre Muller), Structural Fe³⁺ in Natural Kaolinites: New Insights from Electron Paramagnetic Resonance Spectra Fitting at X and Q-Band Frequencies 605
Band Decomposition (Goethite) 156

- Barrón, Vidal (with Natividad Gálvez and José Torrent), Effect of Phosphate on the Crystallization of Hematite, Goethite, and Lepidocrocite from Ferrihydrite 304
- Barrón, Vidal (with Natividad Gálvez and José Torrent), Preparation and Properties of Hematite with Structural Phosphorus 375
- Basalt 241
- Basaltic Rock (Weathering) 505
- Bateman, C. (with P.A. Crozier, M. Pan, J.J. Alcaraz, and J.S. Holmgren), Direct Imaging of Zirconia Pillars in Montmorillonite by Analytical Electron Microscopy 683
- Battaglia, Stefano, Applying X-ray Geothermometer Diffraction to a Chlorite 54
- Beidellite 165, 241, 529
- Beidellite-Saponite Join 803
- Benke, M.B. (with H. Shariatmadari and A.R. Mermut), Sorption of Selected Cationic and Neutral Organic Molecules on Palygorskite and Sepiolite 44
- Bentonite 28, 84, 286, 481, 567, 708
- Benzylalkylammonium 366
- Berry, Richard W., Eocene and Oligocene Otay-Type Waxy Bentonites of San Diego and Baja California: Chemistry, Mineralogy, Petrology and Plate Tectonic Implications 70
- Bertsch, Paul M. (with Robert G. Ford), Distinguishing Between Surface and Bulk Dehydration-Dehydroxylation Reaction in Synthetic Goethites by High-Resolution Thermogravimetric Analysis 329
- BET 742
- Bickmore, Barry R. (with Michael F. Hochella, Jr., Dirk Bosbach, and Laurent Charlet), Methods for Performing Atomic Force Microscopy Imaging of Clay Minerals in Aqueous Solutions 573
- Biga Peninsula (Turkey) 165
- Bigham, Jerry M. (with Antonio Carlos S. da Costa, Fred E. Rhoton, and Samuel J. Traina), Quantification and Characterization of Maghemite in Soils Derived from Volcanic Rocks in Southern Brazil 466
- Bingham Yield Stress 522
- Biotite 144, 784
- Black Soils (Smectites) 389
- Boero, Valter (with Mario Crosa and Marinella Franchini-Angela), Determination of Mean Crystallite Dimensions from X-ray Diffraction Peak Profiles: A Comparative Analysis of Synthetic Hematites 742
- Boizot, Bruno (with Etienne Balan, Thierry Allard, Guillaume Morin, and Jean-Pierre Muller), Structural Fe³⁺ in Natural Kaolinites: New Insights from Electron Paramagnetic Resonance Spectra Fitting at X and Q-Band Frequencies 605
- Book Reviews:
- Environmental Interactions of Clays*, Edited by A. Parker and J.E. Rae 527
- Nuclear Methods in Mineralogy and Geology, Techniques and Applications*, Edited by A. Vertes, S. Nagy, and K. Süvegh 239
- Bond Distance (Goethite) 156
- Bondnár, Katalina Juhász (with Bernhard H. Harmann, Karl Ramseyer, and Albert Matter), Effect of Permo-Carboniferous Climate on Illite-Smectite, Haushi Group, Sultanate of Oman 131
- Bosbach, Dirk (with Barry R. Bickmore, Michael F. Hochella, Jr., and Laurent Charlet), Methods for Performing Atomic Force Microscopy Imaging of Clay Minerals in Aqueous Solutions 573
- Bram, A. (with R.B. Neder, M. Burghammer, TH. Grasl, H. Schulz, and S. Fiedler), Refinement of the Kaolinite Structure from Single-Crystal Synchrotron Data 487
- Brigatti, Maria Franca (with Cristina Lugli, Stefano Montorsi, and Luciano Poppi), Effects of Exchange Cations and Layer-Charge Location on Cysteine Retention by Smectites 664
- Brown, Gordon E., Jr. (with Hillary A. Thompson and George A. Parks), Ambient-Temperature Synthesis, Evolution, and Characterization of Cobalt-Aluminum Hydrotalcite-Like Solids 425
- BTEX 358
- Buatier, Martine D. (with Lhoussain Hassouta, Jean-Luc Potdevin, and Nicole Liewig), Clay Diagenesis in the Sandstone Reservoir of the Ellon Field (Alwyn, North Sea) 269
- Bucher, Jerome J. (with Eric A. Hudson, Louis J. Terminello, Brian E. Viani, Melissa Denecke, Tobias Reich, Patrick G. Allen, David K. Shuh, and Norman M. Edelstein), The Structure of U⁶⁺ Sorption Complexes on Vermiculite and Hydrobiotite 439
- Burghammer, M. (with R.B. Neder, TH. Grasl, H. Schulz, A. Bram, and S. Fiedler), Refinement of the Kaolinite Structure from Single-Crystal Synchrotron Data 487

C

- Caballero, Emilia (with Javier Cuadros, F. Javier Huertas, Concepción Jiménez de Cisneros, Francisco Huertas, and José Linares), Experimental Alteration of Volcanic Tuff: Smectite Formation and Effect on ¹⁸O Isotope Composition 769
- Cadmium 761
- Calcined Hydrotalcite 777
- Calcite 269
- Cappeletti, Piergiulio (with Maurizio de' Gennaro, Alessio Langella, and Carmine Colella), Hydrothermal Conversion of Trachytic Glass to Zeolite. 3. Monocationic Model Glasses 348

- Carretero, M^a Isabel (with Emilio Galan), A New Approach to Compositional Limits for Sepiolite and Palygorskite 399
- Catalyst 481
- Cation-Absorption Model 366
- Cation Exchange 439, 567
- Cation-Exchange Capacity (CEC) 113, 174, 386, 688
- Cation-Exchange Capacity (CEC) of Zeolitic Volcaniclastic Materials: Applicability of the Ammonium Acetate Saturation (AMAS) Method** by Konstantinos P. Kotsopoulos 688
- Cation Exchange Capacity of Kaolinite** by Chi Ma and Richard A. Eggleton 174
- Cation Ordering 425
- Celadonite 591
- Çelik, Muazzez (with Necati Karakaya and Abidin Temel), Clay Minerals in Hydrothermally Altered Volcanic Rocks, Eastern Pontides, Turkey 708
- Ceramic Processing (Kaolinite) 36
- Cerpa, A. (with M.T. García-González, P. Tartaj, J. Requena, L. Garcell, and C.J. Serna), Mineral-Content and Particle-Size Effects on the Colloidal Properties of Concentrated Lateritic Suspensions 515
- Cerro Negro 286
- Cesium Sorption 755
- Chabazite 348
- Characterization of Octahedral Substitutions in Kaolinites Using Near Infrared Spectroscopy** by S. Petit, J. Madejová, A. Decarreau, and F. Martin 103
- Charlet, Laurent (with Barry R. Bickmore, Michael F. Hochella, Jr., and Dirk Bosbach), Methods for Performing Atomic Force Microscopy Imaging of Clay Minerals in Aqueous Solutions
- Chaudhuri, Sam (with Jan Środoń and Norbert Clauer), K-Ar Dating of Illitic Fractions of Estonian "Blue Clay" Treated with Alkylammonium Cations 96
- Chaudhuri, Swades K. (with Amit Adak, Durjoy Malik, and Swapan Khanra), Alum Mud: Phase Identification and Catalytic Potential for Aqueous-Phase Decomposition of Hydrogen Peroxide 234
- Chemical Changes and Genesis of Secondary Minerals During the Alteration of Biotites from Ignimbrites in the Tazzeka Mountain (Morocco)** by Jean Dejou, Christian De Kimpe, Jean-Jacques Macaire, and Alain Perruchot 144
- Chemical Composition 399
- Chemistry (Otay Bentonite) 70
(Weathering) 201
- Childs, Cyril W. (with Shigenobu Hayashi and Roger H. Newman), Five-Coordinate Aluminum in Allophane 64
- Chlorite 119, 144, 212
- Chlorite Geothermometer 54
- Christodoulou, Eirini (with Stella Triantafyllou and Paraskevi Neou-Syngouna), Removal of Nickel and Cobalt from Aqueous Solutions by Na-Activated Bentonite 567
- Cis-Vacant Octahedra 591
- Clauer, Norbert (with Jan Środoń and Sam Chaudhuri), K-Ar Dating of Illitic Fractions of Estonian "Blue Clay" Treated with Alkylammonium Cations 96
- Clay(s) 481, 567, 683, 697
- Clay Diagenesis in the Sandstone Reservoir of the Ellon Field (Alwyn, North Sea) by the Lhousain Hassouta, Martine D. Buatier, Jean-Luc Potdevin, and Nicole Liewig** 269
- Clay Fabrics 637
- Clay-Inorganic Complex 726
- Clay Mineralogy and Occurrence of Ferrian Smectites between Serpentinite Saprolites and Basalts in Biga Peninsula, Northwest Turkey** by Ö. Işık Ece, Fazlı Çoban, Nurfer Güngör, and Fikret Suner 241
- Clay Minerals in Hydrothermally Altered Volcanic Rocks, Eastern Pontides, Turkey** by Muazzez Çelik, Necati Karakaya, and Abidin Temel 708
- Clay Sediment-Structure Formation in Aqueous Kaolinite Suspensions** by Kunsong Ma and Alain C. Pierre 522
- Clinoptilolite 319, 688
- CMS Clays (Imt-2) 366
(KGa-1) 410, 573, 753
(SAZ-1) 630, 647, 664
(SHCa-1) 630
(SWa-1) 458, 630
(SWy-1) 573
(VTx-1) 630
- Cobalt Removal 567
- Çoban, Fazlı (with Ö. Işık Ece, Nurfer Güngör, and Fikret Suner), Clay Mineralogy and Occurrence of Ferrian Smectites between Serpentinite Saprolites and Basalts in Biga Peninsula, Northwest Turkey 241
- Çoban, Fazlı (with Ö. Işık Ece) Fe³⁺-Rich Montmorillonite-Beidellite Series in Ayvacık Bentonite Deposit, Biga Peninsula, Northwest Turkey 165
- Colella, Carmine (with Maurizio de' Gennaro, Alessio Langella, and Piergiulio Cappelletti), Hydrothermal Conversion of Trachytic Glass to Zeolite. 3. Monocationic Model Glasses 348
- Colloid 522
- Colloid Chemical Control of Kaolinite Properties Related to Ceramic Processing** by Lyudmyla A. Pavlova and Michael J. Wilson 36
- Color (Hematite) 375
- Comparison of Adsorption of Phosphate, Tartrate, and Oxalate on Hydroxy Aluminum Montmorillonite Complexes** by J.Z. He, A. De Cristofaro, and A. Violante 226
- Competitive Adsorption (Montmorillonite) 226

