Alison J Davenport

List of Publications by Year
in descending order

112 papers	5,534 citations	66336 42 h-index	82542 72 g-index
112 all docs	112 docs citations	112 times ranked	3775 citing authors

#	Article	IF	Citations
1	Influence of microdefects in rust layer of weathering steel on corrosion resistance from 3D observation by synchrotron X-ray micro tomography. Materials Today Communications, 2022, 31, 103219.	1.9	2
2	Temperature-Dependence Corrosion Behavior of Ti6Al4V in the Presence of HCl. Frontiers in Materials, 2022, 9, .	2.4	8
3	In Situ X-ray Tomography Observations of Initiation and Propagation of Pits During Atmospheric Corrosion of Aluminium Alloy AA2024. Journal of the Electrochemical Society, 2021, 168, 031508.	2.9	3
4	The Influence of Partial Replacement of Cu with Ga on the Corrosion Behavior of Ti₄₀Zr₁₀Cu₃₆Pd₁₄ÂMetallic Glasses. Journal of the Electrochemical Society, 2019, 166, C485-C491.	2.9	4
5	The effect of relative humidity change on atmospheric pitting corrosion of stainless steel 304L. Corrosion Science, 2019, 150, 110-120.	6.6	31
6	Effect of Mixed Salts on Atmospheric Corrosion of 304 Stainless Steel. Journal of the Electrochemical Society, 2019, 166, C3010-C3014.	2.9	19
7	Effect of Zr Addition on the Corrosion of Ti in Acidic and Reactive Oxygen Species (ROS)-Containing Environments. ACS Biomaterials Science and Engineering, 2018, 4, 1103-1111.	5.2	20
8	Time-dependent Enhanced Corrosion of Ti6Al4V in the Presence of H2O2 and Albumin. Scientific Reports, 2018, 8, 3185.	3.3	49
9	Effect of Microstructure on the Morphology of Atmospheric Corrosion Pits in Type 304L Stainless Steel. Corrosion, 2018, 74, 1373-1384.	1.1	14
10	In Situ Synchrotron Xâ€Ray Diffraction Characterization of Corrosion Products of a Tiâ€Based Metallic Glass for Implant Applications. Advanced Healthcare Materials, 2018, 7, e1800338.	7.6	4
11	The Effect of Deposition Conditions on Atmospheric Pitting Corrosion Location Under Evans Droplets on Type 304L Stainless Steel. Corrosion, 2018, 74, 520-529.	1.1	9
12	Operando Assessment of Galvanic Corrosion Between Al-Zn-Mg-Cu Alloy and a Stainless Steel Fastener Using X-ray Tomography. Corrosion, 2018, 74, 5-23.	1.1	15
13	The effect of carbon within corrosion pits of iron in chloride solutions. Corrosion Engineering Science and Technology, 2017, 52, 383-390.	1.4	3
14	Effect of Nitrate and Sulfate on Atmospheric Corrosion of 304L and 316L Stainless Steels. Journal of the Electrochemical Society, 2017, 164, C148-C163.	2.9	30
15	In-Situ Synchrotron X-ray Characterization of Corrosion Products in Zr Artificial Pits in Simulated Physiological Solutions. Journal of the Electrochemical Society, 2017, 164, C1003-C1012.	2.9	8
16	Quantitative, Inâ€…Situ Visualization of Metalâ€Ion Dissolution and Transport Using 1 H Magnetic Resonance Imaging. Angewandte Chemie, 2016, 128, 9540-9543.	2.0	1
17	Quantitative, Inâ€…Situ Visualization of Metalâ€Ion Dissolution and Transport Using 1 H Magnetic Resonance Imaging. Angewandte Chemie - International Edition, 2016, 55, 9394-9397.	13.8	28
18	In-Situ Synchrotron Studies of the Effect of Nitrate on Iron Artificial Pits in Chloride Solutions. Journal of the Electrochemical Society, 2015, 162, C243-C250.	2.9	18

