Clays and Clay Minerals, Vol. 48, No. 6, 719–736, 2000.

COMPREHENSIVE SUBJECT, AUTHOR, TITLE INDEX VOLUME 48, 2000

3-Chloroaniline (sorption in pillared complexes) 593
3-Chlorophenol (sorption in pillared complexes) 593

A

Absorption (Cr) 272
Acebal, Silvia G. (with Ana Mijovilovich, Elsa H. Rueda, María E. Aguirre, and Celia Saragovi), Iron-Oxide Mineralogy of a Mollisol from Argentina: A Study by Selective-Dissolution Techniques, X-ray Diffraction, and Mössbauer Spectroscopy 322
Acid Activation (pillared montmorillonite) 549
Acidity (pillared montmorillonite) 528
Acid Weathering 238
Activated Carbon 593
Active Geothermal System (illite crystallinity) 139
Adsorption 638
(bentonite) 557
(montmorillonite) 19
(of glycine in montmorillonite) 495
(pillared clays) 385
Adsorption and Degradation of Triasulfuron on Homoionic Montmorillonites by Alba Pusino, Ilaria Braschi, and Carlo Gessa 19
Adsorption Kinetics of Pentachloroethane by Iron-Bearing Smectites by Javiera Cervini-Silva, Jun Wun, Joseph W. Stucki, and Richard A. Larson 132
Adsorption of Methylene Blue 665
AEM (low-grade metamorphic rocks) 213
Agnew, Stephen F. (with Weizong Xu, Cliff T. Johnston, and Paul Parker), Infrared Study of Water Sorption of Na-, Li-, Ca-, and Mg-Exchanged (SWy-1 and SAz-1) Montmorillonite 120
Aguirre, María E. (with Silvia G. Acebal, Ana Mijovilovich, Elsa H. Rueda, and Celia Saragovi), Iron-Oxide Mineralogy of a Mollisol from Argentina: A Study by Selective-Dissolution Techniques, X-ray Diffraction, and Mössbauer Spectroscopy 322
Airoldi, Claudio (with Maria G. Da Fonseca and José S. Barone), Self-Organized Inorganic-Organic Hybrids Induced by Silylating Agents with Phyllosilicate-Like Structure and the Influence of the Adsorption of Cations 638
Alemdaroğlu, Tülay (with Yüksel Sarikaya, Müşerref Önal, and Bülent Baran), The Effect of Thermal Treatment on Some of the Physicochemical Properties of a Bentonite 557
Alkylammonium 290
Alkylammonium-Intercalated Magadiite 224
Alkyl Bispyridinium Ions 246
Alkyl Trimethylammonium Ions 246
Allard, Thierry (with Etienne Balan, Bruno Boizot, Guillaume Morin, and Jean-Pierre Muller), Quantitative Measurement of Paramagnetic Fe^{3+} in Kaolinite 439
Allophane (dielectric-relaxation spectroscopy) 75
Alonso-Azcárate, Jacinto (with José F. Barrenechea, Magdalena Rodas, Martin Frey, and José Ramón Mas), Chlorite, Corrensite, and Chlorite-Mica in Late Jurassic Fluvio-Lacustrine Sediments of the Cameros Basin of Northeastern Spain 257
Al-Pillared Montmorillonite 528, 593
Al-Substituted Hematite 159
Altaner, Stephen P. (with Robert F. Ylagan and Antonio Pozzuoli), Reaction Mechanisms of Smectite Illitization Associated with Hydrothermal Alteration from Ponza Island, Italy 610
Alteration (isotopic data) 474
Alumina Pillared Montmorillonite 549
Alumina Pillaring (in montmorillonite) 1
Aluminous Minerals 238
Aluminum Hydroxides 230
Aminated Surface 638
Amino Acids (glycine in montmorillonite) 495
Ammonium-Oxalate Dissolution Treatment 322
A Model for the Mechanism of Fe^{3+} to Fe^{2+} Reduction in Dioctahedral Smectites, by V.A. Drits and A. Manceau 185
Amouric, Marc (with Juan Olives and Régis Perbost), Mixed Layering of Illite-Smectite: Results from High-Resolution Transmission Electron Microscopy and Lattice-Energy Calculations 282
Amphibole Alteration 537
Analytical Electron Microscopy 374
(Podzols) 655
Anatase 151
Anchizone 213
A New Method for the Prediction of Gibbs Free Energies of Formation of Hydrated Clay Minerals Based on the Electronegativity Scale by Philippe Vieillard 459
A Nuclear Magnetic Resonance (NMR) and Fourier-Transform Infrared (FTIR) Study of Glycine Speciation on a Cd-Rich Montmorillonite by Paola Di Leo 495
Atomic Force Microscopy 610
Atrazine (sorption in pillared complexes) 593
Audsley, Frank (with I. Tonguç Uysal and Suzanne D. Golding), Clay-Mineral Authigenesis in the Late

Copyright © 2000, The Clay Minerals Society

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

Permian Coal Measures, Bowen Basin, Queensland, Australia 351
Authigenesis 317
Authigenesis of Trioctahedral Smectite in Magnesium-Rich Carbonate Speleothems in Carlsbad Cavern and Other Caves of the Guadalupe Mountains, New Mexico by Victor James Polyak and Necip Güven 317
Authigenic Chlorite 26
Authigenic Illite and Organic Matter: The Principal Hosts of Vanadium in the Mecca Quarry Shale at Velpen, Indiana by Donald R. Peacor, Raymond M. Coveney, Jr., and Gengmei Zhao 311

B

Bacteria (banded Fe-Mn structures) 511
Bailey Distinguished Member Award: Boris Zvyagin by Victor A. Drits 716
Balan, Etienne (with Thierry Allard, Bruno Boizot, Guillaume Morin, and Jean-Pierre Muller), Quantitative Measurement of Paramagnetic Fe^{3+} in Kaolinite 439
Baltic Paleosedimentary Basin 95
Banded Fe-Mn Structure 511
Banin, Amos (with Joseph W. Stucki, Jun Wu, Huamin Gan, and Peter Komadel), Effects of Iron Oxidation State and Organic Cations on Dioctahedral Smectite Hydration 290
Baran, Bülent (with Yüksel Sarikaya, Müşerref Önal, and Tülay Alemdaroğlu), The Effect of Thermal Treatment on Some of the Physicochemical Properties of a Bentonite 557
Barone, José S. (with Maria G. Da Fonseca and Claudio Airoldi), Self-Organized Inorganic-Organic Hybrids Induced by Silylating Agents with Phyllosilicate-Like Structure and the Influence of the Adsorption of Cations 638
Barrenechea, José F. (with Magdalena Rodas, Martin Frey, Jacinto Alonso-Azcárate, and José Ramón Mas), Chlorite, Corrensite, and Chlorite-Mica in Late Jurassic Fluvio-Lacustrine Sediments of the Cameros Basin of Northeastern Spain 256
Barrón, Vidal (with Jesús Cumplido and José Torrent), Effect of Phosphate on the Formation of Nanophase Lepidocrocite from Fe(II) Sulfate 503
Bauluz, Blanca (with Donald R. Peacor and Jose Manuel Gonzalez Lopez), Transmission Electron Microscopy Study of Illitization in Pelites from the Iberian Range, Spain: Layer-by-Layer Replacement? 374
Bayerite 85
Beaufort, Daniel (with Claire-Isabelle Fialips, Sabine Petit, and Alain Decarreau), Influence of Synthesis pH on Kaolinite "Crystallinity" and Surface Properties 173
Beidellite (calculation of Gibbs Free Energies of Formation) 459
Bentonite 557
(pillared smectite) 424
Bernard, Alain (with Thierry De Putter, Alain Perruchot, Dominique Nicaise, and Christian Dupuis), Low-Temperature Acid Weathering in Newhaven, Sussex, United Kingdom, and its Application to Theoretical Modeling in Radioactive Waste-Disposal Sites 238
Berthierne (flint clays) 145
BET 51
Bingham-Yield-Value 713
Biomats 511
Biomineralization 511
Biotite 196
Biotite Alteration 537
Bird, Michael I. (with Frédéric Vitali, Fred J. Longstaffe, and W. Glen E. Caldwell), Oxygen-Isotope Fractionation Between Aluminum-Hydroxide Phases and Water at <60°C: Results of Decade-Long Synthesis Experiments 230
Black Shale (vanadium) 311
Bleaching (pillared montmorillonite) 549
Bleaching Properties of Alumina-Pillared Acid-Activated Montmorillonite by Polycarpos Falaras, Fani Lezou, Georgios Seiragakis, and Dimitrios Petrakis 549
Bleam, William F. (with Robert W. Taylor, Siyuan Shen, and Shu-I Tu), Chromate Removal by Dithionite-Reduced Clays: Evidence from Direct X-ray Adsorption Near Edge Spectroscopy (XANES) of Chromate Reduction at Clay Surfaces 648
Boehmite 699
(flint clays) 145
Boizot, Bruno (with Etienne Balan, Thierry Allard, Guillaume Morin, and Jean-Pierre Muller), Quantitative Measurement of Paramagnetic Fe^{3+} in Kaolinite 439
Bound Water (kaolinite, montmorillionite, allophane, imogolite) 75
Boyd, Stephen A. (with Guangyao Sheng), Polarity Effect on Dichlorobenzene Sorption by Hexadecyltrimethylammonium-Exchanged Clays 43
Braschi, Ilaria (with Alba Pusino and Carlo Gessa), Adsorption and Degradation of Triasulfuron on Homoionic Montmorillonites 19
Brigatti, Maria Franca (with Cristina Lugli, Giannantonio Cibin, Augusto Marcelli, Gabriele Giuli, Eleonora Paris, Annibale Mottana, and Ziyu Wu), Reduction and Sorption of Chromium by Fe(II)-Bearing Phyllosilicates: Chemical Treatments and X-ray Absorption Spectroscopy (XAS) Studies 272
Brines (isotopic data) 474

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

Brodsky, I. (with S. Yariv, I. Lapides, A. Nasser, N. Lahav, and K.H. Michaelian), Infrared Study of the Intercalation of Potassium Halides in Kaolinite 10
Brotas de Carvalho, M. (with J. Pires, A.P. Carvalho, J.M. Guil, and J.A. Perdigón-Melón), Heats of Adsorption of N-Hexane by Thermal Gravimetry with Differential Scanning Calorimetry (TG-DSC): A Tool for Textural Characterization of Pillared Clays 385
Browne, Patrick R.L. (with Junfeng Ji), Relationship Between Illite Crystallinity and Temperature in Active Geothermal Systems of New Zealand 139
Burial Diagenesis (clinoptilolite) 106
Buseck, Peter R. (with Dawn E. Janney and John M. Cowley), Transmission Electron Microscopy of Synthetic 2- and 6-Line Ferrihydrite 111

