Juan Creus

List of Publications by Year
in descending order

79 papers	2,926 citations	186265 28 h-index	175258 52 g-index
79 all docs	79 docs citations	79 times ranked	2284 citing authors

#	Article	IF	Citations
1	Grain size and grain-boundary effects on diffusion and trapping of hydrogen in pure nickel. Acta Materialia, 2012, 60, 6814-6828.	7.9	331
2	Porosity evaluation of protective coatings onto steel, through electrochemical techniques. Surface and Coatings Technology, 2000, 130, 224-232.	4.8	323
3	Study of the hydrogen diffusion and segregation into Feâ€“Câ€“Mo martensitic HSLA steel using electrochemical permeation test. Journal of Physics and Chemistry of Solids, 2010, 71, 1467-1479.	4.0	152
4	Cathodic electrodeposition of cerium-based oxides on carbon steel from concentrated cerium nitrate solutions. Materials Chemistry and Physics, 2009, 113, 650-657.	4.0	138
5	The diffusion and trapping of hydrogen along the grain boundaries in polycrystalline nickel. Scripta Materialia, 2012, 66, 37-40.	5.2	123
6	Improvement of the corrosion resistance of CrN coated steel by an interlayer. Surface and Coatings Technology, 1998, 107, 183-190.	4.8	97
7	Synthesis and characterisation of thin cerium oxide coatings elaborated by cathodic electrolytic deposition on steel substrate. Surface and Coatings Technology, 2006, 200, 4636-4645.	4.8	92
8	Hydrogen trapping in martensitic steel investigated using electrochemical permeation and thermal desorption spectroscopy. Scripta Materialia, 2011, 65, 859-862.	5.2	91
9	Surface study of cerium oxide based coatings obtained by cathodic electrodeposition on zinc. Applied Surface Science, 2011, 257, 6202-6207.	6.1	82
10	Effects of grain orientation on the Hallâ€“Petch relationship in electrodeposited nickel with nanocrystalline grains. Scripta Materialia, 2010, 62, 403-406.	5.2	81
11	Hydrogen solubility, diffusivity and trapping in a tempered Feâ€“Câ€“Cr martensitic steel under various mechanical stress states. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 534, 384-393.	5.6	75
12	Localised corrosion of carbon steel in NaHCO3/NaCl electrolytes: role of Fe(II)-containing compounds. Corrosion Science, 2006, 48, 709-726.	6.6	68
13	Corrosion behaviour of amorphous Alâ€“Cr and Alâ€“Crâ€“(N) coatings deposited by dc magnetron sputtering on mild steel substrate. Thin Solid Films, 2004, 466, 1-9.	1.8	57
14	Morphological and structural characterisation of electrodeposited Znâ€“Mn alloys from acidic chloride bath. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 430, 165-171.	5.6	57
15	Electrodeposition of Znâ€“Mn alloys on steel from acidic Znâ€“Mn chloride solutions. Thin Solid Films, 2003, 424, 171-178.	1.8	55
16	Electrodeposition of Znâ€“Mn alloys on steel using an alkaline pyrophosphate-based electrolytic bath. Surface and Coatings Technology, 2005, 200, 2137-2145.	4.8	55
17	Characterization of electrodeposited nickel coatings from sulphamate electrolyte without additive. Materials Characterization, 2011, 62, 164-173.	4.4	52
18	The effects of dislocation patterns on the dissolution process of polycrystalline nickel. Acta Materialia, 2006, 54, 2157-2167.	7.9	51

