Martin S Bojinov

List of Publications by Year
in descending order

127	2,953	136950	206112
papers	citations	32 h-index	48 g-index

127	127	127	1483
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Corrosion of Alloy 690 in Simulated Steam Generator Crevices: Effect of Applied Potential, pH and Pb Addition. Journal of the Electrochemical Society, 2022, 169, 021502.	2.9	7
2	Nano-porous TiO2 electrochemically doped with Mo oxide â€“ Composition, electrochemical and photo-electrochemical properties. Materials Chemistry and Physics, 2022, 285, 126139.	4.0	0
3	Anodic oxide films on stainless steel as prospective photo-anodes for light-assisted electrochemical water splitting. Journal of Photochemistry and Photobiology A: Chemistry, 2022, 429, 113953.	3.9	3
4	Re-passivation rate and conduction mechanism of surface film on copper in nitrite solutions. Corrosion Science, 2022, 205, 110447.	6.6	3
5	A comparative study of hydrazine alternatives in simulated steam generator conditionsâ€”Oxygen reaction kinetics and interaction with carbon steel. Electrochimica Acta, 2021, 369, 137697.	5.2	5
6	Parameterization and Extension of a Model of Oxide Growth by a Multi-Method Approach. Journal of the Electrochemical Society, 2021, 168, 031502.	2.9	2
7	Influence of ionic strength on hydrogen generation during interaction of copper with deoxygenated neutral solution. Corrosion Science, 2021, 188, 109552.	6.6	4
8	Effect of potential on dissociative adsorption of water on titanium assessed by density functional theory calculations. Computational Materials Science, 2020, 171, 109260.	3.0	4
9	Identification of key parameters of magnetite deposition on steam generator surfacesâ€”Modeling and preliminary experiments. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 586, 124239.	4.7	1
10	Modeling barrier film growth and dissolution on titanium based on EIS, XPS and photocurrent data. Electrochimica Acta, 2020, 344, 136137.	5.2	7
11	Characterization and Modeling of Anodic Oxide Films on a Ti Alloy in Fluoride-Containing Electrolyte. Journal of the Electrochemical Society, 2020, 167, 121506.	2.9	2
12	(Invited) Multiscale Modelling of Titanium Oxide Growth and Dissolution in Fluoride-Containing Electrolytes. ECS Meeting Abstracts, 2020, MA2020-02, 1259-1259.	0.0	0
13	Effect of lead and applied potential on corrosion of carbon steel in steam generator crevice solutions. Corrosion Science, 2019, 159, 108117.	6.6	8
14	Deposition of molybdenum oxide in nanoporous titanium oxide template â€“ modified with â€“ composition, electrical and optical properties. Applied Surface Science, 2018, 448, 331-340.	6.1	3
15	Hydrogen generation during interaction of oxide covered copper with deoxygenated aqueous solution. Electrochimica Acta, 2018, 274, 143-151.	5.2	7
16	Localized corrosion of pressure vessel steel in a boiling water reactor cladding flaw â€“ modeling of electrochemical conditions and dedicated experiments. Electrochimica Acta, 2017, 241, 10-27.	5.2	8
17	Corrosion Behavior of Carbon Steel Coated with Octadecylamine in the Secondary Circuit of a Pressurized Water Reactor. Journal of Materials Engineering and Performance, 2017, 26, 6037-6046.	2.5	9
18	Effect of sulfate and dissolved hydrogen on oxide films on stainless steel in high-temperature water. Journal of Solid State Electrochemistry, 2017, 21, 3505-3518.	2.5	2

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19	Oxidation Parameters of Oxide Dispersion-Strengthened Steels in Supercritical Water. Journal of Nuclear Engineering and Radiation Science, 2016, 2, .	0.4	1