C

Cadmium (montmorillonite) 495
Caldwell, W. Glen E. (with Frédéric Vitali, Fred J. Longstaffe, and Michael I. Bird), Oxygen-Isotope Fractionation Between Aluminum-Hydroxide Phases and Water at <60°C: Results of Decade-Long Synthesis Experiments 230
Calorimetry (pillared clays) 385
Cambrian (Baltic Paleobasin, Estonia) 95
Cameros Basin (Spain) 256
Cañizares, P. (with J.L. Valverde, M.R. Sun Kou, and C.B. Molina), Enhanced Thermal Stability of Al-Pillared Smectites Modified with Ce and La 424
Carlsbad Cavern (smectite) 317
Carvalho, A.P. (with J. Pires, M. Brotas de Carvalho, J.M. Guil, and J.A. Perdigón-Melón), Heats of Adsorption of N-Hexane by Thermal Gravimetry with Differential Scanning Calorimetry (TG-DSC): A Tool for Textural Characterization of Pillared Clays 385
Casey, William H. (with Juraj Majzlan and Alexandra Navrotsky), Surface Enthalpy of Boehmite 699
Cation Exchange (clinoptilolite) 106
Cation-Exchange Capacity (bentonite) 557
Cation Migration (2:1 dioctahedral phyllosilicates) 572
Caves 693
(smectite) 317
Cave Sediments 693
Ce (pillared smectite) 424
Celadonite 572
Cervini-Silva, Javiera (with Jun Wu, Joseph W. Stucki, and Richard A. Larson), Adsorption Kinetics of Pentachloroethane by Iron-Bearing Smectites 132
Chang, Tae Woo (with Chang Oh Choo), Characteristics of Clay Minerals in Gouges of the Dongrae Fault, Southeastern Korea, and Implications for Fault Activity 204
Characteristics of Clay Minerals in Gouges of the Dongrae Fault, Southeastern Korea, and Implications for Fault Activity by Chang Oh Choo and Tae Woo Chang 204
Characterization and Assignment of Far Infrared Absorption Bands of K^+ in Muscovite by M. Diaz, V.C. Farmer, and R. Prost 433
Characterization of Silanol Groups in Protonated Magadiite by ^1H and ^2H Solid-State Nuclear Magnetic Resonance by Yoshihiko Komori, Masaki Miyoshi, Shigenobu Hayashi, Yoshiyuki Sugahara, and Kazuyuki Kuroda 632
Chemical Analysis (dissolution methods) 322
(smectite illitization) 610
Chlorite 256, 351
(isotopic data) 474
Chlorite, Corrensite, and Chlorite-Mica in Late Jurassic Fluvio-Lacustrine Sediments of the Cameros Basin of Northeastern Spain by José F. Barrenechea, Magdalena Rodas, Martin Frey, Jacinto Alonso-Azcárate, and José Ramón Mas 256
Chlorite-Mica 256
Chloritic Phases 213
Choo, Chang Oh (with Tae Woo Chang), Characteristics of Clay Minerals in Gouges of the Dongrae Fault, Southeastern Korea, and Implications for Fault Activity 204
Christidis, Georgios E. (with Aggeliki Moirou, Aikaterini Vaxevanidou, and Ioannis Paspaliaris), Ion Exchange of Zeolite Na-P_c with Pb^{2+}, Zn^{2+}, and Ni^{2+} Ions 563
Chromate Removal by Dithionite-Reduced Clays: Evidence from Direct X-ray Adsorption Near Edge Spectroscopy (XANES) of Chromate Reduction at Clay Surfaces by Robert W. Taylor, Siyuan Shen, William F. Bleam, and Shu-I Tu 638
Chromium 272
Cibin, Giannantonio (with Maria Franca Brigatti, Cristina Lugli, Augusto Marcelli, Gabriele Giuli, Eleonora Paris, Annibale Mottana, and Ziyu Wu), Reduction and Sorption of Chromium by Fe(II)-Bearing Phyllosilicates: Chemical Treatments and X-ray Absorption Spectroscopy (XAS) Studies 272
Cis-Vacant (montmorillonite) 405
Cis-Vacant Octahedra 572
Clastic Rocks 213
Clay (orientation effects) 682
Clay Analysis 57
Clay Cation-Exchange Capacity Determination 665
Clay-Dye Complex (in saponite) 392
Clay-Mineral Authigenesis in the Late Permian Coal Measures, Bowen Basin, Queensland, Australia

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

by I. Tonguç Uysal, Suzanne D. Golding, and Frank Audsley 351
Clay-Mineral Distribution (in coal measures) 351
Clay Surface-Area Determination 665
Clinoptilolite 106
CMS Clay (IMt-2) 648
(KGa-1) 10
(KGa-2) 85, 648
(NG-1) 132
(NAu-1) 537
(NAu-2) 537
(SAz-1) 43, 120
(SWa-1) 68, 132, 185, 648
(SWy-1) 120, 648
(SWy-2) 43
Çolak, Mümtaz (with Cahit Helvacı and Marino Maggetti), Saponite from the Emet Colemanite Mines, Kütahya, Turkey 409
Colemanite 409
Colloids 246
Complexes 638
Complexity of Pore Structure 603
Complex Permittivity (kaolinite, montmorillonite, allophane, imogolite) 75
Composition of Clinoptilolite Formed from Volcanic Glass during Burial Diagenesis by Shigenori Ogihara 106
Computer Simulation (Al_{13} pillars in montmorillonite) 1
Coprecipitation (pyroaurite-like phases and iron) 266
Corrensite 256
Cortabitarte, Javier (with M. Teresa Garcia-Gonzalez, and Carmen Vizcayno), Effect of Kaoline and Sulfate on the Formation of Hydroxy-Aluminum Compounds 85
Cottonseed Oil 549
Coveney, Raymond, Jr. (with Donald R. Peacor and Gengmei Zhao), Authigenic Illite and Organic Matter: The Principal Hosts of Vanadium in the Mecca Quar Jr.ary Shale at Velpen, Indiana 311
Cowley, John M. (with Dawn E. Janney and Peter R. Buseck), Transmission Electron Microscopy of Synthetic 2- and 6-Line Ferrihydrite 111
Critical Coagulation Concentration 246
Cronstedtite (structure) 331
Crystalline Swelling (smectite) 400
Crystal Growth (in illitization) 446
Crystal Violet 246, 392
Cuadros, J. (with S. de la Fuente, S. Fiore, and J. Linares), Electron Microscopy Study of Volcanic Tuff Alteration to Illite-Smectite under Hydrothermal Conditions 339
Cuadros, Javier (with Sandra de la Fuente and José Linares), Quantification of Mixed-Layer Illite-Smectite in Glass Matrices by Fourier-Transform Infrared Spectroscopy 299
Cumplido, Jesús (with Vidal Barrón and José Torrent), Effect of Phosphate on the Formation of Nanophase Lepidocrocite from Fe(II) Sulfate 503
Cyanine Dyes 392

D

Da Fonseca, Maria G. (with José S. Barone and Claudio Airoldi), Self-Organized Inorganic-Organic Hybrids Induced by Silylating Agents with Phyllosilicate-Like Structure and the Influence of the Adsorption of Cations 638
Decarreau, Alain (with Claire-Isabelle Fialips, Sabine Petit, and Daniel Beaufort), Influence of Synthesis pH on Kaolinite "Crystallinity" and Surface Properties 173
Decomposition 708
Defect Density (kaolinite) 173
Degradation (of herbicides on montmorillonite) 19
Dehydration (bentonite) 557
Dehydrochlorination (smectites) 132
Dehydroxylation (2:1 dioctahedral phyllosilicates) 572
(bentonite) 557
(montmorillonite) 405
(nontronite) 68
de la Fuente, S. (with J. Cuadros, S. Fiore, and J. Linares), Electron Microscopy Study of Volcanic Tuff Alteration to Illite-Smectite under Hydrothermal Conditions 339
de la Fuente, Sandra (with Javier Cuadros and José Linares), Quantification of Mixed-Layer Illite-Smectite in Glass Matrices by Fourier-Transform Infrared Spectroscopy 299
De Putter, Thierry (with Alain Bernard, Alain Perruchot, Dominique Nicaise, and Christian Dupuis), Low-Temperature Acid Weathering in Newhaven, Sussex, United Kingdom, and its Application to Theoretical Modeling in Radioactive Waste-Disposal Sites 238
de Santiago Buey, Cristina (with Mercedes Suárez Barrios, Emilia García Romero, and Mercedes Doval Montoya), Mg-Rich Smectite "Precursor" Phase in the Tagus Basin, Spain 366
Detrital Origin of a Sedimentary Fill, Lechuguilla Cave, Guadalupe Mountains, New Mexico by Annabelle M. Foos, Ira D. Sasowsky, Edward J. LaRock, and Patricia N. Kambesis 693
Diagenesis 26
Diaz, M. (with V.C. Farmer and R. Prost), Characterization and Assignment of Far Infrared Absorption Bands of K^+ in Muscovite 433
Dichlorobenzene 43
Dichroism (muscovite) 433
Dickite (hydrazine) 586
Dielectric-Relaxation Spectroscopy (kaolinite, montmorillonite, allophane, imogolite) 75

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

Dielectric-Relaxation Spectroscopy of Kaolinite, Montmorillonite, Allophane, and Imogolite under Moist Conditions by Tomoyuki Ishida, Tomoyuki Makino, and Changjun Wang 75
Di Leo, Paola, A Nuclear Magnetic Resonance (NMR) and Fourier-Transform Infrared (FTIR) Study of Glycine Speciation on a Cd-Rich Montmorillonite 495
Dimov, Virgil I. (with Albena V. Ilieva, Nelly G. Khaltakova, and Liudmila D. Filizova), Structural Model of Al_{13}-Pillared Montmorillonite 1
Dioctahedral Smectite 185
Diquat 246
Dithionite-Citrate-Bicarbonate Dissolution Treatment 322
Dithionite-Ethylenediaminetetraacetic Acid Dissolution Treatment 322
Dolomite 317
Dongrae Fault (Korea) 204
Doval Montoya, Mercedes (with Cristina de Santiago Buey, Mercedes Suárez Barrios, and Emilia García Romero), Mg-Rich Smectite "Precursor" Phase in the Tagus Basin, Spain 366
Drits, V.A. (with A. Manceau), A Model for the Mechanism of Fe^{3+} to Fe^{2+} Reduction in Dioctahedral Smectites 185
Drits, V.A. (with A. Plançon), Phase Analysis of Clays using an Expert System and Calculation Programs for X-ray Diffraction by Two- and Three-Component Mixed-Layer Minerals 57
Drits, V.A. (with J. Środoń and D.D. Eberl), Evolution of Fundamental-Particle Size During Illitization of Smectite and Implications for Reaction Mechanism 446
Drits, Victor A., The Marilyn and Sturges W. Bailey Distinguished Member Award: Boris Zvyagin 716
Drits, Victor (with Fabrice Muller, Alain Plançon, and Jean-Louis Robert), Structural Transformation of 2:1 Dioctahedral Layer Silicates During Dehydroxylation-Rehydroxylation Reactions 572
DTA-TG (dickite-hydrazine) 586
(kaolinite-hydrazine) 63
Dupuis, Christian (with Thierry De Putter, Alain Bernard, Alain Perruchot, and Dominique Nicaise), Low-Temperature Acid Weathering in Newhaven, Sussex, United Kingdom, and its Application to Theoretical Modeling in Radioactive Waste-Disposal Sites 238
Ďurovič, Slavomil (with Jiří Hybler, Václav Petříček, and Ľubomír Smrčok), Refinement of the Crystal Structure of Cronstedtite-1*T* 331

