

# Edouard Asselin

## List of Publications by Year in descending order

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119  
papers

1,937  
citations

331670

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#	ARTICLE	IF	CITATIONS
1	Microstructural, corrosion and mechanical properties of additively manufactured alloys: a review. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2022, 47, 46-98.	12.3	12
2	Antimicrobial efficacy and durability of copper formulations over one year of hospital use. <i>Infection Control and Hospital Epidemiology</i> , 2022, 43, 79-87.	1.8	6
3	Improving Surface Functionality, Hydrophilicity, and Interfacial Adhesion Properties of High-Density Polyethylene with Activated Peroxides. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 3601-3609.	8.0	9
4	Corrosion evaluation of Ti-6Al-4V manufactured by electron beam melting in Ringer's physiological solution: an in vitro study of the passive film. <i>Journal of Applied Electrochemistry</i> , 2022, 52, 1003-1019.	2.9	16
5	Evaluating the antimicrobial activity of copper surfaces against <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> 1 year after use in a microbiology laboratory. <i>Journal of Hospital Infection</i> , 2022, 123, 186-188.	2.9	2
6	Solubility and Modeling of $\text{Li}_2\text{SO}_4 \cdot \text{H}_2\text{O}$ in Aqueous $\text{H}_2\text{SO}_4$ - $\text{MgSO}_4$ Solutions for Lithium Extraction from Spodumene. <i>Journal of Chemical &amp; Engineering Data</i> , 2022, 67, 919-931.	1.9	2
7	A review on the electrocatalytic dissociation of water over stainless steel: Hydrogen and oxygen evolution reactions. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 161, 112323.	16.4	20
8	A New Process for Peracetic Acid Production from Acetic Acid and Hydrogen Peroxide Based on Kinetic Modeling and Distillation Simulation. <i>Industrial &amp; Engineering Chemistry Research</i> , 2022, 61, 339-348.	3.7	3
9	Water transport through epoxy-based powder pipeline coatings. <i>Progress in Organic Coatings</i> , 2022, 168, 106874.	3.9	7
10	Electron beam surface remelting enhanced corrosion resistance of additively manufactured Ti-6Al-4V as a potential in-situ re-finishing technique. <i>Scientific Reports</i> , 2022, 12, .	3.3	6
11	Passivity Breakdown of Copper in Borate Buffer Solutions Containing $\text{Cl}^-$ , $\text{SO}_4^{2-}$ , and $\text{NO}_3^-$ . <i>Corrosion</i> , 2022, 78, 865-875.	1.1	0
12	A process for beneficiation of low-grade manganese ore and synchronous preparation of calcium sulfate whiskers during hydrochloric acid regeneration. <i>Hydrometallurgy</i> , 2021, 199, 105533.	4.3	10
13	$\text{CaCO}_3$ Precipitation Kinetics in the System $\text{CaCl}_2$ - $\text{CO}_2$ - $\text{Mg}(\text{OH})_2$ - $\text{H}_2\text{O}$ for Comprehensive Utilization of Soda Production Wastes. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 398-410.	6.7	4
14	Corrosion of cast iron pipelines buried in Fraser River silt subject to climate-induced moisture variations. <i>Acta Geotechnica</i> , 2021, 16, 873-884.	5.7	2
15	Three phase corrosion of pipeline steel: Size effects of deposited solids under water droplets and an oil diffusion barrier. <i>Journal of Pipeline Science and Engineering</i> , 2021, 1, 137-147.	4.8	6
16	Predicting the External Corrosion Rate of X60 Pipeline Steel: A Mathematical Model. <i>Metals</i> , 2021, 11, 583.	2.3	1
17	Fluoride induced corrosion of Ti-45Nb in sulfuric acid solutions. <i>Corrosion Science</i> , 2021, 181, 109232.	6.6	21
18	Chemical oxidation of <i>high-density</i> polyethylene: Surface energy, functionality, and adhesion to liquid epoxy. <i>Journal of Applied Polymer Science</i> , 2021, 138, 50999.	2.6	5