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19	In-situ Synchrotron Studies of the Effect of Nitrate on Iron Artificial Pits in Chloride Solutions. Journal of the Electrochemical Society, 2015, 162, C238-C242.	2.9	12
20	Lipopolysaccharide inhibits or accelerates biomedical titanium corrosion depending on environmental acidity. International Journal of Oral Science, 2015, 7, 179-186.	8.6	49
21	Synchrotron X-ray radiography studies of pitting corrosion of stainless steel: Extraction of pit propagation parameters. Corrosion Science, 2015, 100, 23-35.	6.6	83
22	Localised corrosion: general discussion. Faraday Discussions, 2015, 180, 381-414.	3.2	29
23	Corrosion scales and passive films: general discussion. Faraday Discussions, 2015, 180, 205-232.	3.2	7
24	Corrosion control: general discussion. Faraday Discussions, 2015, 180, 543-576.	3.2	12
25	Atmospheric pitting corrosion of 304L stainless steel: the role of highly concentrated chloride solutions. Faraday Discussions, 2015, 180, 251-265.	3.2	46
26	Operando Observation of Galvanic Corrosion Between Aluminum Alloy 7050-T7451 and 304 Stainless Steel in a Simulated Fastener Arrangement Using X-Ray Tomography. Corrosion, 2015, 71, 1171-1176.	1.1	19
27	Determination of Cathodic and Anodic Charge from Operando X-Ray Tomography Observation of Galvanic Corrosion of Aluminum Alloy 7050-T7451 and 304 Stainless Steel in a Simulated Fastener. Corrosion, 2015, 71, 1300-1303.	1.1	18
28	The Effect of Nitrate on Salt Layers in Pitting Corrosion of 304L Stainless Steel. Journal of the Electrochemical Society, 2015, 162, C457-C464.	2.9	24
29	A synergistic effect of albumin and H2O2 accelerates corrosion of Ti6Al4V. Acta Biomaterialia, 2015, 26, 355-365.	8.3	103
30	Mechanistic studies of atmospheric pitting corrosion of stainless steel for ILW containers. Corrosion Engineering Science and Technology, 2014, 49, 514-520.	1.4	22
31	In Situ, Real-Time Visualization of Electrochemistry Using Magnetic Resonance Imaging. Journal of Physical Chemistry Letters, 2013, 4, 3019-3023.	4.6	46
32	Interfacial Phenomena during Salt Layer Formation under High Rate Dissolution Conditions. Journal of Physical Chemistry B, 2013, 117, 6724-6732.	2.6	11
33	Lymphoid Aggregates That Resemble Tertiary Lymphoid Organs Define a Specific Pathological Subset in Metal-on-Metal Hip Replacements. PLoS ONE, 2013, 8, e63470.	2.5	50
34	Pit Propagation in Pure Aluminum Investigated via the 1D Artificial Pit Technique: Growth Regimes, Surface Morphology and Implications for Stability Criteria. ECS Transactions, 2012, 41, 121-132.	0.5	5
35	(Invited)Localized Dissolution Kinetics From Fast In Situ Radiography of Propagating Pits in Stainless Steel and Implications for Modeling Pitting Corrosion over Long Time-Scales. ECS Transactions, 2012, 41, 3-16.	0.5	22
36	Do â€˜passiveâ€™ medical titanium surfaces deteriorate in service in the absence of wear?. Journal of the Royal Society Interface, 2012, 9, 3161-3164.	3.4	83

