

C Rodriguez-Navarro

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Salt weathering: influence of evaporation rate, supersaturation and crystallization pattern. <i>Earth Surface Processes and Landforms</i> , 1999 , 24, 191-209	3.7	412
110	Carbonate and silicate phase reactions during ceramic firing. <i>European Journal of Mineralogy</i> , 2001 , 13, 621-634	2.2	375
109	Conservation of ornamental stone by <i>Myxococcus xanthus</i> -induced carbonate biomineralization. <i>Applied and Environmental Microbiology</i> , 2003 , 69, 2182-93	4.8	358
108	How does sodium sulfate crystallize? Implications for the decay and testing of building materials. <i>Cement and Concrete Research</i> , 2000 , 30, 1527-1534	10.3	282
107	Thermal decomposition of calcite: Mechanisms of formation and textural evolution of CaO nanocrystals. <i>American Mineralogist</i> , 2009 , 94, 578-593	2.9	250
106	Influence of mineralogy and firing temperature on the porosity of bricks. <i>Journal of the European Ceramic Society</i> , 2004 , 24, 547-564	6	250
105	Bacterially mediated mineralization of vaterite. <i>Geochimica Et Cosmochimica Acta</i> , 2007 , 71, 1197-1213	5.5	220
104	Role of particulate matter from vehicle exhaust on porous building stones (limestone) sulfation. <i>Science of the Total Environment</i> , 1996 , 187, 79-91	10.2	160
103	The role of saline solution properties on porous limestone salt weathering by magnesium and sodium sulfates. <i>Environmental Geology</i> , 2007 , 52, 269-281		151
102	Phase and morphology evolution of calcium carbonate precipitated by carbonation of hydrated lime. <i>Journal of Materials Science</i> , 2012 , 47, 6151-6165	4.3	148
101	Formation of amorphous calcium carbonate and its transformation into mesostructured calcite. <i>CrystEngComm</i> , 2015 , 17, 58-72	3.3	131
100	Alcohol dispersions of calcium hydroxide nanoparticles for stone conservation. <i>Langmuir</i> , 2013 , 29, 11457-70	4.7	130
99	Influence of substrate mineralogy on bacterial mineralization of calcium carbonate: implications for stone conservation. <i>Applied and Environmental Microbiology</i> , 2012 , 78, 4017-29	4.8	128
98	Nanostructure and irreversible colloidal behavior of Ca(OH) ₂ : implications in cultural heritage conservation. <i>Langmuir</i> , 2005 , 21, 10948-57	4	128
97	Precipitation and Growth Morphology of Calcium Carbonate Induced by <i>Myxococcus Xanthus</i> : Implications for Recognition of Bacterial Carbonates. <i>Journal of Sedimentary Research</i> , 2004 , 74, 868-876	2.1	121
96	Aging of Lime Putty: Effects on Traditional Lime Mortar Carbonation. <i>Journal of the American Ceramic Society</i> , 2004 , 83, 1070-1076	3.8	112
95	Calcium Hydroxide Crystal Evolution upon Aging of Lime Putty. <i>Journal of the American Ceramic Society</i> , 2005 , 81, 3032-3034	3.8	112

94	Mechanism of leached layer formation during chemical weathering of silicate minerals. <i>Geology</i> , 2012 , 40, 947-950	5	108
93	Consolidation of degraded ornamental porous limestone stone by calcium carbonate precipitation induced by the microbiota inhabiting the stone. <i>Chemosphere</i> , 2007 , 68, 1929-36	8.4	96
92	Effects of ferrocyanide ions on NaCl crystallization in porous stone. <i>Journal of Crystal Growth</i> , 2002 , 243, 503-516	1.6	88
91	An atomic force microscopy study of calcite dissolution in saline solutions: The role of magnesium ions. <i>Geochimica Et Cosmochimica Acta</i> , 2009 , 73, 3201-3217	5.5	84