- Complex Formation of Cation-Exchanged Montmorillonites with Propylene Carbonate: Osmotic Swelling in Aqueous Electrolyte Solutions** by Masanobu Onikata, Mitsuji Kondo, Naoki Hayashi, and Shoji Yamanaka 672
- Compositional Gap 803
- Compositional Gap in Diotahedral-Trioctahedral Smectite System: Beidellite-Saponite Pseudo-Binary Join** by Hirohisa Yamada, Katsuaki Yoshioaka, Kenji Tamura, Kazuko Fujii, and Hiromoto Nakazawa 803
- Compton, J.S. (with M.E. Conrad and T.W. Venemann), Stable Isotope Evolution of Volcanic Ash Layers During Diagenesis of the Miocene Monterey Formation, California 84
- Concentrated Suspensions 515
- Congo Basin 582
- Conrad, M.E. (with J.S. Compton, and T.W. Venemann), Stable Isotope Evolution of Volcanic Ash Layers During Diagenesis of the Miocene Monterey Formation, California 84
- Copper Complex 386
- Coprecipitation 425
- Corrensite 212
- Coskren, T. Dennis (with Roland C. Rouse, Eric J. Essene and Donald R. Peacor), Destinezite ("Diadochite"), $\text{Fe}_2(\text{PO}_4)(\text{SO}_4)(\text{OH})\cdot 6\text{H}_2\text{O}$: Its Crystal Structure and Role as a Soil Mineral at Alum Cave Bluff, Tennessee 1
- Costa, Antonio Carlos S. da (with Jerry M. Bigham, Fred E. Rhoton, and Samuel J. Traina), Quantification and Characterization of Maghemite in Soils Derived from Volcanic Rocks in Southern Brazil 466
- Costanzo, P.M. (with C.J. van Oss, J.O. Naim, R.F. Giese, Jr., W. Wu, and A. F. Sorling), Impact of Different Asbestos Species and Other Mineral Particles on Pulmonary Pathogenesis 697
- Cretaceous 286
- Crosa, Mario (with Valter Boero and Marinella Franchini-Angela), Determination of Mean Crystallite Dimensions from X-ray Diffraction Peak Profiles: A Comparative Analysis of Synthetic Hematites 742
- Crozier, P.A. (with M. Pan, C. Bateman, J.J. Alcaraz, and J.S. Holmgren), Direct Imaging of Zirconia Pillars in Montmorillonite by Analytical Electron Microscopy 683
- Crystal Chemistry (Hematite) 375
- Crystal Chemistry of Layer Silicates of the Miocene Green Grain (Congo Basin) from Transmission Electron Microscopy (TEM) and Analytical Electron Microscopy (AEM) Observations** by A. Wiewióra, P. Giresse, A.M. Jaunet, A. Wilamowski, and F. Elsass 582
- Crystallinity 329, 417
- Crystallization 304
- Crystal Structure 1, 487
- Crystal Violet 44, 366
- Cysteine 664
- Cuadros, Javier (with Emilia Caballero, F. Javier Huertas, Concepción Jiménez de Cisneros, Francisco Huertas, and José Linares), Experimental Alteration of Volcanic Tuff: Smectite Formation and Effect on ^{18}O Isotope Composition 769
- D
- Debtylation 481
- de Cisneros, Concepción Jiménez (with Javier Cuadros, Emilia Caballero, F. Javier Huertas, Francisco Huertas, and José Linares), Experimental Alteration of Volcanic Tuff: Smectite Formation and Effect on ^{18}O Isotope Composition 769
- De Cristofaro, A. (with J.Z. He and A. Violante), Comparison of Adsorption of Phosphate, Tartrate, and Oxalate on Hydroxy Aluminum Montmorillonite Complexes 226
- Decarreau, A. (with J. Madejová, S. Petit and F. Martin), Characterization of Octahedral Substitutions in Kaolinites Using Near Infrared Spectroscopy 103
- de'Gennaro, Maurizio (with Alessio Langella, Piergiulio Cappeletti, and Carmine Colella), Hydrothermal Conversion of Trachytic Glass to Zeolite. 3. Monocationic Model Glasses 348
- Dehydration (Halloysite) 811
- Dehydroxylation 329, 417, 591
- Dehydroxylation Behavior of Heat-Treated and Steam-Treated Homoionic Cis-Vacant Montmorillonites** by Katja Emmerich, Fritz Thule Madsen, and Guenter Kahr 591
- Deintercalation of Hydrazine-Intercalated Low-Defect Kaolinite** by Ray L. Frost, J. Theo Klopogge, Janos Kristof, and Erzsebet Horvath 732
- Dejou, Jean (with Christian De Kimpe, Jean-Jacques Macaire and Alain Perruchot), Chemical Changes and Genesis of Secondary Minerals During the Alteration of Biotites from Ignimbrites in the Tazzeke Mountain (Morocco) 144
- De Kimpe, Christian (with Jean Dejou, Jean-Jacques Macaire and Alain Perruchot), Chemical Changes and Genesis of Secondary Minerals During the Alteration of Biotites from Ignimbrites in the Tazzeke Mountain (Morocco) 144
- Denaix, L. (with F. van Oort, M. Pernes, and A.G. Jongmans), Transmission X-ray Diffraction of Undisturbed Soil Microfabrics Obtained by Microdrilling in Thin Sections 637
- Denecke, Melissa (with Eric A. Hudson, Louis J. Terminello, Brian E. Viani, Tobias Reich, Patrick G. Allen, Jerome J. Bucher, David K. Shuh, and Norman M. Edelstein), The Structure of U^{6+} Sorption Complexes on Vermiculite and Hydrobiotite 439

- Destinezite 1
- Destinezite ("Diadochite"), $\text{Fe}_2(\text{PO}_4)(\text{SO}_4)(\text{OH})\cdot 6\text{H}_2\text{O}$: Its Crystal Structure and Role as a Soil Mineral at Alum Cave Bluff, Tennessee** by Donald R. Peacor, Roland C. Rouse, T. Dennis Coskren, and Eric J. Essene 1
- Determination of Illite-Smectite Structures Using Multispecimen X-ray Diffraction Profile Fitting** by Boris A. Sakharov, Holger Lindgreen, Alfred Salyn, and Victor A. Drits 555
- Determination of Mean Crystallite Dimensions from X-ray Diffraction Peak Profiles: A Comparative Analysis of Synthetic Hematites** by Mario Crosa, Valter Boero, and Marinella Franchini-Angela 742
- Determination of the Cation Exchange Capacity (CEC) of Clay Minerals Using the Complexes of Copper(II) Ion with Triethylenetetramine and Tetraethylenepentamine** by Lorenz P. Meier and Guenter Kahr 386
- Detrital Phyllosilicates 582
- Diagenesis 84, 269
- Dickite 269, 605
- Differential Thermal Analysis 793
- Diffuse Reflectance Spectra of Al Substituted Goethite: A Ligand Field Approach** by Andreas C. Scheinost, Darrell G. Schulze and Udo Schwertmann 156
- Diffuse Reflectance Spectroscopy (Goethite) 156
- Diffuse Scattering 487
- Diffusion (Water in HDTMA-Clay) 28
- Di Leo, Paola (with Paul O'Brien), Nuclear Magnetic Resonance (NMR) Study of Cd^{2+} Sorption on Montmorillonite 761
- Dimethylammonium-Exchanged Vermiculite 338
- Direct Imaging of Zirconia Pillars in Montmorillonite by Analytical Electron Microscopy** by P. A. Crozier, M. Pan, C. Bateman, J.J. Alcaraz, and J.S. Holmgren 683
- Disorder 605
- Dissolution (Hematite) 375
- Distinguishing Between Surface and Bulk Dehydration-Dehydroxylation Reactions in Synthetic Goethites by High-Resolution Thermogravimetric Analysis** by Robert G. Ford and Paul M. Bertsch 329
- Distribution Coefficient 755
- Doner, Harvey E. (with Xiaohua Sun and Mavrik Zavarin), Spectroscopy Study of Arsenite [$\text{As}(\text{III})$] Oxidation on Mn-Substituted Goethite 474
- Donor Number 678
- Drief, A. (with F. Nieto), The Effect of Dry Grinding on Antigorite from Mulhacen, Spain 417
- Drits, Victor A. (with Boris A. Sakharov, Holger Lindgreen, and Alfred Salyn), Determination of Illite-Smectite Structures Using Multispecimen X-ray Diffraction Profile Fitting 555
- Dry Grinding 417
- DTA 201
- E
- Early Diagenesis 252
- Eastern Pontides 708
- Eberl, Dennis D. (with Pavol Rajec, Vladimír Šucha, Jan Šrodoň, and Françoise Elsass), Effect of Illite Particle Shape on Cesium Sorption 755
- Ece, Ö. Işık (with Fazlı Çoban) Fe^{3+} -Rich Montmorillonite-Beidellite Series in Ayvacık Bentonite Deposit, Biga Peninsula, Northwest Turkey 165
- Ece, Ö. Işık (with Fazlı Çoban, Nurfer Guñgör and Fikret Suner), Clay Mineralogy and Occurrence of Ferrian Smectites between Serpentinite Saptolites and Basalts in Biga Peninsula, Northwest Turkey 241
- Edelstein, Norman M. (with Eric A. Hudson, Louis J. Terminello, Brian E. Viani, Melissa Denecke, Tobias Reich, Patrick G. Allen, Jerome J. Bucher, and David K. Shuh), The Structure of U^{6+} Sorption Complexes on Vermiculite and Hydrobiotite 439
- Edges (Kaolinite) 174
- Effect of Acid Activation on the De-Tert-Butylation Activity of Some Jordanian Clays** by Sabri Mahmoud and Sadiq Saleh 481
- Effect of Illite Particle Shape on Cesium Sorption** by Pavol Rajec, Vladimír Šucha, Dennis D. Eberl, Jan Šrodoň, and Françoise Elsass 755
- Effect of Permo-Carboniferous Climate on Illite-Smectite, Haushi Group, Sultanate of Oman** by Bernhard H. Hartmann, Kataline Juhász Bodnár, Karl Ramseyer, and Albert Matter 131
- Effect of Phosphate on the Crystallization of Hematite, Goethite, and Lepidocrocite from Ferrihydrite** by Natividad Gálvez, Vidal Barrón, and José Torrent 304
- Effects of Exchange Cations and Layer-Charge Location on Cysteine Retention by Smectites** by Maria Franca Brigatti, Cristina Lugli, Stefano Montorsi, and Luciano Poppi 664
- Eggleton, Richard A. (with Chi Ma), Cation Exchange Capacity of Kaolinite 174
- Eggleton, Richard A. (with Chi Ma), Surface Layer Types of Kaolinite: A High-Resolution Transmission Electron Microscope Study 181
- Electroconductivity (Kaolinite) 36
- Electron Energy-Loss Spectroscopy 683
- Elemental Mapping 683
- Elliott, W. Crawford (with Andrea M. Edenfield, J. Marion Wampler, Gerald Matisoff, and Philip E. Long), The Kinetics of the Smectite to Illite Transformation in Cretaceous Bentonites, Cerro Negro, New Mexico 286
- Elsass, F. (with A. Wiewióra, P. Giresse, A.M. Jaunet, and A. Wilamowski), Crystal Chemistry of Layer

