

Jinshan Pan

List of Publications by Year in descending order

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115
papers

4,011
citations

109137

35
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149479

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all docs

117
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117
times ranked

3757
citing authors

#	ARTICLE	IF	CITATIONS
1	Layered double hydroxide (LDH) for multi-functionalized corrosion protection of metals: A review. <i>Journal of Materials Science and Technology</i> , 2022, 102, 232-263.	5.6	112
2	Thickness and composition of native oxides and near-surface regions of Ni superalloys. <i>Journal of Alloys and Compounds</i> , 2022, 895, 162657.	2.8	33
3	Hydrogen-Induced Micro-Strain Evolution in Super Duplex Stainless Steel—Correlative High-Energy X-Ray Diffraction, Electron Backscattered Diffraction, and Digital Image Correlation. <i>Frontiers in Materials</i> , 2022, 8, .	1.2	6
4	Reply to Comment on “Corrosion-induced microstructure degradation of copper in sulfide-containing simulated anoxic groundwater studied by synchrotron high-energy X-ray diffraction and ab-initio density functional theory calculation” <i>Corrosion Science</i> , 2022, 199, 110183.	3.0	2
5	Relevance of implicit and explicit solvent in density-functional theory study of adsorption at electrochemical NaCl/Al interface. <i>Materials Today Communications</i> , 2022, 31, 103425.	0.9	1
6	Passivation characteristics of ultra-thin 316L foil in NaCl solutions. <i>Journal of Materials Science and Technology</i> , 2022, 127, 192-205.	5.6	21
7	Temperature effect on mechanical strength and frictional properties of polytetrafluoroethylene-based core-shell nanocomposites. <i>Journal of Applied Polymer Science</i> , 2021, 138, 49929.	1.3	5
8	Corrosion-induced microstructure degradation of copper in sulfide-containing simulated anoxic groundwater studied by synchrotron high-energy X-ray diffraction and ab-initio density functional theory calculation. <i>Corrosion Science</i> , 2021, 184, 109390.	3.0	15
9	Real-Time and Online Lubricating Oil Condition Monitoring Enabled by Triboelectric Nanogenerator. <i>ACS Nano</i> , 2021, 15, 11869-11879.	7.3	56
10	Density Functional Theory Study of Influence of Oxide Thickness and Surface Alloying on Cl Migration within Al_2O_3 . <i>Journal of the Electrochemical Society</i> , 2021, 168, 081508.	1.3	10
11	Interactions in Composite Film Formation of Mefp-1/graphene on Carbon Steel. <i>Coatings</i> , 2021, 11, 1161.	1.2	2
12	Towards understanding micro-galvanic activities in localised corrosion of AA2099 aluminium alloy. <i>Electrochimica Acta</i> , 2021, 392, 139005.	2.6	13
13	Comparative study of CNC and CNF as additives in waterborne acrylate-based anti-corrosion coatings. <i>Journal of Dispersion Science and Technology</i> , 2020, 41, 2037-2047.	1.3	11
14	Corrosion inhibition of pre-formed mussel adhesive protein (Mefp-1) film to magnesium alloy. <i>Corrosion Science</i> , 2020, 164, 108309.	3.0	15
15	Anodisation of aluminium alloy AA7075 – Influence of intermetallic particles on anodic oxide growth. <i>Corrosion Science</i> , 2020, 164, 108319.	3.0	31
16	Corrosion- and wear-resistant composite film of graphene and mussel adhesive proteins on carbon steel. <i>Corrosion Science</i> , 2020, 164, 108351.	3.0	22
17	Operando time- and space-resolved high-energy X-ray diffraction measurement to understand hydrogen-microstructure interactions in duplex stainless steel. <i>Corrosion Science</i> , 2020, 175, 108899.	3.0	10
18	Metastable precursor structures in hydrogen-infused super duplex stainless steel microstructure – An operando diffraction experiment. <i>Corrosion Science</i> , 2020, 176, 109021.	3.0	14

