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	Titanosilicate Mesoporous Molecular Sieve MCM-41:Â Synthesis and Characterization. The Journal of Physical Chemistry, 1996, 100, 2178-2182.	2.9	236
2	Acidity and catalytic activity of the mesoporous aluminosilicate molecular sieve MCM-41. Catalysis Letters, 1996, 37, 113-120.	2.6	174
3	Synthesis and Characterization of the Mesoporous Silicate Molecular Sieve MCM-48. Journal of Physical Chemistry B, 1997, 101, 5294-5300.	2.6	173
4	Aluminosilicate Mesoporous Molecular Sieve MCM-48. Journal of Physical Chemistry B, 1998, 102, 123-128.	2.6	98
5	Reversible Migration of Lithium in Montmorillonites. The Journal of Physical Chemistry, 1994, 98, 7848-7853.	2.9	60
6	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
7	Hydrothermal Reactivity of Na-n-Micas (n = 2, 3, 4). Chemistry of Materials, 2006, 18, 2867-2872.	6.7	53
8	Revisiting Y2Si2O7 and Y2SiO5 polymorphic structures by 89Y MAS-NMR spectroscopy. Journal of Solid State Chemistry, 2004, 177, 2783-2789.	2.9	50
9	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
10	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
11	Solid solubility of Yb2Si2O7 in Î²-, Î³- and Î´-Y2Si2O7. Journal of Solid State Chemistry, 2011, 184, 1882-1889.	2.9	38
12	Hydrothermal reactivity of Lu-saturated smectites: Part I. A long-range order study. American Mineralogist, 2001, 86, 115-123.	1.9	36
13	Lanthanide sorption on smectitic clays in presence of cement leachates. Geochimica Et Cosmochimica Acta, 2010, 74, 862-875.	3.9	36
14	⁴⁵Sc Spectroscopy of Solids: Interpretation of Quadrupole Interaction Parameters and Chemical Shifts. Journal of Physical Chemistry C, 2010, 114, 12125-12132.	3.1	33
15	Formation of Organo-Highly Charged Mica. Langmuir, 2011, 27, 9711-9718.	3.5	33
16	Discrete Breathers for Understanding Reconstructive Mineral Processes at Low Temperatures. Journal of Physical Chemistry B, 2006, 110, 24112-24120.	2.6	32
17	High-resolution 1H MAS NMR spectra of 2âˆ¶1 phyllosilicates. Chemical Communications, 2000, , 37-38.	4.1	30
18	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

#	Article	IF	Citations
19	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
20	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
21	Chemical Behavior of Lithium Ions in Reexpanded Liâ^'Montmorillonites. Journal of Physical Chemistry B, 1998, 102, 2207-2213.	2.6	27
22	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
23	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
24	Polymorphism in the Sc2Si2O7â€“Y2Si2O7 system. Journal of Solid State Chemistry, 2007, 180, 1436-1445.	2.9	26
25	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
26	Local environment of lanthanum ions in montmorillonite upon heating. Clay Minerals, 1992, 27, 423-434.	0.6	25
27	Hydrothermal reactivity of Lu-saturated smectites: Part II. A short-range order study. American Mineralogist, 2001, 86, 124-131.	1.9	22
28	Structural study of the Lu2Si2O7â€“Sc2Si2O7 system. Journal of Physics and Chemistry of Solids, 2007, 68, 464-469.	4.0	22
29	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
30	Persistence of lutetium disilicate. Applied Geochemistry, 2007, 22, 192-201.	3.0	21
31	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
32	NMR study of n-dodecane adsorbed on graphite. Solid State Nuclear Magnetic Resonance, 2003, 23, 174-181.	2.3	20
33	Chemical reactivity of argillaceous material in engineered barrierRare earth disilicate formation under subcritical conditions. Applied Clay Science, 2009, 43, 369-375.	5.2	20
34	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
35	Hydration properties of synthetic high-charge micas saturated with different cations: An experimental approach. American Mineralogist, 2013, 98, 394-400.	1.9	20
36	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

#	Article	IF	Citations
37	Mixing Behavior at the Solid/Liquid Interface:Â Binary Alcohol Monolayers on Graphite. Langmuir, 2002, 18, 9429-9433.	3.5	18
38	Silicoaluminates as â€œSupport Activatorâ€•Systems in Olefin Polymerization Processes. Materials, 2010, 3, 1015-1030.	2.9	18
39	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
40	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
41	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
42	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
43	Failure mode and effect analysis of a large scale thin-film CIGS photovoltaic module. Engineering Failure Analysis, 2017, 76, 55-60.	4.0	16
44	Cs+ immobilization by designed micaceous adsorbent under subcritical conditions. Applied Clay Science, 2017, 143, 293-299.	5.2	16
45	New Trends in Nanoclay-Modified Sensors. Inorganics, 2021, 9, 43.	2.7	16
46	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
47	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
48	Bionanocomposites based on chitosan intercalation in designed swelling high-charged micas. Scientific Reports, 2019, 9, 10265.	3.3	15
49	Reexpansion of collapsed Li-montmorillonites; evidence on the location of Li+ ions. Journal of the Chemical Society Chemical Communications, 1993, , 1809.	2.0	14
50	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
51	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
52	Interaction Between Lu Cations and 2:1 Aluminosilicates under Hydrothermal Treatment. Clays and Clay Minerals, 2005, 53, 37-44.	1.3	14
53	Solution Properties of the System ZrSiO₄â€“HfSiO₄: A Computational and Experimental Study. Journal of Physical Chemistry C, 2013, 117, 10013-10019.	3.1	14
54	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