E

Eberl, D.D. (with J. Środoń and V.A. Drits), Evolution of Fundamental-Particle Size During Illitization of Smectite and Implications for Reaction Mechanism 446
Effect of Kaolinite and Sulfate on the Formation of Hydroxy-Aluminum Compounds by M. Teresa Garcia-Gonzalez, Carmen Vizcayno, and Javier Cortabitarte 85
Effect of Phosphate on the Formation of Nanophase Lepidocrocite from Fe(II) Sulfate by Jesús Cumplido, Vidal Barrón, and José Torrent 503
Effects of Clay Fraction and Temperature on the H_2O Self-Diffusivity in Hectorite Gel: A Pulsed-Field-Gradient Spin-Echo Nuclear Magnetic Resonance Study by Yoshito Nakashima 603
Effects of Iron Oxidation State and Organic Cations on Dioctahedral Smectite Hydration by Joseph W. Stucki, Jun Wu, Huamin Gan, Peter Komadel, and Amos Banin 290
Effects of Synthesis Conditions on the Thermal Stability of a Texas Montmorillonite Expanded with $[Al_{13}O_4(OH)_{24}(H_2O)_{12}]^{7+}$ Cations by S.M. Thomas and M.L. Occelli 304
Electron Microscopy Study of Volcanic Tuff Alteration to Illite-Smectite under Hydrothermal Conditions by S. de la Fuente, J. Cuadros, S. Fiore, and J. Linares 339
Electron Paramagnetic Resonance (kaolinite) 439
Elless, M.P. (with Y. Roh, S.Y. Lee, and J.E. Foss), Incorporation of Radioactive Contaminants into Pyroaurite-Like Phases by Electrochemical Synthesis 266
Elsass, Françoise (with Florence Gillot and Dominique Righi), Pedogenic Smectites in Podzols from Central Finland: An Analytical Electron Microscopy Study 655
Emet (saponite) 409
Emmerich, Katja, Spontaneous Rehydroxylation of a Dehydroxylated *Cis*-Vacant Montmorillonite 405
EMPA 256
Enhanced Thermal Stability of Al-Pillared Smectites Modified with Ce and La by J.L. Valverde, P. Cañizares, M.R. Sun Kou, and C.B. Molina 424
Enthalpy of Formation 699
EPR (kaolinite) 439
Esbey (saponite) 409
Evaluation of the Acidity of Pillared Montmorillonites by Pyridine Adsorption by M.R. Sun Kou, S. Mendioroz, and V. Mùñoz 528
Evolution of Fundamental-Particle Size During Illitization of Smectite and Implications for Reaction Mechanism by J. Środoń, D.D. Eberl, and V.A. Drits 446
EXAFS 272
(hematite) 521

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

Exchangeable Cation(s) (calculation of Gibbs Free Energies of Formation) 459
(montmorillonite) 120
Expert System 57

F

Falaras, Polycarpos (with Fani Lezou, Georgios Seiragakis, and Dimitrios Petrakis), Bleaching Properties of Alumina-Pillared Acid-Activated Montmorillonite 549
Far Infrared (muscovite) 433
Farmer, V.C. (with M. Diaz and R. Prost), Characterization and Assignment of Far Infrared Absorption Bands of K^+ in Muscovite 433
Fe^{3+} (kaolinite) 439
Fe Oxides 521
Ferric Iron (smectite) 290
Ferrihydrite 51, 111
Ferrous Iron (smectite) 290
Fialips, Claire-Isabelle (with Sabine Petit, Alain Decarreau, and Daniel Beaufort), Influence of Synthesis pH on Kaolinite "Crystallinity" and Surface Properties 173
Filizova, Liudmila D. (with Virgil I. Dimov, Albena V. Ilieva, and Nelly G. Khaltakova), Structural Model of Al_{13}-Pillared Montmorillonite 1
Finland (Podzols) 655
Fiore, S. (with S. de la Fuente, J. Cuadros, and J. Linares), Electron Microscopy Study of Volcanic Tuff Alteration to Illite-Smectite under Hydrothermal Conditions 339
Flint Clay 145
Flocculation 246
Fluid Flow (in coal measures) 351
Foos, Annabelle M. (with Ira D. Sasowsky, Edward J. LaRock, and Patricia N. Kambesis), Detrital Origin of a Sedimentary Fill, Lechuguilla Cave, Guadalupe Mountains, New Mexico 693
Formation of Banded Iron-Manganese Structures by Natural Microbial Communities by Kazue Tazaki 511
Formation of Fe Oxide 159
Foss, J.E. (with Y. Roh, S.Y. Lee, and M.P. Elless), Incorporation of Radioactive Contaminants into Pyroaurite-Like Phases by Electrochemical Synthesis 266
Fractionation Factor 230
Franco, Francisco (with María Dolores Ruiz Cruz), Thermal Behavior of the Kaolinite-Hydrazine Intercalation Complex 63
Franco, Francisco (with María Dolores Ruiz Cruz), Thermal Decomposition of a Dickite-Hydrazine Intercalation Complex 586
Frey, Martin (with José F. Barrenechea, Magdalena Rodas, Jacinto Alonso-Azcárate, and José Ramón Mas), Chlorite, Corrensite, and Chlorite-Mica in Late Jurassic Fluvio-Lacustrine Sediments of the Cameros Basin of Northeastern Spain 256
Friedl, Josef (with Udo Schwertmann, Helge Stanjek, and Darrell G. Schulze), The Effect of Al on Fe Oxides. XIX. Formation of Al-Substituted Hematite from Ferrihydrite at 25°C and pH 4 to 7 159
FTIR (illite-smectite) 299
(kaolinite) 173
(montmorillionite) 120
Fukunishi, Koushi (with Masashi Iwasaki, Masaki Kita, Kengo Ito, and Atsuya Kohno), Intercalation Characteristics of 1,1′-Diethyl-2,2′-Cyanine and other Cationic Dyes in Synthetic Saponite: Orientation in the Interlayer 392
Fundamental Particle (in illitization) 446

G

Gan, Huamin (with Joseph W. Stucki, Jun Wu, Peter Komadel, and Amos Banin), Effects of Iron Oxidation State and Organic Cations on Dioctahedral Smectite Hydration 290
Garcia-Gonzalez, M. Teresa (with Carmen Vizcayno and Javier Cortabitarte), Effect of Kaoline and Sulfate on the Formation of Hydroxy-Aluminum Compounds 85
García Romero, Emilia (with Cristina de Santiago Buey, Mercedes Suárez Barrios, and Mercedes Doval Montoya), Mg-Rich Smectite "Precursor" Phase in the Tagus Basin, Spain 366
Gates, Will P. (with John L. Keeling and Mark D. Raven), Geology and Characterization of Two Hydrothermal Nontronites from Weathered Metamorphic Rocks at the Uley Graphite Mine, South Australia 537
Gehring, Andreas U. (with Susan M. Glasauer, Paul Hug, and Peter G. Weidler), Inhibition of Sintering by Si during the Conversion of Si-rich Ferrihydrite to Hematite 51
Geology and Characterization of Two Hydrothermal Nontronites from Weathered Metamorphic Rocks at the Uley Graphite Mine, South Australia by John L. Keeling, Mark D. Raven, and Will P. Gates 537
Georgia 151
Gessa, Carlo (with Alba Pusino and Ilaria Braschi), Adsorption and Degradation of Triasulfuron Homoionic Montmorillonites 19
Gibbs Free Energies of Formation 459
Gibbsite 85, 230
Gilkes, R.J. (with Balwant Singh, D.M. Sherman, M. Wells, and J.F.W. Mosselmans), Structural Chemistry of Fe, Mn, and Ni in Synthetic Hematites as Determined by Extended X-ray Absorption Fine Structure Spectroscopy 521

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

Gillot, Florence (with Dominique Righi and Françoise Elsass), Pedogenic Smectites in Podzols from Central Finland: An Analytical Electron Microscopy Study 655
Giuli, Gabriele (with Maria Franca Brigatti, Cristina Lugli, Giannantonio Cibin, Augusto Marcelli, Eleonora Paris, Annibale Mottana, and Ziyu Wu), Reduction and Sorption of Chromium by Fe(II)-Bearing Phyllosilicates: Chemical Treatments and X-ray Absorption Spectroscopy (XAS) Studies 272
Glasauer, Susan M. (with Paul Hug, Peter G. Weidler, and Andreas U. Gehring), Inhibition of Sintering by Si during the Conversion of Si-rich Ferrihydrite to Hematite 51
Glauconite 572
Glycine (montmorillonite) 495
Goethite 503
Golding, Suzanne D. (with I. Tonguç Uysal and Frank Audsley), Clay-Mineral Authigenesis in the Late Permian Coal Measures, Bowen Basin, Queensland, Australia 351
Gonzalez Lopez, Jose Manuel (with Blanca Bauluz and Donald R. Peacor), Transmission Electron Microscopy Study of Illitization in Pelites from the Iberian Range, Spain: Layer-by-Layer Replacement? 374
Gouge 204
Gournis, Dimitris (with Michalis A. Karakassides, Thanassis Simopoulos, and Dimitris Petridis), Mössbauer and Infrared Study of Heat-Treated Nontronite 68
Granite 196
Groundwater Remediation 266
Guil, J.M. (with J. Pires, M. Brotas de Carvalho, A.P. Carvalho, and J.A. Perdigón-Melón), Heats of Adsorption of N-Hexane by Thermal Gravimetry with Differential Scanning Calorimetry (TG-DSC): A Tool for Textural Characterization of Pillared Clays 385
Güven, Necip (with Victor James Polyak), Authigenesis of Trioctahedral Smectite in Magnesium-Rich Carbonate Speleothems in Carlsbad Cavern and Other Caves of the Guadalupe Mountains, New Mexico 317