90	Consolidation of quarry calcarenite by calcium carbonate precipitation induced by bacteria activated among the microbiota inhabiting the stone. <i>International Biodeterioration and Biodegradation</i> , 2008 , 62, 352-363	4.8	77
89	TEM study of mullite growth after muscovite breakdown. <i>American Mineralogist</i> , 2003 , 88, 713-724	2.9	76
88	Lime Mortars for the Conservation of Historic Buildings. <i>Studies in Conservation</i> , 2002 , 47, 62	0.6	71
87	Dissolution and carbonation of Portlandite [Ca(OH) ₂] single crystals. <i>Environmental Science & Technology</i> , 2013 , 47, 11342-9	10.3	69
86	Direct Nanoscale Imaging Reveals the Growth of Calcite Crystals via Amorphous Nanoparticles. <i>Crystal Growth and Design</i> , 2016 , 16, 1850-1860	3.5	68
85	A non-classical view on calcium oxalate precipitation and the role of citrate. <i>Nature Communications</i> , 2017 , 8, 768	17.4	67
84	Effect of pH on calcite growth at constant aCa ²⁺ /aCO ₃ ²⁻ ratio and supersaturation. <i>Geochimica Et Cosmochimica Acta</i> , 2011 , 75, 284-296	5.5	66
83	Bacterial biomineralization: new insights from Myxococcus-induced mineral precipitation. <i>Geological Society Special Publication</i> , 2010 , 336, 31-50	1.7	65
82	The mechanism of thermal decomposition of dolomite: New insights from 2D-XRD and TEM analyses. <i>American Mineralogist</i> , 2012 , 97, 38-51	2.9	63
81	Lime Mortars for the Conservation of Historic Buildings. <i>Studies in Conservation</i> , 2002 , 47, 62-75	0.6	60
80	Amorphous and crystalline calcium carbonate phases during carbonation of nanolimes: implications in heritage conservation. <i>CrystEngComm</i> , 2016 , 18, 6594-6607	3.3	59
79	Swelling damage in clay-rich sandstones used in the church of San Mateo in Tarifa (Spain). <i>Journal of Cultural Heritage</i> , 2008 , 9, 66-76	2.9	59
78	Damage mechanisms of porous materials due to in-pore salt crystallization. <i>Physical Review Letters</i> , 2012 , 109, 265503	7.4	57
77	Effects of particulate matter from gasoline and diesel vehicle exhaust emissions on silicate stones sulfation. <i>Atmospheric Environment</i> , 2006 , 40, 6905-6917	5.3	57

76	Ion-specific effects on the kinetics of mineral dissolution. <i>Chemical Geology</i> , 2011 , 281, 364-371	4.2	56
75	Protection and consolidation of stone heritage by self-inoculation with indigenous carbonatogenic bacterial communities. <i>Nature Communications</i> , 2017 , 8, 279	17.4	55
74	Bioconservation of deteriorated monumental calcarenite stone and identification of bacteria with carbonatogenic activity. <i>Microbial Ecology</i> , 2010 , 60, 39-54	4.4	55
73	Liesegang pattern development in carbonating traditional lime mortars. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2002 , 458, 2261-2273	2.4	55
72	Control of silicate weathering by interface-coupled dissolution-precipitation processes at the mineral-solution interface. <i>Geology</i> , 2016 , 44, 567-570	5	54
71	Human impact in a tourist karstic cave (Aracena, Spain). <i>Environmental Geology</i> , 1997 , 31, 142-149		54
70	Nonclassical crystallization in vivo et in vitro (II): Nanogranular features in biomimetic minerals disclose a general colloid-mediated crystal growth mechanism. <i>Journal of Structural Biology</i> , 2016 , 196, 260-287	3.4	54
69	Nanolimes: from synthesis to application. <i>Pure and Applied Chemistry</i> , 2018 , 90, 523-550	2.1	53
68	Origins of honeycomb weathering: The role of salts and wind. <i>Bulletin of the Geological Society of America</i> , 1999 , 111, 1250-1255	3.9	51