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19	Consequences of plastic strain on the dissolution process of polycrystalline nickel in H2SO4 solution. Scripta Materialia, 2004, 51, 869-873.	5.2	43
20	Influence of metallurgical parameters on the electrochemical behavior of electrodeposited Ni and Niâ€“W nanocrystalline alloys. Applied Surface Science, 2016, 370, 149-159.	6.1	43
21	Biomolecules as a sustainable protection against corrosion of reinforced carbon steel in concrete. Journal of Cleaner Production, 2016, 112, 666-671.	9.3	42
22	The role of plasticity and hydrogen flux in the fracture of a tempered martensitic steel: A new design of mechanical test until fracture to separate the influence of mobile from deeply trapped hydrogen. Acta Materialia, 2020, 186, 133-148.	7.9	41
23	Ageing of polyethylene at raised temperature in contact with chlorinated sanitary hot water. Part I â€“ Chemical aspects. Polymer Degradation and Stability, 2012, 97, 149-157.	5.8	38
24	Consequence of the diffusive hydrogen contents on tensile properties of martensitic steel during the desorption at room temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 598, 420-428.	5.6	37
25	Electrodeposition of Znâ€“Mn alloys in acidic and alkaline baths. Influence of additives on the morphological and structural properties. Journal of Applied Electrochemistry, 2005, 35, 1133-1139.	2.9	36
26	Influence of the plastic strain on the hydrogen evolution reaction on polycrystalline nickel electrodes in H2S04. Electrochimica Acta, 2006, 51, 4716-4727.	5.2	35
27	Influence of metallurgical states on the corrosion behaviour of Alâ€“Zn PVD coatings in saline solution. Corrosion Science, 2013, 74, 240-249.	6.6	32
28	Influence of deposition parameters on microstructure and contamination of electrodeposited nickel coatings from additive-free sulphamate bath. Surface and Coatings Technology, 2012, 206, 4394-4402.	4.8	31
29	The influence of hydrostatic stress states on the hydrogen solubility in martensitic steels. Scripta Materialia, 2014, 84-85, 23-26.	5.2	28
30	Corrosion behaviour of magnetron-sputtered Al1â^'xâ€“Mnx coatings in neutral saline solution. Corrosion Science, 2010, 52, 3615-3623.	6.6	26
31	Characterization of thin solid films containing yttrium formed by electrogeneration of base for high temperature corrosion applications. Surface and Coatings Technology, 2004, 185, 275-282.	4.8	24
32	Marine corrosion resistance of CeO2/Mg(OH)2 mixed coating on a low alloyed steel. Surface and Coatings Technology, 2019, 372, 410-421.	4.8	24
33	Corrosion behaviour of Al/Ti coating elaborated by cathodic arc PVD process onto mild steel substrate. Thin Solid Films, 1999, 346, 150-154.	1.8	23
34	Mechanical and corrosion properties of dc magnetron sputtered Al/Cr multilayers. Surface and Coatings Technology, 2008, 202, 4047-4055.	4.8	23
35	Nanostructured aluminium based coatings deposited by electron-beam evaporative PVD. Thin Solid Films, 2009, 518, 1575-1580.	1.8	22
36	Impact of chlorinated disinfection on copper corrosion in hot water systems. Applied Surface Science, 2014, 314, 686-696.	6.1	21

