Maria D Alba

List of Publications by Year
in descending order

118 papers	2,343 citations	257450 24 h-index	265206 42 g-index
119 all docs	119 docs citations	119 times ranked	2056 citing authors

#	Article	IF	Citations
1	Insight into the role of temperature, time and pH in the effective zirconium retention using clay minerals. Journal of Environmental Management, 2022, 308, 114635.	7.8	1
2	Exploring the local environment of the engineered nanoclay Mica-4 under hydrothermal conditions using Eu3+ as a luminescent probe. Journal of Alloys and Compounds, 2022, 921, 166086.	5.5	3
3	Zirconium retention for minimizing environmental risk: Role of counterion and clay mineral. Chemosphere, 2021, 267, 128914.	8.2	1
4	Pb2+, Cd2+ and Hg2+ removal by designed functionalized swelling high-charged micas. Science of the Total Environment, 2021, 764, 142811.	8.0	8
5	Organophilization of acid and thermal treated sepiolite for its application in BTEX adsorption from aqueous solutions. Journal of Water Process Engineering, 2021, 40, 101949.	5.6	13
6	Swelling layered minerals applications: A solid state NMR overview. Progress in Nuclear Magnetic Resonance Spectroscopy, 2021, 124-125, 99-128.	7.5	7
7	New Trends in Nanoclay-Modified Sensors. Inorganics, 2021, 9, 43.	2.7	16
8	By-products revaluation in the production of design micaceous materials. Applied Clay Science, 2021, 214, 106292.	5.2	1
9	Designed organomicaceous materials for efficient adsorption of iodine. Journal of Environmental Chemical Engineering, 2021, 9, 106577.	6.7	9
10	An insight on the design of mercapto functionalized swelling brittle micas. Journal of Colloid and Interface Science, 2020, 561, 533-541.	9.4	5
11	Multiple pollutants removal by functionalized heterostructures based on Na-2-Mica. Applied Clay Science, 2020, 196, 105749.	5.2	8
12	Bionanocomposites based on chitosan intercalation in designed swelling high-charged micas. Scientific Reports, 2019, 9, 10265.	3.3	15
13	Design swelling micas: Insights on heavy metals cation exchange reaction. Applied Clay Science, 2019, 182, 105298.	5.2	13
14	Eu³⁺ Luminescence in High Charge Mica: An In Situ Probe for the Encapsulation of Radioactive Waste in Geological Repositories. ACS Applied Materials & Interfaces, 2019, 11, 7559-7565.	8.0	22
15	Natural abundance 17O MAS NMR and DFT simulations: New insights into the atomic structure of designed micas. Solid State Nuclear Magnetic Resonance, 2019, 100, 45-51.	2.3	8
16	Influence of framework and interlayer on the colloidal stability of design swelling high-charged micas. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 561, 32-38.	4.7	6
17	Comparison of solvent extraction and extraction chromatography resin techniques for uranium isotopic characterization in high-level radioactive waste and barrier materials. Applied Radiation and Isotopes, 2018, 137, 177-183.	1.5	26
18	Heteroatom framework distribution and layer charge of sodium Taeniolite. Applied Clay Science, 2018, 158, 246-251.	5.2	1