H

Halloysite 196
Hayashi, Shigenobu (with Yoshihiko Komori, Masaki Miyoshi, Yoshiyuki Sugahara, and Kazuyuki Kuroda), Characterization of Silanol Groups in Protonated Magadiite by ^{1}H and ^{2}H Solid-State Nuclear Magnetic Resonance 632
HDTMA 43, 290
Heats of Adsorption of N-Hexane by Thermal Gravimetry with Differential Scanning Calorimetry (TG-DSC): A Tool for Textural Characterization of Pillared Clays by J. Pires, M. Brotas de Carvalho, A.P. Carvalho, J.M. Guil, and J.A. Perdigón-Melón 385
Heavy Metals (zeolite) 563
Hectorite 603
(calculation of Gibbs Free Energies of Formation) 459
Helvacı, Cahit (with Mümtaz Çolak and Marino Maggetti), Saponite from the Emet Colemanite Mines, Kütahya, Turkey 409
Hematite 521
Herbicides (on montmorillonite) 19
High-Resolution Transmission Electron Microscopy (HRTEM) (ferrihydrite) 111
(Podzols) 655
Hirai, Akio (with Ben Niu and Takahisa Yoshimura), Smectite Diagenesis in Neogene Marine Sandstone and Mudstone of the Niigata Basin, Japan 26
Hisarcık (saponite) 409
^{1}H NMR (magadiite) 632
^{2}H NMR (magadiite) 632
H_2O (hectorite) 603
HRTM-AEM (illite-smectite) 282
HTXRD (dickite-hydrazine) 586
(high temperature XRD of kaolinite-hydrazine) 63
Huber Formation (Georgia) 151
Hughes, Randall E. (with D.M. Moore), Ordovician and Pennsylvanian Berthierine-Bearing Flint Clays 145
Hug, Paul (with Susan M. Glasauer, Peter G. Weidler, and Andreas U. Gehring), Inhibition of Sintering by Si during the Conversion of Si-rich Ferrihydrite to Hematite 51
Huntite 317
Hybler, Jiří (with Václav Petříček, Slavomil Ďurovič, and Ľubomír Smrčok), Refinement of the Crystal Structure of Cronstedtite-1*T* 331
Hydration 682
(calculation of Gibbs Free Energies of Formation) 459
(montmorillonite) 120
(smectite) 400
Hydrazine (dickite) 586
(in kaolinite) 63
Hydrogen Bonding (magadiite) 632
Hydrolysis 708
Hydrophilic Surface (smectite) 290
Hydrophobic Surface (smectite) 290
Hydrothermal Alteration 339, 537
Hydrothermal Synthesis (kaolinite) 173
Hydroxysulfate 85
Hyperfine Fields (Al-rich Fe oxides) 159
Hysteresis (montmorillonite) 120

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

I

Ilieva, Albena V. (with Virgil I. Dimov, Nelly G. Khaltakova, and Liudmila D. Filizova), Structural Model of Al_{13}-Pillared Montmorillonite 1
Illite 204, 299, 374, 572, 610
(calculation of Gibbs Free Energies of Formation) 459
(isotopic data) 474
(orientation effects) 682
(reactivity of ^{VI}Cr) 648
(vanadium) 311
Illite Crystalinity (geothermal systems) 139
Illite-Smectite 282, 299, 339, 446
(in coal measures) 351
Illitization 26, 95
Illitization Mechanism 446
Illitization Process 374
Imogolite (dielectric-relaxation spectroscopy) 75
IMt-2 (reactivity of ^{VI}Cr) 648
Incipient Crystallization 366
Incorporation of Radioactive Contaminants into Pyroaurite-Like Phases by Electrochemical Synthesis by Y. Roh, S.Y. Lee, M.P. Elless, and J.E. Foss 266
Influence of Organic and Inorganic Salts on the Coagulation of Montmorillonite Dispersions by D. Penner and G. Lagaly 246
Influence of Synthesis pH on Kaolinite "Crystallinity" and Surface Properties by Claire-Isabelle Fialips, Sabine Petit, Alain Decarreau, and Daniel Beaufort 173
Infrared Spectra (nontronite) 68
(of kaolinite complexes) 10
Infrared Spectroscopy (nontronite) 537
(of montmorillonite complexes) 19
Infrared Study of the Intercalation of Potassium Halides in Kaolinite by S. Yariv, I. Lapides, A. Nasser, N. Lahav, I. Brodsky, and K.H. Michaelian 10
Infrared Study of Water Sorption on Na-, Li-, Ca-, and Mg-Exchanged (SWy-1 and SAz-1) Montmorillonite by Weizong Xu, Cliff T. Johnston, Paul Parker, and Stephen F. Agnew 120
Inhibition of Sintering by Si during the Conversion of Si-rich Ferrihydrite to Hematite by Susan M. Glasauer, Paul Hug, Peter G. Weidler, and Andreas U. Gehring 51
Iñigo, A.C. (with D. Tessier and M. Pernes), Use of X-ray Transmission Diffractometry for the Study of Clay-Particle Orientation at Different Water Contents 682
Intercalation (magadiite) 224
Intercalation Characteristics of 1,1′-Diethyl-2,2′-Cyanine and other Cationic Dyes in Synthetic Saponite: Orientation in the Interlayer by Masashi Iwasaki, Masaki Kita, Kengo Ito, Atsuya Kohno, and Koushi Fukunishi 392
Intercalation Complex(es) (dickite-hydrazine) 586
(hydrazine in kaolinite) 63
(kaolinite) 10
Interfacial Polarization 75
Interlayer Cation (smectite) 290, 400
Ion-Exchange 638
(zeolite) 563
Ion Exchange of Zeolite Na-P_c with Pb^{2+}, Zn^{2+}, and Ni^{2+} Ions by Aggeliki Moirou, Aikaterini Vaxevanidou, Georgios E. Chrisidis, and Ioannis Paspaliaris 563
Iron(II) (smectites) 132
Iron(III) (smectites) 132
Iron-Oxide Mineralogy of a Mollisol from Argentina: A Study by Selective-Dissolution Techniques, X-ray Diffraction, and Mössbauer Spectroscopy by Silvia G. Acebal, Ana Mijovilovich, Elsa H. Rueda, María E. Aguirre, and Celia Saragovi 322
Iron Reduction (dioctahedral smectite) 185
I-S 374
Ishida, Tomoyuki (with Tomoyuki Makino and Changjun Wang), Dielectric-Relaxation Spectroscopy of Kaolinite, Montmorillonite, Allophane, and Imogolite under Moist Conditions 75
Isotopes 474
Israel (soils) 708
Ito, Kengo (with Masashi Iwasaki, Masaki Kita, Atsuya Kohno, and Koushi Fukunishi), Intercalation Characteristics of 1,1′-Diethyl-2,2′-Cyanine and other Cationic Dyes in Synthetic Saponite: Orientation in the Interlayer 392
Iwasaki, Masashi (with Masaki Kita, Kengo Ito, Atsuya Kohno, and Koushi Fukunishi), Intercalation Characteristics of 1,1′-Diethyl-2,2′-Cyanine and other Cationic Dyes in Synthetic Saponite: Orientation in the Interlayer 392

J

Janney, Dawn E. (with John M. Cowley and Peter R. Buseck), Transmission Electron Microscopy of Synthetic 2- and 6-Line Ferrihydrite 111
Jarosite 238
Jeong, Gi Young, The Dependence of Localized Crystallization of Halloysite and Kaolinite on Primary Minerals in the Weathering Profile of Granite 196
Ji, Junfeng (with Patrick R.L. Browne), Relationship Between Illite Crystallinity and Temperature in Active Geothermal Systems of New Zealand 139
Johnston, Cliff T. (with Weizong Xu, Paul Parker, and Stephen F. Agnew), Infrared Study of Water Sorption on Na-, Li-, Ca-, and Mg-Exchanged (SWy-1 and SAz-1) Montmorillonite 120

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

Jordan and Bet-She'an Valleys (soils) 708
Jørgensen, Per (with Kalle Kirsimäe), Mineralogical and Rb-Sr Isotope Studies of Low-Temperature Diagenesis of Lower Cambrian Clays of the Baltic Paleobasin of North Estonia 95

K

Kahr, Guenther (with Winnie Matthes), Sorption of Organic Compounds by Al and Zr-Hydroxy-Intercalated and Pillared Bentonite 593
Kambesis, Patricia N. (with Annabelle M. Foos, Ira D. Sasowsky, and Edward J. LaRock), Detrital Origin of a Sedimentary Fill, Lechuguilla Cave, Guadalupe Mountains, New Mexico 693
Kaolinite 10, 63, 145, 151, 173, 196, 586
(dielectric-relaxation spectroscopy) 75
(EPR) 439
(in coal measures) 351
(reactivity of ^{VI}Cr) 648
Karakassides, Michalis A. (with Dimitris Gournis, Thanassis Simopoulos, and Dimitris Petridis), Mössbauer and Infrared Study of Heat-Treated Nontronite 68
K-Ar Radiogenic Dating 204
Keeling, John L. (with Mark D. Raven and Will P. Gates), Geology and Characterization of Two Hydrothermal Nontronites from Weathered Metamorphic Rocks at the Uley Graphite Mine, South Australia 537
Keggin Ions 304
Keggin Pillaring 1
KGa-2 (reactivity of ^{VI}Cr) 648
Khaltakova, Nelly G. (with Virgil I. Dimov, Albena V. Ilieva, and Liudmila D. Filizova), Structural Model of Al_{13}-Pillared Montmorillonite 1
Kinetics 708
Kinetics of Hydrolysis of Some Palygorskite-Containing Soil Clays in Dilute Salt Solutions by Alexander Neaman and Arieh Singer 708
Kirsimäe, Kalle (with Per Jørgensen), Mineralogical and Rb-Sr Isotope Studies of Low-Temperature Diagenesis of Lower Cambrian Clays of the Baltic Paleobasin of North Estonia 95
Kita, Masaki (with Masashi Iwasaki, Kengo Ito, Atsuya Kohno, and Koushi Fukunishi), Intercalation Characteristics of 1,1′-Diethyl-2,2′-Cyanine and other Cationic Dyes in Synthetic Saponite: Orientation in the Interlayer 392
Kohno, Atsuya (with Masashi Iwasaki, Masaki Kita, Kengo Ito, and Koushi Fukunishi), Intercalation Characteristics of 1,1′-Diethyl-2,2′-Cyanine and other Cationic Dyes in Synthetic Saponite: Orientation in the Interlayer 392
Komadel, Peter (with Joseph W. Stucki, Jun Wu, Huamin Gan, and Amos Banin), Effects of Iron Oxidation State and Organic Cations on Dioctahedral Smectite Hydration 290
Komori, Yoshihiko (with Masaki Miyoshi, Shigenobu Hayashi, Yoshiyuki Sugahara, and Kazuyuki Kuroda), Characterization of Silanol Groups in Protonated Magadiite by ^{1}H and ^{2}H Solid-State Nuclear Magnetic Resonance 632
Kubler Index (geothermal systems) 139
Kuroda, Kazuyuki (with Yoshihiko Komori, Masaki Miyoshi, Shigenobu Hayashi, and Yoshiyuki Sugahara), Characterization of Silanol Groups in Protonated Magadiite by ^{1}H and ^{2}H Solid-State Nuclear Magnetic Resonance 632