20	Corrosion Mechanism of Low-Alloyed Steel in High-Temperature Water: Effect of Additives and Time of Exposure. Journal of the Electrochemical Society, 2016, 163, C530-C538.	2.9	4
21	Electrochemical methods to study hydrogen production during interaction of copper with deoxygenated aqueous solution. Electrochimica Acta, 2016, 202, 333-344.	5.2	11
22	Coupling between dissolution and passivation revisited â€“ Kinetic parameters of anodic oxidation of titanium alloys in a fluoride-containing electrolyte. Journal of Electroanalytical Chemistry, 2015, 737, 150-161.	3.8	20
23	Effect of chloride and sulfate additions on corrosion of low alloy steel in high-temperature water. Electrochimica Acta, 2015, 173, 757-770.	5.2	15
24	Oxidation model for construction materials in supercritical waterâ€”Estimation of kinetic and transport parameters. Corrosion Science, 2015, 100, 36-46.	6.6	15
25	Effect of hydrazine on general corrosion of carbon and low-alloyed steels in pressurized water reactor secondary side water. Nuclear Engineering and Design, 2015, 295, 106-115.	1.7	5
26	Effect of Chloride on the Oxides on Low-Alloyed Steel in Conditions of a Light Water Reactor Pressure Vessel Cladding Flaw. Journal of the Electrochemical Society, 2014, 161, C177-C187.	2.9	7
27	Multi-Scale Modeling of the Initial Stages of Anodic Oxidation of Titanium. Journal of the Electrochemical Society, 2014, 161, E3188-E3195.	2.9	5
28	Interfacial and bulk processes during oxide growth on titanium in ethylene glycol-based electrolytes. Journal of Solid State Electrochemistry, 2013, 17, 1271-1283.	2.5	12
29	Influence of chloride on the long-term interaction of copper with deoxygenated neutral aqueous solutions. Corrosion Science, 2013, 76, 192-205.	6.6	10
30	Long-Term Interaction of Copper with a Deoxygenated Neutral Aqueous Solution. Journal of the Electrochemical Society, 2013, 160, C49-C58.	2.9	4
31	Effect of microstructure on the electrocatalytic activity for hydrogen evolution of amorphous and nanocrystalline Zrâ€“Ni alloys. International Journal of Hydrogen Energy, 2012, 37, 10499-10506.	7.1	46
32	Effect of water chemistry on the oxide film on Alloy 690 during simulated hot functional testing of a pressurised water reactor. Corrosion Science, 2012, 58, 20-32.	6.6	40
33	Influence of fluoride content on the barrier layer formation and titanium dissolution in ethylene glycolâ€“water electrolytes. Electrochimica Acta, 2012, 78, 65-74.	5.2	60
34	Estimation of kinetic parameters of the corrosion layer constituents on steels in supercritical water coolant conditions. Corrosion Science, 2011, 53, 4193-4203.	6.6	22
35	Mechanism of anodic oxidation of molybdenum in nearly-neutral electrolytes studied by electrochemical impedance spectroscopy and X-ray photoelectron spectroscopy. Electrochimica Acta, 2011, 56, 7899-7906.	5.2	29
36	Estimation of kinetic parameters of the passive state of carbon steel in mildly alkaline solutions from electrochemical impedance spectroscopic and X-ray photoelectron spectroscopic data. Electrochimica Acta, 2011, 56, 5910-5918.	5.2	11

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37	Interaction of metallic materials with simulated kraft digester white liquor â€“ Towards the electrochemical detection of sulphide. Journal of Electroanalytical Chemistry, 2011, 654, 52-59.	3.8	3
38	Barrier Layer Growth and Nanopore Initiation During Anodic Oxidation of Tungsten and Niobium. ECS Transactions, 2010, 25, 89-104.	0.5	5
39	Optimisation of the hot conditioning of carbon steel surfaces of primary heat transport system of Pressurized Heavy Water Reactors using electrochemical impedance spectroscopy. Journal of Nuclear Materials, 2010, 401, 46-54.	2.7	11