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19	Studying the Passivity and Breakdown of Duplex Stainless Steels at Micrometer and Nanometer Scales – The Influence of Microstructure. <i>Frontiers in Materials</i> , 2020, 7, .	1.2	12
20	Real-Time Corrosion Monitoring of Aluminum Alloy Using Scanning Kelvin Probe Force Microscopy. <i>Journal of the Electrochemical Society</i> , 2020, 167, 081502.	1.3	23
21	Lateral variation of the native passive film on super duplex stainless steel resolved by synchrotron hard X-ray photoelectron emission microscopy. <i>Corrosion Science</i> , 2020, 174, 108841.	3.0	22
22	Time-resolved grazing-incidence X-ray diffraction measurement to understand the effect of hydrogen on surface strain development in super duplex stainless steel. <i>Scripta Materialia</i> , 2020, 187, 63-67.	2.6	8
23	In-Situ Time-Lapse SKPFM Investigation of Sensitized AA5083 Aluminum Alloy to Understand Localized Corrosion. <i>Journal of the Electrochemical Society</i> , 2020, 167, 141502.	1.3	11
24	Mussel-Inspired Graphene Film with Enhanced Durability as a Macroscale Solid Lubricant. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 31386-31392.	4.0	22
25	Numerical simulation of micro-galvanic corrosion of Al alloys: Effect of density of Al(OH) ₃ precipitate. <i>Electrochimica Acta</i> , 2019, 324, 134847.	2.6	17
26	Recent Development of Corrosion Protection Strategy Based on Mussel Adhesive Protein. <i>Frontiers in Materials</i> , 2019, 6, .	1.2	9
27	Characterization of Native Oxide and Passive Film on Austenite/Ferrite Phases of Duplex Stainless Steel Using Synchrotron HAXPEEM. <i>Journal of the Electrochemical Society</i> , 2019, 166, C3336-C3340.	1.3	22
28	Redefining passivity breakdown of super duplex stainless steel by electrochemical operando synchrotron near surface X-ray analyses. <i>Npj Materials Degradation</i> , 2019, 3, .	2.6	36
29	A DFT-Study of Cl Ingress into $\hat{\pm}$ -Al ₂ O ₃ (0001) and Al(111) and Its Possible Influence on Localized Corrosion of Al. <i>Journal of the Electrochemical Society</i> , 2019, 166, C3124-C3130.	1.3	25
30	Probing electrochemical mechanism of polyaniline and CeO ₂ nanoparticles in alkyd coating with in-situ electrochemical-AFM and IRAS. <i>Progress in Organic Coatings</i> , 2019, 132, 399-408.	1.9	11
31	Corrosion protective properties of cellulose nanocrystals reinforced waterborne acrylate-based composite coating. <i>Corrosion Science</i> , 2019, 155, 186-194.	3.0	40
32	Investigation and application of mussel adhesive protein nanocomposite film-forming inhibitor for reinforced concrete engineering. <i>Corrosion Science</i> , 2019, 153, 333-340.	3.0	22
33	Influence of Surface Strain on Passive Film Formation of Duplex Stainless Steel and Its Degradation in Corrosive Environment. <i>Journal of the Electrochemical Society</i> , 2019, 166, C3071-C3080.	1.3	17
34	On the Volta potential measured by SKPFM – fundamental and practical aspects with relevance to corrosion science. <i>Corrosion Engineering Science and Technology</i> , 2019, 54, 185-198.	0.7	73
35	Passive film characterisation of duplex stainless steel using scanning Kelvin probe force microscopy in combination with electrochemical measurements. <i>Npj Materials Degradation</i> , 2019, 3, .	2.6	28
36	Insight into the Fabrication of ZnAl Layered Double Hydroxides Intercalated with Organic Anions and Their Corrosion Protection of Steel Reinforced Concrete. <i>Journal of the Electrochemical Society</i> , 2019, 166, C617-C623.	1.3	16