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19	A Critical Review of the Time-Dependent Performance of Polymeric Pipeline Coatings: Focus on Hydration of Epoxy-Based Coatings. <i>Polymers</i> , 2021, 13, 1517.	4.5	18
20	Critical pitting temperature of selective laser melted 316L stainless steel: A mechanistic approach. <i>Corrosion Science</i> , 2021, 185, 109302.	6.6	15
21	Thermoâ€“Kinetic diagrams: The Cuâ€“H <sub>2</sub> Oâ€“Acetate and the Cu-H <sub>2</sub> O systems. <i>Journal of Electroanalytical Chemistry</i> , 2021, 895, 115467.	3.8	11
22	General corrosion vulnerability assessment using a Bayesian belief network model incorporating experimental corrosion data for X60 pipe steel. <i>Journal of Pipeline Science and Engineering</i> , 2021, 1, 329-338.	4.8	9
23	Ex Situ Examination of Matrix and Inclusions of API-X100 before and after Exposure to Bitumen at Elevated Temperature. <i>Materials</i> , 2021, 14, 5007.	2.9	2
24	Preparation of strontium carbonate via celestite leaching in NaHCO <sub>3</sub> using two interconnected reactors. <i>Hydrometallurgy</i> , 2021, 204, 105729.	4.3	2
25	Corrosion of monometallic iron- and nickel-based electrocatalysts for the alkaline oxygen evolution reaction: A review. <i>Journal of Power Sources</i> , 2021, 510, 230387.	7.8	21
26	Method of developing Thermoâ€“Kinetic diagrams: The Cuâ€“H <sub>2</sub> Oâ€“acetate and the Cu-H <sub>2</sub> O systems. <i>MethodsX</i> , 2021, 8, 101539.	1.6	0
27	Microwave pretreatment for enhanced selective nitric acid pressure leaching of limonitic laterite. <i>Journal of Central South University</i> , 2021, 28, 3050-3060.	3.0	10
28	Leaching of Mercury from Contaminated Solid Waste: A Mini-Review. <i>Mineral Processing and Extractive Metallurgy Review</i> , 2020, 41, 187-197.	5.0	11
29	Integration of Cu extraction and Zn electrowinning processes for energy storage. <i>Journal of Cleaner Production</i> , 2020, 253, 119779.	9.3	4
30	Corrosion resistance of hot-dip galvanized steel in simulated soil solution: A factorial design and pit chemistry study. <i>Corrosion Science</i> , 2020, 164, 108310.	6.6	35
31	Charge Transport Characteristics of the Passive Oxide Film Formed on 3D Printed 316 L Stainless Steel in the Presence of Fe <sup>II</sup> /Fe <sup>III</sup> Species. <i>Journal of Physical Chemistry C</i> , 2020, 124, 21435-21445.	3.1	6
32	Localised instability of titanium during its erosion-corrosion in simulated acidic hydrometallurgical slurries. <i>Corrosion Science</i> , 2020, 174, 108816.	6.6	10
33	Scanning electrochemical microscopy screening of CO <sub>2</sub> electroreduction activities and product selectivities of catalyst arrays. <i>Communications Chemistry</i> , 2020, 3, .	4.5	28
34	Catalytic effect of ethylene thiourea on the leaching of chalcopyrite. <i>Hydrometallurgy</i> , 2020, 196, 105410.	4.3	9
35	Evaluation of the cathodic disbondment resistance of pipeline coatings â€“ A review. <i>Progress in Organic Coatings</i> , 2020, 146, 105728.	3.9	17
36	Controlling the dissolution of iron through the development of nanostructured Fe-Mg for biomedical applications. <i>Acta Biomaterialia</i> , 2020, 113, 660-676.	8.3	18