40	Effect of dissolved oxygen on oxidation and hydrogen pick up behaviourâ€"Zircaloy vs Zrâ€“Nb alloys. Nuclear Engineering and Design, 2010, 240, 985-994.	1.7	32
41	Estimation of kinetic and transport parameters by quantitative evaluation of EIS and XPS data. Electrochimica Acta, 2010, 55, 6163-6173.	5.2	31
42	Influence of water chemistry on the corrosion mechanism of a zirconiumâ€“niobium alloy in simulated light water reactor coolant conditions. Corrosion Science, 2010, 52, 54-67.	6.6	73
43	Effect of sulphide on the corrosion behaviour of AISI 316L stainless steel and its constituent elements in simulated Kraft digester conditions. Corrosion Science, 2010, 52, 1499-1507.	6.6	44
44	A mechanism of interaction of copper with a deoxygenated neutral aqueous solution. Corrosion Science, 2010, 52, 2917-2927.	6.6	31
45	Mechanism of anodic oxidation of tungsten in neutral sulphate-fluoride solutions. Journal of Solid State Electrochemistry, 2009, 13, 309-320.	2.5	15
46	Nanoporous oxide formation by anodic oxidation of Nb in sulphateâ€“fluoride electrolytes. Journal of Solid State Electrochemistry, 2009, 13, 1215-1226.	2.5	14
47	Influence of Zn on the oxide layer on AISI 316L(NG) stainless steel in simulated pressurised water reactor coolant. Electrochimica Acta, 2009, 54, 1056-1069.	5.2	38
48	Characterisation of the oxide layer on carbon steel during hot conditioning of primary heat transport systems in heavy-water reactors. Corrosion Science, 2009, 51, 1146-1156.	6.6	23
49	Influence of Additives on the Transpassive Dissolution of Ferritic Steels in Phosphoric Acid-Acetic Acid Electrolytes. ECS Transactions, 2008, 11, 43-52.	0.5	0
50	Kinetic parameters of the oxidation of zirconium alloys in simulated WWER water â€“ Effect of KOH content. Journal of Nuclear Materials, 2008, 378, 45-54.	2.7	15
51	Anodic oxidation of tungsten in sulphuric acid solutionâ€"Influence of hydrofluoric acid addition. Materials Chemistry and Physics, 2008, 112, 702-710.	4.0	25
52	Mixed-Conduction Model for Stainless Steel in a High-Temperature Electrolyte: Estimation of Kinetic Parameters of Inner Layer Constituents. Journal of the Electrochemical Society, 2008, 155, C81.	2.9	32
53	Surface film electrochemistry of austenitic stainless steel and its main constituents in supercritical water. Journal of Supercritical Fluids, 2007, 43, 333-340.	3.2	42
54	Estimation of the parameters of oxide film growth on nickel-based alloys in high-temperature water electrolytes. Electrochimica Acta, 2007, 52, 7475-7483.	5.2	51

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55	An electrochemical and surface analytical study of the formation of nanoporous oxides on niobium. Electrochimica Acta, 2007, 52, 7724-7731.	5.2	23
56	Oxidation of toluene on Bi-doped PbO2 studied by electrochemical impedance spectroscopy and UV spectrophotometry. Journal of Solid State Electrochemistry, 2007, 11, 1613-1620.	2.5	8
57	Passive film growth and oxide layer restructuring on stainless steel in a high-temperature borate electrolyte. , 2006, , 397-402.		0
58	In situ characterisation of the oxidation of Ni in ultrasupercritical water. Electrochemistry Communications, 2006, 8, 311-316.	4.7	3
59	In situ and ex situ characterisation of oxide films formed on strained stainless steel surfaces in high-temperature water. Applied Surface Science, 2006, 252, 8580-8588.	6.1	27
60	EIS Investigations of Transpassive Dissolution of Ferritic Steels in Aqueous and Molten Electrolytes. ECS Transactions, 2006, 2, 63-72.	0.5	0
61	Composition and Properties of Oxide Films on a Ferriti Steel and a Nickel-Based Alloy in Molten Hydroxide - Carbonate Electrolytes. ECS Transactions, 2006, 3, 429-438.	0.5	0
