Manuel Morcillo

List of Publications by Year
in descending order

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131 papers	5,660 citations	61984 43 h-index	88630 70 g-index
131 all docs	131 docs citations	131 times ranked	2803 citing authors

#	Article	IF	Citations
1	Long-term atmospheric corrosion of mild steel. Corrosion Science, 2011, 53, 604-617.	6.6	430
2	Atmospheric corrosion data of weathering steels. A review. Corrosion Science, 2013, 77, 6-24.	6.6	276
3	Marine Atmospheric Corrosion of Carbon Steel: A Review. Materials, 2017, 10, 406.	2.9	199
4	Weathering steels: From empirical development to scientific design. A review. Corrosion Science, 2014, 83, 6-31.	6.6	186
5	Airborne chloride deposit and its effect on marine atmospheric corrosion of mild steel. Corrosion Science, 2015, 97, 74-88.	6.6	179
6	Characterisation of rust surfaces formed on mild steel exposed to marine atmospheres using XRD and SEM/Micro-Raman techniques. Corrosion Science, 2016, 110, 253-264.	6.6	163
7	Atmospheric corrosion of Ni-advanced weathering steels in marine atmospheres of moderate salinity. Corrosion Science, 2013, 76, 348-360.	6.6	153
8	The prediction of atmospheric corrosion from meteorological and pollution parametersâ€"I. Annual corrosion. Corrosion Science, 1993, 34, 403-414.	6.6	146
9	Long-term atmospheric corrosion of zinc. Corrosion Science, 2007, 49, 1420-1436.	6.6	132
10	Salinity in marine atmospheric corrosion: its dependence on the wind regime existing in the site. Corrosion Science, 2000, 42, 91-104.	6.6	124
11	The prediction of atmospheric corrosion from meteorological and pollution parametersâ€"II. Long-term forecasts. Corrosion Science, 1993, 34, 415-422.	6.6	121
12	An attempt to classify the morphologies presented by different rust phases formed during the exposure of carbon steel to marine atmospheres. Materials Characterization, 2016, 118, 65-78.	4.4	120
13	Characterization of corrosion products formed on Ni 2.4 wt%â€"Cu 0.5 wt%â€"Cr 0.5 wt% weathering steel exposed in marine atmospheres. Corrosion Science, 2014, 87, 438-451.	6.6	115
14	Steel cathodic protection afforded by zinc, aluminium and zinc/aluminium alloy coatings in the atmosphere. Surface and Coatings Technology, 2005, 190, 244-248.	4.8	104
15	Atmospheric corrosion of weathering steels. Overview for engineers. Part I: Basic concepts. Construction and Building Materials, 2019, 213, 723-737.	7.2	99
16	Studies of long-term weathering of aluminium in the atmosphere. Corrosion Science, 2007, 49, 3134-3148.	6.6	98
17	Five-year atmospheric corrosion of Cu, Cr and Ni weathering steels in a wide range of environments. Corrosion Science, 2018, 141, 146-157.	6.6	93
18	The charge transfer reaction in Nyquist diagrams of painted steel. Corrosion Science, 1990, 30, 989-998.	6.6	84