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37	Co-Adsorption of H ₂ O, OH, and Cl on Aluminum and Intermetallic Surfaces and Its Effects on the Work Function Studied by DFT Calculations. <i>Molecules</i> , 2019, 24, 4284.	1.7	11
38	Experimental and modelling study of the effect of tempering on the susceptibility to environment-assisted cracking of AISI 420 martensitic stainless steel. <i>Corrosion Science</i> , 2019, 148, 83-93.	3.0	10
39	Corrosion inhibition of aluminium alloy AA6063-T5 by vanadates: Local surface chemical events elucidated by confocal Raman micro-spectroscopy. <i>Corrosion Science</i> , 2019, 148, 237-250.	3.0	43
40	Corrosion Inhibition of Aluminum Alloy AA6063-T5 by Vanadates: Microstructure Characterization and Corrosion Analysis. <i>Journal of the Electrochemical Society</i> , 2018, 165, C116-C126.	1.3	49
41	Volta Potential Evolution of Intermetallics in Aluminum Alloy Microstructure Under Thin Aqueous Adlayers: A combined DFT and Experimental Study. <i>Topics in Catalysis</i> , 2018, 61, 1169-1182.	1.3	26
42	Combining lithography and capillary techniques for local electrochemical property measurements. <i>Electrochemistry Communications</i> , 2018, 87, 53-57.	2.3	16
43	Micro-galvanic corrosion of Cu/Ru couple in potassium periodate (KIO ₄) solution. <i>Corrosion Science</i> , 2018, 137, 184-193.	3.0	25
44	Experimental and Simulation Investigations of Copper Reduction Mechanism with and without Addition of SPS. <i>Journal of the Electrochemical Society</i> , 2018, 165, D604-D611.	1.3	3
45	Hydrogen embrittlement of super duplex stainless steel – Towards understanding the effects of microstructure and strain. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 12543-12555.	3.8	44
46	Nano-scale mechanical and wear properties of a waterborne hydroxyacrylic-melamine anti-corrosion coating. <i>Applied Surface Science</i> , 2018, 457, 548-558.	3.1	29
47	In-situ synchrotron GIXRD study of passive film evolution on duplex stainless steel in corrosive environment. <i>Corrosion Science</i> , 2018, 141, 18-21.	3.0	32
48	Numerical Simulation of Micro-Galvanic Corrosion in Al Alloys: Effect of Geometric Factors. <i>Journal of the Electrochemical Society</i> , 2017, 164, C75-C84.	1.3	48
49	Tunable Adsorption and Film Formation of Mussel Adhesive Protein by Potential Control. <i>Langmuir</i> , 2017, 33, 8749-8756.	1.6	6
50	Heating-Induced Enhancement of Corrosion Protection of Carbon Steel by a Nanocomposite Film Containing Mussel Adhesive Protein. <i>Journal of the Electrochemical Society</i> , 2017, 164, C188-C193.	1.3	6
51	Correlative Microstructure Analysis and In Situ Corrosion Study of AISI 420 Martensitic Stainless Steel for Plastic Molding Applications. <i>Journal of the Electrochemical Society</i> , 2017, 164, C85-C93.	1.3	52
52	Integration of electrochemical and synchrotron-based X-ray techniques for in-situ investigation of aluminum anodization. <i>Electrochimica Acta</i> , 2017, 241, 299-308.	2.6	19
53	Temperature-dependent surface nanomechanical properties of a thermoplastic nanocomposite. <i>Journal of Colloid and Interface Science</i> , 2017, 494, 204-214.	5.0	15
54	In Situ AFM Study of Localized Corrosion Processes of Tempered AISI 420 Martensitic Stainless Steel: Effect of Secondary Hardening. <i>Journal of the Electrochemical Society</i> , 2017, 164, C810-C818.	1.3	22