62	Development of a rapid screening test for SCC susceptibility of copper in disposal vault conditions. Materials Research Society Symposia Proceedings, 2006, 932, 1.	0.1	0
63	Composition, Structure, and Properties of Corrosion Layers on Ferritic and Austenitic Steels in Ultrasupercritical Water. Journal of the Electrochemical Society, 2006, 153, B464.	2.9	14
64	Interaction of Oxide Layers on Structural Materials with Light Water Reactor Coolants - its influence on the mechanism of oxide growth and restructuring. , 2006, , 431-436.		1
65	Effect of temperature and melt composition on the passivity of a Ni-10%Cr alloy in a molten electrolyte. , 2006, , 59-64.		0
66	Composition and conduction mechanism of the surface oxide film on Ni-based alloys in molten hydroxide. Applied Surface Science, 2005, 241, 459-470.	6.1	9
67	In situ and ex situ characterisation of the passive film on a ferritic stainless steel in molten sodium hydroxide. Applied Surface Science, 2005, 249, 162-175.	6.1	7
68	Electrochemical and surface analytical study of the anodic oxidation of Feâ€“18% Cr steel in molten NaOHâ€“Li2CO3 mixtures. Materials Letters, 2005, 59, 2479-2483.	2.6	2
69	Transpassive dissolution mechanism of ferrous alloys in phosphoric acid/acetic acid mixtures. Journal of Solid State Electrochemistry, 2005, 9, 154-167.	2.5	5
70	A Mixed-Conduction Model for the Oxidation of Stainless Steel in a High-Temperature Electrolyte. Journal of the Electrochemical Society, 2005, 152, B250.	2.9	66
71	Conduction mechanism in oxide films on ferrous alloys studied by impedance spectroscopy in symmetrical and asymmetrical configurations. Journal of Electroanalytical Chemistry, 2004, 572, 211-223.	3.8	24
72	Transpassive dissolution of ferritic steels in a molten salt electrolyte. Electrochemistry Communications, 2004, 6, 1206-1211.	4.7	0

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73	Oxidative dissolution and anion-assisted solubilisation in the transpassive state of nickelâ€“chromium alloys. Electrochimica Acta, 2004, 49, 2295-2306.	5.2	17
74	Evidence of coupling between film growth and metal dissolution in passivation processes. Electrochimica Acta, 2003, 48, 4107-4117.	5.2	59
75	Role of surface reactions in the transpassive dissolution of ferrous alloys in concentrated H3PO4. Applied Surface Science, 2003, 220, 273-287.	6.1	9
76	The Influence of Solution Anion on the Mechanism of Transpassive Dissolution of Ferrous- and Nickel-Based Alloys. Journal of Physical Chemistry B, 2003, 107, 5101-5112.	2.6	19
77	Corrosion of Copper in 1 M NaCl under Strictly Anoxic Conditions. Materials Research Society Symposia Proceedings, 2003, 807, 630.	0.1	4
78	Electrochemical Behavior of Nickel-Chromium Alloys in a High-Temperature Aqueous Electrolyte. Corrosion, 2003, 59, 91-103.	1.1	37
79	Corrosion of Copper in Simulated Nuclear Waste Repository Conditions. Electrochemical and Solid-State Letters, 2003, 6, B19.	2.2	19
80	Transpassive Dissolution Mechanism of Ni-Based Alloys in a Simulated Bleaching Solution. Journal of the Electrochemical Society, 2002, 149, B499.	2.9	7
81	A mixed-conduction model for oxide films on Fe, Cr and Feâ€“Cr alloys in high-temperature aqueous electrolytesâ€“â€“I. Comparison of the electrochemical behaviour at room temperature and at 200 Â°C. Corrosion Science, 2002, 44, 1901-1921.	6.6	75
82	A mixed-conduction model for oxide films on Fe, Cr and Feâ€“Cr alloys in high-temperature aqueous electrolytesâ€”II. Adaptation and justification of the model. Corrosion Science, 2002, 44, 1923-1940.	6.6	59
83	The transpassive dissolution mechanism of highly alloyed stainless steels. Corrosion Science, 2002, 44, 2675-2697.	6.6	132
