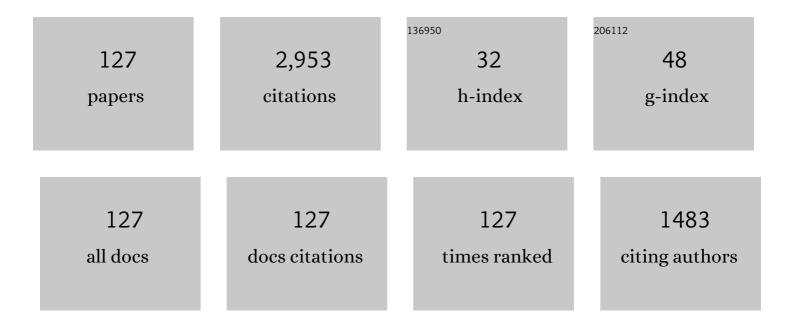
Martin S Bojinov

List of Publications by Year in descending order

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MARTIN S ROUNOV

#	Article	IF	CITATIONS
1	Coupling between ionic defect structure and electronic conduction in passive films on iron, chromium and iron–chromium alloys. Electrochimica Acta, 2000, 45, 2029-2048.	5.2	148
2	The transpassive dissolution mechanism of highly alloyed stainless steels. Corrosion Science, 2002, 44, 2675-2697.	6.6	132
3	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
4	The stability of the passive state of iron–chromium alloys in sulphuric acid solution. Corrosion Science, 1999, 41, 1557-1584.	6.6	90
5	The mechanism of transpassive dissolution of Ni–Cr alloys in sulphate solutions. Electrochimica Acta, 2000, 45, 2791-2802.	5.2	78
6	A mixed-conduction model for oxide films on Fe, Cr and Fe–Cr alloys in high-temperature aqueous electrolytes––l. Comparison of the electrochemical behaviour at room temperature and at 200 °C. Corrosion Science, 2002, 44, 1901-1921.	6.6	75
7	Influence of water chemistry on the corrosion mechanism of a zirconium–niobium alloy in simulated light water reactor coolant conditions. Corrosion Science, 2010, 52, 54-67.	6.6	73
8	Electrochemical study of the passive behaviour of Ni–Cr alloys in a borate solution—a mixed-conduction model approach. Journal of Electroanalytical Chemistry, 2001, 504, 29-44.	3.8	69
9	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
10	Influence of molybdenum on the conduction mechanism in passive films on iron–chromium alloys in sulphuric acid solution. Electrochimica Acta, 2001, 46, 1339-1358.	5.2	65
11	Electrodeposition of refractory metals (Ti, Zr, Nb, Ta) from molten salt electrolytes. Journal of Applied Electrochemistry, 1995, 25, 993.	2.9	63
12	Influence of fluoride content on the barrier layer formation and titanium dissolution in ethylene glycol–water electrolytes. Electrochimica Acta, 2012, 78, 65-74.	5.2	60
13	A mixed-conduction model for oxide films on Fe, Cr and Fe–Cr alloys in high-temperature aqueous electrolytes—II. Adaptation and justification of the model. Corrosion Science, 2002, 44, 1923-1940.	6.6	59
14	Evidence of coupling between film growth and metal dissolution in passivation processes. Electrochimica Acta, 2003, 48, 4107-4117.	5.2	59
15	Conduction mechanism of the anodic film on chromium in acidic sulphate solutions. Electrochimica Acta, 1998, 44, 247-261.	5.2	54
16	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
17	Transpassivity mechanism of iron–chromium–molybdenum alloys studied by AC impedance, DC resistance and RRDE measurements. Electrochimica Acta, 1999, 44, 4331-4343.	5.2	48
18	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

