C Rodriguez-Navarro

List of Publications by Year in Descending Order

111 papers	6,497 citations	47 h-index	79 g-index
122 ext. papers	7,336 ext. citations	4.3 avg, IF	5.92 L-index

#	Paper	IF	Citations
111	Consolidation of clay-rich earthen building materials: A comparative study at the Alhambra fortress (Spain). *Journal of Building Engineering*, **2022**, 50, 104081	5.2	0
110	Degradation and conservation of clay-containing stone: A review. *Construction and Building Materials*, **2022**, 330, 127226	6.7	2
109	Kinetics and Mechanisms of Acid-pH Weathering of Pyroxenes. *Geochemistry, Geophysics, Geosystems*, **2021**, 22, e2021GC009711	3.6	0
108	Weathering of serpentinite stone due to in situ generation of calcium and magnesium sulfates. *Construction and Building Materials*, **2021**, 280, 122402	6.7	1
107	Citrate Stabilizes Hydroxylapatite Precursors: Implications for Bone Mineralization. *ACS Biomaterials Science and Engineering*, **2021**, 7, 2346-2357	5.5	2
106	Protection and Consolidation of Stone Heritage by Bacterial Carbonatogenesis **2021**, 281-299		1
105	Stabilization of Calcium Oxalate Precursors during the Pre- and Post-Nucleation Stages with Poly(acrylic acid). *Nanomaterials*, **2021**, 11,	5.4	3
104	Carbonation of calcium-magnesium pyroxenes: Physical-chemical controls and effects of reaction-driven fracturing. *Geochimica Et Cosmochimica Acta*, **2021**, 304, 258-280	5.5	3
103	Degradation of ancient Maya carved tuff stone at Copan and its bacterial bioconservation. *Npj Materials Degradation*, **2021**, 5,	5.7	3
102	Synthesis of high surface area CaSO□0.5HO nanorods using calcium ethoxide as precursor. *Chemical Communications*, **2021**, 57, 7304-7307	5.8	3
101	Nonclassical Crystallization of Calcium Hydroxide via Amorphous Precursors and the Role of Additives. *Crystal Growth and Design*, **2020**, 20, 4418-4432	3.5	9
100	Bacterial Diversity Evolution in Maya Plaster and Stone Following a Bio-Conservation Treatment. *Frontiers in Microbiology*, **2020**, 11, 599144	5.7	8
99	CO2 sequestration and simultaneous zeolite production by carbonation of coal fly ash: Impact on the trapping of toxic elements. *Journal of CO2 Utilization*, **2020**, 40, 101263	7.6	7
98	New polymer-based treatments for the prevention of damage by salt crystallization in stone. *Materials and Structures/Materiaux Et Constructions*, **2019**, 52, 1	3.4	2
97	Reaction of pseudowollastonite with carbonate-bearing fluids: Implications for CO2 mineral sequestration. *Chemical Geology*, **2019**, 524, 158-173	4.2	8
96	Bioinspired Alkoxysilane Conservation Treatments for Building Materials Based on Amorphous Calcium Carbonate and Oxalate Nanoparticles. *ACS Applied Nano Materials*, **2019**, 2, 4954-4967	5.6	13
95	The multiple roles of carbonic anhydrase in calcium carbonate mineralization. *CrystEngComm*, **2019**, 21, 7407-7423	3.3	9