L

La (pillared smectite) 424
Lagaly, G. (with D. Penner), Influence of Organic and Inorganic Salts on the Coagulation of Montmorillonite Dispersions 246
Lahav, N. (with S. Yariv, I. Lapides, A. Nasser, I. Brodsky, and K.H. Michaelian), Infrared Study of the Intercalation of Potassium Halides in Kaolinite 10
Lapides, I. (with S. Yariv, A. Nasser, N. Lahav, I. Brodsky, and K.H. Michaelian), Infrared Study of the Intercalation of Potassium Halides in Kaolinite 10
LaRock, Edward J. (with Annabelle M. Foos, Ira D. Sasowsky, and Patricia N. Kambesis), Detrital Origin of a Sedimentary Fill, Lechuguilla Cave, Guadalupe Mountains, New Mexico 693
Larson, Richard A. (with Javiera Cervini-Silva, Jun Wu, and Joseph W. Stucki), Adsorption Kinetics of Pentachloroethane by Iron-Bearing Smectites 132
Lattice-Energy Calculations 282
Layer Silicate (cronstedtite) 331
Lechuguilla Cave 693
Lee, S.Y. (with Y. Roh, M.P. Elless, and J.E. Foss), Incorporation of Radioactive Contaminants into Pyroaurite-Like Phases by Electrochemical Synthesis 266
Lepidocrocite 503
Lezou, Fani (with Polycarpos Falaras, Georgios Seiragakis, and Dimitrios Petrakis), Bleaching Properties of Alumina-Pillared Acid-Activated Montmorillonite 549
Linares, J. (with S. de la Fuente, J. Cuadros, and S. Fiore), Electron Microscopy Study of Volcanic Tuff Alteration to Illite-Smectite under Hydrothermal Conditions 339
Linares, José (with Sandra de la Fuente and Javier Cuadros), Quantification of Mixed-Layer Illite-Smectite in Glass Matrices by Fourier-Transform Infrared Spectroscopy 299
Lithium 145

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

Lithium Migration (in nontronite) 68
Lognormal Distribution (in illitization) 446
Longstaffe, Fred J. (with Frédéric Vitali, Michael I. Bird, and W. Glen E. Caldwell), Oxygen-Isotope Fractionation Between Aluminum-Hydroxide Phases and Water at <60°C: Results of Decade-Long Synthesis Experiments 230
Longstaffe, Fred J. (with Karen Ziegler), Multiple Episodes of Clay Alteration at the Precambrian/Paleozoic Unconformity, Appalachian Basin: Isotopic Evidence for Long-Distance and Local Fluid Migrations 474
López-Munguira, A. (with F. Nieto), Transmission Electron Microscopy Study of Very Low-Grade Metamorphic Rocks in Cambrian Sandstones and Shales, Ossa-Morena Zone, Southwest Spain 213
Low-Grade Metamorphism 256
Low-Temperature Acid Weathering in Newhaven, Sussex, United Kingdom, and its Application to Theoretical Modeling in Radioactive Waste-Disposal Sites by Thierry De Putter Alain Bernard, Alain Perruchot, Dominique Nicaise, and Christian Dupuis 238
Low-Temperature Diagenesis 95
Lugli, Cristina (with Maria Franca Brigatti, Giannantonio Cibin, Augusto Marcelli, Gabriele Giuli, Eleonora Paris, Annibale Mottana, and Ziyu Wu), Reduction and Sorption of Chromium by Fe(II)-Bearing Phyllosilicates: Chemical Treatments and X-ray Absorption Spectroscopy (XAS) Studies 272

M

Magadiite 224, 632
Maggetti, Marino (with Mümtaz Çolak and Cahit Helvacı), Saponite from the Emet Colemanite Mines, Kütahya, Turkey 409
Magnesium (palygorskite) 708
Majzlan, Juraj (with Alexandra Navrotsky and William H. Casey), Surface Enthalpy of Boehmite 699
Makino, Tomoyuki (with Tomoyuki Ishida and Changjun Wang), Dielectric-Relaxation Spectroscopy of Kaolinite, Montmorillonite, Allophane, and Imogolite under Moist Conditions 75
Manceau, A. (with V.A. Drits), A Model for the Mechanism of Fe^{3+} to Fe^{2+} Reduction in Dioctahedral Smectites 185
Marcelli, Augusto (with Maria Franca Brigatti, Cristina Lugli, Giannantonio Cibin, Gabriele Giuli, Eleonora Paris, Annibale Mottana, and Ziyu Wu), Reduction and Sorption of Chromium by Fe(II)-Bearing Phyllosilicates: Chemical Treatments and X-ray Absorption Spectroscopy (XAS) Studies 272
Mascarenhas, Artur J.S. (with Heloise O. Pastore and Marcelo Munsignatti), One-Step Synthesis of Alkyltrimethylammonium-Intercalated Magadiite 224
Mas, José Ramón (with José F. Barrenechea, Magdalena Rodas, Martin Frey, and Jacinto Alonso-Azcárate), Chlorite, Corrensite, and Chlorite-Mica in Late Jurassic Fluvio-Lacustrine Sediments of the Cameros Basin of Northeastern Spain 256
Matthes, Winnie (with Guenther Kahr), Sorption of Organic Compounds by Al and Zr-Hydroxy-Intercalated and Pillared Bentonite 593
Mecca Quarry 311
Mendioroz, S. (with M.R. Sun Kou and V. Muñoz), Evaluation of the Acidity of Pillared Montmorillonites by Pyridine Adsorption 528
Mesoporous Materials (pillared montmorillonite) 528
Metal Substitution (hematite) 521
Meteoric Water (isotopic data) 474
Methylene Blue 392, 665
Methyl Green 246
Mg-Release (palygorskite) 708
Mg-Rich Smectite "Precursor" Phase in the Tagus Basin, Spain by Cristina de Santiago Buey, Mercedes Suárez Barrios, Emilia García Romero, and Mercedes Doval Montoya 366
Mica 213
Michaelian, K.H. (with S. Yariv, I. Lapides, A. Nasser, N. Lahav, and I. Brodsky), Infrared Study of the Intercalation of Potassium Halides in Kaolinite 10
Microporous Materials 385
Microstructure 682
Mijovilovich, Ana (with Silvia G. Acebal, Elsa H. Rueda, María E. Aguirre, and Celia Saragovi), Iron-Oxide Mineralogy of a Mollisol from Argentina: A Study by Selective-Dissolution Techniques, X-ray Diffraction, and Mössbauer Spectroscopy 322
Miller, David M. (with Ching-Hsing Yu, Susan Q. Newton, Mya A. Norman, Lothar Schäfer, and Brian J. Teppen), Molecular Dynamics Simulations of the Adsorption of Methylene Blue at Clay Mineral Surfaces 665
Mineralogical and Rb-Sr Isotope Studies of Low-Temperature Diagenesis of Lower Cambrian Clays of the Baltic Paleobasin of North Estonia by Kalle Kirsimäe and Per Jørgensen 95
Mixed-Clays (rheology) 713
Mixed-Layer Illite-Smectite 26
Mixed-Layering 282
Mixed-Layering of Illite-Smectite: Results from High-Resolution Transmission Electron Microscopy and Lattice-Energy Calculations by Juan Olives, Marc Amouric, and Régis Perbost 282

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

Mixed-Layer Minerals (XRD analysis) 57
Miyoshi, Masaki (with Yoshihiko Komori, Shigenobu Hayashi, Yoshiyuki Sugahara, and Kazuyuki Kuroda), Characterization of Silanol Groups in Protonated Magadiite by ^{1}H and ^{2}H Solid-State Nuclear Magnetic Resonance 632
Modified Phyllosilicate 638
Moirou, Aggeliki (with Aikaterini Vaxevanidou, Georgios E. Christidis, and Ioannis Paspaliaris), Ion Exchange of Zeolite Na-P_c with Pb^{2+}, Zn^{2+}, and Ni^{2+} Ions 563
Molecular Dynamics Simulations 665
Molecular Dynamics Simulations of the Adsorption of Methylene Blue at Clay Mineral Surfaces by Ching-Hsing Yu, Susan Q. Newton, Mya A. Norman, David M. Miller, Lothar Schäfer, and Brian J. Teppen 665
Molina, C.B. (with J.L. Valverde, P. Cañizares, and M.R. Sun Kou), Enhanced Thermal Stability of Al-Pillared Smectites Modified with Ce and La 424
Mollisols 322
Montmorillonite(s) 19, 132, 246, 304, 405, 557
(Al_{13} pillars) 1
(calculation of Gibbs Free Energies of Formation) 459
(dielectric-relaxation spectroscopy) 75
(glycine) 495
(reactivity of ^{VI}Cr) 648
(rheology) 713
Moonmilk 317
Moore D.M. (with Randall E. Hughes), Ordovician and Pennsylvanian Berthierine-Bearing Flint Clays 145
Morin, Guillaume (with Etienne Balan, Thierry Allard, Bruno Boizot, and Jean-Pierre Muller), Quantitative Measurement of Paramagnetic Fe^{3+} in Kaolinite 439
Mössbauer and Infrared Study of Heat-Treated Nontronite by Michalis A. Karakassides, Dimitris Gournis, Thanassis Simopoulos, and Dimitris Petridis 68
Mössbauer Spectra (nontronite) 68
Mössbauer Spectroscopy (iron-oxide minerals) 322
Mosselmans, J.F.W. (with Balwant Singh, D.M. Sherman, R.J. Gilkes, and M. Wells), Structural Chemistry of Fe, Mn, and Ni in Synthetic Hematites as Determined by Extended X-ray Absorption Fine Structure Spectroscopy 521
Mottana, Annibale (with Maria Franca Brigatti, Cristina Lugli, Giannantonio Cibin, Augusto Marcelli, Gabriele Giuli, Eleonora Paris, and Ziyu Wu), Reduction and Sorption of Chromium by Fe(II)-Bearing Phyllosilicates: Chemical Treatments and X-ray Absorption Spectroscopy (XAS) Studies 272
Muller, Fabrice (with Victor Drits, Alain Plançon, and Jean-Louis Robert), Structural Transformation of 2:1 Dioctahedral Layer Silicates During Dehydroxylation-Rehydroxylation Reactions 572
Muller, Jean-Pierre (with Etienne Balan, Thierry Allard, Bruno Boizot, and Guillaume Morin), Quantitative Measurement of Paramagnetic Fe^{3+} in Kaolinite 439
Mutiple Episodes of Clay Alteration at the Precambrian/Paleozoic Unconformity, Appalachian Basin: Isotopic Evidence for Long-Distance and Local Fluid Migrations by Karen Ziegler and Fred J. Longstaffe 474
Muñoz, V. (with M.R. Sun Kou and S. Mendioroz), Evaluation of the Acidity of Pillared Montmorillonites by Pyridine Adsorption 528
Munsignatti, Marcelo (with Heloise O. Pastore and Artur J.S. Mascarenhas), One-Step Synthesis of Alkyltrimethylammonium-Intercalated Magadiite 224
Muscovite (IR) 433