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37	Corrosion protection of AA2024-T351 friction stir welds by laser surface melting with Excimer laser. Corrosion Engineering Science and Technology, 2012, 47, 188-202.	1.4	8
38	Corrosion behaviour of banded microstructure within nugget of friction stir welds in AA2024-T351. Materials Science and Technology, 2011, 27, 208-213.	1.6	4
39	In situ synchrotron X-ray micro-tomography study of pitting corrosion in stainless steel. Corrosion Science, 2011, 53, 2684-2687.	6.6	94
40	Use of inkjet printing to deposit magnesium chloride salt patterns for investigation of atmospheric corrosion of 304 stainless steel. Corrosion Science, 2011, 53, 3114-3121.	6.6	28
41	Corrosion protection of AA7449-T7951 friction stir welds by laser surface melting with an Excimer laser. Corrosion Science, 2011, 53, 3956-3969.	6.6	26
42	XANES Study of the Chemistry of Molybdenum in Artificial Corrosion Pits in 316L Stainless Steel. Journal of the Electrochemical Society, 2011, 158, C111.	2.9	13
43	Pitting corrosion of stainless steel: measuring and modelling pit propagation in support of damage prediction for radioactive waste containers. Corrosion Engineering Science and Technology, 2011, 46, 205-211.	1.4	46
44	Visualisation of chemical processes during corrosion of zinc using magnetic resonance imaging. Electrochemistry Communications, 2010, 12, 44-47.	4.7	21
45	Oral Keratinocyte Responses to Nickel-based Dental Casting AlloysIn Vitro. Journal of Biomaterials Applications, 2010, 25, 251-267.	2.4	9
46	Effect of cryogenic cooling on corrosion of friction stir welded AA7010â€T7651. Anti-Corrosion Methods and Materials, 2010, 57, 83-89.	1.5	19
47	Microstructure and corrosion of Pd-modified Ti alloys produced by powder metallurgy. Corrosion Science, 2010, 52, 2413-2421.	6.6	18
48	In situ X-ray tomography of intergranular corrosion of 2024 and 7050 aluminium alloys. Corrosion Science, 2010, 52, 3855-3860.	6.6	79
49	A method to detect retained gas during AC electrograining using in-situ small angle X-ray scattering. Electrochemistry Communications, 2010, 12, 717-719.	4.7	10
50	Understanding the Directional Dependence of Intergranular Corrosion in Aluminium Alloys. Materials Science Forum, 2010, 654-656, 946-949.	0.3	8
51	The effect of cryogenic CO₂cooling on corrosion behaviour of friction stir welded AA2024-T351. Corrosion Engineering Science and Technology, 2009, 44, 425-432.	1.4	15
52	Microstructure, mechanical properties, and corrosion of friction stir welded Al 5456. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 519, 1-8.	5.6	47
53	Characterisation of salt films on dissolving metal surfaces in artificial corrosion pits via in situ synchrotron X-ray diffraction. Electrochemistry Communications, 2008, 10, 855-858.	4.7	50
54	In situ monitoring of corrosion processes within the bulk of AlMgSi alloys using X-ray microtomography. Corrosion Science, 2008, 50, 3455-3466.	6.6	42

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55	Synchrotron X-Ray Microtomography Study of the Role of Y in Corrosion of Magnesium Alloy WE43. Electrochemical and Solid-State Letters, 2007, 10, C5.	2.2	63
56	The effect of welding parameters on the corrosion behaviour of friction stir welded AA2024â€“T351. Corrosion Science, 2007, 49, 877-909.	6.6	186
57	Emeraldine base as corrosion protective layer on aluminium alloy AA5182, effect of the surface microstructure. Corrosion Science, 2007, 49, 818-829.	6.6	40
58	Characterisation by X-ray absorption near-edge spectroscopy of KMnO4-based no-rinse conversion coatings on Al and Al alloys. Corrosion Science, 2007, 49, 1981-1991.	6.6	12
59	Magnetic Field Effects on the Corrosion of Artificial Pit Electrodes and Pits in Thin Films. Journal of the Electrochemical Society, 2007, 154, C362.	2.9	46
60	Corrosion of nickel-based dental casting alloys. Dental Materials, 2007, 23, 714-723.	3.5	98
61	Effect of iron-containing intermetallic particles on the corrosion behaviour of aluminium. Corrosion Science, 2006, 48, 3455-3471.	6.6	194
62	Corrosion and Protection of Friction Stir Welds. Materials Science Forum, 2006, 519-521, 699-704.	0.3	2
63	Intergranular Corrosion and Stress Corrosion Cracking of Sensitised AA5182. Materials Science Forum, 2006, 519-521, 641-646.	0.3	90
64	X-ray microtomography studies of localised corrosion and transitions to stress corrosion cracking. Materials Science and Technology, 2006, 22, 1076-1085.	1.6	81
65	Corrosion of a dissimilar friction stir weld joining aluminium alloys AA2024 and AA7010. Corrosion Engineering Science and Technology, 2006, 41, 135-142.	1.4	18
66	Electrochemical Behavior of the Active Surface Layer on Rolled Aluminum Alloy Sheet. Journal of the Electrochemical Society, 2004, 151, B53.	2.9	43
67	Laser Treatment Method for Improvement of the Corrosion Resistance of Friction Stir Welds. Materials Science Forum, 2003, 426-432, 2855-2860.	0.3	26
68	The Effect of Heat Treatment and Surface Roughness on the Zincate Treatment of Aluminium Alloy 6082. Transactions of the Institute of Metal Finishing, 2001, 79, 85-89.	1.3	3
69	In Situ Synchrotron X-Ray Microprobe Studies of Passivation Thresholds in Fe-Cr Alloys. Journal of the Electrochemical Society, 2001, 148, B217.	2.9	18
70	Comparison of Voltammetric Responses of Toluene and Xylenes at Iron(III)-Doped, Bismuth(V)-Doped, and Undoped Î²-Lead Dioxide Film Electrodes in 0.50 M H[sub 2]SO[sub 4]. Journal of the Electrochemical Society, 2001, 148, E459.	2.9	44
71	The Structure of the Passive Film That Forms on Iron in Aqueous Environments. Journal of the Electrochemical Society, 2000, 147, 2162.	2.9	232
72	In Situ X-Ray-Diffraction Studies of Passive Oxide Films. MRS Bulletin, 1999, 24, 29-35.	3.5	17