- Silicates of the Miocene Green Grain (Congo Basin) from Transmission Electron Microscopy (TEM) and Analytical Electron Microscopy (AEM) Observations 582
- Elsass, François (with Pavol Rajec, Vladimír Šucha, Dennis D. Eberl, and Jan Šrodoň), Effect of Illite Particle Shape on Cesium Sorption 755
- Emmerich, Katja (with Fritz Thule Madsen and Guenter Kahr), Dehydroxylation of Heat-Treated and Steam-Treated Homoionic *Cis*-Vacant Montmorillonites 591
- Endenfield, Andrea M. (with W. Crawford Elliott, J. Marion Wampler, Gerald Matisoff, and Philip E. Long), The Kinetics of the Smectite to Illite Transformation in Cretaceous Bentonites, Cerro Negro, New Mexico 286
- Energy-Filtered Imaging 683
- Eocene and Oligocene Otay-Type Waxy Bentonites of San Diego and Baja California: Chemistry, Mineralogy, Petrology and Plate Tectonic Implications** by Richard W. Berry 70
- EPR 605
- Equilibrium 811
- Essene, Eric J. (with Roland C. Rouse, T. Dennis Coskren and Donald R. Peacor), Destinezite ("Diadochite") $\text{Fe}_2(\text{PO}_4)(\text{SO}_4)(\text{OH})\cdot 6\text{H}_2\text{O}$: Its Crystal Structure and Role as a Soil Mineral at Alum Cave Bluff, Tennessee 1
- Estonian "Blue Clay" 96
- EXAFS 425, 439
- Experimental Alteration of Volcanic Tuff: Smectite Formation and Effect on ^{18}O Isotope Composition** by Javier Cuadros, Emilia Caballero, F. Javier Huertas, Concepción Jiménez de Cisneros, Francisco Huertas, and José Linares 769
- Exposed (OH) Planes (Kaolinite) 174
- External Surface 630
- F
- Fe(II), Fe(III)-hydroxides 312
- Fe^{3+} 605
- Fe-rich Beidellite 165
- Fe^{3+} -Rich Montmorillonite-Beidellite Series in Ayvacik Bentonite Deposit, Biga Peninsula, Northwest Turkey** by Fazlı Çoban and Ö. Işık Ece 165
- Ferric Iron 241, 458
- Ferrihydrite 304, 748
- Ferrimagnetic 466
- Ferrous Iron 458
- Ferruginous Smectite 458
- Fiedler, S. (with R.B. Neder, M. Burghammer, TH. Grasl, H. Schulz, and A. Bram), Refinement of the Kaolinite Structure from Single-Crystal Synchrotron Data 487
- First Occurrence of a Stacking Sequence Including ($\pm 60^\circ$, 180°) Rotations in Mg-Rich Annite** by Toshihiro Kogure and Massimo Nespolo 784
- Five-Coordinate Aluminum 64
- Five-Coordinate Aluminum in Allophane** by Cyril W. Childs, Shigenobu Hayashi and Roger H. Newman 64
- Flocculation 522
- Fluid Cell 573
- Fluid Inclusions 201
- Fluid/Rock Interaction 319
- Fluoride 529
- Ford, Robert G. (with Paul M. Bertsch), Distinguishing Between Surface and Bulk Dehydration-Dehydroxylation Reactions in Synthetic Goethites by High-Resolution Thermogravimetric Analysis 329
- Formamide 297, 678
- Formation of Goethite and Hematite from Neodymium-Containing Ferrihydrite Suspensions** by Tetsushi Nagano, Hisayoshi Mitamura, Shinichi Nakayama, and Satoru Nakashima 748
- Fractal 522
- Franchini-Angela, Marinella (with Mario Crosa and Valter Boero), Determination of Mean Crystallite Dimensions from X-ray Diffraction Peak Profiles: A Comparative Analysis of Synthetic Hematites 742
- Franco, Enrico (with Maria R. Ghiara, Carmela Petti, Roberto Lonis, Santina Luxoro, and Lucio Gnazzo), Occurrence of Clinoptilolite and Mordenite in Tertiary Calc-Alkaline Pyroclastites from Sardinia (Italy) 319
- Freda Formation (Wisconsin) 119
- Frost, Ray L. (with Daniel A. Lack, Gina N. Paroz, and Thu Ha T. Tran), New Techniques for Studying the Intercalation of Kaolinites from Georgia with Formamide 297
- Frost, Ray L. (with J. Theo Klopogge, Janos Kristof, and Erzsebet Horvath), Deintercalation of Hydrate-Intercalated Low-Defect Kaolinite 732
- FTIR 664
- Fujii, Kazuko (with Hirohisa Yamada, Katsuaki Yoshioka, Kenji Tamura, and Hiromoto Nakazawa), Compositional Gap in Dioctahedral-Trioctahedral Smectite System: Beidellite-Saponite Pseudo-Binary Join 803
- G
- Galán, Emilio (with M^a Isabel Carretero), A New Approach to Compositional Limits for Sepiolite and Palygorskite 399
- Galán, Emilio (with Patricia Aparicio), Mineralogical Interference on Kaolinite Crystallinity Index Measurements 12

- Gálvez, Natividad (with Vidal Barrón and José Torrent), Effect of Phosphate on the Crystallization of Hematite, Goethite, and Lepidocrocite from Ferrihydrite 304
- Gálvez, Natividad (with Vidal Barrón and José Torrent), Preparation and Properties of Hematite with Structural Phosphorus 375
- Garcell, L. (with A. Cerpa, M.T. García-González, P. Tartaj, J. Requena, and C.J. Serna), Mineral-Content and Particle-Size Effects on the Colloidal Properties of Concentrated Lateritic Suspensions 515
- García-González, M.T. (with A. Cerpa, P. Tartaj, J. Requena, L. Garcell, and C.J. Serna), Mineral-Content and Particle-Size Effects on the Colloidal Properties of Concentrated Lateritic Suspensions 515
- Gas Adsorption 647
- Gas Separation 647
- Ghiara, Maria R. (with Carmela Petti, Enrico Franco, Roberto Lonis, Santina Luxoro, and Lucio Gnazzo), Occurrence of Clinoptilolite and Mordenite in Tertiary Calc-Alkaline Pyroclastites from Sardinia (Italy) 319
- Gibbsite 201
- Giese, R.F., Jr. (with C.J. van Oss, J.O. Naim, P.M. Costanzo, W. Wu, and A.F. Sorling), Impact of Different Asbestos Species and Other Mineral Particles on Pulmonary Pathogenesis 697
- Gilg, H.A. (with S. Hülmeier, H. Miller, and S.M.F. Sheppard), Supergene Origin of the Lastarria Kaolin Deposit, South-Central Chile, and Paleoclimatic Implications 201
- Giresse, P. (with A. Wiewióra, A.M. Jaunet, A. Wilamowski, and F. Elsass), Crystal Chemistry of Layer Silicates of the Miocene Green Grain (Congo Basin) from Transmission Electron Microscopy (TEM) and Analytical Electron Microscopy (AEM) Observations 582
- Glass-to-Zeolite Conversion 348
- Glyphosate 777
- Glyphosate-Hydrotalcite Interaction as Influenced by pH** by M. Jesús Sánchez Martín, María V. Villa, and María Sánchez-Camazano 777
- Gnazzo, Lucio (with Maria R. Ghiara, Carmela Petti, Enrico Franco, Roberto Lonis, and Santina Luxoro), Occurrence of Clinoptilolite and Mordenite in Tertiary Calc-Alkaline Pyroclastites from Sardinia (Italy) 319
- Goethite 156, 304, 329, 748
- Grasl, TH. (with R.B. Neder, M. Burghammer, H. Schulz, A. Bram, and S. Fiedler), Refinement of the Kaolinite Structure from Single-Crystal Synchrotron Data 487
- Greece 688
- Green Grains 582
- Green Rust 312
- Guggenheim, Stephen (with A. Vahedi-Faridi), Structural Study of Tetramethylphosphonium-Exchanged Vermiculite 219
- Guggenheim, Stephen (with A. Vahedi-Faridi), Structural Study of Monomethylammonium and Dimethylammonium-Exchanged Vermiculites 338
- Gulf Coast 495
- Güngör, Nurfer (with Ö. Işık Ece, Fazlı Çoban, and Fikret Suner), Clay Mineralogy and Occurrence of Ferrian Smectites between Serpentinite Sapro-lites and Basalts in Biga Peninsula, Northwest Turkey 241
- H
- Halloysite 647, 811
- Hansen, Hans Christian Bruun (with Inge Fiil Poulsen), Interaction of Synthetic Sulphate "Green Rust" with Phosphate and the Crystallization of Vivianite 312
- Hartmann, Bernhard H. (with Kataline Juhász Bondnár, Karl Ramseyer, and Albert Matter), Effect of Permo-Carboniferous Climate on Illite-Smectite, Haushi Group, Sultanate of Oman 131
- Hassouta, Lhoussain, (with Martine D. Buatier, Jean-Luc Potdevin, and Nicole Liewig), Clay Diagenesis in the Sandstone Reservoir of the Ellon Field (Alwyn, North Sea) 269
- Haushi Group (Oman) 131
- Hayashi, Naoki (with Masanobu Onikata, Mitsuji Kondo, and Shoji Yamanaka), Complex Formation of Cation-Exchanged Montmorillonites with Propylene Carbonate: Osmotic Swelling in Aqueous Electrolyte Solutions 672
- Hayashi, Shigenobu (with Cyril W. Childs and Roger H. Newman) Five-Coordinate Aluminum in Al-lophane 64
- He, J.A. (with A. De Cristofaro and A. Violante), Comparison of Adsorption of Phosphate, Tartrate, and Oxalate on Hydroxy Aluminum Montmorillonite Complexes 226
- Heavy Metals 567, 617
- Hectorite 358, 529
- Hematite 304, 375, 742, 748
- Heterocoagulation 515
- Heterogeneous Catalyst 234
- HDTMA 28
- Hipedinger, Nora Elba (with Cristina Volzone), Influence of Hydrolyzed Zirconium Solutions on the OH-Zr-Montmorillonite 109
- Ho, Nei-Che (with Donald R. Peacor and Ben A. van der Pluijm), Preferred Orientation of Phyllosilicates in Gulf Coast Mudstones and Relation to the Smectite-Illite Transition 495
- Hochella, Michael F., Jr. (with Barry R. Bickmore, Dirk Bosbach, and Laurent Charlet), Methods for