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19	Effect of Distance from Sea on Atmospheric Corrosion Rate. Corrosion, 1999, 55, 883-891.	1.1	81
20	Electrochemical impedance spectroscopy study of the effect of curing time on the early barrier properties of silane systems applied on steel substrates. Progress in Organic Coatings, 2007, 60, 45-53.	3.9	81
21	Atmospheric corrosion of mild steel. Revista De Metalurgia, 2011, 47, 426-444.	0.5	77
22	Morphological study of 16-year patinas formed on copper in a wide range of atmospheric exposures. Corrosion Science, 2008, 50, 268-285.	6.6	73
23	Artificial neural network modeling of atmospheric corrosion in the MICAT project. Corrosion Science, 2000, 42, 35-52.	6.6	71
24	Corrosion resistance of new epoxyâ€“siloxane hybrid coatings. A laboratory study. Progress in Organic Coatings, 2010, 69, 278-286.	3.9	71
25	SEM/Micro-Raman Characterization of the Morphologies of Marine Atmospheric Corrosion Products Formed on Mild Steel. Journal of the Electrochemical Society, 2016, 163, C426-C439.	2.9	71
26	Atmospheric corrosion of weathering steels. Overview for engineers. Part II: Testing, inspection, maintenance. Construction and Building Materials, 2019, 222, 750-765.	7.2	66
27	Anticorrosive behaviour of alkyd paints formulated with ion-exchange pigments. Progress in Organic Coatings, 2008, 61, 283-290.	3.9	65
28	The effect of nitrogen oxides in atmospheric corrosion of metals. Corrosion Science, 1995, 37, 293-305.	6.6	59
29	Corrosion inhibition of aluminum by coatings formulated with Alâ€“Znâ€“vanadate hydrotalcite. Progress in Organic Coatings, 2011, 70, 213-219.	3.9	59
30	An interpretation of electrical impedance diagrams for painted galvanized steel. Progress in Organic Coatings, 1989, 17, 143-153.	3.9	55
31	City scale assessment model for air pollution effects on the cultural heritage. Atmospheric Environment, 2011, 45, 1242-1250.	4.1	54
32	Corrosion mechanisms of mild steel in chloride-rich atmospheres. Materials and Corrosion - Werkstoffe Und Korrosion, 2016, 67, 227-238.	1.5	54
33	Effect of Cu, Cr and Ni alloying elements on mechanical properties and atmospheric corrosion resistance of weathering steels in marine atmospheres of different aggressivities. Materials and Corrosion - Werkstoffe Und Korrosion, 2018, 69, 8-19.	1.5	53
34	Atmospheric corrosion of bare and anodised aluminium in a wide range of environmental conditions. Part II: Electrochemical responses. Surface and Coatings Technology, 2002, 153, 235-244.	4.8	51
35	Soluble salts: their effect on premature degradation of anticorrosive paints. Progress in Organic Coatings, 1999, 36, 137-147.	3.9	50
36	An study on accelerated corrosion testing of weathering steel. Materials Chemistry and Physics, 2013, 142, 220-228.	4.0	50

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37	Annual Atmospheric Corrosion of Carbon Steel Worldwide. An Integration of ISOCORRAG, ICP/UNECE and MICAT Databases. Materials, 2017, 10, 601.	2.9	49
38	The influence of the interfacial conditions on rust conversion by phosphoric acid. Corrosion Science, 1997, 39, 1561-1570.	6.6	48
39	Atmospheric corrosion of bare and anodized aluminium in a wide range of environmental conditions. Part I: Visual observations and gravimetric results. Surface and Coatings Technology, 2002, 153, 225-234.	4.8	48
40	A SEM study on the galvanic protection of zinc-rich paints. Journal of Materials Science, 1990, 25, 2441-2446.	3.7	46
41	Environmental Conditions for Akaganeite Formation in Marine Atmosphere Mild Steel Corrosion Products and Its Characterization. Corrosion, 2015, 71, 872-886.	1.1	46
42	Atmospheric corrosion of mild steel in chloride-rich environments. Questions to be answered. Materials and Corrosion - Werkstoffe Und Korrosion, 2015, 66, 882-892.	1.5	46
43	Atmospheric corrosion of zinc Part 2: Marine atmospheres. Corrosion Engineering Science and Technology, 2000, 35, 289-296.	0.3	44
44	Mapping air pollution effects on atmospheric degradation of cultural heritage. Journal of Cultural Heritage, 2013, 14, 138-145.	3.3	44
45	Atmospheric Corrosion of Copper in Ibero-America. Corrosion, 2001, 57, 967-980.	1.1	43
46	Corrosion resistance of steel treated with different silane/paint systems. Journal of Coatings Technology Research, 2012, 9, 3-13.	2.5	41
47	pH-dependent release of environmentally friendly corrosion inhibitor from mesoporous silica nanoreservoirs. Microporous and Mesoporous Materials, 2018, 255, 166-173.	4.4	40
48	Atmospheric corrosion of zinc Part 1: Rural and urban atmospheres. Corrosion Engineering Science and Technology, 2000, 35, 284-288.	0.3	38
49	Synthesis and Characterization of Hollow Mesoporous Silica Nanoparticles for Smart Corrosion Protection. Nanomaterials, 2018, 8, 478.	4.1	36
50	Atmospheric corrosion of mild steel. Part II - Marine atmospheres. Materials and Corrosion - Werkstoffe Und Korrosion, 2000, 51, 865-874.	1.5	35
51	On the Mechanism of Rust Exfoliation in Marine Environments. Journal of the Electrochemical Society, 2017, 164, C8-C16.	2.9	34
52	Deviation from bilogarithmic law for atmospheric corrosion of steel. Corrosion Engineering Science and Technology, 1993, 28, 50-52.	0.3	33
53	Some Clarifications Regarding Literature on Atmospheric Corrosion of Weathering Steels. International Journal of Corrosion, 2012, 2012, 1-9.	1.1	33
54	Effect of treatment with tannic, gallic and phosphoric acids on the electrochemical behaviour of rusted steel. Electrochimica Acta, 1992, 37, 1983-1985.	5.2	31