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19	The transpassive dissolution mechanism of highly alloyed stainless steels. Corrosion Science, 2002, 44, 2699-2723.	6.6	48
20	Effect of microstructure on the electrocatalytic activity for hydrogen evolution of amorphous and nanocrystalline Zr–Ni alloys. International Journal of Hydrogen Energy, 2012, 37, 10499-10506.	7.1	46
21	Electrochemical behaviour of the antimony electrode in sulphuric acid solutions—l. Corrosion processes and anodic dissolution of antimony. Electrochimica Acta, 1991, 36, 2081-2086.	5.2	44
22	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
23	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
24	Electrochemical behaviour of the antimony electrode in sulphuric acid solutions—II. Formation and properties of the primary anodic layer. Electrochimica Acta, 1991, 36, 2087-2092.	5.2	42
25	The Mechanism of the Transpassive Dissolution of Chromium in Acidic Sulfate Solutions. Journal of the Electrochemical Society, 1998, 145, 2043-2050.	2.9	42
26	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
27	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
28	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
29	Electrochemical Behavior of Nickel-Chromium Alloys in a High-Temperature Aqueous Electrolyte. Corrosion, 2003, 59, 91-103.	1.1	37
30	Conduction Mechanism of the Anodic Film on Fe r Alloys in Sulfate Solutions. Journal of the Electrochemical Society, 1999, 146, 3238-3247.	2.9	35
31	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
32	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
33	Effect of dissolved oxygen on oxidation and hydrogen pick up behaviour—Zircaloy vs Zr–Nb alloys. Nuclear Engineering and Design, 2010, 240, 985-994.	1.7	32
34	Estimation of kinetic and transport parameters by quantitative evaluation of EIS and XPS data. Electrochimica Acta, 2010, 55, 6163-6173.	5.2	31
35	A mechanism of interaction of copper with a deoxygenated neutral aqueous solution. Corrosion Science, 2010, 52, 2917-2927.	6.6	31
36	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

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37	Passivation mechanism of iron in concentrated phosphoric acid. Journal of Electroanalytical Chemistry, 1999, 475, 58-65.	3.8	28
38	Corrosion of nickel, iron, cobalt and their alloys in molten salt electrolytes. Journal of Materials Science, 1995, 30, 5561-5575.	3.7	27
39	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
40	Anodic oxidation of tungsten in sulphuric acid solution—Influence of hydrofluoric acid addition. Materials Chemistry and Physics, 2008, 112, 702-710.	4.0	25
41	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
42	Influence of tin on the anodic behaviour of lead in sulphuric acid solutions—I. Voltammetric, photoelectrochemical and AC impedance measurements on a Pb—10%Sn alloy. Electrochimica Acta, 1994, 39, 719-726.	5.2	23
43	An electrochemical and surface analytical study of the formation of nanoporous oxides on niobium. Electrochimica Acta, 2007, 52, 7724-7731.	5.2	23
44	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
45	Electrochemical behaviour of the antimony electrode in sulphuric acid solutions—III. identification of corrosion products after long-term polarization. Electrochimica Acta, 1991, 36, 2093-2102.	5.2	22
46	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
47	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
48	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
49	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
50	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
51	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
52	Coupling between dissolution and passivation revisited – Kinetic parameters of anodic oxidation of titanium alloys in a fluoride-containing electrolyte. Journal of Electroanalytical Chemistry, 2015, 737, 150-161.	3.8	20
53	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
54	Corrosion of Copper in Simulated Nuclear Waste Repository Conditions. Electrochemical and Solid-State Letters, 2003, 6, B19.	2.2	19