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37	Fe(III) Precipitation and Copper Loss from Sulphate-Chloride Solutions at 150 °C: A Statistical Approach. <i>Metals</i> , 2020, 10, 669.	2.3	3
38	<i>In vitro</i> evaluation of antimicrobial efficacy and durability of three copper surfaces used in healthcare. <i>Biointerphases</i> , 2020, 15, 011005.	1.6	16
39	The Mineral Battery: Combining Metal Extraction and Energy Storage. <i>Joule</i> , 2020, 4, 4-9.	24.0	5
40	Electrodeposition of metallic molybdenum and its alloys – a review. <i>Canadian Metallurgical Quarterly</i> , 2019, 58, 1-18.	1.2	14
41	Aqueous Corrosion of Deformed Steel Under Simulated Diluted Bitumen. <i>Corrosion</i> , 2019, 75, 1194-1206.	1.1	2
42	Failure investigation of stainless steel anodes used in gold electrowinning. <i>Engineering Failure Analysis</i> , 2019, 106, 104183.	4.0	4
43	Effect of Fe(III) and Cu(II) on the Passivation of Ti-2 in Acidic Chloride Solutions. <i>Journal of the Electrochemical Society</i> , 2019, 166, C76-C82.	2.9	8
44	Electrochemical Investigation and Identification of Titanium Hydrides Formed in Mixed Chloride Sulfuric Acid Solution. <i>Journal of the Electrochemical Society</i> , 2019, 166, C3096-C3105.	2.9	11
45	The Effects of Chloride Droplet Properties on the Underoil Corrosion of API X100 Pipeline Steel. <i>Corrosion</i> , 2019, 75, 1051-1064.	1.1	2
46	On the use of a naturally-sourced CuFeS <sub>2</sub> mineral concentrate for energy storage. <i>Electrochimica Acta</i> , 2019, 297, 1079-1093.	5.2	16
47	The dissolution kinetics and salt film precipitation of Zn and Fe in chloride solutions: Importance of the common-ion effect and diffusivity. <i>Corrosion Science</i> , 2019, 146, 152-162.	6.6	5
48	Electrosynthesis of metallic molybdenum from water deficient solution containing molybdate ions and high concentrations of acetate. <i>Surface and Coatings Technology</i> , 2019, 357, 567-574.	4.8	7
49	A Hybrid Mineral Battery: Energy Storage and Dissolution Behavior of CuFeS <sub>2</sub> in a Fixed Bed Flow Cell. <i>ChemSusChem</i> , 2018, 11, 1533-1548.	6.8	14
50	Corrosion behaviour of X100 pipeline steel under a salty droplet covered by simulated diluted bitumen. <i>Materials Letters</i> , 2018, 222, 196-199.	2.6	10
51	Effect of retrogression and re-aging (RRA) heat treatment on the corrosion behavior of B206 aluminum-copper casting alloy. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2018, 69, 998-1015.	1.5	7
52	A New Corrosion Mechanism for X100 Pipeline Steel Under Oil-Covered Chloride Droplets. <i>Corrosion</i> , 2018, 74, 947-957.	1.1	9
53	Kinetics of Passive Film Growth on 304 Stainless Steel in H <sub>2</sub> SO <sub>4</sub> Pickling Solution under Chemical Oxidation. <i>Corrosion</i> , 2018, 74, 705-714.	1.1	7
54	Factors affecting hematite precipitation and characterization of the product from simulated sulphate-chloride solutions at 150 °C. <i>Hydrometallurgy</i> , 2018, 179, 8-19.	4.3	11