N

Nakashima, Yoshito, Effects of Clay Fraction and Temperature on the H_2O Self-Diffusivity in Hectorite Gel: A Pulsed-Field-Gradient Spin-Echo Nuclear Magnetic Resonance Study 603
Nakazawa, Hiromoto (with Kenji Tamura and Hirohisa Yamada), Stepwise Hydration of High-Quality Synthetic Smectite with Various Cations 400
Nanodiffraction (of ferrihydrite) 111
Nanophase (lepidocrocite) 503
Nasser, A. (with S. Yariv, I. Lapides, N. Lahav, I. Brodsky, and K.H. Michaelian), Infrared Study of the Intercalation of Potassium Halides in Kaolinite 10
NAu-1 (nontronite) 537
NAu-2 (nontronite) 537
Navrotsky, Alexandra (with Juraj Majzlan and William H. Casey), Surface Enthalpy of Boehmite 699
Neaman, Alexander (with Arieh Singer), Kinetics of Hydrolysis of Some Palygorskite-Containing Soil Clays in Dilute Salt Solutions 708
Neaman, Alexander (with Arieh Singer), Rheology of Mixed Palygorskite-Montmorillonite Suspensions 713
Newton, Susan Q. (with Ching-Hsing Yu, Mya A. Norman, David M. Miller, Lothar Schäfer, and Brian J. Teppen), Molecular Dynamics Simulations of the Adsorption of Methylene Blue at Clay Mineral Surfaces 665
Nicaise, Dominique (with Thierry De Putter, Alain Bernard, Alain Perruchot, and Christian Dupuis), Low-Temperature Acid Weathering in Newhaven, Sussex, United Kingdom, and its Application to

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

Theoretical Modeling in Radioactive Waste-Disposal Sites 238
Nieto, F. (with A. López-Munguira), Transmission Electron Microscopy Study of Very Low-Grade Metamorphic Rocks in Cambrian Sandstones and Shales, Ossa-Morena Zone, Southwest Spain 213
Niu, Ben (with Takahisa Yoshimura and Akio Hirai), Smectite Diagenesis in Neogene Marine Sandstone and Mudstone of the Niigata Basin, Japan 26
NMR (hectorite) 603
Noncrystalline Compounds 85
Nontronite 68, 132, 537
(calculation of Gibbs Free Energies of Formation) 459
Nordstrandite 85
Norman, Mya A. (with Ching-Hsing Yu, Susan Q. Newton, David M. Miller, Lothar Schäfer, and Brian J. Teppen), Molecular Dynamics Simulations of the Adsorption of Methylene Blue at Clay Mineral Surfaces 665

O

Occelli, M.L. (with S.M. Thomas), Effects of Synthesis Conditions on the Thermal Stability of a Texas Montmorillonite Expanded with $[Al_{13}O_4(OH)_{24}(H_2O)_{12}]^{7+}$ Cations 304
Ogihara, Shigenori, Composition of Clinoptilolite Formed from Volcanic Glass during Burial Diagenesis 106
Olives, Juan (with Marc Amouric and Régis Perbost), Mixed Layering of Illite-Smectite: Results from High-Resolution Transmission Electron Microscopy and Lattice-Energy Calculations 282
Önal, Müşerref (with Yüksel Sarikaya, Bülent Baran, and Tülay Almdaroğlu), The Effect of Thermal Treatment on Some of the Physicochemical Properties of a Bentonite 557
One-Step Synthesis of Alkyltrimethylammonium-Intercalated Magadiite by Heloise O. Pastore, Marcelo Munsignatti, and Artur J.S. Mascarenhas 224
Ontario (isotopic data) 474
Ordovician and Pennsylvanian Berthierine-Bearing Flint Clays by D.M. Moore and Randall E. Hughes 145
Ordovician (flint clays) 145
Order-Disorder (OD) (cronstedtite) 331
Organic Matter (and vanadium) 311
Organoclay 43
Organo-Magadiite 224
Orientation of Dye Molecules (in saponite) 392
Ostwald Ripening (in illitization) 446
Oxidation (smectite) 132, 290
Oxygen Isotope 230
Oxygen-Isotope Fractionation Between Aluminum-Hydroxide Phases and Water at <60°C: Results of Decade-Long Synthesis Experiments by Frédéric Vitali, Fred J. Longstaffe, Michael I. Bird, and W. Glen E. Caldwell 230

P

Palygorskite 708
(rheology) 713
Paraquat 246
Paris, Eleonora (with Maria Franca Brigatti, Cristina Lugli, Giannantonio Cibin, Augusto Marcelli, Gabriele Giuli, Annibale Mottana, and Ziyu Wu), Reduction and Sorption of Chromium by Fe(II)-Bearing Phyllosilicates: Chemical Treatments and X-ray Absorption Spectroscopy (XAS) Studies 272
Parker, Paul (with Weizong Xu, Cliff T. Johnston, and Stephen F. Agnew), Infrared Study of Water Sorption of Na-, Li-, Ca-, and Mg-Exchanged (SWy-1 and SAz-1) Montmorillonite 120
Particle Orientation 682
Paspaliaris, Ioannis (with Aggeliki Moirou, Aikaterini Vaxevanidou, and Georgios E. Christidis), Ion Exchange of Zeolite Na-P_c with Pb^{2+}, Zn^{2+}, and Ni^{2+} Ions 563
Pastore, Heloise O. (with Marcelo Munsignatti and Artur J.S. Mascarenhas), One-Step Synthesis of Alkyltrimethylammonium-Intercalated Magadiite 224
Peacor, Donald R. (with Blanca Bauluz and Jose Manuel Gonzalez Lopez), Transmission Electron Microscopy Study of Illitization in Pelites from the Iberian Range, Spain: Layer-by-Layer Replacement? 374
Peacor, Donald R. (with Raymond M. Coveney, Jr. and Gengmei Zhao), Authigenic Illite and Organic Matter: The Principal Hosts of Vanadium in the Mecca Quarry Shale at Velpen, Indiana 311
Pedogenic Smectites in Podzols from Central Finland: An Analytical Electron Microscopy Study by Florence Gillot, Dominique Righi, and Françoise Elsass 655
Penner, D. (with G. Lagaly), Influence of Organic and Inorganic Salts on the Coagulation of Montmorillonite Dispersions 246
Pentachloroethane (smectites) 132
Perbost, Régis (with Juan Olives and Marc Amouric), Mixed Layering of Illite-Smectite: Results from High-Resolution Transmission Electron Microscopy and Lattice-Energy Calculations 282
Percusor Clay 366
Perdigón-Melón, J.A. (with J. Pires, M. Brotas de Carvalho, A.P. Carvalho, and J.M. Guil), Heats of Adsorption of N-Hexane by Thermal Gravimetry with Differential Scanning Calorimetry (TG-

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

DSC): A Tool for Textural Characterization of Pillared Clays 385
Perlite 563
Pernes, M. (with A.C. Iñigo and D. Tessier), Use of X-ray Transmission Diffractometry for the Study of Clay-Particle Orientation at Different Water Contents 682
Perruchot, Alain (with Thierry De Putter, Alain Bernard, Dominique Nicaise, and Christian Dupuis), Low-Temperature Acid Weathering in Newhaven, Sussex, United Kingdom, and its Application to Theoretical Modeling in Radioactive Waste-Disposal Sites 238
Petit, Sabine (with Claire-Isabelle Fialips, Alain Decarreau, and Daniel Beaufort), Influence of Synthesis pH on Kaolinite "Crystallinity" and Surface Properties 173
Petrakis, Dimitrios (with Polycarpos Falaras, Fani Lezou, and Georgios Seiragakis), Bleaching Properties of Alumina-Pillared Acid-Activated Montmorillonite 549
Petříček, Václav (with Jiří Hybler, Slavomil Ďurovič, and Ľubomír Smrčok), Refinement of the Crystal Structure of Cronstedtite-1*T* 331
Petridis, Dimitris (with Michalis A. Karakassides, Dimitris Gournis, and Thanassis Simopoulos), Mössbauer and Infrared Study of Heat-Treated Nontronite 68
pH (effect on kaolinite formation) 173
Phase Analysis (XRD) 57
Phase Analysis of Clays using an Expert System and Calculation Programs for X-ray Diffraction by Two- and Three-Component Mixed-Layer Minerals by A. Plançon and V.A. Drits 57
Phosphate (and formation of lepidocrocite) 503
Phyllosilicates (chlorite, corrensite, montmorillonite) 272
Pillared Clays 304, 385, 424
Pillar Density (in pillared montmorillonite) 304
Pipestone 145
Pires, J. (with M. Brotas de Carvalho, A.P. Carvalho, J.M. Guil, and J.A. Perdigón-Melón), Heats of Adsorption of N-Hexane by Thermal Gravimetry with Differential Scanning Calorimetry (TG-DSC): A Tool for Textural Characterization of Pillared Clays 385
Plançon, Alain (with Fabrice Muller, Victor Drits, and Jean-Louis Robert), Structural Transformation of 2:1 Dioctahedral Layer Silicates During Dehydroxylation-Rehydroxylation Reactions 572
Plançon, A. (with V.A. Drits), Phase Analysis of Clays using an Expert System and Calculation Programs for X-ray Diffraction by Two- and Three-Component Mixed-Layer Minerals 57
Podzols 655
Polar 2:1 Layers 282
Polarity (on sorption) 43
Polarity Effect on Dichlorobenzene Sorption by Hexadecyltrimethylammonium-Exchanged Clays by Guangyao Sheng and Stephen A. Boyd 43
Polyak, Victor James (with Necip Güven), Authigenesis of Trioctahedral Smectite in Magnesium-Rich Carbonate Speleothems in Carlsbad Cavern and Other Caves of the Guadalupe Mountains, New Mexico 317
Polytype(s) 610
(K-rich micas) 213
Polytypism 374
(cronstedtite) 331
Pore Fluid (and diagenesis) 26
Pore Volume (bentonite) 557
Potassium Halide-Kaolinite Complexes 10
Potassium (IR in muscovite) 433
Pozzuoli, Antonio (with Robert F. Ylagan and Stephen P. Altaner), Reaction Mechanisms of Smectite Illitization Associated with Hydrothermal Alteration from Ponza Island, Italy 610
Precambrian Unconformity (isotopic data) 474
Prograde Diagenesis 374
Prost, R. (with M. Diaz and V.C. Farmer), Characterization and Assignment of Far Infrared Absorption Bands of K^+ in Muscovite 433
Pusino, Alba (with Ilaria Braschi and Carlo Gessa), Adsorption and Degradation of Triasulfuron on Homoionic Montmorillonites 19
Pyridine Adsorption (pillared montmorillonite) 528
Pyroaurite 266

Q

Quantification of Mixed-Layer Illite-Smectite in Glass Matrices by Fourier-Transform Infrared Spectroscopy by Sandra de la Fuente, Javier Cuadros, and José Linares 299
Quantitative Analysis (illite-smecite) 299
Quantitative Measurement of Paramagnetic Fe^{3+} in Kaolinite by Etienne Balan, Thierry Allard, Bruno Boizot, Guillaume Morin, and Jean-Pierre Muller 439

R

Radioactive-Waste Sites 238
Raven, Mark D. (with John L. Keeling and Will P. Gates), Geology and Characterization of Two Hydrothermal Nontronites from Weathered Metamorphic Rocks at the Ůley Graphite Mine, South Australia 537
Reaction Mechanisms of Smectite Illitization Associated with Hydrothermal Alteration from Ponza Island, Italy by Robert F. Ylagan, Stephen P. Altaner, and Antonio Pozzuoli 610
Reduction 272