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55	Transpassive dissolution of Ni–Cr alloys in sulphate solutions—comparison between a model alloy and two industrial alloys. Electrochimica Acta, 2002, 47, 1697-1712.	5.2	18
56	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
57	Oxidative dissolution and anion-assisted solubilisation in the transpassive state of nickel–chromium alloys. Electrochimica Acta, 2004, 49, 2295-2306.	5.2	17
58	Impedance measurements of the relaxation phenomena in the bismuth/anodic film/electrolyte system. Electrochimica Acta, 1992, 37, 2415-2420.	5.2	16
59	Impedance measurements of a tin electrode in H2SO4 solutions. Journal of Electroanalytical Chemistry, 1993, 347, 207-221.	3.8	16
60	Kinetic parameters of the oxidation of zirconium alloys in simulated WWER water – Effect of KOH content. Journal of Nuclear Materials, 2008, 378, 45-54.	2.7	15
61	Mechanism of anodic oxidation of tungsten in neutral sulphate-fluoride solutions. Journal of Solid State Electrochemistry, 2009, 13, 309-320.	2.5	15
62	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
63	Oxidation model for construction materials in supercritical water—Estimation of kinetic and transport parameters. Corrosion Science, 2015, 100, 36-46.	6.6	15
64	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
65	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
66	Nanoporous oxide formation by anodic oxidation of Nb in sulphate–fluoride electrolytes. Journal of Solid State Electrochemistry, 2009, 13, 1215-1226.	2.5	14
67	Barrier oxide film vs. salt layer formation on bismuth in tartaric acid solutions. Electrochimica Acta, 1995, 40, 591-598.	5.2	13
68	Sealed lead/acid battery with auxiliary tungsten carbide electrodes. Journal of Power Sources, 1990, 31, 79-88.	7.8	12
69	Influence of pH on the anodic dissolution mechanism of Fe–Mo alloys in sulphate solutions. Electrochimica Acta, 1998, 44, 721-734.	5.2	12
70	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
71	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
72	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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73	Electrochemical methods to study hydrogen production during interaction of copper with deoxygenated aqueous solution. Electrochimica Acta, 2016, 202, 333-344.	5.2	11
74	Influence of chloride on the long-term interaction of copper with deoxygenated neutral aqueous solutions. Corrosion Science, 2013, 76, 192-205.	6.6	10
75	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
76	Anodic film growth on antimony in H3PO4 solutions. Electrochimica Acta, 1995, 40, 873-878.	5.2	9
77	Photocurrent response of the passive film on iron in a high-temperature aqueous electrolyte. Electrochemistry Communications, 2002, 4, 222-226.	4.7	9
78	Role of surface reactions in the transpassive dissolution of ferrous alloys in concentrated H3PO4. Applied Surface Science, 2003, 220, 273-287.	6.1	9
79	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
80	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
81	Anodic oxidation of antimony at high overpotentials — formation of a barrier layer and klebelsbergite. Journal of Electroanalytical Chemistry, 1993, 346, 339-352.	3.8	8
82	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
83	Localized corrosion of pressure vessel steel in a boiling water reactor cladding flaw – modeling of electrochemical conditions and dedicated experiments. Electrochimica Acta, 2017, 241, 10-27.	5.2	8
84	Effect of lead and applied potential on corrosion of carbon steel in steam generator crevice solutions. Corrosion Science, 2019, 159, 108117.	6.6	8
85	Impedance of the Li Electrode in Li / Li x MnO2 Accumulators at Open ircuit Voltage. Journal of the Electrochemical Society, 1993, 140, 294-299.	2.9	7
86	Transpassive Dissolution Mechanism of Ni-Based Alloys in a Simulated Bleaching Solution. Journal of the Electrochemical Society, 2002, 149, B499.	2.9	7
87	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
88	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
89	Hydrogen generation during interaction of oxide covered copper with deoxygenated aqueous solution. Electrochimica Acta, 2018, 274, 143-151.	5.2	7
90	Modeling barrier film growth and dissolution on titanium based on EIS, XPS and photocurrent data. Electrochimica Acta, 2020, 344, 136137.	5.2	7

