Nick Birbilis

List of Publications by Citations

382 papers	20,431 citations	75 h-index	128 g-index
402 ext. papers	24,537 ext. citations	4.8 avg, IF	7.45 L-index

#	Paper	IF	Citations
382	Fundamentals and advances in magnesium alloy corrosion. *Progress in Materials Science*, **2017**, 89, 92-193	42.2	788
381	Electrochemical Characteristics of Intermetallic Phases in Aluminum Alloys. *Journal of the Electrochemical Society*, **2005**, 152, B140	3.9	770
380	Effect of Grain Size on Corrosion: A Review. *Corrosion*, **2010**, 66, 075005-075005-13	1.8	637
379	Assessing the corrosion of biodegradable magnesium implants: a critical review of current methodologies and their limitations. *Acta Biomaterialia*, **2012**, 8, 925-36	10.8	561
378	Revealing the relationship between grain size and corrosion rate of metals. *Scripta Materialia*, **2010**, 63, 1201-1204	5.6	506
377	Exploring graphene as a corrosion protection barrier. *Corrosion Science*, **2012**, 56, 1-4	6.8	438
376	A high-specific-strength and corrosion-resistant magnesium alloy. *Nature Materials*, **2015**, 14, 1229-35	27	379
375	A survey of bio-corrosion rates of magnesium alloys. *Corrosion Science*, **2010**, 52, 287-291	6.8	348
374	Accurate Electrochemical Measurement of Magnesium Corrosion Rates; a Combined Impedance, Mass-Loss and Hydrogen Collection Study. *Electrochimica Acta*, **2014**, 121, 394-406	6.7	342
373	Evolution of hydrogen at dissolving magnesium surfaces. *Corrosion Science*, **2013**, 70, 104-111	6.8	285
372	Corrosion of magnesium alloys: the role of alloying. *International Materials Reviews*, **2015**, 60, 169-194	16.1	259
371	Texture evolution during static recrystallization of cold-rolled magnesium alloys. *Acta Materialia*, **2016**, 105, 479-494	8.4	237
370	Effect of grain size on corrosion of high purity aluminium. *Electrochimica Acta*, **2011**, 56, 1729-1736	6.7	225
369	Electrochemical behavior and localized corrosion associated with Al7Cu2Fe particles in aluminum alloy 7075-T651. *Corrosion Science*, **2006**, 48, 4202-4215	6.8	223
368	Corrosion mechanism and hydrogen evolution on Mg. *Current Opinion in Solid State and Materials Science*, **2015**, 19, 85-94	12	217
367	Review of Corrosion-Resistant Conversion Coatings for Magnesium and Its Alloys. *Corrosion*, **2011**, 67, 035005-1-035005-16	1.8	211
366	On the corrosion of binary magnesium-rare earth alloys. *Corrosion Science*, **2009**, 51, 683-689	6.8	205