84	The transpassive dissolution mechanism of highly alloyed stainless steels. Corrosion Science, 2002, 44, 2699-2723.	6.6	48
85	Photocurrent response of the passive film on iron in a high-temperature aqueous electrolyte. Electrochemistry Communications, 2002, 4, 222-226.	4.7	9
86	Transpassive dissolution of Niâ€“Cr alloys in sulphate solutionsâ€”comparison between a model alloy and two industrial alloys. Electrochimica Acta, 2002, 47, 1697-1712.	5.2	18
87	Mechanism of transpassive dissolution of nickel-based alloys studied by impedance spectroscopy and rotating ring-disc voltammetry. Electrochimica Acta, 2002, 47, 2093-2107.	5.2	22
88	Influence of the electrolyte composition and temperature on the transpassive dissolution of austenitic stainless steels in simulated bleaching solutions. Electrochimica Acta, 2002, 47, 3335-3349.	5.2	20
89	Technical Note:Detection of Soluble Species Released during Metal Corrosion in High-Temperature Aqueous Solutions. Corrosion, 2001, 57, 387-393.	1.1	6
90	Contact electric impedance and resistance studies of the conduction mechanism in passive films on ferrous alloys. Electrochimica Acta, 2001, 46, 3627-3640.	5.2	21

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91	Electrochemical study of the passive behaviour of Niâ€“Cr alloys in a borate solutionâ€”a mixed-conduction model approach. Journal of Electroanalytical Chemistry, 2001, 504, 29-44.	3.8	69
92	Influence of molybdenum on the conduction mechanism in passive films on ironâ€“chromium alloys in sulphuric acid solution. Electrochimica Acta, 2001, 46, 1339-1358.	5.2	65
93	Conduction Mechanism of the Passive Film on Iron Based on Contact Electric Impedance and Resistance Measurements. Journal of the Electrochemical Society, 2001, 148, B243.	2.9	48
94	The mechanism of transpassive dissolution of Niâ€“Cr alloys in sulphate solutions. Electrochimica Acta, 2000, 45, 2791-2802.	5.2	78
95	Coupling between ionic defect structure and electronic conduction in passive films on iron, chromium and ironâ€“chromium alloys. Electrochimica Acta, 2000, 45, 2029-2048.	5.2	148
96	Conduction Mechanism of the Anodic Film on Feâ€Cr Alloys in Sulfate Solutions. Journal of the Electrochemical Society, 1999, 146, 3238-3247.	2.9	35
97	Studies on the redox behaviour of some polythiophene derivatives by impedance spectroscopy in symmetrical and asymmetrical configurations. Journal of Electroanalytical Chemistry, 1999, 472, 20-32.	3.8	21
98	Passivation mechanism of iron in concentrated phosphoric acid. Journal of Electroanalytical Chemistry, 1999, 475, 58-65.	3.8	28
99	Transpassivity mechanism of ironâ€“chromiumâ€“molybdenum alloys studied by AC impedance, DC resistance and RRDE measurements. Electrochimica Acta, 1999, 44, 4331-4343.	5.2	48
100	The stability of the passive state of ironâ€“chromium alloys in sulphuric acid solution. Corrosion Science, 1999, 41, 1557-1584.	6.6	90
101	Conduction mechanism of the anodic film on chromium in acidic sulphate solutions. Electrochimica Acta, 1998, 44, 247-261.	5.2	54
102	Influence of pH on the anodic dissolution mechanism of Feâ€“Mo alloys in sulphate solutions. Electrochimica Acta, 1998, 44, 721-734.	5.2	12
103	The Mechanism of the Transpassive Dissolution of Chromium in Acidic Sulfate Solutions. Journal of the Electrochemical Society, 1998, 145, 2043-2050.	2.9	42
104	Modelling the formation and growth of anodic passive films on metals in concentrated acid solutions. Journal of Solid State Electrochemistry, 1997, 1, 161-171.	2.5	44
105	The ability of a surface charge approach to describe barrier film growth on tungsten in acidic solutions. Electrochimica Acta, 1997, 42, 3489-3498.	5.2	110