67	Microstructure and rheology of lime putty. <i>Langmuir</i> , 2010 , 26, 3868-77	4	49
66	Alkaline treatment of clay minerals from the Alhambra Formation: Implications for the conservation of earthen architecture. <i>Applied Clay Science</i> , 2008 , 39, 122-132	5.2	48
65	Kinetics and Mechanism of Calcium Hydroxide Conversion into Calcium Alkoxides: Implications in Heritage Conservation Using Nanolimes. <i>Langmuir</i> , 2016 , 32, 5183-94	4	48
64	Nonclassical crystallization in vivo et in vitro (I): Process-structure-property relationships of nanogranular biominerals. <i>Journal of Structural Biology</i> , 2016 , 196, 244-259	3.4	45
63	In situ nanoscale observations of the dissolution of dolomite cleavage surfaces. <i>Geochimica Et Cosmochimica Acta</i> , 2012 , 80, 1-13	5.5	44
62	A review of selected inorganic consolidants and protective treatments for porous calcareous materials. <i>Studies in Conservation</i> , 2003 , 48, 13-25	0.6	43
61	Influencing Crystallization Damage in Porous Materials through the Use of Surfactants: Experimental Results Using Sodium Dodecyl Sulfate and Cetyldimethylbenzylammonium Chloride. <i>Langmuir</i> , 2000 , 16, 947-954	4	40
60	Predicting salt damage in practice: A theoretical insight into laboratory tests.. <i>RILEM Technical Letters</i> , 2 , 108-118		37
59	Consolidation of archaeological gypsum plaster by bacterial biomineralization of calcium carbonate. <i>Acta Biomaterialia</i> , 2014 , 10, 3844-54	10.8	36

58	Alkaline activation as an alternative method for the consolidation of earthen architecture. <i>Journal of Cultural Heritage</i> , 2015 , 16, 461-469	2.9	35
57	Sodium Sulfate Crystallization in the Presence of Phosphonates: Implications in Ornamental Stone Conservation. <i>Crystal Growth and Design</i> , 2006 , 6, 1575-1583	3.5	35
56	Behavior of Brick Samples in Aggressive Environments. <i>Water, Air, and Soil Pollution</i> , 2000 , 119, 191-207	2.6	35
55	Control of Crystal Nucleation and Growth by Additives. <i>Elements</i> , 2013 , 9, 203-209	3.8	34
54	Sulfation of calcitic and dolomitic lime mortars in the presence of diesel particulate matter. <i>Environmental Geology</i> , 2008 , 56, 741-752		34
53	Application limits of Q-switched Nd:YAG laser irradiation for stone cleaning based on colour measurements. <i>Journal of Cultural Heritage</i> , 2003 , 4, 50-55	2.9	34
52	An urban model for dolomite precipitation: authigenic dolomite on weathered building stones. <i>Sedimentary Geology</i> , 1997 , 109, 1-11	2.8	32
51	The Role of Sepiolite-Palygorskite in the Decay of Ancient Egyptian Limestone Sculptures. <i>Clays and Clay Minerals</i> , 1998 , 46, 414-422	2.1	31
50	Role of clay minerals in the physicochemical deterioration of sandstone. <i>Journal of Geophysical Research</i> , 2008 , 113,		30
49	Effectiveness of oxalic acid treatments for the protection of marble surfaces. <i>Materials and Design</i> , 2017 , 115, 82-92	8.1	28
48	Crystallization and Colloidal Stabilization of Ca(OH) in the Presence of Nopal Juice (<i>Opuntia ficus indica</i>): Implications in Architectural Heritage Conservation. <i>Langmuir</i> , 2017 , 33, 10936-10950	4	27
47	Mineralogy and physicochemical features of Saharan dust wet deposited in the Iberian Peninsula during an extreme red rain event. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 10089-10122	6.8	27
46	An integrated methodology for salt damage assessment and remediation: the case of San Jerónimo Monastery (Granada, Spain). <i>Environmental Earth Sciences</i> , 2011 , 63, 1475-1486	2.9	27