94	Kinetic effect of carbonic anhydrase enzyme on the carbonation reaction of lime mortar. *International Journal of Architectural Heritage*, **2018**, 12, 779-789	2.1	12
93	Nanolimes: from synthesis to application. *Pure and Applied Chemistry*, **2018**, 90, 523-550	2.1	53
92	Mineralogy and physicochemical features of Saharan dust wet deposited in the Iberian Peninsula during an extreme red rain event. *Atmospheric Chemistry and Physics*, **2018**, 18, 10089-10122	6.8	27
91	The Carbonation of Wollastonite: A Model Reaction to Test Natural and Biomimetic Catalysts for Enhanced CO2 Sequestration. *Minerals (Basel, Switzerland)*, **2018**, 8, 209	2.4	19
90	Mineralogy and physicochemical features of Saharan dust wet deposited in the Iberian Peninsula during an extreme red rain event **2018**,		2
89	A non-classical view on calcium oxalate precipitation and the role of citrate. *Nature Communications* , **2017**, 8, 768	17.4	67
88	Crystallization and Colloidal Stabilization of Ca(OH) in the Presence of Nopal Juice (Opuntia ficus indica): Implications in Architectural Heritage Conservation. *Langmuir*, **2017**, 33, 10936-10950	4	27
87	Protection and consolidation of stone heritage by self-inoculation with indigenous carbonatogenic bacterial communities. *Nature Communications*, **2017**, 8, 279	17.4	55
86	Effectiveness of oxalic acid treatments for the protection of marble surfaces. *Materials and Design*, **2017**, 115, 82-92	8.1	28
85	Hydration Effects on the Stability of Calcium Carbonate Pre-Nucleation Species. *Minerals (Basel, Switzerland)*, **2017**, 7, 126	2.4	17
84	Reactions between minerals and aqueous solutions **2017**, 419-467		2
83	Amorphous and crystalline calcium carbonate phases during carbonation of nanolimes: implications in heritage conservation. *CrystEngComm*, **2016**, 18, 6594-6607	3.3	59
82	Hydration effects on gypsum dissolution revealed by in situ nanoscale atomic force microscopy observations. *Geochimica Et Cosmochimica Acta*, **2016**, 179, 110-122	5.5	17
81	Control of silicate weathering by interface-coupled dissolution-precipitation processes at the mineral-solution interface. *Geology*, **2016**, 44, 567-570	5	54
80	Direct Nanoscale Imaging Reveals the Growth of Calcite Crystals via Amorphous Nanoparticles. *Crystal Growth and Design*, **2016**, 16, 1850-1860	3.5	68
79	Exploring the effect of poly(acrylic acid) on pre- and post-nucleation BaSO4 species: new insights into the mechanisms of crystallization control by polyelectrolytes. *CrystEngComm*, **2016**, 18, 2830-2842	3.3	15
78	Kinetics and Mechanism of Calcium Hydroxide Conversion into Calcium Alkoxides: Implications in Heritage Conservation Using Nanolimes. *Langmuir*, **2016**, 32, 5183-94	4	48
77	Nonclassical crystallization in vivo et in vitro (II): Nanogranular features in biomimetic minerals disclose a general colloid-mediated crystal growth mechanism. *Journal of Structural Biology*, **2016**, 196, 260-287	3.4	54

76	Nonclassical crystallization in vivo et in vitro (I): Process-structure-property relationships of nanogranular biominerals. *Journal of Structural Biology*, **2016**, 196, 244-259	3.4	45
75	Influence of organic matter on the reactivity of clay minerals in highly alkaline environments. *Applied Clay Science*, **2015**, 111, 27-36	5.2	16
74	Alkaline activation as an alternative method for the consolidation of earthen architecture. *Journal of Cultural Heritage*, **2015**, 16, 461-469	2.9	35
73	Stone Consolidation by Bacterial Carbonatogenesis: Evaluation of in situ Applications. *Restoration of Buildings and Monuments*, **2015**, 21, 9-20	0.7	16
72	Mineralogical Evolution of Di- and Trioctahedral Smectites in Highly Alkaline Environments. *Clays and Clay Minerals*, **2015**, 63, 414-431	2.1	2
71	The Sierra Nevada serpentinites: the serpentinites most used in Spanish heritage buildings. *Geological Society Special Publication*, **2015**, 407, 101-108	1.7	6
70	Formation of amorphous calcium carbonate and its transformation into mesostructured calcite. *CrystEngComm*, **2015**, 17, 58-72	3.3	131
69	Consolidation of archaeological gypsum plaster by bacterial biomineralization of calcium carbonate. *Acta Biomaterialia*, **2014**, 10, 3844-54	10.8	36
68	The mechanism of vapor phase hydration of calcium oxide: implications for CO2 capture. *Environmental Science & Technology*, **2014**, 48, 12411-8	10.3	19
67	Control of Crystal Nucleation and Growth by Additives. *Elements*, **2013**, 9, 203-209	3.8	34
66	Alcohol dispersions of calcium hydroxide nanoparticles for stone conservation. *Langmuir*, **2013**, 29, 11457-70	4	130
65	Template-Assisted Crystallization of Sulfates onto Calcite: Implications for the Prevention of Salt Damage. *Crystal Growth and Design*, **2013**, 13, 40-51	3.5	12
64	Dissolution and carbonation of Portlandite [Ca(OH)2] single crystals. *Environmental Science & Technology*, **2013**, 47, 11342-9	10.3	69
63	In situ nanoscale observations of the dissolution of dolomite cleavage surfaces. *Geochimica Et Cosmochimica Acta*, **2012**, 80, 1-13	5.5	44
62	Signatures in magnetites formed by (Ca,Mg,Fe)CO3 thermal decomposition: Terrestrial and extraterrestrial implications. *Geochimica Et Cosmochimica Acta*, **2012**, 87, 69-80	5.5	9
61	Damage mechanisms of porous materials due to in-pore salt crystallization. *Physical Review Letters*, **2012**, 109, 265503	7.4	57
60	The mechanism of thermal decomposition of dolomite: New insights from 2D-XRD and TEM analyses. *American Mineralogist*, **2012**, 97, 38-51	2.9	63
59	Phase and morphology evolution of calcium carbonate precipitated by carbonation of hydrated lime. *Journal of Materials Science*, **2012**, 47, 6151-6165	4.3	148