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19	Cesium adsorption isotherm on swelling high-charged micas from aqueous solutions: Effect of temperature. American Mineralogist, 2018, 103, 623-628.	1.9	7
20	A comprehensive and in-depth analysis of the synthesis of advanced adsorbent materials. Journal of Cleaner Production, 2018, 194, 665-672.	9.3	3
21	Behavior of High-Strength Polypropylene Fiber-Reinforced Self-Compacting Concrete Exposed to High Temperatures. Journal of Materials in Civil Engineering, 2018, 30, .	2.9	28
22	Failure mode and effect analysis of a large scale thin-film CIGS photovoltaic module. Engineering Failure Analysis, 2017, 76, 55-60.	4.0	16
23	New insights into surface-functionalized swelling high charged micas: Their adsorption performance for non-ionic organic pollutants. Journal of Industrial and Engineering Chemistry, 2017, 52, 179-186.	5.8	29
24	Cs+ immobilization by designed micaceous adsorbent under subcritical conditions. Applied Clay Science, 2017, 143, 293-299.	5.2	16
25	Effect of the crystal chemistry on the hydration mechanism of swelling micas. Geochimica Et Cosmochimica Acta, 2017, 217, 231-239.	3.9	4
26	Front contact optimization of industrial scale CIGS solar cells for low solar concentration using 2D physical modeling. Renewable Energy, 2017, 101, 90-95.	8.9	9
27	Influence of temperature and time on the Eu 3+ reaction with synthetic Na-Mica- n (n = 2 and 4). Chemical Engineering Journal, 2016, 284, 1174-1183.	12.7	17
28	Enhancement of dielectric barrier layer properties by sol-gel and PECVD stacks. Surface and Coatings Technology, 2016, 305, 36-40.	4.8	3
29	Uranium immobilization by FEBEX bentonite and steel barriers in hydrothermal conditions. Chemical Engineering Journal, 2015, 269, 279-287.	12.7	8
30	Viability of adding gypsum and calcite for remediation of metal-contaminated soil: laboratory and pilot plant scales. International Journal of Environmental Science and Technology, 2015, 12, 2697-2710.	3.5	13
31	Synthesis temperature effect on Na-Mica-4 crystallinity and heteroatom distribution. Microporous and Mesoporous Materials, 2015, 204, 282-288.	4.4	8
32	Self-Assembling of Tetradecylammonium Chain on Swelling High Charge Micas (Na-Mica-3 and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 22 4394-4401.	3.5	8
33	Impact of hydrothermal treatment of FEBEX and MX80 bentonites in water, HNO3 and Lu(NO3)3 media: Implications for radioactive waste control. Applied Clay Science, 2015, 118, 48-55.	5.2	7
34	Effect of clays and metal containers in retaining Sm3+ and ZrO2+ and the process of reversibility. American Mineralogist, 2014, 99, 696-703.	1.9	4
35	Influence of the synthesis parameter on the interlayer and framework structure of lamellar octadecyltrimethylammonium kanemite. Applied Clay Science, 2014, 95, 9-17.	5.2	5
36	A new route of synthesis of Na-Mica-4 from sodalite. Microporous and Mesoporous Materials, 2014, 186, 176-180.	4.4	10

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37	Ceramic Barrier Layers for Flexible Thin Film Solar Cells on Metallic Substrates: A Laboratory Scale Study for Process Optimization and Barrier Layer Properties. ACS Applied Materials & Interfaces, 2014, 6, 18543-18549.	8.0	10
38	Quantification and comparison of the reaction properties of FEBEX and MX-80 clays with saponite: Europium immobilisers under subcritical conditions. Applied Clay Science, 2014, 101, 10-15.	5.2	13
39	Enhanced activity of clays and its crucial role for the activity in ethylene polymerization. Journal of Molecular Catalysis A, 2014, 393, 96-104.	4.8	4
40	Interaction of Hydrated Cations with Mica-n (n = 2, 3 and 4) Surface. Journal of Physical Chemistry C, 2014, 118, 2115-2121.	3.1	15
41	Direct evidence of Lowenstein's rule violation in swelling high-charge micas. Chemical Communications, 2014, 50, 6984.	4.1	10
42	Competitive effect of the metallic canister and clay barrier on the sorption of Eu3+ under subcritical conditions. Applied Geochemistry, 2014, 40, 25-31.	3.0	7
43	Effects of thermal and mechanical treatments on montmorillonite homoionized with mono- and polyvalent cations: Insight into the surface and structural changes. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 423, 1-10.	4.7	28
44	Solution Properties of the System ZrSiO₄â€“HfSiO₄: A Computational and Experimental Study. Journal of Physical Chemistry C, 2013, 117, 10013-10019.	3.1	14
45	Monolayer arrangement of fatty hydroxystearic acids on graphite: Influence of hydroxyl groups. Thin Solid Films, 2013, 539, 194-200.	1.8	7
46	Evaluation of rare earth on layered silicates under subcritical conditions: Effect of the framework and interlayer space composition. Chemical Geology, 2013, 347, 208-216.	3.3	6
47	Synthesis and characterization of kanemite from fluoride-containing media: Influence of the alkali cation. American Mineralogist, 2013, 98, 1000-1007.	1.9	3
48	Hydration properties of synthetic high-charge micas saturated with different cations: An experimental approach. American Mineralogist, 2013, 98, 394-400.	1.9	20
49	Synthetic High-Charge Organomica: Effect of the Layer Charge and Alkyl Chain Length on the Structure of the Adsorbed Surfactants. Langmuir, 2012, 28, 7325-7332.	3.5	39
50	Effects of the presence of Fe(0) on the sorption of lanthanum and lutetium mixtures in smectites. Applied Clay Science, 2012, 65-66, 162-172.	5.2	1
51	Remediation of metal-contaminated soils with the addition of materials â€“ Part II: Leaching tests to evaluate the efficiency of materials in the remediation of contaminated soils. Chemosphere, 2012, 87, 829-837.	8.2	21
52	Empleo de paneles compuestos por subproductos de centrales tÃ©rmicas en fachadas trasdosadas. Informes De La Construccion, 2012, 64, 179-190.	0.3	4
53	Formation of Organo-Highly Charged Mica. Langmuir, 2011, 27, 9711-9718.	3.5	33
54	Interaction of Eu-isotopes with saponite as a component of the engineered barrier. Applied Clay Science, 2011, 52, 253-257.	5.2	9