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55	An electrochemical impedance study of the behaviour of some pretreatments applied to rusted steel surfaces. Corrosion Science, 1993, 35, 1351-1358.	6.6	31
56	Rust exfoliation on carbon steels in chloride-rich atmospheres. Corrosion Reviews, 2015, 33, 263-282.	2.0	31
57	Atmospheric corrosion of reference metals in Antarctic sites. Cold Regions Science and Technology, 2004, 40, 165-178.	3.5	28
58	Ion-exchange pigments in primer paints for anticorrosive protection of steel in atmospheric service: Cation-exchange pigments. Progress in Organic Coatings, 2012, 75, 147-161.	3.9	28
59	Marine atmospheric corrosion of carbon steels. Revista De Metalurgia, 2015, 51, e045.	0.5	28
60	Reproducibility of electrical impedance data for a metal/paint system. Progress in Organic Coatings, 1989, 17, 135-142.	3.9	27
61	A laboratory study of the effect of NO2 on the atmospheric corrosion of zinc. Atmospheric Environment, 2007, 41, 8681-8696.	4.1	26
62	Looking Back on Contributions in the Field of Atmospheric Corrosion Offered by the MICAT Ibero-American Testing Network. International Journal of Corrosion, 2012, 2012, 1-24.	1.1	26
63	Ion-exchange pigments in primer paints for anticorrosive protection of steel in atmospheric service: Anion-exchange pigments. Progress in Organic Coatings, 2013, 76, 411-424.	3.9	26
64	Atmospheric Corrosion in Ibero-America: The MICAT Project. , 0, , 257-257-19.		26
65	Use of electrochemical impedance spectroscopy for studying corrosion at overlapped joints. Progress in Organic Coatings, 1998, 33, 61-67.	3.9	25
66	Atmospheric corrosion of mild steel. Part I - Rural and urban atmospheres. Materials and Corrosion - Werkstoffe Und Korrosion, 2000, 51, 859-864.	1.5	25
67	Wet/dry accelerated laboratory test to simulate the formation of multilayered rust on carbon steel in marine atmospheres. Corrosion Engineering Science and Technology, 2017, 52, 178-187.	1.4	24
68	Lap-joint corrosion of automotive coated materials in chloride media. Part 2 â€“ Galvannealed steel. Surface and Coatings Technology, 2000, 124, 180-189.	4.8	23
69	Characterization of atmospheric corrosion products of zinc exposed to SO2 and NO2 using XPS and GIXD. Journal of Materials Science, 2007, 42, 9654-9662.	3.7	23
70	Corrosion of Copper in Unpolluted Chloride-Rich Atmospheres. Metals, 2018, 8, 866.	2.3	22
71	The influence of chlorides, sulphates and nitrates at the coating-steel interface on underfilm corrosion. Progress in Organic Coatings, 1997, 31, 245-253.	3.9	20
72	Effect of state of sea on atmospheric corrosion in coastal zones. Corrosion Engineering Science and Technology, 2001, 36, 157-160.	0.3	19