58	Mechanism of leached layer formation during chemical weathering of silicate minerals. *Geology*, **2012**, 40, 947-950	5	108
57	Influence of substrate mineralogy on bacterial mineralization of calcium carbonate: implications for stone conservation. *Applied and Environmental Microbiology*, **2012**, 78, 4017-29	4.8	128
56	Ion-specific effects on the kinetics of mineral dissolution. *Chemical Geology*, **2011**, 281, 364-371	4.2	56
55	Effect of pH on calcite growth at constant aCa2+/aCO32- ratio and supersaturation. *Geochimica Et Cosmochimica Acta*, **2011**, 75, 284-296	5.5	66
54	An integrated methodology for salt damage assessment and remediation: the case of San Jer□imo Monastery (Granada, Spain). *Environmental Earth Sciences*, **2011**, 63, 1475-1486	2.9	27
53	Suppression of salt weathering of porous limestone by borax-induced promotion of sodium and magnesium sulphate crystallization. *Geological Society Special Publication*, **2010**, 331, 93-102	1.7	5
52	Microstructure and rheology of lime putty. *Langmuir*, **2010**, 26, 3868-77	4	49
51	Bacterial biomineralization: new insights from Myxococcus-induced mineral precipitation. *Geological Society Special Publication*, **2010**, 336, 31-50	1.7	65
50	Bioconservation of deteriorated monumental calcarenite stone and identification of bacteria with carbonatogenic activity. *Microbial Ecology*, **2010**, 60, 39-54	4.4	55
49	An atomic force microscopy study of calcite dissolution in saline solutions: The role of magnesium ions. *Geochimica Et Cosmochimica Acta*, **2009**, 73, 3201-3217	5.5	84
48	Thermal decomposition of calcite: Mechanisms of formation and textural evolution of CaO nanocrystals. *American Mineralogist*, **2009**, 94, 578-593	2.9	250
47	Role of clay minerals in the physicomechanical deterioration of sandstone. *Journal of Geophysical Research*, **2008**, 113,		30
46	Interaction between Epsomite Crystals and Organic Additives. *Crystal Growth and Design*, **2008**, 8, 2665-2673	3.7	17
45	Alkaline treatment of clay minerals from the Alhambra Formation: Implications for the conservation of earthen architecture. *Applied Clay Science*, **2008**, 39, 122-132	5.2	48
44	Lime Putties and Mortars. *Studies in Conservation*, **2008**, 53, 9-23	0.6	25
43	Sulfation of calcitic and dolomitic lime mortars in the presence of diesel particulate matter. *Environmental Geology*, **2008**, 56, 741-752		34
42	Swelling damage in clay-rich sandstones used in the church of San Mateo in Tarifa (Spain). *Journal of Cultural Heritage*, **2008**, 9, 66-76	2.9	59
41	Consolidation of quarry calcarenite by calcium carbonate precipitation induced by bacteria activated among the microbiota inhabiting the stone. *International Biodeterioration and Biodegradation*, **2008**, 62, 352-363	4.8	77

40	The role of saline solution properties on porous limestone salt weathering by magnesium and sodium sulfates. *Environmental Geology*, **2007**, 52, 269-281		151
39	Consolidation of degraded ornamental porous limestone stone by calcium carbonate precipitation induced by the microbiota inhabiting the stone. *Chemosphere*, **2007**, 68, 1929-36	8.4	96
38	Bacterially mediated mineralization of vaterite. *Geochimica Et Cosmochimica Acta*, **2007**, 71, 1197-1213	5.5	220
37	Mechanism and kinetics of dehydration of epsomite crystals formed in the presence of organic additives. *Journal of Physical Chemistry B*, **2007**, 111, 41-52	3.4	24
36	Effects of particulate matter from gasoline and diesel vehicle exhaust emissions on silicate stones sulfation. *Atmospheric Environment*, **2006**, 40, 6905-6917	5.3	57
35	Sodium Sulfate Crystallization in the Presence of Phosphonates: Implications in Ornamental Stone Conservation. *Crystal Growth and Design*, **2006**, 6, 1575-1583	3.5	35
34	Nanostructure and irreversible colloidal behavior of Ca(OH)2: implications in cultural heritage conservation. *Langmuir*, **2005**, 21, 10948-57	4	128
33	Calcium Hydroxide Crystal Evolution upon Aging of Lime Putty. *Journal of the American Ceramic Society*, **2005**, 81, 3032-3034	3.8	112
32	Aging of Lime Putty: Effects on Traditional Lime Mortar Carbonation. *Journal of the American Ceramic Society*, **2004**, 83, 1070-1076	3.8	112
31	Influence of mineralogy and firing temperature on the porosity of bricks. *Journal of the European Ceramic Society*, **2004**, 24, 547-564	6	250
30	Precipitation and Growth Morphology of Calcium Carbonate Induced by Myxococcus Xanthus: Implications for Recognition of Bacterial Carbonates. *Journal of Sedimentary Research*, **2004**, 74, 868-876	2.1	121
29	Role of marble microstructure in near-infrared laser-induced damage during laser cleaning. *Journal of Applied Physics*, **2004**, 95, 3350-3357	2.5	21
28	Laser cleaning of stone materials: an overview of current research. *Studies in Conservation*, **2003**, 48, 65-82	0.6	3
27	TEM study of mullite growth after muscovite breakdown. *American Mineralogist*, **2003**, 88, 713-724	2.9	76
26	Thaumasite as decay product of cement mortar in brick masonry of a church near Venice. *Cement and Concrete Composites*, **2003**, 25, 1123-1129	8.6	15
25	Application limits of Q-switched Nd:YAG laser irradiation for stone cleaning based on colour measurements. *Journal of Cultural Heritage*, **2003**, 4, 50-55	2.9	34
24	Conservation of ornamental stone by Myxococcus xanthus-induced carbonate biomineralization. *Applied and Environmental Microbiology*, **2003**, 69, 2182-93	4.8	358
23	A review of selected inorganic consolidants and protective treatments for porous calcareous materials. *Studies in Conservation*, **2003**, 48, 13-25	0.6	43