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91	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
92	The antimony / klebelsbergite electrode. Journal of Electroanalytical Chemistry, 1994, 367, 195-204.	3.8	6
93	Technical Note:Detection of Soluble Species Released during Metal Corrosion in High-Temperature Aqueous Solutions. Corrosion, 2001, 57, 387-393.	1.1	6
94	Transpassive dissolution mechanism of ferrous alloys in phosphoric acid/acetic acid mixtures. Journal of Solid State Electrochemistry, 2005, 9, 154-167.	2.5	5
95	Barrier Layer Growth and Nanopore Initiation During Anodic Oxidation of Tungsten and Niobium. ECS Transactions, 2010, 25, 89-104.	0.5	5
96	Multi-Scale Modeling of the Initial Stages of Anodic Oxidation of Titanium. Journal of the Electrochemical Society, 2014, 161, E3188-E3195.	2.9	5
97	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
98	A comparative study of hydrazine alternatives in simulated steam generator conditions—Oxygen reaction kinetics and interaction with carbon steel. Electrochimica Acta, 2021, 369, 137697.	5.2	5
99	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
100	Kinetics of the anodic oxidation of bismuth in glycol—borate electrolyte—a space charge approach. Electrochimica Acta, 1993, 38, 1061-1065.	5.2	4
101	Influence of molybdenum on the anodic dissolution of iron in acidic solutions. Journal of Applied Electrochemistry, 1996, 26, 939.	2.9	4
102	Corrosion of Copper in 1 M NaCl under Strictly Anoxic Conditions. Materials Research Society Symposia Proceedings, 2003, 807, 630.	0.1	4
103	Long-Term Interaction of Copper with a Deoxygenated Neutral Aqueous Solution. Journal of the Electrochemical Society, 2013, 160, C49-C58.	2.9	4
104	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
105	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
106	Influence of ionic strength on hydrogen generation during interaction of copper with deoxygenated neutral solution. Corrosion Science, 2021, 188, 109552.	6.6	4
107	In situ characterisation of the oxidation of Ni in ultrasupercritical water. Electrochemistry Communications, 2006, 8, 311-316.	4.7	3
108	Interaction of metallic materials with simulated kraft digester white liquor – Towards the electrochemical detection of sulphide. Journal of Electroanalytical Chemistry, 2011, 654, 52-59.	3.8	3

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109	Deposition of molybdenum oxide in nanoporous titanium oxide template – modified with – composition, electrical and optical properties. Applied Surface Science, 2018, 448, 331-340.	6.1	3
110	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
111	Re-passivation rate and conduction mechanism of surface film on copper in nitrite solutions. Corrosion Science, 2022, 205, 110447.	6.6	3
112	Electrochemical and surface analytical study of the anodic oxidation of Fe–18% Cr steel in molten NaOH–Li2CO3 mixtures. Materials Letters, 2005, 59, 2479-2483.	2.6	2
113	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
114	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
115	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
116	Oxidation Parameters of Oxide Dispersion-Strengthened Steels in Supercritical Water. Journal of Nuclear Engineering and Radiation Science, 2016, 2, .	0.4	1
117	Identification of key parameters of magnetite deposition on steam generator surfaces—Modeling and preliminary experiments. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 586, 124239.	4.7	1
118	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
119	Transpassive dissolution of ferritic steels in a molten salt electrolyte. Electrochemistry Communications, 2004, 6, 1206-1211.	4.7	0
120	Passive film growth and oxide layer restructuring on stainless steel in a high-temperature borate electrolyte. , 2006, , 397-402.		0
121	EIS Investigations of Transpassive Dissolution of Ferritic Steels in Aqueous and Molten Electrolytes. ECS Transactions, 2006, 2, 63-72.	0.5	0
122	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
123	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
124	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
125	Effect of temperature and melt composition on the passivity of a Ni-10%Cr alloy in a molten electrolyte. , 2006, , 59-64.		0
126	(Invited) Multiscale Modelling of Titanium Oxide Growth and Dissolution in Fluoride-Containing Electrolytes. ECS Meeting Abstracts, 2020, MA2020-02, 1259-1259.	0.0	0

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127	Nano-porous TiO2 electrochemically doped with Mo oxide – Composition, electrochemical and photo-electrochemical properties. Materials Chemistry and Physics, 2022, 285, 126139.	4.0	Ο