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37	Corrosion behaviour of dc magnetron sputtered Fe1â^'xMgx alloy films in 3wt% NaCl solution. Corrosion Science, 2007, 49, 4276-4295.	6.6	20
38	Reactivity classification in saline solution of magnetron sputtered or EBPVD pure metallic, nitride and Al-based alloy coatings. Corrosion Science, 2012, 57, 162-173.	6.6	20
39	Corrosion behavior in artificial seawater of thermal-sprayed WC-CoCr coatings on mild steel by electrochemical impedance spectroscopy. Journal of Solid State Electrochemistry, 2012, 16, 633-648.	2.5	20
40	Electrodeposition of zincâ€“ceria nanocomposite coatings in alkaline bath. Journal of Solid State Electrochemistry, 2014, 18, 223-233.	2.5	20
41	The influence of biosurfactant adsorption on the physicochemical behaviour of carbon steel surfaces using contact angle measurements and X-ray photoelectron spectroscopy. Applied Surface Science, 2015, 351, 1174-1183.	6.1	19
42	Corrosion behaviour of TiN and CrN coatings produced by cathodic arc PVD process on mild steel substrate. Surface Engineering, 1998, 14, 432-436.	2.2	18
43	Influence of plastic strain on the hydrogen evolution reaction on nickel (100) single crystal surfaces to improve hydrogen embrittlement. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 578, 24-34.	5.6	17
44	Computational analysis of geometrical factors affecting experimental data extracted from hydrogen permeation tests: III â€“ Comparison with experimental results from the literature. International Journal of Hydrogen Energy, 2014, 39, 1145-1155.	7.1	17
45	Comparison of the intrinsic properties of EBPVD Alâ€“Ti and Alâ€“Mg coatings. Materials Chemistry and Physics, 2012, 132, 154-161.	4.0	16
46	The effect of tungsten addition on metallurgical state and solute content in nanocrystalline electrodeposited nickel. Journal of Alloys and Compounds, 2014, 609, 296-301.	5.5	14
47	Thermodynamic parameters evolution versus plastic strain during HER on nickel in sulphuric acid. Electrochimica Acta, 2007, 52, 4004-4014.	5.2	13
48	Controlled stripping of aluminide coatings on nickel superalloys through electrolytic techniques. Journal of Applied Electrochemistry, 2008, 38, 817-825.	2.9	13
49	On the implication of solute contents and grain boundaries on the Hall-Petch relationship of nanocrystalline Ni-W alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 678, 204-214.	5.6	13
50	Galvanic corrosion behaviour of mild steel, Al, and Ti in 3%NaCl solution: Application to PVD coatings on steel substrate. Surface Engineering, 1997, 13, 415-419.	2.2	11
51	A comparison between the microstructure and the functional properties of NiW coatings produced by magnetron sputtering and electrodeposition. Materials Chemistry and Physics, 2022, 276, 125332.	4.0	11
52	Diffusion of a Corroding Electrolyte through Defective Electroplated Ceria Based Coatings. Defect and Diffusion Forum, 0, 289-292, 235-242.	0.4	10
53	Znâ€“Fe alloy electrodeposition from chloride bath: Influence of deposition parameters on coatings morphology and structure. Materials and Corrosion - Werkstoffe Und Korrosion, 2013, 64, 328-334.	1.5	10
54	On the Implication of Hydrogen on Inter-granular Fracture. , 2014, 3, 2030-2034.		10