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55	Electrochemical dissolution of chalcopyrite in the presence of thiourea and formamidine disulfide. Hydrometallurgy, 2018, 179, 110-117.	4.3	9
56	Improved corrosion resistance of air plasma sprayed WC-12%Co cermet coating by laser re-melting process. Materials Letters, 2017, 191, 34-37.	2.6	28
57	FIB/SEM Study of Pitting and Intergranular Corrosion in an Al-Cu Alloy. Corrosion, 2017, 73, 927-941.	1.1	1
58	Effect of cysteine on the electrochemical dissolution of chalcopyrite. Hydrometallurgy, 2017, 169, 552-563.	4.3	7
59	On the refractory nature of precious metal tellurides. Hydrometallurgy, 2017, 169, 488-495.	4.3	11
60	Dissolution Kinetics of Pure Zinc: The Effect of Bulk Solution Concentration and Temperature Studied by the Lead-In Pencil Electrode Technique. Journal of the Electrochemical Society, 2017, 164, C758-C767.	2.9	6
61	Novel reagents for iron and sulphur control in medium temperature leaching of sulphide concentrates. Canadian Metallurgical Quarterly, 2017, 56, 382-392.	1.2	2
62	Electrodeposition of Aluminum onto Copper-Coated Printed Circuit Boards. Journal of the Electrochemical Society, 2017, 164, D729-D736.	2.9	1
63	Dependence of the Electrochemical and Passive Behavior of the Lead-Acid Battery Positive Grid on Electrode Surface Roughness. Corrosion, 2017, 73, 1359-1366.	1.1	4
64	Laboratory and Pilot Scale Studies of Potassium Extraction from K-feldspar Decomposition with $\text{CaCl}_2$ and $\text{CaCO}_3$ . Journal of Chemical Engineering of Japan, 2016, 49, 111-119.	0.6	23
65	Kinetic study of the dissolution of metallic nickel in sulphuric acid solutions in the presence of different oxidants. Canadian Journal of Chemical Engineering, 2016, 94, 1872-1879.	1.7	6
66	Extended validation of an expression to predict ORP and iron chemistry: Application to complex solutions generated during the acidic leaching or bioleaching of printed circuit boards. Hydrometallurgy, 2016, 164, 334-342.	4.3	18
67	Differentiation of the non-faradaic and pseudocapacitive electrochemical response of graphite felt/CuFeS <sub>2</sub> composite electrodes. Electrochimica Acta, 2016, 212, 979-991.	5.2	26
68	Solubility Measurement and Chemical Modeling of $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ in the $\text{Ti}(\text{SO}_4)_2 \cdot \text{H}_2\text{SO}_4 \cdot \text{H}_2\text{O}$ System. Journal of Chemical & Engineering Data, 2016, 61, 2363-2370.	1.9	5
69	Long-term Hot Corrosion Behavior of Boiler Tube Alloys in Waste-to-Energy Plants. Oxidation of Metals, 2016, 86, 135-149.	2.1	10
70	Etching Induced Stepped Nanostructure on $\text{Pb}(\text{Mg}_{1-x}\text{Mn}_x\text{W}_{1/2})\text{O}_3$ Ceramics. Journal of the American Ceramic Society, 2016, 99, 1125-1128.	3.8	4
71	Amorphous iron phases in medium temperature leach residues and associated metal loss. International Journal of Mineral Processing, 2016, 148, 65-71.	2.6	4
72	Turning Bulk Titanium into Rutile Nanorods in One Step: Synthesis, Mechanism, and Application. Crystal Growth and Design, 2016, 16, 1583-1590.	3.0	1