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55	Stability of Rare-Earth Disilicates: Ionic Radius Effect. Journal of the American Ceramic Society, 2011, 94, 1568-1574.	3.8	4
56	Application of the solid state NMR to the study of the alcohol/alkane mixtures adsorption onto graphite. Solid State Nuclear Magnetic Resonance, 2011, 40, 138-143.	2.3	2
57	Remediation of metal-contaminated soils with the addition of materials â€“ Part I: Characterization and viability studies for the selection of non-hazardous waste materials and silicates. Chemosphere, 2011, 85, 1511-1517.	8.2	13
58	Evolution of Phases and Alâ€“Si Distribution during Na-4-Mica Synthesis. Journal of Physical Chemistry C, 2011, 115, 20084-20090.	3.1	10
59	Structural elucidation of Î²-(Y,Sc)₂Si₂O₇: combined use of⁸⁹Y MAS NMR and powder diffraction. Journal of Applied Crystallography, 2011, 44, 846-852.	4.5	15
60	Solid solubility of Yb2Si2O7 in Î²-, Î³- and Î´-Y2Si2O7. Journal of Solid State Chemistry, 2011, 184, 1882-1889.	2.9	38
61	Examination of competitive lanthanide sorption onto smectites and its significance in the management of radioactive waste. Journal of Hazardous Materials, 2011, 186, 1930-1941.	12.4	16
62	The effect of polymorphic structure on the structural and chemical stability of yttrium disilicates. American Mineralogist, 2011, 96, 1512-1520.	1.9	2
63	Hydrothermal Stability of Layered Silicates in Neutral and Acidic Media: Effect on Engineered-Barrier Safety. Clays and Clay Minerals, 2010, 58, 501-514.	1.3	13
64	Silicoaluminates as â€œSupport Activatorâ€•Systems in Olefin Polymerization Processes. Materials, 2010, 3, 1015-1030.	2.9	18
65	Application of Micro-X-ray Fluorescence Analysis for the Characterization of Industrial Wastes. Industrial & Engineering Chemistry Research, 2010, 49, 2348-2352.	3.7	2
66	Lanthanide sorption on smectitic clays in presence of cement leachates. Geochimica Et Cosmochimica Acta, 2010, 74, 862-875.	3.9	36
67	⁴⁵Sc Spectroscopy of Solids: Interpretation of Quadrupole Interaction Parameters and Chemical Shifts. Journal of Physical Chemistry C, 2010, 114, 12125-12132.	3.1	33
68	Synthesis, Rietveld Analysis, and Solid State Nuclear Magnetic Resonance of X₂â€šc₂SiO₅. Journal of the American Ceramic Society, 2009, 92, 487-490.	3.8	9
69	Reversibility of La and Lu sorption onto smectites: Implications for the design of engineered barriers in deep geological repositories. Journal of Hazardous Materials, 2009, 172, 1198-1205.	12.4	11
70	Synthesis of MCM-22 zeolites of different Si/Al ratio and their structural, morphological and textural characterisation. Microporous and Mesoporous Materials, 2009, 118, 1-10.	4.4	42
71	Liquid-phase thiophene adsorption on MCM-22 zeolites. Acidity, adsorption behaviour and nature of the adsorbed products. Microporous and Mesoporous Materials, 2009, 118, 11-20.	4.4	8
72	Phase separation of carboxylic acids on graphite surface at submonolayer regime. European Physical Journal: Special Topics, 2009, 167, 151-156.	2.6	2