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55	Local surface mechanical properties of PDMS-silica nanocomposite probed with Intermodulation AFM. <i>Composites Science and Technology</i> , 2017, 150, 111-119.	3.8	37
56	First-Principle Calculation of Volta Potential of Intermetallic Particles in Aluminum Alloys and Practical Implications. <i>Journal of the Electrochemical Society</i> , 2017, 164, C465-C473.	1.3	61
57	Numerical Simulation of Micro-Galvanic Corrosion in Al Alloys: Steric Hindrance Effect of Corrosion Product. <i>Journal of the Electrochemical Society</i> , 2017, 164, C1035-C1043.	1.3	21
58	Numerical Simulation of Micro-Galvanic Corrosion of Al Alloys: Effect of Chemical Factors. <i>Journal of the Electrochemical Society</i> , 2017, 164, C768-C778.	1.3	24
59	Controllable degradation of medical magnesium by electrodeposited composite films of mussel adhesive protein (Mefp-1) and chitosan. <i>Journal of Colloid and Interface Science</i> , 2016, 478, 246-255.	5.0	18
60	Corrosion Protection and Self-Healing of a Nanocomposite Film of Mussel Adhesive Protein and CeO ₂ Nanoparticles on Carbon Steel. <i>Journal of the Electrochemical Society</i> , 2016, 163, C545-C552.	1.3	20
61	Towards the mechanism of electrochemical activity and self-healing of 1 wt% PTSA doped polyaniline in alkyd composite polymer coating: combined AFM-based studies. <i>RSC Advances</i> , 2016, 6, 19111-19127.	1.7	18
62	In Situ and Operando AFM and EIS Studies of Anodization of Al 6060: Influence of Intermetallic Particles. <i>Journal of the Electrochemical Society</i> , 2016, 163, C609-C618.	1.3	48
63	Corrosion Investigations of Ruthenium in Potassium Periodate Solutions Relevant for Chemical Mechanical Polishing. <i>Journal of Electronic Materials</i> , 2016, 45, 4067-4075.	1.0	11
64	Atmospheric corrosion of Cu, Zn, and Cu-Zn alloys protected by self-assembled monolayers of alkanethiols. <i>Surface Science</i> , 2016, 648, 170-176.	0.8	28
65	A FEM model for investigation of micro-galvanic corrosion of Al alloys and effects of deposition of corrosion products. <i>Electrochimica Acta</i> , 2016, 192, 310-318.	2.6	76
66	Multifunctional commercially pure titanium for the improvement of bone integration: Multiscale topography, wettability, corrosion resistance and biological functionalization. <i>Materials Science and Engineering C</i> , 2016, 60, 384-393.	3.8	32
67	Localized Corrosion of Binary Mg-Ca Alloy in 0.9wt% Sodium Chloride Solution. <i>Acta Metallurgica Sinica (English Letters)</i> , 2016, 29, 46-57.	1.5	23
68	Active corrosion protection by conductive composites of polyaniline in a UV-cured polyester acrylate coating. <i>Progress in Organic Coatings</i> , 2016, 90, 154-162.	1.9	43
69	Corrosion protection by hydrophobic silica particle-polydimethylsiloxane composite coatings. <i>Corrosion Science</i> , 2015, 99, 89-97.	3.0	69
70	The thickness of native oxides on aluminum alloys and single crystals. <i>Applied Surface Science</i> , 2015, 349, 826-832.	3.1	174
71	In-situ AFM and EIS study of a solventborne alkyd coating with nanoclay for corrosion protection of carbon steel. <i>Progress in Organic Coatings</i> , 2015, 87, 179-188.	1.9	54
72	Corrosion Inhibition of Two Brass Alloys by Octadecanethiol in Humidified Air with Formic Acid. <i>Corrosion</i> , 2015, 71, 908-917.	0.5	6