- Performing Atomic Force Microscopy Imaging of Clay Minerals in Aqueous Solutions 573
- Hoffbauer, W. (with Sridhar Komarneni, Rajyalakshmi Pidugu, and Hartmut Schneider), A Synthetic Na-Rich Mica: Synthesis and Characterization by ^{27}Al and ^{29}Si Magic Angle Spinning Nuclear Magnetic Resonance Spectroscopy 410
- Holmgren, J.S. (with P.A. Crozier, M. Pan, C. Bateman, and J.J. Alcaraz), Direct Imaging of Zirconia Pillars in Montmorillonite by Analytical Electron Microscopy 683
- Homoionic (Montmorillonite) 591
(Smectites) 664
- Horvath, Erzsebet (with Ray L. Frost, J. Theo Klotz, and Janos Kristof), Deintercalation of Hydrazine-Intercalated Low-Defect Kaolinite 732
- Houng, Kun-Huang (with Chuang-Wen Pai, Ming-Kuang Wang, and Wei-Min Wang), Smectites in Iron-Rich Calcareous Soil and Black Soils of Taiwan 389
- Hover, Victoria C. (with Lynn M. Walter, Donald R. Peacor, and Anna M. Martini), Mg-Smectite Authigenesis in a Marine Evaporative Environment, Salina Ometepec, Baja California 252
- H-Positions 487
- HRTEM 181, 784
- Hsieh, Jean C.C. (with Crayton J. Yapp), Hydrogen-Isotope Exchange in Halloysite: Insight from Room-Temperature Experiments 811
- Huang, P.M. (with G.S.R. Krishnamurti and M.K. Wang), Role of Tartaric Acid in the Inhibition of the Formation of Al_{13} Tridecamer Using Sulfate Precipitation 658
- Hudson, Eric A. (with Louis J. Terminello, Brian E. Viani, Melissa Denecke, Tobias Reich, Patrick G. Allen, Jerome J. Bucher, David K. Shuh, and Norman M. Edelstein), The Structure of U^{6+} Sorption Complexes on Vermiculite and Hydrobiotite 439
- Huertas, F. Javier (with Javier Cuadros, Emilia Caballero, Concepción Jiménez de Cisneros, Francisco Huertas, and José Linares), Experimental Alteration of Volcanic Tuff: Smectite Formation and Effect on ^{18}O Isotope Composition 769
- Huertas, Francisco (with Javier Cuadros, Emilia Caballero, F. Javier Huertas, Concepción Jiménez de Cisneros, and José Linares), Experimental Alteration of Volcanic Tuff: Smectite Formation and Effect on ^{18}O Isotope Composition 769
- Hülmeyer, S. (with H.A. Gilg, H. Miller and S.M.F. Sheppard), Supergene Origin of the Lastarria Kaolin Deposit, South-Central Chile, and Paleoclimatic Implications 201
- Hydrated Kaolinite 793
- Hydration 630
- Hydrazine 732
- Hydrogen Bonding 732
- Hydrogen-Isotope Exchange in Halloysite: Insight from Room-Temperature Experiments** by Jean C.C. Hsieh and Crayton J. Yapp 811
- Hydrogen Isotopes 201, 811
- Hydrogen Peroxide 234
- Hydrotalcite 425, 777
- Hydrothermal (Synthesis) 212, 529
(Weathering) 201
- Hydrothermal Alteration 708
- Hydrothermal Conversion of Trachytic Glass to Zeolite. 3. Monocationic Model Glasses** by Maurizio de' Gennaro, Alessio Langella, Piergiulio Cappelletti, and Carmine Colella 348
- Hydrothermal Experiments 803
- Hydrothermal Synthesis of Corrensite: A Study of the Transformation of Saponite to Corrensite** by Herman E. Roberson, R.C. Reynolds, Jr., and David M. Jenkins 212
- Hydroxyl Groups 297, 732
- Hydroxyaluminum-Montmorillonite Complexes 226
- Hydroxyinterlayers (Montmorillonite) 109
- Hypersaline Brines 252
- I
- ICP-MS 425
- Ignimbrite 144
- Illite 96, 119, 131, 144, 201, 269, 286, 366, 708, 755
- Illite-Smectite 555
- Illite-Type Clays 718
- Image Analysis 683
- Impact of Different Asbestos Species and Other Mineral Particles on Pulmonary Pathogenesis** by C.J. van Oss, J.O. Naim, P.M. Costanzo, R. F. Giese, Jr., W. Wu, and A.F. Sorling 697
- Influence of Hydrolyzed Zirconium Solutions on the OH-Zr-Montmorillonite** by Cristina Volzone and Nora Elba Hipendinger 109
- Infrared Microscopy 297
- Infrared Spectroscopy 375, 417, 458, 672, 793
- Interaction of Synthetic Sulphate "Green Rust" with Phosphate and the Crystallization of Vivianite** by Hans Christian Bruun Hansen and Inge Fiil Poulsen 312
- Interfacial Mobility 515
- Interlayer Cation-Exchange Capacity (Montmorillonite) 113
- Intercalation 617
(Complex) 672
(Kaolinite) 297, 732, 793
(Montmorillonite) 109
- Interparticle Interactions (Kaolinite) 36
- Interstratification 425
- Ionic Strength 366
- Iron (also see Fe) 522
- Iron Oxides 742
- Iron-Rich Calcareous Soil (Smectite) 389

IR Spectra 375, 417, 458, 793
 Illite-Smectite (I-S) 119, 131, 286
 Isotopic Exchange 811

J

Janek, M., (with L. Smrčok), Application of an Internal Standard Technique by Transmission X-ray Diffraction to Assess Layer Charge of a Montmorillonite by Using the Alkylammonium Method 113
 Jaunet, A.M. (with A. Wiewióra, P. Giresse, A. Wilamowski, and F. Elsass), Crystal Chemistry of Layer Silicates of the Miocene Green Grain (Congo Basin) from Transmission Electron Microscopy (TEM) and Analytical Electron Microscopy (AEM) Observations 582
 Jaynes, W.F. (with G.F. Vance), Sorption of Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) Compounds by Hectorite Clays Exchanged with Aromatic Organic Cations 358
 Jenkins, David M. (With Herman E. Roberson and R. C. Reynolds, Jr.), Hydrothermal Synthesis of Corrensite: A Study of the Transformation of Saponite to Corrensite 212
 Jongmans, A.G. (with L. Denaix, F. van Oort, and M. Pernes), Transmission X-ray Diffraction of Undisturbed Soil Microfabrics Obtained by Microdrilling in Thin Sections 637

K

Kahr, Guenter (with Lorenz P. Meier), Determination of the Cation Exchange Capacity (CEC) of Clay Minerals Using the Complexes of Copper(II) Ion with Triethylenetetramine and Tetraethylenepentamine 386
 Kahr, Guenter (with Katja Emmerich and Fritz Thule Madsen), Dehydroxylation Behavior of Heat-Treated and Steam-Treated Homoionic *Cis*-Vacant Montmorillonites 591
 Kahr, Guenter (with Winnie Matthes and Fritz T. Madsen), Sorption of Heavy-Metal Cations by Al and Zr-Hydroxy-Intercalated and Pillared Bentonite 617
 K-Ar 286
 K-Ar Dating 96
K-Ar Dating of Illitic Fractions of Estonian "Blue Clay" Treated with Alkylammonium Cations by Sam Chaudhuri, Jan Środoń and Norbert Clauer 96
 Kaolin 481
 Kaolinite 36, 103, 174, 181, 201, 269, 297, 481, 487, 522, 605, 647, 793
 Kaolinite Crystallinity Index 12
 Kaolinite-Smectite Mixed Layers 505

Karakaya, Necati (with Muazzez Çelik and Abidin Temel), Clay Minerals in Hydrothermally Altered Volcanic Rocks, Eastern Pontides, Turkey 708
 Khanra, Swapan (with Amit Adak, Durjoy Mallik, and Swades K. Chaudhuri), Alum Mud: Phase Identification and Catalytic Potential for Aqueous-Phase Decomposition of Hydrogen Peroxide 234
 Kinetics 286
 Kitsopoulos, Konstantinos P., Cation-Exchange Capacity (CEC) of Zeolitic Volcaniclastic Materials: Applicability of the Ammonium Acetate Saturation (AMAS) Method 688
 Kjeldahl Ammonia Distillation 688
 Klopogge, J. Theo (with Ray L. Frost, Janos Kristof, and Erzsebet Horvath), Deintercalation of Hydrazine-Intercalated Low-Defect Kaolinite 732
 Klopogge, J. Theo (with Sridhar Komarneni and James E. Amonette), Synthesis of Smectite Clay Minerals: A Critical Review 529
 Kogure, Toshihiro (with Massimo Nespolo), First Occurrence of a Stacking Sequence Including ($\pm 60^\circ$, 180°) Rotations in Mg-Rich Annite 784
 Komadel, Peter (with Jana Madejová and Joseph W. Stucki), Partial Stabilization of Fe(II) in Reduced Ferruginous Smectite by Li Fixation 458
 Komarneni, Sridhar (with J. Theo Klopogge and James E. Amonette), Synthesis of Smectite Clay Minerals: A Critical Review 529
 Komarneni, Sridhar (with Rajyalakshmi Pidugu, W. Hoffbauer, and Hartmut Schneider), A Synthetic Na-Rich Mica: Synthesis and Characterization by ^{27}Al and ^{29}Si Magic Angle Spinning Nuclear Magnetic Resonance Spectroscopy 410
 Kondo, Mitsuji (with Masanobu Onikata, Naoki Hayashi, and Shoji Yamanaka), Complex Formation of Cation-Exchanged Montmorillonites with Propylene Carbonate: Osmotic Swelling in Aqueous Electrolyte Solutions 672
 Kondo, Mitsuji (with Masanobu Onikata and Shoji Yamanaka), Swelling of Formamide-Montmorillonite Complexes in Polar Liquids 678
 Krishnamurti, G.S.R. (with M.K. Wang and P.M. Huang), Role of Tartaric Acid in the Inhibition of the Formation of Al_{13} Tridecamer Using Sulfate Precipitation 658
 Kristof, Janos (with Ray L. Frost, J. Theo Klopogge, and Erzsebet Horvath), Deintercalation of Hydrazine-Intercalated Low-Defect Kaolinite 732
 K-smectite 252

L

Lack, Daniel, A. (with Ray L. Frost, Gina N. Paroz, and Thu Ha T. Tran), New Techniques for Studying the Intercalation of Kaolinites from Georgia with Formamide 297