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73	Anticorrosive painting for a wide spectrum of marine atmospheres: Environmental-friendly versus traditional paint systems. Progress in Organic Coatings, 2006, 57, 11-22.	3.9	19
74	Paint systems formulated with ion-exchange pigments applied on carbon steel: Effect of surface preparation. Progress in Organic Coatings, 2011, 70, 394-400.	3.9	19
75	A SEM/XPS/SKP study on the distribution of chlorides in contaminated rusty steel. Corrosion Science, 2006, 48, 2304-2316.	6.6	18
76	The settling of critical levels of soluble salts for painting. Progress in Organic Coatings, 2007, 58, 23-32.	3.9	18
77	Smart Mesoporous Silica Nanocapsules as Environmentally Friendly Anticorrosive Pigments. International Journal of Corrosion, 2015, 2015, 1-8.	1.1	18
78	Long-Term Atmospheric Corrosion in Spain: Results after 13â€“16 Years of Exposure and Comparison with Worldwide Data. , 0, , 195-195-20.		18
79	Mild steel corrosion in saline solutions. Comparison between bulk solutions and steel-coating interfacial solutions. Journal of Coatings Technology, 1998, 70, 61-66.	0.7	15
80	Characterisation of a centuries-old patinated copper roof tile from Queen Anne's Summer Palace in Prague. Materials Characterization, 2017, 133, 146-155.	4.4	15
81	Analysis of Historic Copper Patinas. Influence of Inclusions on Patina Uniformity. Materials, 2017, 10, 298.	2.9	15
82	Accelerated degradation of a chlorinated rubber paint system applied over rusted steel. Progress in Organic Coatings, 1993, 21, 315-325.	3.9	14
83	Anticipated levels of soluble salts remaining on rusty steel prior to painting. Journal of Coatings Technology and Research, 1999, 82, 19-25.	0.2	14
84	Atmospheric corrosion of zinc in coastal atmospheres. Materials and Corrosion - Werkstoffe Und Korrosion, 2019, 70, 1005-1015.	1.5	14
85	Influence of inorganic anions from atmospheric depositions on weathering steel corrosion and metal release. Construction and Building Materials, 2020, 236, 117515.	7.2	14
86	Electrochemical determination of rusted steel surface stability. Journal of Applied Electrochemistry, 1993, 23, 157-161.	2.9	13
87	Mapas de EspaÃ±a de corrosividad del zinc en atmÃ³sferas rurales. Revista De Metalurgia, 2010, 46, 485-492.	0.5	13
88	Lap-joint corrosion of automotive coated materials in chloride media. Part 1 â€" Electrogalvanized steel. Surface and Coatings Technology, 2000, 124, 169-179.	4.8	12
89	Corrosion inhibition of aluminum by organic coatings formulated with calcium exchange silica pigment. Journal of Coatings Technology Research, 2013, 10, 209-217.	2.5	12
90	Effect of NO₂ and/or SO₂ atmospheric contaminants and relative humidity on copper corrosion. Revista De Metalurgia, 2003, 39, 278-288.	0.5	12

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91	The reproducibility of impedance parameters obtained for painted specimens. Progress in Organic Coatings, 1995, 25, 365-377.	3.9	11
92	Effect of variable amounts of rust at the steel/paint interface on the behaviour of anticorrosive paint systems. Progress in Organic Coatings, 2003, 46, 241-249.	3.9	11
93	X-Ray Photoelectron Spectroscopy Study of the Effect of Nitrogen Dioxide and Sulfur Dioxide on the Atmospheric Corrosion of Copper at Low Relative Humidity Values. Corrosion, 2005, 61, 627-638.	1.1	11
94	Anticorrosive behaviour of Cr(VI)-free surface pretreatments applied on magnesium alloys. Progress in Organic Coatings, 2013, 76, 1833-1840.	3.9	11
95	Exploring the corrosion inhibition of aluminium by coatings formulated with calcium exchange bentonite. Progress in Organic Coatings, 2017, 111, 273-282.	3.9	11
96	Atmospheric corrosion of ASTM A-242 and ASTM A-588 weathering steels in different types of atmosphere. Corrosion Engineering Science and Technology, 2018, 53, 449-459.	1.4	11
97	Differences between apparent polarization resistance values obtained in the time and frequency domains. Journal of Electroanalytical Chemistry, 1995, 381, 1-4.	3.8	10
98	Atmospheric galvanic protection, of 55% Al-Zn precoated steel. Materials and Corrosion - Werkstoffe Und Korrosion, 1994, 45, 550-553.	1.5	9
99	Alternative environmentally friendly coatings for mild steel and electrogalvanized steel to be exposed to atmospheres. Materials and Corrosion - Werkstoffe Und Korrosion, 2001, 52, 904-919.	1.5	9
100	Interaction of copper and NO2: Effect of joint presence of SO2, relative humidity and temperature. Journal of Physics and Chemistry of Solids, 2008, 69, 895-904.	4.0	9
101	MÃ¶ssbauer study of some rust converters. Hyperfine Interactions, 1989, 46, 461-465.	0.5	8
102	Discrimination by EIS of degradation mechanisms in lap joints of coated metal sheet. Journal of Coatings Technology, 1999, 71, 61-68.	0.7	8
103	Deterioration of paint systems applied on zinc substrates contaminated with soluble salts. Progress in Organic Coatings, 2001, 41, 183-190.	3.9	7
104	Study of the electrochemical noise generated by the mild steel/zinc-rich paint/NaCl solution system. Progress in Organic Coatings, 1990, 18, 265-273.	3.9	6
105	Surface treatment of rusted steel with phosphoric acid solutions: a study using physico-chemical methods. Progress in Organic Coatings, 1993, 21, 327-338.	3.9	6
106	Lap-joint corrosion of automotive coated materials in chloride media. Part 3 â€" Electrogalvanized steel/galvanneal interface. Surface and Coatings Technology, 2000, 124, 44-52.	4.8	6
107	Atmospheric corrosivity map for steel in Canary Isles. Corrosion Engineering Science and Technology, 2001, 36, 266-271.	0.3	6
108	Measure of the driving forces of underfilm differential contamination cells and differential aeration cells. Progress in Organic Coatings, 2002, 45, 441-447.	3.9	6