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

(reactivity of ^{VI}Cr) 648
(smectite) 290
Reduction and Sorption of Chromium by Fe(II)-Bearing Phyllosilicates: Chemical Treatments and X-ray Absorption Spectroscopy (XAS) Studies by Maria Franca Brigatti, Cristina Lugli, Giannantonio Cibin, August Marcelli, Gabriele Giuli, Eleonora Paris, Annibale Mottana, and Ziyu Wu 272
Reduction Reactions (smectites) 132
Refinement of the Crystal Structure of Cronstedtite-1*T* by Jiří Hybler, Václav Petříček, Slavomil Ďurovič, and Ľubomír Smrčok 331
Rehydroxylation (2:1 dioctahedral phyllosilicates) 572
(montmorillonite) 405
Relationship Between Illite Crystallinity and Temperature in Active Geothermal Systems of New Zealand by Junfeng Ji and Patrick R.L. Browne 139
Rheology 246, 713
Rheology of Mixed Palygorskite-Montmorillonite Suspensions by Alexander Neaman and Arieh Singer 713
Rietveld Analysis (lepidocrocite) 503
Righi, Dominique (with Florence Gillot and Françoise Elsass), Pedogenic Smectites in Podzols from Central Finland: An Analytical Electron Microscopy Study 655
Robert, Jean-Louis (with Fabrice Muller, Victor Drits, and Alain Plançon), Structural Transformation of 2:1 Dioctahedral Layer Silicates During Dehydroxylation-Rehydroxylation Reactions 572
Rodas, Magdalena (with José F. Barrenechea, Martin Frey, Jacinto Alonso-Azcárate, and José Ramón Mas), Chlorite, Corrensite, and Chlorite-Mica in Late Jurassic Fluvio-Lacustrine Sediments of the Cameros Basin of Northeastern Spain 256
Roh, Y. (with S.Y. Lee, M.P. Elless, and J.E. Foss), Incorporation of Radioactive Contaminants into Pyroaurite-Like Phases by Electrochemical Synthesis 266
Rueda, Elsa H. (with Silvia G. Acebal, Ana Mijovilovich, María E. Aguirre, and Celia Saragovi), Iron-Oxide Mineralogy of a Mollisol from Argentina: A Study by Selective-Dissolution Techniques, X-ray Diffraction, and Mössbauer Spectroscopy 322
Ruiz Cruz, María Dolores (with Francisco Franco), Thermal Behavior of the Kaolinite-Hydrazine Intercalation Complex 63
Ruiz Cruz, María Dolores (with Francisco Franco), Thermal Decomposition of a Dickite-Hydrazine Intercalation Complex 586
Rutile 151

S

Saponite 392, 409
(calculation of Gibbs Free Energies of Formation) 459
Sapponite from the Emet Colemanite Mines, Kütahya, Turkey by Mümtaz Çolak, Cahit Helvacı, and Marino Maggetti 409
Saragovi, Celia (with Silvia G. Acebal, Ana Mijovilovich, Elsa H. Rueda, and María E. Aguirre), Iron-Oxide Mineralogy of a Mollisol from Argentina: A Study by Selective-Dissolution Techniques, X-ray Diffraction, and Mössbauer Spectroscopy 322
Sarikaya, Yüsel (with Müşerref Önal, Bülent Baran, and Tülay Alemdaroğlu), The Effect of Thermal Treatment on Some of the Physicochemical Properties of a Bentonite 557
Sasowsky, Ira D. (with Annabelle M. Foos, Edward J. LaRock, and Patricia N. Kambesis), Detrital Origin of a Sedimentary Fill, Lechuguilla Cave, Guadalupe Mountains, New Mexico 693
Sauconite (calculation of Gibbs Free Energies of Formation) 459
Scanning Electron Microscopy 374
Schäfer, Lothar (with Ching-Hsing Yu, Susan Q. Newton, Mya A. Norman, David M. Miller, and Brian J. Teppen), Molecular Dynamics Simulations of the Adsorption of Methylene Blue at Clay Mineral Surfaces 665
Schroeder, Paul A. (with Jason Shiflet), Ti-Bearing Phases in the Huber Formation, an East Georgia Kaolin Deposit 151
Schulze, Darrell G. (with Udo Schwertmann, Josef Friedl, and Helge Stanjek), The Effect of Al on Fe Oxides. XIX. Formation of Al-Substituted Hematite from Ferrihydrite at 25°C and pH 4 to 7 159
Schwertmann, Udo (with Josef Friedl, Helge Stanjek, and Darrell G. Schulze), The Effect of Al on Fe Oxides. XIX. Formation of Al-Substituted Hematite from Ferrihydrite at 25°C and pH 4 to 7 159
Sedimentary Facies 256
Seiragakis, Georgios (with Polycarpos Falaras, Fani Lezou, and Dimitrios Petrakis), Bleaching Properties of Alumina-Pillared Acid-Activated Montmorillonite 549
Selected-Area Electron Diffraction (SAED) (of ferrihydrite) 111
Selectivity (zeolite) 563
Selectivity Coefficient (zeolite) 563
Self Diffusion (hectorite) 603
Self-Organized Inorganic-Organic Hybrids Induced by Silylating Agents with Phyllosilicate-Like Structure and the Influence of the Ad-

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

sorption of Cations by Maria G. Da Fonseca, José S. Barone, and Claudio Airoldi 638
SEM-EDS 339
Shen, Siyuan (with Robert W. Taylor, William F. Bleam, and Shu-I Tu), Chromate Removal by Dithionite-Reduced Clays: Evidence from Direct X-ray Adsorption Near Edge Spectroscopy (XANES) of Chromate Reduction at Clay Surfaces 648
Sheng, Guangyao (with Stephen A. Boyd), Polarity Effect on Dichlorobenzene Sorption by Hexadecyltrimethylammonium-Exchanged Clays 43
Sherman, D.M. (with Balwant Singh, R.J. Gilkes, M. Wells, and J.F.W. Mosselmans), Structural Chemistry of Fe, Mn, and Ni in Synthetic Hematites as Determined by Extended X-ray Absorption Fine Structure Spectroscopy 521
Shiflet, Jason (with Paul A. Schroeder), Ti-Bearing Phases in the Huber Formation, an East Georgia Kaolin Deposit 151
Si (in ferrihydrite) 51
Silanol Group (magadiite) 632
Silica 708
Silico-Aluminous Gels 238
Simopoulos, Thanassis (with Michalis A. Karakassides, Dimitris Gournis, and Dimitris Petridis), Mössbauer and Infrared Study of Heat-Treated Nontronite 68
Singer, Arieh (with Alexander Neaman), Kinetics of Hydrolysis of Some Palygorskite-Containing Soil Clays in Dilute Salt Solutions 708
Singer, Arieh (with Alexander Neaman), Rheology of Mixed Palygorskite-Montmorillonite Suspensions 713
Singh, Balwant (with D.M. Sherman, R.J. Gilkes, M. Wells, and J.F.W. Mosselmans), Structural Chemistry of Fe, Mn, and Ni in Synthetic Hematites as Determined by Extended X-ray Absorption Fine Structure Spectroscopy 521
Sintering (effect on ferrihydrite to hematite conversion) 51
Si-Release (palygorskite) 708
Smectite(s) 26, 204, 299, 366, 400, 572, 610
(montmorillonite) 120
(orientation effects) 682
(Podzols) 655
(reactivity of ^{VI}Cr) 648
Smectite Diagenesis in Neogene Marine Sandstone and Mudstone of the Niigata Basin, Japan by Ben Niu, Takahisa Yoshimura, and Akio Hirai 26
Smectite-Illite Transformation 26
Smrčok, Ľubomír (with Jiří Hybler, Václav Petříček, and Slavomil Ďurovič), Refinement of the Crystal Structure of Cronstedtite-1*T* 331
Soil Clays 708
Sorption 43, 593
(montmorillonite) 120
(reactivity of ^{VI}Cr) 648
Soprtion of Organic Compounds by Al and Zr-Hydroxy-Intercalated and Pillared Bentonite by Winnie Matthes and Guenther Kahr 593
Spain 256
Speciation (of glycine in montmorillonite) 495
Spontaneous Rehydroxylation of a Dehydroxylated *Cis*-Vacant Montmorillonite by Katja Emmerich 405
Środoń, J. (with D.D. Eberl and V.A. Drits), Evolution of Fundamental-Particle Size During Illitization of Smectite and Implications for Reaction Mechanism 446
Stanjek, Helge (with Udo Schwertmann, Josef Friedl, and Darrell G. Schulze), The Effect of Al on Fe Oxides. XIX. Formation of Al-Substituted Hematite from Ferrihydrite at 25°C and pH 4 to 7 159
Stepwise Hydration of High-Quality Synthetic Smectite with Various Cations by Kenji Tamura, Hirohisa Yamada, and Hiromoto Nakazawa 400
Stevensite 366
(calculation of Gibbs Free Energies of Formation) 459
(in caves) 317
Structural Chemistry of Fe, Mn, and Ni in Synthetic Hematites as Determined by Extended X-ray Absorption Fine Structure Spectroscopy by Balwant Singh, D.M. Sherman, R.J. Gilkes, M. Wells, and J.F.W. Mosselmans 521
Structural Formula (dioctahedral smectite) 185
Structural Model (of Al_{13} pillars in montmorillonite) 1
Structural Model of Al_{13}-Pillared Montmorillonite by Virgil I. Dimov, Albena V. Ilieva, Nelly G. Khaltakova, and Liudmila D. Filizova 1
Structural OH (Fe-rich oxides) 159
Structural Transformation of 2:1 Dioctahedral Layer Silicates During Dehydroxylation-Rehydroxylation Reactions by Fabrice Muller, Victor Drits, Alain Plançon, and Jean-Louis Robert 572
Structure (2:1 dioctahedral phyllosilicates) 572
Stucki, Joseph W. (with Javiera Cervini-Silva, Jun Wu, and Richard A. Larson), Adsorption Kinetics of Pentachloroethane by Iron-Bearing Smectites 132
Stucki, Joseph W. (with Jun Wu, Huamin Gan, Peter Komadel, and Amos Banin), Effects of Iron Oxidation State and Organic Cations on Dioctahedral Smectite Hydration 290
Suárez Barrios, Mercedes (with Cristina de Santiago Buey, Emilia García Romero, and Mercedes Doval Montoya), Mg-Rich Smectite "Precursor" Phase in the Tagus Basin, Spain 366
Sugahara, Yoshiyuki (with Yoshihiko Komori, Masaki Miyoshi, Shigenobu Hayashi, and Kazuyuki Ku-