- Laird, David A., Layer Charge Influences on the Hydration of Expandable 2:1 Phyllosilicates 630
- Langella, Alessio (with Maurizio de'Gennaro, Alessio Langella, Piergiulio Cappelletti, and Carmine Collella), Hydrothermal Conversion of Trachytic Glass to Zeolite. 3. Monocationic Model Glasses 348
- Lateritic Suspensions 515
- Layer Charge 630, 664
- Layer-Charge Determination 113
- Layer Charge Influences on the Hydration of Expandable 2:1 Phyllosilicates** by David A. Laird 630
- Layered Hydroxides 312
- Lepidocrocite 304
- Liewig, Nicole (with Lhoussain Hassouta, Maritne D. Buatier, and Jean-Luc Potdevin), Clay Diagenesis in the Sandstone Reservoir of the Ellon Field (Alwyn, North Sea) 269
- Li Fixation 458
- Ligand Field Splitting (Goethite) 156
- Linares, José (with Javier Cuadros, Emilia Caballero, F. Javier Huertas, Concepción Jiménez de Cisneros, and Francisco Huertas), Experimental Alteration of Volcanic Tuff: Smectite Formation and Effect on ^{18}O Isotope Composition 769
- Lindgreen, Holger (with Boris A. Sakharov, Alfred Salyn, and Victor A. Drits), Determination of Illite-Smectite Structures Using Multispecimen X-ray Diffraction Profile Fitting 555
- Long, Philip E. (with W. Crawford Elliott, Andrea M. Edenfield, J. Marion Wampler, and Gerald Matisoff), The Kinetics of the Smectite to Illite Transformation in Cretaceous Bentonites, Cerro Negro, New Mexico 286
- Lonis, Roberto (with Maria R. Ghiara, Carmela Petti, Enrico Franco, Santina Luxoro, and Lucio Gnazzo), Occurrence of Clinoptilolite and Mordenite in Tertiary Calc-Alkaline Pyroclastites from Sardinia (Italy) 319
- Lugli, Cristina (with Maria Franca Brigatti, Stefano Montorsi, and Luciano Poppi), Effects of Exchange Cations and Layer-Charge Location on Cysteine Retention by Smectites 664
- Lung 697
- Luxoro, Santina (with Maria R. Ghiara, Carmela Petti, Enrico Franco, Roberto Lonis, and Lucio Gnazzo), Occurrence of Clinoptilolite and Mordenite in Tertiary Calc-Alkaline Pyroclastites from Sardinia (Italy) 319
- Ma, Chi (with Richard A. Eggleton), Surface Layer Types of Kaolinite: A High-Resolution Transmission Electron Microscope Study 181
- Ma, Kunsong (with Alain C. Pierre), Clay Sediment-Structure Formation in Aqueous Kaolinite Suspensions 522
- Macaire, Jean-Jacques (with Jean Dejou, Christian De Kimpe, and Alain Perruchot), Chemical Changes and Genesis of Secondary Minerals During the Alteration of Biotites from Ignimbrites in the Tazze Mountain (Morocco) 144
- Madejová, J. (with S. Petit, A. Decarreau, and F. Martín), Characterization of Octahedral Substitutions in Kaolinites Near Using Infrared Spectroscopy 103
- Madejová, Jana (with Peter Komadel and Joseph W. Stucki), Partial Stabilization of Fe(II) in Reduced Ferruginous Smectite by Li Fixation 458
- Madsen, Fritz T. (with Winnie Matthes and Guenter Kahr), Sorption of Heavy-Metal Cations by Al and Zr-Hydroxy-Intercalated and Pillared Bentonite 617
- Madsen, Fritz Thule (with Katja Emmerich and Guenter Kahr), Dehydroxylation Behavior of Heat-Treated and Steam-Treated Homoionic *Cis*-Vacant Montmorillonites 591
- Maghemite 466
- Magnetic Susceptibility 466
- Magnetite 466
- Mahmoud, Sabri (with Sadiq Saleh), Effect of Acid Activation on the De-Tert-Butylation Activity of Some Jordanian Clays 481
- Mallik, Durjoy (with Amit Adak, Swapan Khanra, and Swades K. Chaudhuri), Alum Mud: Phase Identification and Catalytic Potential for Aqueous-Phase Decomposition of Hydrogen Peroxide 234
- Martin, F. (with S. Petit, J. Madejová, and A. Decarreau), Characterization of Octahedral Substitutions in Kaolinites Using Near Infrared Spectroscopy 103
- Martín, M. Jesús Sánchez (with María V. Villa and María Sánchez-Camazano), Glyphosate-Hydrotalcite Interaction as Influenced by pH 777
- Martini, Anna M. (with Victoria C. Hover, Lynn M. Walter, and Donald R. Peacor), Mg-Smectite Authigenesis in a Marine Evaporative Environment, Salina Ometepe, Baja California 252
- MAS NMR Spectroscopy 410
- Mass Spectrometry 591
- Materials Characterization 683
- Matisoff, Gerald (with W. Crawford Elliott, Andrea M. Edenfield, J. Marion Wampler, and Philip E. Long), The Kinetics of the Smectite to Illite Transformation in Cretaceous Bentonites, Cerro Negro, New Mexico 286

M

- Ma, Chi (with Richard A. Eggleton), Cation Exchange Capacity of Kaolinite 174

- Matter, Albert (with Bernhard H. Harmann, Katalina Juhász Bondnár, and Karl Ramseyer), Effect of Permo-Carboniferous Climate on Illite-Smectite, Haushi Group, Sultanate of Oman 131
- Matthes, Winnie (with Fritz T. Madsen and Guenter Kahr), Sorption of Heavy-Metal Cations by Al and Zr-Hydroxy-Intercalated and Pillared Bentonite 617
- McDowell, S. Douglas (with Gengmei Zhao and Donald R. Peacor), "Retrograde Diagenesis" of Clay Minerals in the Precambrian Freda Sandstone, Wisconsin 119
- Mean Crystallite Dimension 742
- Meier, Lorenz P. (with Guenter Kahr), Determination of the Cation Exchange Capacity (CEC) of Clay Minerals Using the Complexes of Copper(II) Ion with Triethylenetetramine and Tetraethylenepentamine 386
- Melnitchenko, Alexandra (with Cristina Volzone, John G. Thompson, José Ortega, and Stephen R. Palethorpe), Selective Gas Adsorption by Amorphous Clay-Mineral Derivatives 647
- Mermut, A.R. (with H. Shariatmadari and M.B. Benke), Sorption of Selected Cationic and Neutral Organic Molecules on Palygorskite and Sepiolite 44
- Metakaolinite 410
- Metal Contamination 425
- Methods for Performing Atomic Force Microscopy Imaging of Clay Minerals in Aqueous Solutions** by Barry R. Bickmore, Michael F. Hochella, Jr., Dirk Bosbach, and Laurent Charlet 573
- Methylene Blue 44
- Mica 410, 784
- Mica Schist 241
- Microcrystal 487
- Microdrilling 637
- Micromorphology 637
- Microorganisms 286
- Miller, H. (with H.A. Gilg, S. Hülmeyer, and S.M. F. Sheppard), Supergene Origin of the Lasterra Kaolin Deposit, South-Central Chile, and Paleoclimatic Implications 201
- Mineral-Content and Particle-Size Effects on the Colloidal Properties of Concentrated Lateritic Suspensions** by A. Cerpa, M.T. García-González, P. Tartaj, J. Requena, L. Garcell, and C.J. Serena 515
- Mineral Content of Suspensions 515
- Mineralogy (Otay Bentonites) 44
- Mineralogical Interference (Kaolinite Crystallinity Index) 12
- Mineralogical Interference on Kaolinite Crystallinity Index Measurements** by Patricia Aparicio and Emilio Galán 12
- Mineral Phases (Alum Mud) 234
- Mitamura, Hisayoshi (with Tetsushi Nagano, Shinichi Nakayama, and Satoru Nakashima), Formation of Goethite and Hematite from Neodymium-Containing Ferrihydrite Suspensions 748
- Mixed-Layer Phases 803
- Mg-Smectite 252
- Mg-Smectite Authigenesis in a Marine Evaporative Environment, Salina Ometepe, Baja California** by Victoria C. Hover, Lynn M. Walter, Donald R. Peacor, and Anna M. Martini 252
- Mn-Substituted Goethite 474
- Modeling of Organic and Inorganic Cation Sorption by Illite** by Tamara Polubesova and Shlomo Nir 366
- Mollisols 389
- Monomethylammonium-Exchanged Vermiculite 338
- Monte Carlo Simulation of the Total Radial Distribution Function for Interlayer Water in Sodium and Potassium Montmorillonites** by Garrison Sposito, Sung-Ho Park, and Rebecca Sutton 192
- Monterey Formation 84
- Montmorillonite 109, 113, 165, 192, 226, 241, 366, 481, 761, 529, 617, 647, 672, 678
- Montorsi, Stefano (with Maria Franca Brigatti, Cristina Lugli, and Luciano Poppi), Effects of Exchange Cations and Layer-Charge Location on Cysteine Retention by Smectites 664
- Mordenite 319, 688
- Morin, Guillaume (with Etienne Balan, Thierry Allard, Bruno Boizot, and Jean-Pierre Muller), Structural Fe³⁺ in Natural Kaolinites: New Insights from Electron Paramagnetic Resonance Spectra Fitting at X and Q-Band Frequencies 605
- Mörtel, H. (with V. Schwinka), Physico-Chemical Properties of Illite Suspensions after Cycles of Freezing and Thawing 718
- Mössbauer Spectroscopy 458
- Muller, Jean-Pierre (with Etienne Balan, Thierry Allard, Bruno Boizot and Guillaume Morin), Structural Fe³⁺ in Natural Kaolinites: New Insights from Electron Paramagnetic Resonance Spectra Fitting at X and Q-Band Frequencies 605
- Muscovite 119

N

- Nagano, Tetsushi (with Hisayoshi Mitamura, Shinichi Nakayama, and Satoru Nakashima), Formation of Goethite and Hematite from Neodymium-Containing Ferrihydrite Suspensions 748
- Naim, J.O. (with C.J. van Oss, P.M. Costanzo, R.F. Giese, Jr., W. Wu, and A.F. Sorling), Impact of Different Asbestos Species and Other Mineral Particles on Pulmonary Pathogenesis 697
- Nakashima, Satoru (with Tetsushi Nagano, Hisayoshi Mitamura, and Shinichi Nakayama), Formation of

- Goethite and Hematite from Neodymium-Containing Ferrihydrite Suspensions 748
- Nakayama, Shinichi (with Tetsushi Nagano, Hisayoshi Mitamura, and Satoru Nakashima), Formation of Goethite and Hematite from Neodymium-Containing Ferrihydrite Suspensions 748
- Nakazawa, Hiromoto (with Hirohisa Yamada, Katsuki Yoshioka, Kenji Tamura, and Kazuko Fujii), Compositional Gap in Dioctahedral-Trioctahedral Smectite System: Beidellite-Saponite Pseudo-Binary Join 803
- Na Mica 410
- Natural Clays 358
- Near Infrared Spectroscopy (Kaolinite) 103
- Neder, R.B. (with M. Burghammer, TH. Grasl, H. Schulz, A. Bram, and S. Fiedler), Refinement of the Kaolinite Structure from Single-Crystal Synchrotron Data 487
- Neodymium 748
- Neofomed Phyllosilicates 582
- Neou-Syngouna, Paraskevi (with Stella Triantafyllou and Eirini Christodoulou), Removal of Nickel and Cobalt from Aqueous Solutions by Na-Activated Bentonite 567
- Nespolo, Massimo (with Toshihiro Kogure), First Occurrence of a Stacking Sequence Including ($\pm 60^\circ$, 180°) Rotations in Mg-Rich Annite 784
- Neutron Diffraction 192
- Neutron Scattering (HDTMA-Clay) 28
- Neutrophils 697
- Newman, Roger H. (with Cyril W. Childs and Shigenobu Hayashi), Five-Coordinate Aluminum in Allophane 64
- New Mexico 286
- New Techniques for Studying the Intercalation of Kaolinites from Georgia with Formamide** by Ray L. Frost, Daniel A. Lack, Gina N. Paroz, and Thu Ha T. Tran 297
- Nickel Hydroxide 726
- Nickel Removal 567
- Nieto, F. (with A. Drief), The Effect of Dry Grinding on Antigorite from Mulhacen, Spain 417
- Nir, Shlomo (with Tamara Polubesova), Modeling of Organic and Inorganic Cation Sorption by Illite 366
- NMR Spectroscopy (Allophane) 64
- Non-stoichiometric Water 329
- Nontronite 529
- North Sea 269
- Nuclear Magnetic Resonance 761
- Nuclear Magnetic Resonance (NMR) Study of Cd²⁺ Sorption on Montmorillonite** by Paola Di Leo and Paul O'Brien 761
- Resonance (NMR) Study of Cd²⁺ Sorption on Montmorillonite 761
- Occurrence of Clinoptilolite and Mordenite in Tertiary Calc-Alkaline Pyroclastites from Sardinia (Italy)** by Maria R. Ghiara, Carmela Petti, Enrico Franco, Roberto Lonis, Santina Luxoro, and Lucio Gnazzo 319
- Octahedral site substitutions (Kaolinite) 103
- One-Dimensional Fourier Electron Density Map 726
- Onikata, Masanobu (with Mitsuji Kondo, Naoki Hayashi, and Shoji Yamanaka), Complex Formation of Cation-Exchanged Montmorillonites with Propylene Carbonate: Osmotic Swelling in Aqueous Electrolyte Solutions 672
- Onikata, Masanobu (with Mitsuji Kondo, and Shoji Yamanaka), Swelling of Formamide-Montmorillonite Complexes in Polar Liquids 678
- Opal-CT 319
- Optimal Structures (Kaolinite) 36
- Organoclay (Structure) 219, 338
- Organophilic Organoclays 358
- Origin of Kaolin 201
- Ortiga, José (with Cristina Volzone, John G. Thompson, Alexandra Melnitchenko, and Stephen R. Palethorpe), Selective Gas Adsorption by Amorphous Clay-Mineral Derivatives 647
- Osmotic Swelling 672, 678
- Otay Bentonite 70
- Oxalate 226
- Oxidation 458, 474
- Oxygen Isotope Exchange 769
- Oxygen Isotopes 201