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73	Preferential Adsorption from Binary Mixtures on Graphite: The n-Decaneâ"n-Heptan-1-ol System. Journal of Physical Chemistry C, 2009, 113, 3176-3180.	3.1	7
74	Chemical reactivity of argillaceous material in engineered barrierRare earth disilicate formation under subcritical conditions. Applied Clay Science, 2009, 43, 369-375.	5.2	20
75	Rare-earth disilicate formation under Deep Geological Repository approach conditions. Applied Clay Science, 2009, 46, 63-68.	5.2	9
76	Stability of phyllosilicates in Ca(OH)2 solution: Influence of layer nature, octahedral occupation, presence of tetrahedral Al and degree of crystallinity. Applied Geochemistry, 2009, 24, 1251-1260.	3.0	20
77	Getting more out of X2T2O7 compounds with thortveitite structure: The bond-valence model. Journal of Solid State Chemistry, 2008, 181, 340-344.	2.9	2
78	Persistence of lutetium disilicate. Applied Geochemistry, 2007, 22, 192-201.	3.0	21
79	Polymorphism in the Sc2Si2O7â€"Y2Si2O7 system. Journal of Solid State Chemistry, 2007, 180, 1436-1445.	2.9	26
80	Structural study of the Lu2Si2O7â€"Sc2Si2O7 system. Journal of Physics and Chemistry of Solids, 2007, 68, 464-469.	4.0	22
81	Contribution to the hydrothermal synthesis of zeolite beta and its modifications with gallium. Journal of Porous Materials, 2007, 14, 239-242.	2.6	3
82	Hydrothermal Reactivity of Na-n-Micas (n = 2, 3, 4). Chemistry of Materials, 2006, 18, 2867-2872.	6.7	53
83	Discrete Breathers for Understanding Reconstructive Mineral Processes at Low Temperatures. Journal of Physical Chemistry B, 2006, 110, 24112-24120.	2.6	32
84	Synthesis and characterization of gallium containing kanemite. Microporous and Mesoporous Materials, 2006, 94, 66-73.	4.4	10
85	Structural study of synthetic micaâ€"montmorillonite by means of 2D MAS NMR experiments. Physics and Chemistry of Minerals, 2005, 32, 248-254.	0.8	14
86	Interaction Between Lu Cations and 2:1 Aluminosilicates under Hydrothermal Treatment. Clays and Clay Minerals, 2005, 53, 37-44.	1.3	14
87	Revisiting Y2Si2O7 and Y2SiO5 polymorphic structures by 89Y MAS-NMR spectroscopy. Journal of Solid State Chemistry, 2004, 177, 2783-2789.	2.9	50
88	Structural localization of Al 3+ ions in aluminosilicates: application of heteronuclear chemical shift correlation to 2:1 phyllosilicates. Physics and Chemistry of Minerals, 2004, 31, 195-202.	0.8	8
89	Inherent Acidity of Aqua Metal Ions in Solids: An Assay in Layered Aluminosilicates.. ChemInform, 2003, 34, no.	0.0	0
90	NMR study of n-dodecane adsorbed on graphite. Solid State Nuclear Magnetic Resonance, 2003, 23, 174-181.	2.3	20