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55	Optimization of the morphology, structure and properties of high iron content Znâ€“Fe coatings by pulse electrodeposition. Materials Chemistry and Physics, 2021, 263, 124366.	4.0	10
56	Electrochemical behavior of Ni W alloys obtained by magnetron sputtering. Surface and Coatings Technology, 2018, 352, 581-590.	4.8	9
57	Incorporation of silica nanocontainers and its impact on a waterborne polyurethane coating. Materials and Corrosion - Werkstoffe Und Korrosion, 2019, 70, 1884-1899.	1.5	9
58	Rhamnolipids as an eco-friendly corrosion inhibitor of rebars in simulated concrete pore solution: evaluation of conditioning and addition methods. Corrosion Engineering Science and Technology, 2020, 55, 91-102.	1.4	9
59	Bifunctional TiO2/AlZr Thin Films on Steel Substrate Combining Corrosion Resistance and Photocatalytic Properties. Coatings, 2019, 9, 564.	2.6	8
60	Enhancement of Mechanical Properties and Corrosion Resistance of HVOF-Sprayed NiCrBSi Coatings Through Mechanical Attrition Treatment (SMAT). Journal of Thermal Spray Technology, 2020, 29, 2065-2079.	3.1	8
61	Role of Ceria Nanoparticles on the Electrodeposited Zinc Coating's Growth: Interest of a TEM-Scale Investigation. ECS Electrochemistry Letters, 2014, 3, D33-D35.	1.9	7
62	Corrosion behaviour in saline solution of pulsedâ€electrodeposited zincâ€nickelâ€ceria nanocomposite coatings. Materials and Corrosion - Werkstoffe Und Korrosion, 2017, 68, 1129-1142.	1.5	7
63	The Influence of Hydrogen Flux on Crack Initiation in Martensitic Steels. , 2014, 3, 2024-2029.		6
64	Al-Ti-W alloys deposited by magnetron sputtering: Effective barrier to prevent steel hydrogen embrittlement. Applied Surface Science, 2021, 567, 150786.	6.1	6
65	Study of Ce(III) as a potential corrosion inhibitor of Zn-Fe sacrificial coatings electrodeposited on steel. Corrosion Science, 2022, 200, 110249.	6.6	6
66	Relationship Between Microstructure and Marine Corrosion Resistance of Martensitic Stainless Steels: A Multiscale Approach. Journal of Materials Engineering and Performance, 2019, 28, 3785-3802.	2.5	4
67	CaractÃ©risation de revÃªtements Ã©lectrodÃ©posÃ©s de zinc-nickel. Materiaux Et Techniques, 1997, 85, 33-38	0.9	4
68	Impact of coherent and incoherent twin boundaries on the microhardness of annealed nanocrystalline Niâ€“W alloys. Philosophical Magazine Letters, 2017, 97, 399-407.	1.2	2
69	Synthesis of Zn-Ceria Nanocomposite Coatings from Particle-Free Aqueous Bath in a one Electrodeposition Step Process. Colloids and Interface Science Communications, 2018, 25, 31-35.	4.1	2
70	Stress Corrosion Cracking. Between the Corrosion Defect and the Long Crack: the Phase of the Initiation of the Cracks. , 2019, , 287-312.		2
71	Improvement of the corrosion behavior of aluminum alloy 6061-T6 with yttrium and lanthanum conversion coatings. Materiali in Tehnologije, 2018, 52, 329-334.	0.5	2
72	New approach using fluorescent nanosensors for filiform corrosion inhibition. Materials Letters, 2022, 318, 132240.	2.6	2

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73	Dislocations effect on kinetic of passivation of polycrystalline nickel in H2SO4 medium. , 2006, , 519-524.		1
74	Microstructural investigation of nickel deposits obtained by pulsed current. Journal of the Indian Chemical Society, 2022, 99, 100331.	2.8	1
75	Response to comments on â€œComputational analysis of geometrical factors affecting experimental data extracted from hydrogen permeation test: I â€“ Consequences of trappingâ€•[Int J Hydrogen Energy 36 (2011) 12644â€“12652] and â€œII â€“ Consequences of trapping and an oxide layerâ€•[Int J Hydrogen Energy 37 (2012) 13574â€“13582], â€œCorrigendaâ€•to both [Int J Hydrogen Energy 39 (2014) 2430], and on â€œIII â€“ Comparison with experimental results from the literatureâ€•[Int J Hydrogen Energy 39 (2014) 1145â€“1155] with â€œGeneralized. International Journal of Hydrogen Energy, 2014, 39, 19851-19852.	7.1	0
76	Elaboration and microstructural characterization of calcareous/ceria based composite on zinc substrate. Protection of Metals and Physical Chemistry of Surfaces, 2016, 52, 894-899.	1.1	0
77	Influence d'un Ã©tat mÃ©canique sur la rÃ©activitÃ© de surface en milieux aqueux des mÃ©taux c.f.c.. , 2009, , .		0
78	Ã‰laboration par Ã©lectrodÃ©position en rÃ©gime impulsionnel de revÃªtements de zinc sur acier. Materiaux Et Techniques, 2009, 97, 389-396.	0.9	0
79	Improvement of the corrosion resistance of electrodeposited Zn-Fe by sol-gel conversion films. Journal of Electrochemical Science and Engineering, 0, , .	3.5	0