22	Effects of ferrocyanide ions on NaCl crystallization in porous stone. *Journal of Crystal Growth*, **2002**, 243, 503-516	1.6	88
21	Lime Mortars for the Conservation of Historic Buildings. *Studies in Conservation*, **2002**, 47, 62-75	0.6	60
20	Liesegang pattern development in carbonating traditional lime mortars. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2002**, 458, 2261-2273	2.4	55
19	Lime Mortars for the Conservation of Historic Buildings. *Studies in Conservation*, **2002**, 47, 62	0.6	71
18	Carbonate and silicate phase reactions during ceramic firing. *European Journal of Mineralogy*, **2001**, 13, 621-634	2.2	375
17	Procesos de alteraci asociados al contenido de minerales arcillosos en materiales p reos. *Materiales De Construccion*, **2001**, 51, 163-182	1.8	17
16	How does sodium sulfate crystallize? Implications for the decay and testing of building materials. *Cement and Concrete Research*, **2000**, 30, 1527-1534	10.3	282
15	Behavior of Brick Samples in Aggressive Environments. *Water, Air, and Soil Pollution*, **2000**, 119, 191-207	2.6	35
14	Influencing Crystallization Damage in Porous Materials through the Use of Surfactants: Experimental Results Using Sodium Dodecyl Sulfate and Cetyldimethylbenzylammonium Chloride. *Langmuir*, **2000**, 16, 947-954	4	40
13	Origins of honeycomb weathering: The role of salts and wind. *Bulletin of the Geological Society of America*, **1999**, 111, 1250-1255	3.9	51
12	Salt weathering: influence of evaporation rate, supersaturation and crystallization pattern. *Earth Surface Processes and Landforms*, **1999**, 24, 191-209	3.7	412
11	Evidence of honeycomb weathering on Mars. *Geophysical Research Letters*, **1998**, 25, 3249-3252	4.9	27
10	The Role of Sepiolite-Palygorskite in the Decay of Ancient Egyptian Limestone Sculptures. *Clays and Clay Minerals*, **1998**, 46, 414-422	2.1	31
9	The Role of Clays in the Decay of Ancient Egyptian Limestone Sculptures. *Journal of the American Institute for Conservation*, **1997**, 36, 151-163	0.6	19
8	Human impact in a tourist karstic cave (Aracena, Spain). *Environmental Geology*, **1997**, 31, 142-149		54
7	An urban model for dolomite precipitation: authigenic dolomite on weathered building stones. *Sedimentary Geology*, **1997**, 109, 1-11	2.8	32
6	Role of particulate matter from vehicle exhaust on porous building stones (limestone) sulfation. *Science of the Total Environment*, **1996**, 187, 79-91	10.2	160
5	Incipient Maya Burnt-Lime Technology: Characterization and Chronological Variations in Preclassic Plaster, Stucco and Mortar at Nakbe, Guatemala. *Materials Research Society Symposia Proceedings*, **1996**, 462, 207		8

4	Carbonates337-375		4
3	Predicting salt damage in practice: A theoretical insight into laboratory tests.. *RILEM Technical Letters*,2, 108-118		37
2	The Role of Clays in the Decay of Ancient Egyptian Limestone Sculptures		21
1	Influence of the calcination process in traditional gypsum with structural behavior. *Ge-Conservacion* ,11, 79-85	0.2	4