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91	Inherent Acidity of Aqua Metal Ions in Solids:â€‰ An Assay in Layered Aluminosilicates. Journal of Physical Chemistry B, 2003, 107, 3996-4001.	2.6	27
92	Structure-directing effect of phyllosilicates on the synthesis of y-Y2Si2O7. Phase transitions in Y2Si2O7. Journal of Materials Chemistry, 2003, 13, 1835.	6.7	27
93	Mixing Behavior at the Solid/Liquid Interface:Â Binary Alcohol Monolayers on Graphite. Langmuir, 2002, 18, 9429-9433.	3.5	18
94	Two-dimensional heteronuclear 1H â†" 27Al-correlated MAS NMR spectra of layered silicates. Chemical Communications, 2001, , 249-250.	4.1	5
95	Hydrothermal reactivity of Lu-saturated smectites: Part I. A long-range order study. American Mineralogist, 2001, 86, 115-123.	1.9	36
96	Hydrothermal reactivity of Lu-saturated smectites: Part II. A short-range order study. American Mineralogist, 2001, 86, 124-131.	1.9	22
97	High-resolution 1H MAS NMR spectra of 2âˆ¶1 phyllosilicates. Chemical Communications, 2000, , 37-38.	4.1	30
98	Aluminosilicate Mesoporous Molecular Sieve MCM-48. Journal of Physical Chemistry B, 1998, 102, 123-128.	2.6	98
99	Chemical Behavior of Lithium Ions in Reexpanded Liâˆ'Montmorillonites. Journal of Physical Chemistry B, 1998, 102, 2207-2213.	2.6	27
100	Kinetic studies of the dehydration of methanol over aluminosilicate and gallosilicate offretites. Journal of the Chemical Society, Faraday Transactions, 1997, 93, 1221-1224.	1.7	11
101	In Situ NMR Studies of the Conversion of Methanol into Gasoline on Aluminosilicate and Gallosilicate Offretites. Journal of Physical Chemistry B, 1997, 101, 5166-5171.	2.6	14
102	Synthesis and Characterization of the Mesoporous Silicate Molecular Sieve MCM-48. Journal of Physical Chemistry B, 1997, 101, 5294-5300.	2.6	173
103	Study of the reversibility on the local La3+ environment after thermal and drying treatments in lanthanum-exchanged smectites. Nuclear Instruments & Methods in Physics Research B, 1997, 133, 34-38.	1.4	6
104	Titanosilicate Mesoporous Molecular Sieve MCM-41:Â Synthesis and Characterization. The Journal of Physical Chemistry, 1996, 100, 2178-2182.	2.9	236
105	Pore structure analysis of the mesoporous titanosilicate molecular sieve MCM-41 by 1H NMR and N2 sorption. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 849.	1.7	60
106	Formation at 300Â°C of a high-temperature disilicate from hydrated lutetium in a layered aluminosilicate. Clay Minerals, 1996, 31, 507-512.	0.6	2
107	Acidity and catalytic activity of the mesoporous aluminosilicate molecular sieve MCM-41. Catalysis Letters, 1996, 37, 113-120.	2.6	174
108	The unit cell of the gallosilicate mesoporous molecular sieve [Si,Ga]-MCM-41 is significantly smaller than in the purely siliceous [Si]-MCM-41. Chemical Physics Letters, 1996, 250, 328-334.	2.6	16

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109	Formation of High-Temperature Lutetium Disilicate from Lutetium-Saturated Aluminosilicates in Mild Conditions. Incorporation of Si and Al XAS Techniques to the Study of These Systems. The Journal of Physical Chemistry, 1996, 100, 19559-19567.	2.9	8
110	Structure of Lu3+ and La3+ ions intercalated within layered clays as determined by EXAFS. Physica B: Condensed Matter, 1995, 208-209, 622-624.	2.7	6
111	EXAFS study of the interaction of lanthanide cations with layered clays upon hydrothermal treatments. Nuclear Instruments & Methods in Physics Research B, 1995, 97, 142-144.	1.4	2
112	Reversible Migration of Lithium in Montmorillonites. The Journal of Physical Chemistry, 1994, 98, 7848-7853.	2.9	60
113	Interaction of Multivalent Cations with Layered Clays. Generation of Lutetium Disilicate upon Hydrothermal Treatment of Lu-Montmorillonite. Inorganic Chemistry, 1994, 33, 3861-3862.	4.0	16
114	Alumina-pillared montmorillonite: effect of thermal and hydrothermal treatment on the accessible micropore volume. Journal of Materials Science, 1993, 28, 373-378.	3.7	19
115	Reexpansion of collapsed Li-montmorillonites; evidence on the location of Li+ ions. Journal of the Chemical Society Chemical Communications, 1993, , 1809.	2.0	14
116	Study of Lanthanum Local Structure in Montmorillonite. Japanese Journal of Applied Physics, 1993, 32, 779.	1.5	3
117	Local environment of lanthanum ions in montmorillonite upon heating. Clay Minerals, 1992, 27, 423-434.	0.6	25
118	Effect Of La(III) on the Thermal Stability of Al-Pillared Montmorillonite. Studies in Surface Science and Catalysis, 1991, 62, 607-613.	1.5	1