P

O

O'Brien, Paul (with Paola Di Leo), Nuclear Magnetic

- Pai, Chuang-Wen (with Ming-Kuang Wang, Wei-Min Wang, and Kun-Huang Hwang), Smectites in Iron-Rich Calcareous Soil and Black Soils of Taiwan 389
- Paleoclimate (Oman) 131
- Palethorpe, Stephen R. (with Cristina Volzone, John G. Thompson, Alexandra Melnitchenko, and José Ortiga), Selective Gas Adsorption by Amorphous Clay-Mineral Derivatives 647
- Palygorskite 44, 399
- Pan, M. (with P.A. Crozier, C. Bateman, J.J. Alcaraz, and J.S. Holmgren), Direct Imaging of Zirconia Pillars in Montmorillonite by Analytical Electron Microscopy 683
- Park, Sung-Ho (with Garrison Sposito and Rebecca Sutton), Monte Carlo Simulation of the Total Radial Distribution Function for Interlayer Water in Sodium and Potassium Montmorillonites 192
- Parks, George A. (with Hillary A. Thompson, and Gordon E. Brown, Jr.), Ambient-Temperature Synthesis, Evolution, and Characterization of Cobalt-Aluminum Hydrotalcite-Like Solids 425

- Paroz, Gina N. (with Ray L. Frost, Daniel A. Lack, and Thu Ha T. Tran), New Techniques for Studying the Intercalation of Kaolinites from Georgia with Formamide 297
- Partial Stabilization of Fe(II) in Reduced Ferruginous Smectite by Li Fixation** by Peter Komadel, Jana Madejová, and Joseph W. Stucki 458
- Particles 573
- Particle Shape 755
- Pathology 697
- Pavlova, Lyudmyla A. (with Michael J. Wilson), Colloid Chemical Control of Kaolinite Properties Related to Cermic Processing 36
- Peacor, Donald R. (with Ronald C. Rouse, T. Dennis Coskren, and Eric J. Essene), Destinezite ("Diadochite"), $\text{Fe}_2(\text{PO}_4)(\text{SO}_4)(\text{OH})\cdot 6\text{H}_2\text{O}$: Its Crystal Structure and Role as a Soil Mineral at Alum Cave Bluff, Tennessee 1
- Peacor, Donald R. (with Gengmei Zhao and S. Douglas McDowell), "Retrograde Diagenesis" of Clay Minerals in the Precambrian Freda Sandstone, Wisconsin 119
- Peacor, Donald R. (with Nei-Che Ho and Ben A. van der Pluijm), Preferred Orientation of Phyllosilicates in Gulf Coast Mudstones and Relation to the Smectite-Illite Transition 495
- Peacor, Donald R. (with Victoria C. Hover, Lynn M. Walter, and Anna Martini), Mg-Smectite Authigenesis in a Marine Evaporative Environment, Salina Ometepe, Baja California 252
- Pedogenic Formation of Kaolinite-Smectite Mixed Layers in a Soil Toposequence Developed from Basaltic Parent Material in Sardinia (Italy)** by Dominique Righi, Fabio Terribile, and Sabine Petit 505
- Pernes, M. (with L. Denaix, F. van Oort, and A.G. Jongmans), Transmission X-ray Diffraction of Undisturbed Soil Microfabrics Obtained by Microdrilling in Thin Sections 637
- Perruchot, Alain (with Jean Dejou, Christian De Kimppe, Jean-Jacques Macaire), Chemical Changes and Genesis of Secondary Minerals During the Alteration of Biotites from Ignimbrites in the Tazekka Mountain (Morocco) 144
- Petit, S. (with J. Madejová, A. Decarreau and F. Martin), Characterization of Octahedral Substitutions in Kaolinites Near Infrared Spectroscopy 103
- Petit, Sabine (with Dominique Righi and Fabio Terribile), Pedogenic Formation of Kaolinite-Smectite Mixed Layers in a Soil Toposequence Developed from Basaltic Parent Material in Sardinia (Italy) 505
- Petti, Carmela (with Maria R. Ghiara, Enrico Franco, Roberto Lonis, Santina Luxoro, and Lucio Gnazzo), Occurrence of Clinoptilolite and Mordenite in Tertiary Calc-Alkaline Pyroclastites from Sardinia (Italy) 319
- pH 777
- Phagocytosis 697
- Phillipsite 348
- Phosphate 226, 304, 312
- Phosphate-Sulphate 1
- Phyllosilicate(s) 495, 529
- Physicochemical 697
- Physico-Chemical Properties of Illite Suspensions after Cycles of Freezing and Thawing** by V. Schwinka and H. Mörtel 718
- Pidugu, Rajyalakshmi (with Sridhar Komarneni, W. Hoffbauer, and Hartmut Schneider), A Synthetic Na-Rich Mica: Synthesis and Characterization by ^{27}Al and ^{29}Si Magic Angle Spinning Nuclear Magnetic Resonance Spectroscopy 410
- Pierre, Alain C. (with Kunsong Ma), Clay Sediment-Structure Formation in Aqueous Kaolinite Suspensions 522
- Pillared Clay 617
- Plasticity 718
- Plate Tectonics (Ota Bentonites) 70
- Polar Liquids 678
- Polubesova, Tamara (with Shlomo Nir), Modeling of Organic and Inorganic Cation Sorption by Illite 366
- Polyegos 688
- Polyethyleneimine 573
- Polytype-20 784
- Polytypism 784
- Poppi, Luciano (with Maria Franca Brigatti, Cristina Lugli, and Stefano Montorsi), Effects of Exchange Cations and Layer-Charge Location on Cysteine Retention by Smectites 664
- Potassium Fluoride 647
- Potdevin, Jean-Luc (with Lhoussan Hassouta, Martine D. Buatier, and Nicole Liewig), Clay Diagenesis in the Sandstone Reservoir of the Ellon Field (Alwyn, North Sea) 269
- Poulsen, Inge Fiil (with Hans Christian Bruun Hansen), Interaction of Synthetic Sulphate "Green Rust" with Phosphate and the Crystallization of Vivianite 312
- Powder X-ray Diffraction 732, 742, 748, 793
- Powder XRD Data 658
- Preferred Orientation 495
- Preferred Orientation of Phyllosilicates in Gulf Coast Mudstones and Relation to the Smectite-Illite Transition** by Nei-Che Ho, Donald R. Peacor, and Ben A. van der Pluijm 495
- Preparation and Properties of Hematite with Structural Phosphorus** by Natividad Gálvez, Vidal Barrón, and José Torrent 375
- Preparation of Kaolinite-Amino Acid Intercalates Derived from Hydrated Kaolinite** by Makoto Sato 793
- Pressure-Solution 269
- Pretreatment With Cold 718

- Properties of Water in Calcium- and Hexadecyltrimethylammonium-Exchanged Bentonite** by Michael A. Anderson, Frans R. Trouw, and Cheok N. Tam 28
- Pyrophyllite 181
- Propylene Carbonate 672

Q

- Quantification and Characterization of Maghemite in Soils Derived from Volcanic Rocks in Southern Brazil** by Antonio Carlos S. da Costa, Jerry M. Bigham, Fred E. Rhoton, and Samuel J. Traina 466

R

- Racah-Parameters (Goethite) 156
- Rajec, Pavol (with Vladimír Šucha, Dennis D. Eberl, Jan Šrodoň, and Françoise Elsass), Effect of Illite Particle Shape on Cesium Sorption 755
- Raman Microprobe 297
- Raman Microscopy 732
- Ramseyer, Karl (with Bernhard H. Harmann, Katalina Juhász Bondnár, and Albert Matter), Effect of Permo-Carboniferous Climate on Illite-Smectite, Haushi Group, Sultanate of Oman 131
- Randomly Interstratified Chlorite-Smectite 212
- Reduction 458
- Refinement of the Kaolinite Structure from Single-Crystal Synchrotron Data** by R.B. Neder, M. Burghammer, TH. Grasl, H. Schulz, A. Bram, and S. Fiedler 487
- Rehydroxylation 591
- Reich, Tobias (with Eric A. Hudson, Louis J. Terminello, Brian E. Viani, Melissa Denecke, Patrick G. Allen, Jerome J. Bucher, David K. Shuh, and Norman M. Edelstein), The Structure of U^{6+} Sorption Complexes on Vermiculite and Hydrobiotite 439
- Removal of Nickel and Cobalt from Aqueous Solutions by Na-Activated Bentonite** by Stella Triantafyllou, Eirini Christodoulou, and Paraskevi Neou-Syngouna 567
- Retrograde Diagenesis 119
- Requena, J. (with A. Cerpa, M.T. García-González, P. Tartaj, L. Garcell, and C.J. Serna), Mineral-Content and Particle-Size Effects on the Colloidal Properties of Concentrated Lateritic Suspensions 515
- "Retrograde Diagenesis" of Clay Minerals in the Precambrian Freda Sandstone, Wisconsin** by Gengmei Zhao, Donald R. Peacor and S. Douglas McDowell 119
- Reynolds, R.C. (with Herman E. Roberson and David M. Jenkins), Hydrothermal Synthesis of Corrensite: A Study of the Transformation of Saponite to Corrensite 212
- Rheology 515

- Rhoton, Fred E. (with Antonio Carlos S. da Costa, Jerry M. Bigham, and Samuel J. Traina), Quantification and Characterization of Maghemite in Soils Derived from Volcanic Rocks in Southern Brazil 466
- Rietveld Refinement 748
- Righi, Dominique (with Fabio Terribile and Sabine Petit), Pedogenic Formation of Kaolinite-Smectite Mixed Layers in a Soil Toposequence Developed from Basaltic Parent Material in Sardinia (Italy) 505
- Roberson, Herman E. (with R.C. Reynolds, Jr. and David M. Jenkins), Hydrothermal Synthesis of Corrensite: A Study of the Transformation of Saponite to Corrensite 212
- Role of Tartaric Acid in the Inhibition of the Formation of Al_{13} Tridecamer Using Sulfate Precipitation** by G.S.R. Krishnamurti, M.K. Wang, and P.M. Huang
- Rouse, Roland C. (with Donald R. Peacor, T. Dennis Coskren and Eric J. Essene), Destinezite ("Diadochite"), $Fe_2(PO_4)(SO_4)(OH) \cdot 6H_2O$: Its Crystal Structure and Role as a Soil Mineral at Alum Cave Bluff, Tennessee 1