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109	Soluble salts and the durability of paint coatings: a new laboratory method for dosing chlorides and sulphates over steel surfaces. Anti-Corrosion Methods and Materials, 2003, 50, 208-216.	1.5	6
110	Methods for salt contamination of steel corrosion products: A characterization study. Materials and Corrosion - Werkstoffe Und Korrosion, 2007, 58, 781-788.	1.5	6
111	CorrosiÃ³n atmosfÃ©rica de metales en condiciones climÃ¡ticas extremas. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2000, 39, 329-332.	1.9	6
112	Prediction of the effect of second phases embedded in a lead matrix on anodic corrosion. Corrosion Science, 1975, 15, 593-602.	6.6	5
113	Study of the interfacial chemistry of poly(vinyl chloride) paint on steel exposed to the ultraviolet-water condensation test. Journal of Adhesion Science and Technology, 1997, 11, 591-611.	2.6	5
114	Water-borne versus solvent-borne paints for protection of steel to atmospheric exposure. Surface Coatings International Part B: Coatings Transactions, 2006, 89, 237-244.	0.3	5
115	The behaviour of lamellar second phases in a lead matrix under anodic action. Electrochimica Acta, 1976, 21, 1035-1039.	5.2	4
116	An extremely low corrosion rate of steel in the atmosphere of Cuzco (Peru). Atmospheric Environment Part A General Topics, 1993, 27, 1959-1962.	1.3	4
117	Direct measurement of corrosion inside iron crevices. Materials and Corrosion - Werkstoffe Und Korrosion, 2002, 53, 807-812.	1.5	4
118	Lap-joint corrosion testing of precoated steel sheets. Journal of Coatings Technology, 2003, 75, 43-54.	0.7	4
119	Laboratory simulation of formation of steel corrosion products with soluble salt contents. Corrosion Engineering Science and Technology, 2006, 41, 130-134.	1.4	4
120	Factores condicionantes de la durabilidad de los sistemas de pinturas anticorrosivas sobre acero en exposiciones atmosfÃ©ricas. Revista De Metalurgia, 1998, 34, 132-136.	0.5	4
121	Use of zinc-rich primers co-pigmented with phosphates applied on rusty steel surfaces contaminated with soluble salts. Revista De Metalurgia, 2003, 39, 129-136.	0.5	4
122	CaracterizaciÃ³n superficial de nuevos pre-tratamientos a base de silanos aplicados sobre aluminio. Revista De Metalurgia, 2005, 41, 428-432.	0.5	3
123	A new pigment to be used in combination with zinc dust in zincâ€rich antiâ€corrosive paints. Pigment and Resin Technology, 1998, 27, 161-167.	0.9	2
124	Atmospheric corrosion behavior of paint systems applied on weathered hot-dip galvanized steel. Journal of Coatings Technology, 2002, 74, 59-68.	0.7	2
125	Painting over soluble salts: Field extraction of soluble salts from corrosion products of steel. Progress in Organic Coatings, 2005, 54, 240-247.	3.9	2
126	Corrosion behaviour of powder metallurgical stainless steels after two years of exposure in atmosphere. Corrosion Engineering Science and Technology, 2006, 41, 284-290.	1.4	2

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127	Environmental factors responsible for the unusual corrosion of galvanized steel. Materials and Corrosion - Werkstoffe Und Korrosion, 1989, 40, 668-673.	1.5	1
128	Lap-joint corrosion of precoated materials for building applications. Surface and Coatings Technology, 2005, 190, 65-74.	4.8	1
129	Effect of silane solution concentration on the anticorrosive protection of pretreatments applied on steel. , 2007, , 148-157.		1
130	Scanning Kelvin Probe Study on the Stability of the Steel/Coating Interfaces Contaminated by Soluble Salts. Defect and Diffusion Forum, 0, 289-292, 253-260.	0.4	0
131	CorrosiÃ³n del aluminio 1050 en atmÃ³sferas costeras. Revista De Metalurgia, 2019, 55, 153.	0.5	0