45	Evidence of honeycomb weathering on Mars. <i>Geophysical Research Letters</i> , 1998 , 25, 3249-3252	4.9	27
44	Lime Putties and Mortars. <i>Studies in Conservation</i> , 2008 , 53, 9-23	0.6	25
43	Mechanism and kinetics of dehydration of epsomite crystals formed in the presence of organic additives. <i>Journal of Physical Chemistry B</i> , 2007 , 111, 41-52	3.4	24
42	Role of marble microstructure in near-infrared laser-induced damage during laser cleaning. <i>Journal of Applied Physics</i> , 2004 , 95, 3350-3357	2.5	21
41	The Role of Clays in the Decay of Ancient Egyptian Limestone Sculptures		21

40	The Carbonation of Wollastonite: A Model Reaction to Test Natural and Biomimetic Catalysts for Enhanced CO ₂ Sequestration. <i>Minerals (Basel, Switzerland)</i> , 2018 , 8, 209	2.4	19
39	The mechanism of vapor phase hydration of calcium oxide: implications for CO ₂ capture. <i>Environmental Science & Technology</i> , 2014 , 48, 12411-8	10.3	19
38	The Role of Clays in the Decay of Ancient Egyptian Limestone Sculptures. <i>Journal of the American Institute for Conservation</i> , 1997 , 36, 151-163	0.6	19
37	Hydration effects on gypsum dissolution revealed by in situ nanoscale atomic force microscopy observations. <i>Geochimica Et Cosmochimica Acta</i> , 2016 , 179, 110-122	5.5	17
36	Hydration Effects on the Stability of Calcium Carbonate Pre-Nucleation Species. <i>Minerals (Basel, Switzerland)</i> , 2017 , 7, 126	2.4	17
35	Interaction between Epsomite Crystals and Organic Additives. <i>Crystal Growth and Design</i> , 2008 , 8, 2665-2673	3.7	17
34	Procesos de alteraci3n asociados al contenido de minerales arcillosos en materiales p3reos. <i>Materiales De Construcc3n</i> , 2001 , 51, 163-182	1.8	17
33	Influence of organic matter on the reactivity of clay minerals in highly alkaline environments. <i>Applied Clay Science</i> , 2015 , 111, 27-36	5.2	16
32	Stone Consolidation by Bacterial Carbonatogenesis: Evaluation of in situ Applications. <i>Restoration of Buildings and Monuments</i> , 2015 , 21, 9-20	0.7	16
31	Thaumasite as decay product of cement mortar in brick masonry of a church near Venice. <i>Cement and Concrete Composites</i> , 2003 , 25, 1123-1129	8.6	15
30	Exploring the effect of poly(acrylic acid) on pre- and post-nucleation BaSO ₄ species: new insights into the mechanisms of crystallization control by polyelectrolytes. <i>CrystEngComm</i> , 2016 , 18, 2830-2842	3.3	15
29	Bioinspired Alkoxysilane Conservation Treatments for Building Materials Based on Amorphous Calcium Carbonate and Oxalate Nanoparticles. <i>ACS Applied Nano Materials</i> , 2019 , 2, 4954-4967	5.6	13
28	Kinetic effect of carbonic anhydrase enzyme on the carbonation reaction of lime mortar. <i>International Journal of Architectural Heritage</i> , 2018 , 12, 779-789	2.1	12
27	Template-Assisted Crystallization of Sulfates onto Calcite: Implications for the Prevention of Salt Damage. <i>Crystal Growth and Design</i> , 2013 , 13, 40-51	3.5	12
26	Signatures in magnetites formed by (Ca,Mg,Fe)CO ₃ thermal decomposition: Terrestrial and extraterrestrial implications. <i>Geochimica Et Cosmochimica Acta</i> , 2012 , 87, 69-80	5.5	9
25	Nonclassical Crystallization of Calcium Hydroxide via Amorphous Precursors and the Role of Additives. <i>Crystal Growth and Design</i> , 2020 , 20, 4418-4432	3.5	9
24	The multiple roles of carbonic anhydrase in calcium carbonate mineralization. <i>CrystEngComm</i> , 2019 , 21, 7407-7423	3.3	9