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73	Long-term corrosion protection by a thin nano-composite coating. Applied Surface Science, 2015, 357, 2333-2342.	3.1	21
74	In Situ AFM and Electrochemical Study of a Waterborne Acrylic Composite Coating with CeO ₂ Nanoparticles for Corrosion Protection of Carbon Steel. Journal of the Electrochemical Society, 2015, 162, C610-C618.	1.3	25
75	In-Situ AFM and EIS Study of Waterborne Acrylic Latex Coatings for Corrosion Protection of Carbon Steel. Journal of the Electrochemical Society, 2015, 162, C55-C63.	1.3	28
76	EIS and in situ AFM study of barrier property and stability of waterborne and solventborne clear coats. Progress in Organic Coatings, 2014, 77, 600-608.	1.9	22
77	Influence of polyaniline and ceria nanoparticle additives on corrosion protection of a UV-cure coating on carbon steel. Corrosion Science, 2014, 84, 189-197.	3.0	84
78	Direct Electrochemical Synthesis of Reduced Graphene Oxide (rGO)/Copper Composite Films and Their Electrical/Electroactive Properties. ACS Applied Materials & Interfaces, 2014, 6, 7444-7455.	4.0	127
79	Direct Measurement of Colloidal Interactions between Polyaniline Surfaces in a UV-Curable Coating Formulation: The Effect of Surface Hydrophilicity/Hydrophobicity and Resin Composition. Langmuir, 2014, 30, 1045-1054.	1.6	15
80	Role of microstructure on corrosion initiation of an experimental tool alloy: A Quantitative Nanomechanical Property Mapping study. Corrosion Science, 2014, 89, 236-241.	3.0	7
81	Nanoscale Electrical and Mechanical Characteristics of Conductive Polyaniline Network in Polymer Composite Films. ACS Applied Materials & Interfaces, 2014, 6, 19168-19175.	4.0	35
82	Octadecanethiol as Corrosion Inhibitor for Zinc and Patterned Zinc-Copper in Humidified Air with Formic Acid. Journal of the Electrochemical Society, 2014, 161, C330-C338.	1.3	16
83	Microstructure and transformation temperatures in rapid solidified Ni-Ti alloys. Part II: The effect of copper addition. Journal of Alloys and Compounds, 2014, 589, 633-642.	2.8	9
84	Tribological Properties Mapping: Local Variation in Friction Coefficient and Adhesion. Tribology Letters, 2013, 50, 387-395.	1.2	14
85	The effect of superhydrophobic wetting state on corrosion protection – The AKD example. Journal of Colloid and Interface Science, 2013, 412, 56-64.	5.0	68
86	Study of corrosion behavior of a 22% Cr duplex stainless steel: Influence of nano-sized chromium nitrides and exposure temperature. Electrochimica Acta, 2013, 113, 280-289.	2.6	50
87	In situ confocal Raman micro-spectroscopy and electrochemical studies of mussel adhesive protein and ceria composite film on carbon steel in salt solutions. Electrochimica Acta, 2013, 107, 276-291.	2.6	31
88	Micro-Galvanic Corrosion Effects on Patterned Copper-Zinc Samples during Exposure in Humidified Air Containing Formic Acid. Journal of the Electrochemical Society, 2013, 160, C423-C431.	1.3	23
89	In situ investigations of Fe ³⁺ induced complexation of adsorbed Mefp-1 protein film on iron substrate. Journal of Colloid and Interface Science, 2013, 404, 62-71.	5.0	28
90	Microstructure influence on corrosion behavior of a Fe-Cr-V-N tool alloy studied by SEM/EDS, scanning Kelvin force microscopy and electrochemical measurement. Corrosion Science, 2013, 66, 153-159.	3.0	22