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73	Atmospheric ferric sulfate leaching of chalcopyrite: Thermodynamics, kinetics and electrochemistry. Hydrometallurgy, 2016, 165, 148-158.	4.3	38
74	Copper and Cyanide Extraction with Emulsion Liquid Membrane with LIX 7950 as the Mobile Carrier: Part 1, Emulsion Stability. Metals, 2015, 5, 2034-2047.	2.3	16
75	Particle concentration distribution measurements in stirred tanks using a new experimental technique: time and frequency domain analyses. Canadian Metallurgical Quarterly, 2015, 54, 289-296.	1.2	0
76	The Anodic Passivity of Titanium in Mixed Sulfate-Chloride Solutions. Journal of the Electrochemical Society, 2015, 162, E289-E295.	2.9	15
77	A new method to improve the corrosion resistance of titanium for hydrometallurgical applications. Applied Surface Science, 2015, 332, 480-487.	6.1	20
78	Effects of Temperature and Sulfate on the Pitting Corrosion of Titanium in High-Temperature Chloride Solutions. Journal of the Electrochemical Society, 2015, 162, C189-C196.	2.9	21
79	Modeling Phase Equilibria for the Glycine-NH <sub>4</sub> Cl-Methanol-Water System and Its Application for the Industrial Monochloroacetic Acid Process. Industrial & Engineering Chemistry Research, 2015, 54, 3488-3497.	3.7	7
80	High Temperature Corrosion of Titanium Under Conditions Relevant to Pressure Leaching: Mass Loss and Electrochemistry. Corrosion, 2015, 71, 352-366.	1.1	7
81	Influence of Cupric, Ferric, and Chloride on the Corrosion of Titanium in Sulfuric Acid Solutions Up to 85°C. Corrosion, 2014, 70, 29-37.	1.1	30
82	Electrochemical dissolution of fresh and passivated chalcopyrite electrodes. Effect of pyrite on the reduction of Fe <sup>3+</sup> ions and transport processes within the passive film. Electrochimica Acta, 2014, 127, 7-19.	5.2	36
83	Potentiometric titration of hematite and magnetite at elevated temperatures using a ZrO <sub>2</sub> -based pH probe. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2014, 444, 144-152.	4.7	11
84	Vapor-Liquid Equilibria for the ZnSO <sub>4</sub> -H <sub>2</sub> SO <sub>4</sub> -H <sub>2</sub> O and MgSO <sub>4</sub> -H <sub>2</sub> SO <sub>4</sub> -H <sub>2</sub> O Systems at (30, 60, 90), Tj ETQq0,0 0 rgBT /C	1.9	0
85	Process Simulation of Sulfuric Acid Recovery by Azeotropic Distillation: Vapor-Liquid Equilibria and Thermodynamic Modeling. Industrial & Engineering Chemistry Research, 2014, 53, 11794-11804.	3.7	8
86	Kinetics of Ferric Ion Reduction on Chalcopyrite and its Influence on Leaching up to 150 °C. Electrochimica Acta, 2014, 146, 307-321.	5.2	28
87	Leaching kinetics of enargite in alkaline sodium sulphide solutions. Hydrometallurgy, 2014, 146, 48-58.	4.3	29
88	A novel separation process for detoxifying cadmium-containing residues from zinc purification plants. Minerals Engineering, 2014, 64, 1-6.	4.3	12
89	Characterization of anodized titanium for hydrometallurgical applications—Evidence for the reduction of cupric on titanium dioxide. Applied Surface Science, 2013, 283, 705-714.	6.1	9
90	Electrochemical study of the dissolution of enargite (Cu <sub>3</sub> As <sub>4</sub> ) in contact with activated carbon. Electrochimica Acta, 2013, 107, 525-536.	5.2	10