106	A model for the transpassivity of molybdenum in acidic sulphate solutions based on ac impedance measurements. Electrochimica Acta, 1996, 41, 1173-1179.	5.2	34
107	A model for surface charge-assisted barrier film growth on metals in acidic solutions based on ac impedance measurements. Electrochimica Acta, 1996, 41, 2695-2705.	5.2	20
108	Influence of molybdenum on the anodic dissolution of iron in acidic solutions. Journal of Applied Electrochemistry, 1996, 26, 939.	2.9	4

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109	Barrier oxide film vs. salt layer formation on bismuth in tartaric acid solutions. Electrochimica Acta, 1995, 40, 591-598.	5.2	13
110	Anodic film growth on antimony in H3PO4 solutions. Electrochimica Acta, 1995, 40, 873-878.	5.2	9
111	Corrosion of nickel, iron, cobalt and their alloys in molten salt electrolytes. Journal of Materials Science, 1995, 30, 5561-5575.	3.7	27
112	Electrodeposition of refractory metals (Ti, Zr, Nb, Ta) from molten salt electrolytes. Journal of Applied Electrochemistry, 1995, 25, 993.	2.9	63
113	Influence of tin on the anodic behaviour of lead in sulphuric acid solutionsâ€"I. Voltammetric, photoelectrochemical and AC impedance measurements on a Pbâ€"10%Sn alloy. Electrochimica Acta, 1994, 39, 719-726.	5.2	23
114	The antimony / klebelsbergite electrode. Journal of Electroanalytical Chemistry, 1994, 367, 195-204.	3.8	6
115	Kinetics of the anodic oxidation of bismuth in glycolâ€"borate electrolyteâ€"a space charge approach. Electrochimica Acta, 1993, 38, 1061-1065.	5.2	4
116	Electrical properties of the barrier layer/solution interface and its role during breakdown of anodic bismuth oxide films. Electrochimica Acta, 1993, 38, 511-517.	5.2	9
117	Impedance measurements of a tin electrode in H2SO4 solutions. Journal of Electroanalytical Chemistry, 1993, 347, 207-221.	3.8	16
118	Electrochemical behaviour of the passive tin electrode in H2SO4 solutions at very positive potentials. Journal of Electroanalytical Chemistry, 1993, 358, 177-191.	3.8	14
119	Anodic oxidation of antimony at high overpotentials â€" formation of a barrier layer and klebelsbergite. Journal of Electroanalytical Chemistry, 1993, 346, 339-352.	3.8	8
120	Impedance of the Li Electrode in Liâ€‰/â€‰Li x MnO2 Accumulators at Openâ€Circuit Voltage. Journal of the Electrochemical Society, 1993, 140, 294-299.	2.9	7
121	Impedance measurements of the relaxation phenomena in the bismuth/anodic film/electrolyte system. Electrochimica Acta, 1992, 37, 2415-2420.	5.2	16
122	The processes of formation of a gel-like anodic layer during polarization of an antimony electrode in H2SO4 solution. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1991, 315, 201-216.	0.1	17
123	Electrochemical behaviour of the antimony electrode in sulphuric acid solutionsâ€"I. Corrosion processes and anodic dissolution of antimony. Electrochimica Acta, 1991, 36, 2081-2086.	5.2	44
124	Electrochemical behaviour of the antimony electrode in sulphuric acid solutionsâ€"III. identification of corrosion products after long-term polarization. Electrochimica Acta, 1991, 36, 2093-2102.	5.2	22
125	Electrochemical behaviour of the antimony electrode in sulphuric acid solutionsâ€"II. Formation and properties of the primary anodic layer. Electrochimica Acta, 1991, 36, 2087-2092.	5.2	42
126	Sealed lead/acid battery with auxiliary tungsten carbide electrodes. Journal of Power Sources, 1990, 31, 79-88.	7.8	12

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127	Impedance measurements of the lead/sodium sulphate system: synthesis of a.c. analogue circuit. Journal of Power Sources, 1990, 30, 287-299.	7.8	4