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91	UV-curable acrylate-based nanocomposites: effect of polyaniline additives on the curing performance. <i>Polymers for Advanced Technologies</i> , 2013, 24, 668-678.	1.6	21
92	Radial Spreading of Localized Corrosion-Induced Selective Leaching on β -Brass in Dilute NaCl Solution. <i>Corrosion</i> , 2013, 69, 468-476.	0.5	7
93	Influence of Grain Boundaries on Dissolution Behavior of a Biomedical CoCrMo Alloy: In-Situ Electrochemical-Optical, AFM and SEM/TEM Studies. <i>Journal of the Electrochemical Society</i> , 2012, 159, C422-C427.	1.3	39
94	Electrochemical, atomic force microscopy and infrared reflection absorption spectroscopy studies of pre-formed mussel adhesive protein films on carbon steel for corrosion protection. <i>Thin Solid Films</i> , 2012, 520, 7136-7143.	0.8	18
95	Probing the vertical profiles of potential in a thin layer of solution closed to electrode surface during localized corrosion of stainless steel. <i>Corrosion Science</i> , 2012, 61, 242-245.	3.0	17
96	Engineering of bone fixation metal implants biointerface—Application of parylene C as versatile protective coating. <i>Materials Science and Engineering C</i> , 2012, 32, 2431-2435.	3.8	28
97	Thin Composite Films of Mussel Adhesive Proteins and Ceria Nanoparticles on Carbon Steel for Corrosion Protection. <i>Journal of the Electrochemical Society</i> , 2012, 159, C364-C371.	1.3	23
98	Silane-parylene coating for improving corrosion resistance of stainless steel 316L implant material. <i>Corrosion Science</i> , 2011, 53, 296-301.	3.0	111
99	Toward Homogeneous Nanostructured Polyaniline/Resin Blends. <i>ACS Applied Materials & Interfaces</i> , 2011, 3, 1681-1691.	4.0	45
100	Study of PANI-MeSA conducting polymer dispersed in UV-curing polyester acrylate on galvanized steel as corrosion protection coating. <i>Progress in Organic Coatings</i> , 2011, 70, 108-115.	1.9	41
101	Electrochemical impedance spectroscopy of pure copper exposed in bentonite under oxic conditions. <i>Electrochimica Acta</i> , 2011, 56, 7862-7870.	2.6	34
102	Influence of metal carbides on dissolution behavior of biomedical CoCrMo alloy: SEM, TEM and AFM studies. <i>Electrochimica Acta</i> , 2011, 56, 9413-9419.	2.6	112
103	Scanning Kelvin probe force microscopy study of chromium nitrides in 2507 super duplex stainless steel—Implications and limitations. <i>Electrochimica Acta</i> , 2011, 56, 1792-1798.	2.6	75
104	Electrochemical and AFM studies of mussel adhesive protein (Mefp-1) as corrosion inhibitor for carbon steel. <i>Electrochimica Acta</i> , 2011, 56, 1636-1645.	2.6	87
105	Minuscule device for hydrogen generation/electrical energy collection system on aluminum alloy surface. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 2855-2859.	3.8	7
106	Study of nobility of chromium nitrides in isothermally aged duplex stainless steels by using SKPFM and SEM/EDS. <i>Corrosion Science</i> , 2010, 52, 179-186.	3.0	120
107	Investigation of Influence of Small Particles in MP35N on the Corrosion Resistance in Synthetic Biological Environment. <i>Journal of the Electrochemical Society</i> , 2009, 156, C341.	1.3	3
108	Depletion effects at phase boundaries in 2205 duplex stainless steel characterized with SKPFM and TEM/EDS. <i>Corrosion Science</i> , 2009, 51, 1850-1860.	3.0	170

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109	Localized corrosion behaviour of reinforcement steel in simulated concrete pore solution. <i>Corrosion Science</i> , 2009, 51, 2130-2138.	3.0	102
110	An electrochemical impedance spectroscopy study of copper in a bentonite/saline groundwater environment. <i>Electrochimica Acta</i> , 2008, 53, 7556-7564.	2.6	31
111	Electrochemical behavior and anticorrosion properties of modified polyaniline dispersed in polyvinylacetate coating on carbon steel. <i>Electrochimica Acta</i> , 2008, 53, 4239-4247.	2.6	75
112	Characterization of Phases in Duplex Stainless Steel by Magnetic Force Microscopy/Scanning Kelvin Probe Force Microscopy. <i>Electrochemical and Solid-State Letters</i> , 2008, 11, C41.	2.2	51
113	Nickel release from nickel particles in artificial sweat. <i>Contact Dermatitis</i> , 2007, 56, 325-330.	0.8	24
114	Tafel slopes used in monitoring of copper corrosion in a bentonite/groundwater environment. <i>Corrosion Science</i> , 2005, 47, 3267-3279.	3.0	42
115	Determination of instantaneous corrosion rates and runoff rates of copper from naturally patinated copper during continuous rain events. <i>Corrosion Science</i> , 2002, 44, 2131-2151.	3.0	86