S

- Sakharov, Boris A. (with Holger Lindgreen, Alfred Salyn, and Victor A. Drits), Determination of Illite-Smectite Structures Using Multispecimen X-ray Diffraction Profile Fitting 555
- Saleh, Sadiq (with Sabri Mahmoud), Effect of Acid Activation on the De-Tert-Butylation Activity of Some Jordanian Clays 481
- Salina Ometepec 252
- Salyn, Alfred (with Boris A. Sakharov, Holger Lindgreen, and Victor A. Drits), Determination of Illite-Smectite Structures Using Multispecimen X-ray Diffraction Profile Fitting 555
- Sánchez-Camazano, María (with M. Jesús Sánchez Martín and María V. Villa), Glyphosate-Hydrotalcite Interaction as Influenced by pH 777
- Sandstone 269
- Santorini 688
- Saponite 212, 252, 529
- Sapphire 573
- Sardinia 505
- Sato, Makoto, Preparation of Kaolinite-Amino Acid Intercalates Derived from Hydrated Kaolinite 793
- Sauconite 529
- Scanning Electron Microscopy (SEM) 119, 522, 658
- Scheinost, Andreas C. (with Darrell G. Schulze and Udo Schwertmann), Diffuse Reflectance Spectra of Al Substituted Goethite: A Ligand Field Approach 156

- Schneider, Hartmut (with Sridhar Komarneni, Rajyalakshmi Pidugu, and W. Hoffbauer), A Synthetic Na-Rich Mica: Synthesis and Characterization by ^{27}Al and ^{29}Si Magic Angle Spinning Nuclear Magnetic Resonance Spectroscopy 410
- Schulz, H. (with R.B. Neder, M. Burghammer, TH. Grasl, A. Bram, and S. Fiedler), Refinement of the Kaolinite Structure from Single-Crystal Synchrotron Data 487
- Schulze, Darrell G. (with Andreas Scheinost and Udo Schwertmann), Diffuse Reflectance Spectra of Al Substituted Goethite: A Ligand Field Approach 156
- Schwertmann, Udo (with Darrell G. Schulze and Andreas Scheinost), Diffuse Reflectance Spectra of Al Substituted Goethite: A Ligand Field Approach 156
- Schwinka, V. (with H. Mörtel), Physico-Chemical Properties of Illite Suspensions after Cycles of Freezing and Thawing 718
- Sediment 522
- Selective Dissolution 466
- Selective Gas Adsorption by Amorphous Clay-Mineral Derivatives** by Cristina Volzone, John G. Thompson, Alexandra Melnitchenko, José Ortega, and Stephen R. Palethorpe 647
- Sepiolite 44, 399
- Serna, C.J. (with A. Cerpa, M.T. García-González, P. Tartaj, J. Requena, and L. Garcell), Mineral-Content and Particle-Size Effects on the Colloidal Properties of Concentrated Lateritic Suspensions 515
- Serpentine 417
- Serpentinite 241
- Shale Diagenetic Age 96
- Shariatmadari, H. (with A.R. Mermut and M.B. Benke), Sorption of Selected Cationic and Neutral Organic Molecules on Palygorskite and Sepiolite 44
- Sheppard, S.M.F. (with H.A. Gilg, S. Hülmeyer, and H. Miller), Supergene Origin of the Lastarria Kaolin Deposit, South-Central Chile, and Paleoclimatic Implications 201
- Shuh, David K. (with Eric A. Hudson, Louis J. Terminello, Brian E. Viani, Melissa Denecke, Tobias Reich, Patrick G. Allen, Jerome J. Bucher, and Norman M. Edelstein), The Structure of U^{6+} Sorption Complexes on Vermiculite and Hydrobiotite 439
- Silica 697
- Silica Springs, New Zealand (Allophane) 64
- Silicoorganic Liquids 36
- Silver Behenate 113
- Simulation 555
- Single-Crystal Refinement 219, 338, 487
- Smectite 109, 119, 181, 286, 358, 389, 708, 769
- Smectite-Illite Transition 495
- Smectite-Layer Charge 505
- Smectites in Iron-Rich Calcareous Soil and Black Soils of Taiwan** by Chuang-Wen Pai, Ming-Kuang Wang, Wei-Min Wang, and Kun-Huang Hough 389
- Smrčok, L. (with M. Janek), Application of an Internal Standard Technique by Transmission X-ray Diffraction to Assess Layer Charge of a Montmorillonite by Using the Alkylammonium Method 113
- Soil Mineral 1
- Soils 505, 811
- Solid Solution 425
- Solid State NMR 658
- Solubility Product 425
- Sorling, A.F. (with C.J. van Oss, J.O. Naim, P.M. Costanzo, R.F. Giese, Jr., and W. Wu), Impact of Different Asbestos Species and Other Mineral Particles on Pulmonary Pathogenesis 697
- Sorption 358, 439, 617
- Sorption Modeling 44
- Sorption of Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) Compounds by Hectorite Clays Exchanged with Aromatic Organic Cations** by W.F. Jaynes and G.F. Vance 358
- Sorption of Heavy-Metal Cations by Al and Zr-Hydroxy-Intercalated and Pillared Bentonite** by Winnie Matthes, Fritz T. Madsen, and Guenter Kahr 617
- Sorption of Selected Cationic and Neutral Organic Molecules on Palygorskite and Sepiolite** by H. Shariatmadari, A.R. Mermut, and M.B. Benke 44
- Specific Surface 647
- Spectroscopy Study of Arsenite [As(III)] Oxidation on Mn-Substituted Goethite** by Xiaohua Sun, Harvey E. Doner, and Mavrik Zavarin 474
- Sposito, Garrison (with Sung-Ho Park and Rebecca Sutton), Monte Carlo Simulation of the Total Radial Distribution Function for Interlayer Water in Sodium and Potassium Montmorillonites 192
- Šrodoň, Jan (with Pavol Rajec, Vladimír Šucha, Dennis D. Eberl, and Françoise Elsass), Effect of Illite Particle Shape on Cesium Sorption 755
- Šrodoň, Jan (with Sam Chaudhuri and Norbert Clauer), K-Ar Dating of Illitic Fractions of Estonian "Blue Clay" Treated with Alkylammonium Cations 96
- Stable Isotopes (Volcanic Ash, California) 84
- Stable Isotope Evolution of Volcanic Ash Layers During Diagenesis of the Miocene Monterey Formation, California** by J.S. Compton, M.E. Conrad, and T.W. Vennemann 84
- Stacking Disorder 784
- Stevensite 529
- Structural Fe^{3+} in Natural Kaolinites: New Insights from Electron Paramagnetic Resonance Spectra Fitting at X and Q-Band Frequencies** by

- Etienne Balan, Thierry Allard, Bruno Boizot, Guillaume Morin, and Jean-Pierre Muller 605
- Structural Formulae 144
- Structural P (in Hematite) 375
- Structural Study of Monomethylammonium and Dimethylammonium-Exchanged Vermiculites** by A. Vahedi-Faridi and Stephen Guggenheim 338
- Structural Study of Tetramethylphosphonium-Exchanged Vermiculite** by A. Vahedi-Faridi and Stephen Guggenheim 219
- Structure (Illite-Smectite) 555 (Hematite) 375
- Stucki, Joseph W. (with Peter Komadel and Jana Madejová), Partial Stabilization of Fe(II) in Reduced Ferruginous Smectite by Li Fixation 458
- Substitution (Kaolinite) 174
- Šucha, Vladimír (with Pavol Rajec, Dennis D. Eberl, Jan Šrodoň, and Françoise Elsass), Effect of Illite Particle Shape on Cesium Sorption 755
- Sultanate of Oman 131
- Sun, Xiaohua (with Harvey E. Doner and Mavrik Zavarin), Spectroscopy Study of Arsenite [As(III)] Oxidation on Mn-Substituted Goethite 474
- Suner, Fikret (with Ö. Işık Ece, Fazlı Çoban, and Nurfer Güngör), Clay Mineralogy and Occurrence of Ferrian Smectites between Serpentinite Saponites and Basalts in Biga Peninsula, Northwest Turkey 241
- Supergene Origin of the Lastarria Kaolin Deposit, South-Central Chile, and Paleoclimatic Implications by H.A. Gilg, S. Hülmeyer, H. Miller and S.M.F. Sheppard 201
- Surface Area 630, 742
- Surface Complex 439
- Surface Layer 181
- Surface Layer Types of Kaolinite: A High-Resolution Transmission Electron Microscope Study by Chi Ma and Richard A. Eggleton 181
- Surface Modification (Kaolinite) 36
- Suspension (Kaolinite) 522
- Sutton, Rebecca (with Garrison Sposito and Sung-Ho Park), Monte Carlo Simulation of the Total Radial Distribution Function for Interlayer Water in Sodium and Potassium Montmorillonites 192
- Swelling 555, 630, 678
- Swelling of Formamide-Montmorillonite Complexes in Polar Liquids** by Masanobu Onikata, Mitsuji Kondo, and Shoji Yamanaka 678
- Synchrotron Radiation 487
- Synthesis 348
- Synthesis of Smectite Clay Minerals: A Critical Review** by J. Theo Kloprogge, Sridhar Komarneni, and James E. Amonette 529
- Synthetic Clay Mineral 410
- T
- Takahashi, Koichiro (with Motoki Uehara, Atsushi Yamzaki, Taku (Umezawa, and Sadao Tsutsumi), A Nickel Hydroxide-Vermiculite Complex: Preparation and Characterization 726
- Talc 697
- Tam, Cheok N. (with Michael A. Anderson and Frans R. Trouw), Properties of Water in Calcium- and Hexadecyltrimethylammonium-Exchange Bentonite 28
- Tamura, Kenji (with Hirohisa Yamada, Katsuaki Yoshioka, Kazuko Fujii, and Hiromoto Nakazawa), Compositional Gap in Dioctahedral-Trioctahedral Smectite System: Beidellite-Saponite Pseudo-Binary Join 803
- TappingMode 573
- Tartaj, P. (with A. Cerpa, M.T. García-González, J. Requena, L. Garcell, and C.J. Serna), Mineral-Content and Particle-Size Effects on the Colloidal Properties of Concentrated Lateritic Suspensions 515
- Tartaric Acid 658
- Tartrate 226
- TEM 329, 425
- Temel, Abidin (with Muazzez Çelik and Necati Karakaya), Clay Minerals in Hydrothermally Altered Volcanic Rocks, Eastern Pontides, Turkey 708
- Tempfix 573
- Terminello, Louis J. (with Eric A. Hudson, Brian E. Viani, Melissa Denecke, Tobias Reich, Patrick G. Allen, Jerome J. Bucher, David K. Shuh, and Norman M. Edelstein), The Structure of U⁶⁺ Sorption Complexes on Vermiculite and Hydrobiotite 439
- Terribile, Fabio (with Dominique Righi and Sabine Petit), Pedogenic Formation of Kaolinite-Smectite Mixed Layers in a Soil Toposequence Developed from Basaltic Parent Material in Sardinia (Italy) 505
- Tertiary Pyroclastic Flows 319
- Tetraethylenepentamine 386
- Tetramethylammonium-Exchanged Vermiculite 338
- Tetramethylphosphonium-Exchanged Vermiculite 219, 338
- The Effect of Dry Grinding on Antigorite from Mulhacen, Spain** by A. Drief and F. Nieto 417
- The Kinetics of the Smectite to Illite Transformation in Cretaceous Bentonites, Cerro Negro, New Mexico** by W. Crawford Elliott, Andrea M. Edenfield, J. Marion Wampler, Gerald Matisoff, and Philip E. Long 286
- Thermal Analysis 417, 664, 718
- Thermogravimetric Analysis 329, 793
- Thermogravimetry 329, 591, 793
- The Structure of U⁶⁺ Sorption Complexes on Vermiculite and Hydrobiotite** by Eric A. Hudson, Louis J. Terminello, Brian E. Viani, Melissa De-