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91	Solubility of $\text{AlCl}_3 \cdot 6\text{H}_2\text{O}$ in the $\text{Fe(II)} + \text{Mg} + \text{Ca} + \text{K} + \text{Cl} + \text{H}_2\text{O}$ System and Its Salting-Out Crystallization with $\text{FeCl}_2$ . <i>Industrial &amp; Engineering Chemistry Research</i> , 2013, 52, 14282-14290.	3.7	13
92	Electrochemical and XPS analysis of chalcopyrite ( $\text{CuFeS}_2$ ) dissolution in sulfuric acid solution. <i>Electrochimica Acta</i> , 2013, 87, 97-112.	5.2	258
93	Electrochemical detection of corrosion product fouling in high temperature and high pressure solution. <i>Electrochimica Acta</i> , 2013, 100, 101-109.	5.2	12
94	Determination and Modeling of Vapor-Liquid Equilibria for the Sulfuric Acid + Water + Butyl Acetate + Ethanol System. <i>Industrial &amp; Engineering Chemistry Research</i> , 2013, 52, 3481-3489.	3.7	17
95	Use of EIS to Measure the Rate of $\text{H}_2\text{O}_2$ Decomposition on a Bulk Magnetite Electrode in Alkaline Solution. <i>Journal of the Electrochemical Society</i> , 2012, 159, B831-B838.	2.9	7
96	Electrochemical and corrosion behaviour of stainless steels 316L and 317L in chloridised ammonium sulphate solution. <i>Canadian Metallurgical Quarterly</i> , 2012, 51, 471-484.	1.2	2
97	Kinetics of the ferric-ferrous couple on anodically passivated chalcopyrite ( $\text{CuFeS}_2$ ) electrodes. <i>Hydrometallurgy</i> , 2012, 125-126, 42-49.	4.3	52
98	Cobalt loss due to iron precipitation in ammoniacal carbonate solutions. <i>Hydrometallurgy</i> , 2012, 125-126, 144-147.	4.3	9
99	On the Development of Thermo-Kinetic Eh-pH Diagrams. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2012, 43, 1277-1283.	2.1	4
100	The deposition of smooth metallic molybdenum from aqueous electrolytes containing molybdate ions. <i>Electrochemistry Communications</i> , 2012, 15, 78-80.	4.7	50
101	Electrodeposition and Growth Mechanism of Copper Sulfide Nanowires. <i>Journal of Physical Chemistry C</i> , 2011, 115, 9320-9334.	3.1	76
102	Characterization of residue generated during medium temperature leaching of chalcopyrite concentrate under CESL conditions. <i>Hydrometallurgy</i> , 2011, 110, 107-114.	4.3	16
103	One-step template-free electrosynthesis of 300 $\frac{1}{4}$ m long copper sulfide nanowires. <i>Electrochemistry Communications</i> , 2011, 13, 12-15.	4.7	25
104	The effects of mixtures of acid mist suppression reagents on zinc electrowinning from spent electrolyte solutions. <i>Hydrometallurgy</i> , 2011, 108, 1-10.	4.3	14
105	Estimation of Thermodynamic Properties of Aqueous Iron and Cobalt Amines at Elevated Temperatures. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2010, 41, 520-526.	2.1	2
106	Leaching of a limonitic laterite in ammoniacal solutions with metallic iron. <i>Hydrometallurgy</i> , 2010, 104, 260-267.	4.3	26
107	Electrochemical evaluation of the surface of chalcopyrite during dissolution in sulfuric acid solution. <i>Electrochimica Acta</i> , 2010, 55, 5041-5056.	5.2	116
108	An Investigation on the Effects of Organic Additives on Zinc Electrowinning from Industrial Electrolyte. <i>ECS Transactions</i> , 2010, 28, 267-280.	0.5	7

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109	In Situ Electrochemical Analysis of Surface Layers on a Pyrrhotite Electrode in Hydrochloric Acid Solution. <i>Journal of the Electrochemical Society</i> , 2010, 157, C248.	2.9	15
110	Corrosion of nickel-chromium alloys, stainless steel and niobium at supercritical water oxidation conditions. <i>Corrosion Science</i> , 2010, 52, 118-124.	6.6	52
111	Reducing power consumption in zinc electrowinning. <i>Jom</i> , 2009, 61, 54-58.	1.9	27
112	Morphology of chalcopyrite leaching in acidic ferric sulfate media. <i>Hydrometallurgy</i> , 2009, 96, 183-188.	4.3	22
113	Electrochemical properties of metallurgical-grade silicon in hydrochloric acid. <i>Electrochimica Acta</i> , 2009, 54, 6548-6553.	5.2	11
114	Thermodynamics of the Corrosion of Alloy 625 Supercritical Water Oxidation Reactor Tubing in Ammoniacal Sulfate Solution. <i>Corrosion</i> , 2008, 64, 301-314.	1.1	19
115	Effect of Oxygen on the Corrosion Behavior of Alloy 625 from 25 to 200°C. <i>Journal of the Electrochemical Society</i> , 2007, 154, C215.	2.9	21
116	Corrosion of niobium in sulphuric and hydrochloric acid solutions at 75 and 95°C. <i>Corrosion Science</i> , 2007, 49, 694-710.	6.6	69
117	A Polarization Study of Alloy 625, Nickel, Chromium, and Molybdenum in Ammoniated Sulfate Solutions. <i>Corrosion</i> , 2005, 61, 579-586.	1.1	11
118	The Effect of Chloride Ions on the Passive Films of Titanium in Sulfuric Acids. <i>Solid State Phenomena</i> , 0, 227, 67-70.	0.3	4
119	Communication – The Galvanic Effect on the Under-Deposit Corrosion of Titanium in Chloride Solutions. <i>Journal of the Electrochemical Society</i> , 0, , .	2.9	2