365	Corrosion of Pure Mg as a Function of Grain Size and Processing Route. *Advanced Engineering Materials*, **2008**, 10, 579-582	3.5	202
364	Investigation and Discussion of Characteristics for Intermetallic Phases Common to Aluminum Alloys as a Function of Solution pH. *Journal of the Electrochemical Society*, **2008**, 155, C117	3.9	194
363	Correlations between intergranular stress corrosion cracking, grain-boundary microchemistry, and grain-boundary electrochemistry for Al□n□Mg□Cu alloys. *Corrosion Science*, **2010**, 52, 4073-4080	6.8	193
362	Enhanced corrosion resistance of Mg alloy ZK60 after processing by integrated extrusion and equal channel angular pressing. *Acta Materialia*, **2011**, 59, 6176-6186	8.4	186
361	The influence of nanocrystalline structure and processing route on corrosion of stainless steel: A review. *Corrosion Science*, **2015**, 92, 1-15	6.8	185
360	The source of hydrogen evolved from a magnesium anode. *Electrochemistry Communications*, **2013**, 36, 1-5	5.1	172
359	Corrosion of high entropy alloys. *Npj Materials Degradation*, **2017**, 1,	5.7	169
358	On the enhanced corrosion resistance of a selective laser melted austenitic stainless steel. *Scripta Materialia*, **2017**, 141, 94-98	5.6	167
357	Magnesium extrusion alloys: a review of developments and prospects. *International Materials Reviews*, **2019**, 64, 27-62	16.1	165
356	Grain character influences on corrosion of ECAPed pure magnesium. *Corrosion Engineering Science and Technology*, **2010**, 45, 224-230	1.7	163
355	Electrochemical Properties of Intermetallic Phases and Common Impurity Elements in Magnesium Alloys. *Electrochemical and Solid-State Letters*, **2011**, 14, C5		163
354	Electrochemical behaviour and corrosion of Mg□ alloys. *Corrosion Science*, **2011**, 53, 2277-2282	6.8	157
353	In-vitro dissolution of magnesium-calcium binary alloys: clarifying the unique role of calcium additions in bioresorbable magnesium implant alloys. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2010**, 95, 91-100	3.5	155
352	The effect of alloy composition on the microstructure and tensile properties of binary Mg-rare earth alloys. *Intermetallics*, **2009**, 17, 481-490	3.5	141
351	On The Corrosion and Metastable Pitting Characteristics of 316L Stainless Steel Produced by Selective Laser Melting. *Journal of the Electrochemical Society*, **2017**, 164, C250-C257	3.9	139
350	Towards a Physical Description for the Origin of Enhanced Catalytic Activity of Corroding Magnesium Surfaces. *Electrochimica Acta*, **2014**, 116, 396-403	6.7	136
349	Evidence for enhanced catalytic activity of magnesium arising from anodic dissolution. *Electrochimica Acta*, **2014**, 132, 277-283	6.7	133
348	A simple route towards a hydroxyapatite□Mg(OH)2 conversion coating for magnesium. *Corrosion Science*, **2011**, 53, 2263-2268	6.8	123

347	Corrosion of pipelines used for CO2 transport in CCS: Is it a real problem?. *International Journal of Greenhouse Gas Control*, **2011**, 5, 749-756	4.2	120
346	The effect of precipitate size on the yield strength-pitting corrosion correlation in Al(Cu)Mg alloys. *Acta Materialia*, **2010**, 58, 5941-5948	8.4	119
345	Composition and microstructure dependent corrosion behaviour of Mg-Li alloys. *Electrochimica Acta*, **2018**, 260, 55-64	6.7	115
344	Super-formable pure magnesium at room temperature. *Nature Communications*, **2017**, 8, 972	17.4	113
343	Polyaniline-lignosulfonate/epoxy coating for corrosion protection of AA2024-T3. *Corrosion Science*, **2013**, 67, 256-267	6.8	113
342	Controlling initial biodegradation of magnesium by a biocompatible strontium phosphate conversion coating. *Acta Biomaterialia*, **2014**, 10, 1463-74	10.8	110
341	The influence of ceramic particles on bond strength of cold spray composite coatings on AZ91 alloy substrate. *Surface and Coatings Technology*, **2010**, 205, 50-56	4.4	110
340	Recent advances in biodegradation controls over Mg alloys for bone fracture management: A review. *Journal of Materials Science and Technology*, **2019**, 35, 535-544	9.1	110
339	Corrosion of Additively Manufactured Alloys: A Review. *Corrosion*, **2018**, 74, 1318-1350	1.8	107
338	Impact of ultrafine-grained microstructure on the corrosion of aluminium alloy AA2024. *Corrosion Science*, **2012**, 57, 209-214	6.8	105
337	Poisoning the corrosion of magnesium. *Electrochemistry Communications*, **2013**, 34, 295-298	5.1	104
336	Enhanced hydrogen evolution on Mg (OH)2 covered Mg surfaces. *Electrochimica Acta*, **2015**, 161, 144-152	6.7	104
335	Effect of [Ca 2+] and [PO43-] levels on the formation of calcium phosphate conversion coatings on die-cast magnesium alloy AZ91D. *Corrosion Science*, **2012**, 55, 226-232	6.8	104
334	Corrosion of Zinc as a Function of pH. *Corrosion*, **2012**, 68, 015009-1-015009-9	1.8	102
333	Corrosion characteristics of high entropy alloys. *Materials Science and Technology*, **2015**, 31, 1235-1243	1.5	101
332	Influence of retrogression temperature and time on the mechanical properties and exfoliation corrosion behavior of aluminium alloy AA7150. *Materials Characterization*, **2009**, 60, 1334-1341	3.9	101
331	Metallic implant drug/device combinations for controlled drug release in orthopaedic applications. *Journal of Controlled Release*, **2014**, 179, 63-75	11.7	99
330	Metastable pitting characteristics of aluminium alloys measured using current transients during potentiostatic polarisation. *Electrochimica Acta*, **2012**, 66, 245-254	6.7	99