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73	X-ray scattering studies of the passive oxide film formed on iron. Synchrotron Radiation News, 1998, 11, 5-11.	0.8	1
74	Electrochemical Behavior of Cr2â€‰Oâ€‰3â€‰/â€‰Fe2â€‰Oâ€‰3 Artificial Passive Films Studied by In Situ XANES. Journal of the Electrochemical Society, 1998, 145, 791-801.	2.9	92
75	In Situ Xâ€Ray Absorption Near Edge Structure Study of the Potential Dependence of the Formation of the Passive Film on Iron in Borate Buffer. Journal of the Electrochemical Society, 1997, 144, 2398-2404.	2.9	79
76	Dissolution of Thin Iron Oxide Films Used as Models for Iron Passive Films Studied by In Situ Xâ€Ray Absorption Nearâ€Edge Spectroscopy. Journal of the Electrochemical Society, 1997, 144, 198-204.	2.9	46
77	Atomic Structure of the Passive Oxide Film Formed on Iron. Physical Review Letters, 1997, 79, 4282-4285.	7.8	189
78	In Situ Xâ€Ray Absorption Nearâ€Edge Spectroscopic Study of the Cathodic Reduction of Artificial Iron Oxide Passive Films. Journal of the Electrochemical Society, 1996, 143, 574-582.	2.9	84
79	Transpassive Dissolution of Cr and Sputterâ€Deposited Cr Oxides Studied by In Situ Xâ€Ray Nearâ€Edge Spectroscopy. Journal of the Electrochemical Society, 1996, 143, 3997-4005.	2.9	84
80	Studies of the Formation of Ceriumâ€Rich Protective Films Using Xâ€Ray Absorption Nearâ€Edge Spectroscopy and Rotating Disk Electrode Methods. Journal of the Electrochemical Society, 1996, 143, 147-154.	2.9	255
81	Selective Dissolution in Copper-Tin Alloys: Formation of Corrosion-Resistant Patina on Ancient Chinese Bronze Mirrors. Materials Research Society Symposia Proceedings, 1996, 432, 283.	0.1	2
82	Investigation and Replication of the Surface Microstructure of Early Chinese Black Bronzemirrors. Materials Research Society Symposia Proceedings, 1995, 352, 215.	0.1	1
83	Repassivation Transients Measured with the Breakingâ€Electrode Technique on Aluminum Thinâ€Film Samples. Journal of the Electrochemical Society, 1995, 142, 2290-2295.	2.9	26
84	High Resolution In Situ XANES Investigation of the Nature of the Passive Film on Iron in a pH 8.4 Borate Buffer. Journal of the Electrochemical Society, 1995, 142, 725-730.	2.9	94
85	In Situ XANES Study of Galvanostatic Reduction of the Passive Film on Iron. Journal of the Electrochemical Society, 1995, 142, 721-724.	2.9	45
86	The Investigation of Cerium as a Cathodic Inhibitor for Aluminumâ€Copper Alloys. Journal of the Electrochemical Society, 1995, 142, 3342-3350.	2.9	273
87	In Situ Multielement XANES Study of Formation and Reduction of the Oxide Film on Stainless Steel. Journal of the Electrochemical Society, 1994, 141, L6-L8.	2.9	24
88	In Situ Scanning Tunneling Microscopy Studies of the Formation and Reduction of a Gold Oxide Monolayer on Au(111). Journal of the Electrochemical Society, 1994, 141, 1291-1298.	2.9	65
89	Xâ€Ray Absorption Study of Electrochemically Grown Oxide Films on AlCr Sputtered Alloys: II . In Situ Studies. Journal of the Electrochemical Society, 1994, 141, 83-90.	2.9	20
90	Characterization of the oxidation of tantalum nitride. Surface and Interface Analysis, 1993, 20, 559-564.	1.8	22