- necke, Tobias Reich, Patrick G. Allen, Jerome J. Bucher, David K. Shuh, and Norman M. Edelstein 439
- Thixotropy 718
- Thompson, Hillary A. (with George A. Parks and Gordon E. Brown, Jr.), Ambient-Temperature Synthesis, Evolution, and Characterization of Cobalt-Aluminum Hydrotalcite-Like Solids 425
- Thompson, John G. (with Cristina Volzone, Alexandra Melnitchenko, José Ortiga, and Stephen R. Palethorpe), Selective Gas Adsorption by Amorphous Clay-Mineral Derivatives 647
- TMP-Vermiculite 219
- Torrent, José (with Natividad Gálvez and Vidal Barrón), Effect of Phosphate on the Crystallization of Hematite, Goethite, and Lepidocrocite from Ferrihydrite 304
- Torrent, José (with Natividad Gálvez and Vidal Barrón), Preparation and Properties of Hematite with Structural Phosphorus 375
- Toseki 708
- Trachytic Glasses 348
- Traina, Samuel J. (with Antonio Carlos S. da Costa, Jerry M. Bigham, and Fred E. Rhoton), Quantification and Characterization of Maghemite in Soils Derived from Volcanic Rocks in Southern Brazil 466
- Tran, Thu Ha T. (with Ray L. Frost, Daniel A. Lack, and Gina N. Paroz), New Techniques for Studying the Intercalation of Kaolinites from Georgia with Formamide 297
- Transmission Electron Microscopy 119, 748
- Transmission X-ray Diffraction 637
- Transmission X-ray Diffraction of Undisturbed Soil Microfabrics Obtained by Microdrilling in Thin Sections** by L. Denaix, F. van Oort, M. Pernes, and A.G. Jongmans 637
- Trans*-Vacant Octahedra 591
- Triantafyllou, Stella (with Eirini Christodoulou and Paraskevi Neou-Syngouna), Removal of Nickel and Cobalt from Aqueous Solutions by Na-Activated Bentonite 567
- Triethylenetetramine 386
- Trioctahedral Smectite 252
- Triton-X 100 44
- Trouw, Frans R. (with Micahel A. Anderson and Cheok N. Tam), Properties of Water in Calcium- and Hexadecyltrimethylammonium-Exchange Bentonite 28
- Tsutsumi, Sadao (with Motoki Uehara, Atsushi Yamzaki, Taku Umezawa, and Koichiro Takahashi), A Nickel Hydroxide-Vermiculite Complex: Preparation and Characterization 726
- Tuff 769
- Turkey 165, 241
- U
- Uehara, Motoki (with Atsushi Yamzaki, Taku Umezawa, Koichiro Takahashi, and Sadao Tsutsumi), A Nickel Hydroxide-Vermiculite Complex: Preparation and Characterization 726
- Umezawa, Taku (with Motoki Uehara, Atsushi Yamzaki, Koichiro Takahashi, and Sadao Tsutsumi), A Nickel Hydroxide-Vermiculite Complex: Preparation and Characterization 726
- Undisturbed Microsamples 637
- Unleaded Gasoline 358
- Upper Paleozoic 131
- Uranium 439
- Uranyl 439
- V
- Vahedi-Faridi, A. (with Stephen Guggenheim), Structural Study of Monomethylammonium and Dimethylammonium-Exchanged Vermiculites 338
- Vahedi-Faridi, A. (with Stephen Guggenheim), Structural Study of Tetramethylphosphonium-Exchanged Vermiculite 219
- van der Pluijm, Ben A. (with Nei-Che Ho and Donald R. Peacor), Preferred Orientation of Phyllosilicates in Gulf Coast Mudstones and Relation to the Smectite-Illite Transition 495
- van Oort, F. (with L. Denaix, M. Pernes, and A.G. Jongmans), Transmission X-ray Diffraction of Undisturbed Soil Microfabrics Obtained by Microdrilling in Thin Section 637
- van Oss, C.J. (with J.O. Naim, P.M. Costanzo, R.F. Giese, Jr., W. Wu, and A.F. Sorling), Impact of Different Asbestos Species and Other Mineral Particles on Pulmonary Pathogenesis 697
- Vance, G.F. (with W.F. Jaynes), Sorption of Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) Compounds by Hectorite Clays Exchanged with Aromatic Organic Cations 358
- Vennemann, T.W. (with J.S. Compton and M.E. Conrad), Stable Isotope Evolution of Volcanic Ash Layers During Diagenesis of the Miocene Monterey Formation, California 84
- Vermiculite 219, 338, 389, 439, 726
- Vertisols 389
- Viani, Brian E. (with Eric A. Hudson, Louis J. Terminello, Melissa Denecke, Tobias Reich, Patrick G. Allen, Jerome J. Bucher, David K. Shuh, and Norman M. Edelstein), The Structure of U^{6+} Sorption Complexes on Vermiculite and Hydrobiotite 439
- Villa, María V. (with M. Jesús Sánchez Martín and María Sánchez-Camazano), Glyphosate-Hydrotalcite Interaction as Influenced by pH 777
- Violante, A. (with J.Z. He and A. De Cristofaro), Comparison of Adsorption of Phosphate, Tartrate, and Oxalate on Hydroxy Aluminum Montmorillonite Complexes 226

- Viscosity 718
 Vivianite 312
 Volcanic Ash (Stable Isotopes) 84
 Volcanism (Otay Bentonites) 70
 Volcanogenic Massive Sulfide 708
 Volzone, Cristina (with John G. Thompson, Alexandra Melnitchenko, José Ortiga, and Stephen R. Palethorpe), Selective Gas Adsorption by Amorphous Clay-Mineral Derivatives 647
 Volzone, Cristina (with Nora Elba Hipedinger), Influence of Hydrolyzed Zirconium Solutions on the OH-Zr-Montmorillonite 109
- W
- Walter, Lynn M. (with Victoria C. Hover, Donald R. Peacor, and Anna M. Martini), Mg-Smectite Authigenesis in a Marine Evaporative Environment, Salina Ometepec, Baja California 252
 Wampler, J. Marion (with W. Crawford Elliott, Andrea M. Edenfield, Gerald Matisoff, and Philip E. Long), The Kinetics of the Smectite to Illite Transformation in Cretaceous Bentonites, Cerro Negro, New Mexico 286
 Wang, Ming-Kuang (with Chuang-Wen Pai, Wei-Min Wang, and Kun-Huang Houng), Smectites in Iron-Rich Calcareous Soil and Black Soils of Taiwan 389
 Wang, M.K. (with G.S.R. Krishnamurti and P.M. Huang), Role of Tartaric Acid in the Inhibition of the Formation of Al₁₃ Tridecamer Using Sulfate Precipitation 658
 Wang, Wei-Min (with Chuang-Wen Pai, Ming-Kuang Wang, and Kun-Huang Houng), Smectites in Iron-Rich Calcareous Soil and Black Soils of Taiwan 389
 Wastewater 567
 Water (in HDTMA-Clay) 28
 (in Montmorillonite) 192
 Waxy Bentonite 70
 Weathering 201
 Wiewióra, A. (with P. Giresse, A.M. Jaunet, A. Wilamowski, and F. Elsass), Crystal Chemistry of Layer Silicates of the Miocene Green Grain (Congo Basin) from Transmission Electron Microscopy (TEM) and Analytical Electron Microscopy (AEM) Observations 582
 Wilamowski, A. (with A. Wiewióra, P. Giresse, A.M. Jaunet, and F. Elsass), Crystal Chemistry of Layer Silicates of the Miocene Green Grain (Congo Basin) from Transmission Electron Microscopy (TEM) and Analytical Electron Microscopy (AEM) Observations 582
 Wilson, Michael J. (with Lyudmyla A. Pavlova), Colloid Chemical Control of Kaolinite Properties Related to Ceramic Processing 36
- Wu, W. (with C.J. van Oss, J.O. Naim, P.M. Costanzo, R.F. Giese, Jr., and A.F. Sorling), Impact of Different Asbestos Species and Other Mineral Particles on Pulmonary Pathogenesis 697
- X
- XANES 439, 474
 X-ray Diffraction 555
 (Chlorite) 54
 (Corrensite) 212
 (Kaolinite) 297, 793
 (Vermiculite) 338
 XRD 113, 329, 358, 439, 664, 742
- Y
- Yamada, Hirohisa (with Katsuaki Yoshioka, Kenji Tamura, Kazuko Fujii, and Hiromoto Nakazawa), Compositional Gap in Dioctahedral-Trioctahedral Smectite System: Beidellite-Saponite Pseudo-Binary Join 803
 Yamanaka, Shoji (with Masanobu Onikata, Mitsuji Kondo, and Naoki Hayashi), Complex Formation of Cation-Exchanged Montmorillonites with Propylene Carbonate: Osmotic Swelling in Aqueous Electrolyte Solutions 672
 Yamanaka, Shoji (with Masanobu Onikata and Mitsuji Kondo), Swelling of Formamide-Montmorillonite Complexes in Polar Liquids 678
 Yamzaki, Atsushi (with Motoki Uehara, Taku Umezawa, Koichiro Takahashi, and Sadao Tsutsumi), A Nickel Hydroxide-Vermiculite Complex: Preparation and Characterization 726
 Yapp, Crayton J. (with Jean C.C. Hsieh), Hydrogen-Isotope Exchange in Halloysite: Insight from Room-Temperature Experiments 811
 Yield Stress 515
 Yoshioka, Katsuaki, (with Hirohisa Yamada, Kenji Tamura, Kazuko Fujii, and Hiromoto Nakazawa), Compositional Gap in Dioctahedral-Trioctahedral Smectite System: Beidellite-Saponite Pseudo-Binary Join 803
- Z
- Zavarin, Mavrik (with Xiaohua Sun and Harvey E. Doner), Spectroscopy Study of Arsenite [As(III)] Oxidation of Mn-Substituted Goethite 474
 Zeolites 688
 Zeolite Synthesis 348
 Zeta Potential 522
 Zhao, Gengmei (with Donald R. Peacor and S. Douglas McDowell), "Retrograde Diagenesis" of Clay Minerals in the Precambrian Fredda Sandstone, Wisconsin 119
 Zirconium (Montmorillonite) 109