329	General aspects related to the corrosion of 6xxx series aluminium alloys: Exploring the influence of Mg/Si ratio and Cu. *Corrosion Science*, **2013**, 76, 119-128	6.8	99
328	Effect of water presence on choline chloride-2urea ionic liquid and coating platings from the hydrated ionic liquid. *Scientific Reports*, **2016**, 6, 29225	4.9	97
327	A lightweight single-phase AlTiVCr compositionally complex alloy. *Acta Materialia*, **2017**, 123, 115-124	8.4	97
326	Role of nanostructure in pitting of Al□Cu□Mg alloys. *Electrochimica Acta*, **2010**, 55, 7834-7842	6.7	96
325	Microstructural evolution, electrochemical and corrosion properties of Al CoCrFeNiTi high entropy alloys. *Materials and Design*, **2019**, 170, 107698	8.1	95
324	On the electrodeposition of nickel□zinc alloys from a eutectic-based ionic liquid. *Electrochimica Acta*, **2012**, 63, 131-138	6.7	92
323	Self-repairing oxides to protect zinc: Review, discussion and prospects. *Corrosion Science*, **2013**, 69, 11-22	6.8	92
322	Inhibition of AA2024-T3 on a Phase-by-Phase Basis Using an Environmentally Benign Inhibitor, Cerium Dibutyl Phosphate. *Electrochemical and Solid-State Letters*, **2005**, 8, C180		91
321	Chromate replacement: what does the future hold?. *Npj Materials Degradation*, **2018**, 2,	5.7	87
320	Electrochemical behaviour of the □-phase intermetallic (Mg2Al3) as a function of pH as relevant to corrosion of aluminium□magnesium alloys. *Corrosion Science*, **2013**, 70, 290-293	6.8	87
319	Double-layered manganese phosphate conversion coating on magnesium alloy AZ91D: Insights into coating formation, growth and corrosion resistance. *Surface and Coatings Technology*, **2013**, 217, 147-155	4.4	86
318	Some effects of alloy composition on stress corrosion cracking in Al□Zn□Mg□Cu alloys. *Corrosion Science*, **2015**, 98, 50-62	6.8	84
317	Evidence of the Enrichment of Transition Metal Elements on Corroding Magnesium Surfaces Using Rutherford Backscattering Spectrometry. *Journal of the Electrochemical Society*, **2015**, 162, C228-C237	3.9	84
316	Investigating localized corrosion susceptibility arising from Sc containing intermetallic Al3Sc in high strength Al-alloys. *Scripta Materialia*, **2007**, 56, 995-998	5.6	83
315	Effects of dilute additions of Zn and Ca on ductility of magnesium alloy sheet. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 674, 459-471	5.3	83
314	A combined neural network and mechanistic approach for the prediction of corrosion rate and yield strength of magnesium-rare earth alloys. *Corrosion Science*, **2011**, 53, 168-176	6.8	82
313	The effect of pre-ageing temperature and retrogression heating rate on the strength and corrosion behaviour of AA7150. *Corrosion Science*, **2012**, 54, 17-25	6.8	81
312	Effect of solution treatment on the corrosion behaviour of aluminium alloy AA7150: Optimisation for corrosion resistance. *Corrosion Science*, **2011**, 53, 217-225	6.8	80