23	Reaction of pseudowollastonite with carbonate-bearing fluids: Implications for CO ₂ mineral sequestration. <i>Chemical Geology</i> , 2019 , 524, 158-173	4.2	8

22	Incipient Maya Burnt-Lime Technology: Characterization and Chronological Variations in Preclassic Plaster, Stucco and Mortar at Nakbe, Guatemala. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 462, 207		8
21	Bacterial Diversity Evolution in Maya Plaster and Stone Following a Bio-Conservation Treatment. <i>Frontiers in Microbiology</i> , 2020 , 11, 599144	5.7	8
20	CO2 sequestration and simultaneous zeolite production by carbonation of coal fly ash: Impact on the trapping of toxic elements. <i>Journal of CO2 Utilization</i> , 2020 , 40, 101263	7.6	7
19	The Sierra Nevada serpentinites: the serpentinites most used in Spanish heritage buildings. <i>Geological Society Special Publication</i> , 2015 , 407, 101-108	1.7	6
18	Suppression of salt weathering of porous limestone by borax-induced promotion of sodium and magnesium sulphate crystallization. <i>Geological Society Special Publication</i> , 2010 , 331, 93-102	1.7	5
17	Carbonates337-375		4
16	Influence of the calcination process in traditional gypsum with structural behavior. <i>Ge-Conservacion</i> , 2011 , 79-85	0.2	4
15	Laser cleaning of stone materials: an overview of current research. <i>Studies in Conservation</i> , 2003 , 48, 65-82	0.6	3
14	Stabilization of Calcium Oxalate Precursors during the Pre- and Post-Nucleation Stages with Poly(acrylic acid). <i>Nanomaterials</i> , 2021 , 11,	5.4	3
13	Carbonation of calcium-magnesium pyroxenes: Physical-chemical controls and effects of reaction-driven fracturing. <i>Geochimica Et Cosmochimica Acta</i> , 2021 , 304, 258-280	5.5	3
12	Degradation of ancient Maya carved tuff stone at Copan and its bacterial bioconservation. <i>Npj Materials Degradation</i> , 2021 , 5,	5.7	3
11	Synthesis of high surface area CaSO ₄ ·0.5H ₂ O nanorods using calcium ethoxide as precursor. <i>Chemical Communications</i> , 2021 , 57, 7304-7307	5.8	3
10	New polymer-based treatments for the prevention of damage by salt crystallization in stone. <i>Materials and Structures/Materiaux Et Constructions</i> , 2019 , 52, 1	3.4	2
9	Mineralogical Evolution of Di- and Trioctahedral Smectites in Highly Alkaline Environments. <i>Clays and Clay Minerals</i> , 2015 , 63, 414-431	2.1	2
8	Reactions between minerals and aqueous solutions 2017 , 419-467		2
7	Citrate Stabilizes Hydroxylapatite Precursors: Implications for Bone Mineralization. <i>ACS Biomaterials Science and Engineering</i> , 2021 , 7, 2346-2357	5.5	2
6	Mineralogy and physicochemical features of Saharan dust wet deposited in the Iberian Peninsula during an extreme red rain event 2018 ,		2
5	Degradation and conservation of clay-containing stone: A review. <i>Construction and Building Materials</i> , 2022 , 330, 127226	6.7	2

4	Weathering of serpentinite stone due to in situ generation of calcium and magnesium sulfates. <i>Construction and Building Materials</i> , 2021 , 280, 122402	6.7	1
3	Protection and Consolidation of Stone Heritage by Bacterial Carbonatogenesis 2021 , 281-299		1
2	Consolidation of clay-rich earthen building materials: A comparative study at the Alhambra fortress (Spain). <i>Journal of Building Engineering</i> , 2022 , 50, 104081	5.2	0
1	Kinetics and Mechanisms of Acid-pH Weathering of Pyroxenes. <i>Geochemistry, Geophysics, Geosystems</i> , 2021 , 22, e2021GC009711	3.6	0