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

roda), Characterization of Silanol Groups in Protonated Magadiite by ^{1}H and ^{2}H Solid-State Nuclear Magnetic Resonance 632
Sun Kou, M.R. (with J.L. Valverde, P. Cañizares, and C.B. Molina), Enhanced Thermal Stability of Al-Pillared Smectites Modified with Ce and La 424
Sun Kou, M.R. (with S. Mendioroz and V. Muñoz), Evaluation of the Acidity of Pillared Montmorillonites by Pyridine Adsorption 528
Surface Area (bentonite) 557
Surface Enthalpy 699
Surface Enthalpy of Boehmite by Juraj Majzlan, Alexandra Navrotsky, and William H. Casey 699
Surface Hydration (smectite) 290
Surface Speciation (kaolinite) 173
Superparamagnetic Behavior (nontronite) 68
SWa-1 (reactivity of ^{VI}Cr) 648
Swelling (smectite) 290
SWy-1 (reactivity of ^{VI}Cr) 648
Synthesis (Al hydroxides) 230
Synthesis of Fe Oxides 159

T

Tagus Basin (Spain) 366
Tamura, Kenji (with Hirohisa Yamada and Hiromoto Nakazawa), Stepwise Hydration of High-Quality Synthetic Smectite with Various Cations 400
Taylor, Robert W. (with Siyuan Shen, William F. Bleam, and Shu-I Tu), Chromate Removal by Dithionite-Reduced Clays: Evidence from Direct X-ray Adsorption Near Edge Spectroscopy (XANES) of Chromate Reduction at Clay Surfaces 648
Tazaki, Kazue, Formation of Banded Iron-Manganese Structures by Natural Microbial Communities 511
Technetium 266
TEM-AEM 339
Teppen, Brian J. (with Ching-Hsing Yu, Susan Q. Newton, Mya A. Norman, David M. Miller, and Lothar Schäfer), Molecular Dynamics Simulations of the Adsorption of Methylene Blue at Clay Mineral Surfaces 665
Tessier, D. (with A.C. Iñigo and M. Pernes), Use of X-ray Transmission Diffractometry for the Study of Clay-Particle Orientation at Different Water Contents 682
Tetrachloroethene (smectites) 132
Textural Characterization (pillared clays) 385
TG-DSC (pillared clays) 385
The Dependence of Localized Crystallization of Halloysite and Kaolinite on Primary Minerals in the Weathering Profile of Granite by Gi Young Jeong 196
The Effect of Al on Fe Oxides. XIX. Formation of Al-Substituted Hematite from Ferrihydrite at 25°C and pH 4 to 7 by Udo Schwertmann, Josef Friedl, Helge Stanjek, and Darrell G. Schulze 159
The Effect of Thermal Treatment on Some of the Physicochemical Properties of a Bentonite by Yüksel Sarikaya, Müşerref Önal, Bülent Baran, and Tülay Alemdaroğlu 557
The Marilyn and Sturges W. Bailey Distinguished Member Award: Boris Zvyagin by Victor A. Drits 716
Thermal Analysis (bentonite) 557
Thermal Behavior of the Kaolinite-Hydrazine Intercalation Complex by María Dolores Ruiz Cruz and Francisco Franco 63
Thermal Decomposition of a Dickite-Hydrazine Intercalation Complex by María Dolores Ruiz Cruz and Francisco Franco 586
Thermal Stability (of pillared montmorillonite) 304
Thermodynamic Modeling 238
Thomas, S.M. (with M.L. Occelli), Effects of Synthesis Conditions on the Thermal Stability of a Texas Montmorillonite Expanded with $[Al_{13}O_4(OH)_{24}(H_2O)_{12}]^{7+}$ Cations 304
Ti-Bearing Phases in the Huber Formation, an East Georgia Kaolin Deposit by Paul A. Schroeder and Jason Shiflet 151
Time-Domain Reflectometry 75
TiO_2 151
Titanium 151
TMA 290
TMPA 290
Torrent, José (with Jesús Cumplido and Vidal Barrón), Effect of Phosphate on the Formation of Nanophase Lepidocrocite from Fe(II) Sulfate 503
Trace Elements (hematite) 521
Transition Moment (IR in muscovite) 433
Transmission Electron Microscopy 374
(montmorillonite) 1
Transmission Electron Microscopy of Synthetic 2- and 6-Line Ferrihydrite by Dawn E. Janney, John M. Cowley, and Peter R. Buseck 111
Transmission Electron Microscopy Study of Illitization in Pelites from the Iberian Range, Spain: Layer-by-Layer Replacement? by Blanca Bauluz, Donald R. Peacor, and Jose Manuel Gonzalez Lopez 374
Transmission Electron-Microscopy Study of Very Low-Grade Metamorphic Rocks in Cambrian Sandstones and Shales, Ossa-Morena Zone, Southwest Spain by A. López-Munguira and F. Nieto 213
Transmission X-ray Diffraction 682
Trans-Vacant Octahedra (2:1 dioctahedral phyllosilicates) 572
Triasulfuron (on montmorillonite) 19
Trioctahedral Smectite (in caves) 317
(saponite) 409

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

Tu, Shu-I (with Robert W. Taylor, Siyuan Shen, and William F. Bleam), Chromate Removal by Dithionite-Reduced Clays: Evidence from Direct X-ray Adsorption Near Edge Spectroscopy (XANES) of Chromate Reduction at Clay Surfaces 648

U

Unit-Cell Size (of Fe oxides) 159
Uranium 266
Use of X-ray Transmission Diffractometry for the Study of Clay-Particle Orientation at Different Water Contents by A.C. Iñigo, D. Tessier, and M. Pernes 682
Uysal, I. Tonguç (with Suzanne D. Golding and Frank Audsley), Clay-Mineral Authigenesis in the Late Permian Coal Measures, Bowen Basin, Queensland, Australia 351

V

Valverde, J.L. (with P. Cañizares, M.R. Sun Kou, and C.B. Molina), Enhanced Thermal Stability of Al-Pillared Smectites Modified with Ce and La 424
Vanadium 311
Variscan Belt 213
Vaxevanidou, Aikaterini (with Aggeliki Moirou, Georgios E. Christidis, and Ioannis Paspaliaris), Ion Exchange of Zeolite Na-P_c with Pb^{2+}, Zn^{2+}, and Ni^{2+} Ions 563
Vermiculite (calculation of Gibbs Free Energies of Formation) 459
Vibration Mode (IR in muscovite) 433
Vieillard, Philippe, A New Method for the Prediction of Gibbs Free Energies of Formation of Hydrated Clay Minerals Based on the Electronegativity Scale 459
Viscoelasticity 246
Viscosity 713
Visible Spectroscopy (saponite) 392
Vitali, Frédéric (with Fred J. Longstaffe, Michael I. Bird, and W. Glen E. Caldwell), Oxygen-Isotope Fractionation Between Aluminum-Hydroxide Phases and Water at <60°C: Results of Decade-Long Synthesis Experiments 230
Vizcayno, Carmen (with M. Teresa Garcia-Gonzalez and Javier Cortabitarte), Effect of Kaolinite and Sulfate on the Formation of Hydroxy-Aluminum Compounds 85
Volcanic Glass 106
Volcanic Tuff 339

W

Wang, Changjun (with Tomoyuki Ishida and Tomoyuki Makino), Dielectric-Relaxation Spectroscopy of Kaolinite, Montmorillonite, Allophane, and Imogolite under Moist Conditions 75
Water (montmorillonite) 120
Weathering 196
  (nontronite) 537
Weidler, Peter G. (with Susan M. Glasauer, Paul Hug, and Andreas U. Gehring), Inhibition of Sintering by Si during the Conversion of Si-rich Ferrihydrite to Hematite 51
Wells, M. (with Balwant Singh, D.M. Sherman, R.J. Gilkes, and J.F.W. Mosselmans), Structural Chemistry of Fe, Mn, and Ni in Synthetic Hematites as Determined by Extended X-ray Absorption Fine Structure Spectroscopy 521
Wu, Jun (with Javiera Cervini-Silva, Joseph W. Stucki, and Richard A. Larson), Adsorption Kinetics of Pentachloroethane by Iron-Bearing Smectites 132
Wu, Jun (with Joseph W. Stucki, Huamin Gan, Peter Komadel, and Amos Banin), Effects of Iron Oxidation State and Organic Cations on Dioctahedral Smectite Hydration 290
Wu, Ziyu (with Maria Franca Brigatti, Cristina Lugli, Giannantonio Cibin, Augusto Marcelli, Gabriele Giuli, Eleonora Paris, and Annibale Mottana), Reduction and Sorption of Chromium by Fe(II)-Bearing Phyllosilicates: Chemical Treatments and X-ray Absorption Spectroscopy (XAS) Studies 272

X

XANES 272
  (reactivity of ^{VI}Cr) 648
XAS (hematite) 521
XPS 51
X-ray Diffraction (cronstedtite) 331
  (iron-oxide minerals) 322
  (nontronite) 537
  (Ti-bearing phases) 151
X-ray Diffractograms (of kaolinite complexes) 10
XRD (chlorite, corrensite, mica) 256
  (hematite) 521
  (kaolinite) 173
  (of clay mixtures) 57
  (smectite illitization) 610
Xu, Weizong (with Cliff T. Johnston, Paul Parker, and Stephen F. Agnew), Infrared Study of Water Sorption on Na-, Li-, Ca-, and Mg-Exchanged (SWy-1 and SAz-1) Montmorillonite 120

Y

Yamada, Hirohisa (with Kenji Tamura and Hiromoto Nakazawa), Stepwise Hydration of High-Quality Synthetic Smectite with Various Cations 400
Yariv, S. (with I. Lapides, A. Nasser, N. Lahav, I. Brodsky, and K.H. Michaelian), Infrared Study of the Intercalation of Potassium Halides in Kaolinite 10

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press

Ylagan, Robert F. (with Stephen P. Altaner and Antonio Pozzuoli), Reaction Mechanisms of Smectite Illitization Associated with Hydrothermal Alteration from Ponza Island, Italy 610
Yoshimura, Takahisa (with Ben Niu and Akio Hirai), Smectite Diagenesis in Neogene Marine Sandstone and Mudstone of the Niigata Basin, Japan 26
Yu, Ching-Hsing (with Susan Q. Newton, Mya A. Norman, David M. Miller, Lothar Schäfer, and Brian J. Teppen), Molecular Dynamics Simulations of the Adsorption of Methylene Blue at Clay Mineral Surfaces 665

Z

Zebra Architecture (banded Fe-Mn structures) 511
Zeolite 204
(clinoptilolite) 106
Zeolite P_c 563
Zeolitization 563
Zero-Valent Iron 266
Zhao, Gengmei (with Donald R. Peacor and Raymond M. Coveney, Jr.), Authigenic Illite and Organic Matter: The Principal Hosts of Vanadium in the Mecca Quarry Shale at Velpen, Indiana 311
Ziegler, Karen (with Fred J. Longstaffe), Multiple Episodes of Clay Alteration at the Precambrian/Paleozoic Unconformity, Appalachian Basin: Isotopic Evidence for Long-Distance and Local Fluid Migrations 474
Zr-Pillared Montmorillonite 528, 593

https://doi.org/10.1346/CCMN.2000.0480616 Published online by Cambridge University Press