#	Article	IF	Citations
55	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
56	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
57	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
58	Design swelling micas: Insights on heavy metals cation exchange reaction. Applied Clay Science, 2019, 182, 105298.	5.2	13
59	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
60	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
61	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
62	Synthesis and characterization of gallium containing kanemite. Microporous and Mesoporous Materials, 2006, 94, 66-73.	4.4	10
63	Evolution of Phases and Alâ€“Si Distribution during Na-4-Mica Synthesis. Journal of Physical Chemistry C, 2011, 115, 20084-20090.	3.1	10
64	A new route of synthesis of Na-Mica-4 from sodalite. Microporous and Mesoporous Materials, 2014, 186, 176-180.	4.4	10
65	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
66	Direct evidence of Lowenstein's rule violation in swelling high-charge micas. Chemical Communications, 2014, 50, 6984.	4.1	10
67	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
68	Rare-earth disilicate formation under Deep Geological Repository approach conditions. Applied Clay Science, 2009, 46, 63-68.	5.2	9
69	Interaction of Eu-isotopes with saponite as a component of the engineered barrier. Applied Clay Science, 2011, 52, 253-257.	5.2	9
70	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
71	Designed organomicaceous materials for efficient adsorption of iodine. Journal of Environmental Chemical Engineering, 2021, 9, 106577.	6.7	9
72	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

#	Article	IF	Citations
73	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
74	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
75	Uranium immobilization by FEBEX bentonite and steel barriers in hydrothermal conditions. Chemical Engineering Journal, 2015, 269, 279-287.	12.7	8
76	Synthesis temperature effect on Na-Mica-4 crystallinity and heteroatom distribution. Microporous and Mesoporous Materials, 2015, 204, 282-288.	4.4	8
77	Self-Assembling of Tetradecylammonium Chain on Swelling High Charge Micas (Na-Mica-3 and) Tj ETQq1 1 0.784314 rgBT /Overlock 10 4394-4401.	3.5	8
78	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
79	Multiple pollutants removal by functionalized heterostructures based on Na-2-Mica. Applied Clay Science, 2020, 196, 105749.	5.2	8
80	Pb2+, Cd2+ and Hg2+ removal by designed functionalized swelling high-charged micas. Science of the Total Environment, 2021, 764, 142811.	8.0	8
81	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
82	Monolayer arrangement of fatty hydroxystearic acids on graphite: Influence of hydroxyl groups. Thin Solid Films, 2013, 539, 194-200.	1.8	7
83	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
84	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
85	Cesium adsorption isotherm on swelling high-charged micas from aqueous solutions: Effect of temperature. American Mineralogist, 2018, 103, 623-628.	1.9	7
86	Swelling layered minerals applications: A solid state NMR overview. Progress in Nuclear Magnetic Resonance Spectroscopy, 2021, 124-125, 99-128.	7.5	7
87	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
88	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
89	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
90	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

#	Article	IF	Citations
91	Two-dimensional heteronuclear 1H â†" 27Al-correlated MAS NMR spectra of layered silicates. Chemical Communications, 2001, , 249-250.	4.1	5
92	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
93	An insight on the design of mercapto functionalized swelling brittle micas. Journal of Colloid and Interface Science, 2020, 561, 533-541.	9.4	5
94	Stability of Rare-Earth Disilicates: Ionic Radius Effect. Journal of the American Ceramic Society, 2011, 94, 1568-1574.	3.8	4
95	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
96	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
97	Effect of the crystal chemistry on the hydration mechanism of swelling micas. Geochimica Et Cosmochimica Acta, 2017, 217, 231-239.	3.9	4
98	Empleo de paneles compuestos por subproductos de centrales tÃ©rmicas en fachadas trasdosadas. Informes De La Construccion, 2012, 64, 179-190.	0.3	4
99	Contribution to the hydrothermal synthesis of zeolite beta and its modifications with gallium. Journal of Porous Materials, 2007, 14, 239-242.	2.6	3
100	Synthesis and characterization of kanemite from fluoride-containing media: Influence of the alkali cation. American Mineralogist, 2013, 98, 1000-1007.	1.9	3
101	Enhancement of dielectric barrier layer properties by sol-gel and PECVD stacks. Surface and Coatings Technology, 2016, 305, 36-40.	4.8	3
102	A comprehensive and in-depth analysis of the synthesis of advanced adsorbent materials. Journal of Cleaner Production, 2018, 194, 665-672.	9.3	3
103	Study of Lanthanum Local Structure in Montmorillonite. Japanese Journal of Applied Physics, 1993, 32, 779.	1.5	3
104	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
105	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
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	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
108	Phase separation of carboxylic acids on graphite surface at submonolayer regime. European Physical Journal: Special Topics, 2009, 167, 151-156.	2.6	2

#	Article	IF	Citations
109	Application of Micro-X-ray Fluorescence Analysis for the Characterization of Industrial Wastes. Industrial & Engineering Chemistry Research, 2010, 49, 2348-2352.	3.7	2
110	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
111	The effect of polymorphic structure on the structural and chemical stability of yttrium disilicates. American Mineralogist, 2011, 96, 1512-1520.	1.9	2
112	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
113	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
114	Heteroatom framework distribution and layer charge of sodium Taeniolite. Applied Clay Science, 2018, 158, 246-251.	5.2	1
115	Zirconium retention for minimizing environmental risk: Role of counterion and clay mineral. Chemosphere, 2021, 267, 128914.	8.2	1
116	By-products revaluation in the production of design micaceous materials. Applied Clay Science, 2021, 214, 106292.	5.2	1
117	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
118	Inherent Acidity of Aqua Metal Ions in Solids: An Assay in Layered Aluminosilicates.. ChemInform, 2003, 34, no.	0.0	0