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91	In situ studies of passive film chemistry using X-ray absorption spectroscopy. Corrosion Science, 1993, 35, 19-25.	6.6	15
92	The mechanism of corrosion inhibition by chromate conversion coatings from x-ray absorption near edge spectroscopy (Xanes). Corrosion Science, 1993, 34, 41-49.	6.6	208
93	Surface Roughness of Silicon Wafers on Different Lateral Length Scales. Journal of the Electrochemical Society, 1993, 140, L75-L77.	2.9	20
94	In situx-ray-diffraction and -reflectivity studies of the Au(111)/electrolyte interface: Reconstruction and anion adsorption. Physical Review B, 1992, 46, 10321-10338.	3.2	254
95	In Situ XANES Detection of Cr(VI) in the Passive Film on Feâ€26Cr. Journal of the Electrochemical Society, 1992, 139, 371-373.	2.9	52
96	Xâ€Ray Absorption Study of Electrochemically Grown Oxide Films on Alâ€Cr Sputtered Alloys: I . Ex situ Studies. Journal of the Electrochemical Society, 1992, 139, 1812-1820.	2.9	13
97	Surface Charge--Induced Ordering of the Au(111) Surface. Science, 1992, 255, 1416-1418.	12.6	127
98	Reply to â€œcomment on â€˜Cr LVV Auger emission and photoreduction of hexavalent Cr oxidesâ€™ by E. Paparazzoâ€• Surface Science, 1992, 273, L480-L481.	1.9	1
99	Electrochemical behavior of thin masking coatings. Corrosion Science, 1992, 33, 1141-1145.	6.6	2
100	CrLVV Auger emission and photoreduction of hexavalent Cr oxides. Surface Science, 1991, 250, 139-146.	1.9	20
101	In Situ Xâ€Ray Absorption Study of Chromium Valency Changes in Passive Oxides on Sputtered AlCr Thin Films under Electrochemical Control. Journal of the Electrochemical Society, 1991, 138, 337-338.	2.9	23
102	The Electrochemical Response of Steel to the Presence of Dissolved Cerium. Journal of the Electrochemical Society, 1991, 138, 390-393.	2.9	57
103	XANES investigation of the role of cerium compounds as corrosion inhibitors for aluminum. Corrosion Science, 1991, 32, 653-663.	6.6	150
104	Repassivation Transients Measured with Thin Film Breaking Electrodes. Journal of the Electrochemical Society, 1991, 138, 643-644.	2.9	25
105	Upper limits on emission rates of neutrons and gamma-rays from â€œcold fusionâ€•in deuterided metals. Journal of Fusion Energy, 1990, 9, 217-217.	1.2	3
106	In situx-ray reflectivity and diffraction studies of the Au(001) reconstruction in an electrochemical cell. Physical Review Letters, 1990, 65, 1466-1469.	7.8	251
107	Concerning the Distribution of the Overpotential during Anodic Oxide Film Growth. Journal of the Electrochemical Society, 1990, 137, 1496-1501.	2.9	28
108	The Influence of Surface Capacitance on the Measurements of Localized Corrosion Transients. Journal of the Electrochemical Society, 1990, 137, 2196-2198.	2.9	10

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109	Glancing angle x-ray studies of oxide films. Corrosion Science, 1990, 31, 105-110.	6.6	19
110	Xâ€Ray Absorption Study of Cerium in the Passive Film on Aluminum. Journal of the Electrochemical Society, 1989, 136, 1837-1838.	2.9	26
111	Upper limits on neutron and Î³-ray emission from cold fusion. Nature, 1989, 340, 29-34.	27.8	69
112	The Currentâ€Time Relationship during Anodic Oxide Film Growth under High Electric Field. Journal of the Electrochemical Society, 1989, 136, 936-941.	2.9	102