311	Corrosion behaviour of Mg-alloy AZ91E with atypical alloying additions. *Journal of Alloys and Compounds*, **2009**, 471, 109-115	5.7	78
310	Performance-driven design of Biocompatible Mg alloys. *Jom*, **2011**, 63, 28-34	2.1	77
309	Revisiting zinc passivation in alkaline solutions. *Electrochimica Acta*, **2013**, 97, 192-201	6.7	76
308	Ca-Mg-Zn bulk metallic glasses as bioresorbable metals. *Acta Biomaterialia*, **2012**, 8, 2375-83	10.8	75
307	An Ionic Liquid Surface Treatment for Corrosion Protection of Magnesium Alloy AZ31. *Electrochemical and Solid-State Letters*, **2006**, 9, B52		75
306	Exploring corrosion protection of Mg via ionic liquid pretreatment. *Surface and Coatings Technology* , **2007**, 201, 4496-4504	4.4	74
305	Electrochemical Behavior and Localized Corrosion Associated with Mg2Si Particles in Al and Mg Alloys. *ECS Electrochemistry Letters*, **2012**, 1, C1-C3		73
304	Electrodeposition of chemically and mechanically protective Al-coatings on AZ91D Mg alloy. *Corrosion Science*, **2011**, 53, 381-387	6.8	72
303	Improved solution treatment for an as-rolled Al□nMg□u alloy. Part I. Characterisation of constituent particles and overheating. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2012**, 534, 234-243	5.3	71
302	Assessing the Corrosion of Commercially Pure Magnesium and Commercial AZ31B by Electrochemical Impedance, Mass-Loss, Hydrogen Collection, and Inductively Coupled Plasma Optical Emission Spectrometry Solution Analysis. *Corrosion*, **2015**, 71, 128-145	1.8	71
301	Limitations in microelectrochemical capillary cell testing and transformation of electrochemical transients for acquisition of microcell impedance data. *Electrochimica Acta*, **2005**, 50, 3536-3544	6.7	68
300	Tailoring nickel coatings via electrodeposition from a eutectic-based ionic liquid doped with nicotinic acid. *Applied Surface Science*, **2011**, 257, 9094-9102	6.7	66
299	Nano-scale dissolution phenomena in Al□u□Mg alloys. *Electrochemistry Communications*, **2008**, 10, 32-37	5.1	66
298	Observations of the galvanostatic dissolution of pure magnesium. *Corrosion Science*, **2012**, 65, 5-9	6.8	64
297	A Survey of Sensitization in 5xxx Series Aluminum Alloys. *Corrosion*, **2016**, 72, 144-159	1.8	63
296	Investigating the Real Time Dissolution of Mg Using Online Analysis by ICP-MS. *Journal of the Electrochemical Society*, **2014**, 161, C115-C119	3.9	63
295	Volta Potentials Measured by Scanning Kelvin Probe Force Microscopy as Relevant to Corrosion of Magnesium Alloys. *Corrosion*, **2015**, 71, 160-170	1.8	62
294	High capacity group-15 alloy anodes for Na-ion batteries: Electrochemical and mechanical insights. *Journal of Power Sources*, **2015**, 285, 29-36	8.9	61

293	Buffer-regulated biocorrosion of pure magnesium. *Journal of Materials Science: Materials in Medicine*, **2012**, 23, 283-91	4.5	61
292	Achieving exceptionally high strength in Mg3Al1Zn-0.3Mn extrusions via suppressing intergranular deformation. *Acta Materialia*, **2018**, 160, 97-108	8.4	58
291	The influence of alloying elements on the electrochemistry of lead anodes for electrowinning of metals: A review. *Hydrometallurgy*, **2013**, 131-132, 144-157	4	58
290	Development of water-repellent organic□inorganic hybrid sol□gel coatings on aluminum using short chain perfluoro polymer emulsion. *Applied Surface Science*, **2013**, 283, 1051-1059	6.7	57
289	Relating the Early Evolution of Microstructure with the Electrochemical Response and Mechanical Performance of a Cu-Rich and Cu-Lean 7xxx Aluminum Alloy. *Journal of the Electrochemical Society*, **2012**, 159, C492-C502	3.9	57
288	Reducing the corrosion rate of magnesium via microalloying additions of group 14 and 15 elements. *Electrochimica Acta*, **2018**, 260, 184-195	6.7	57
287	A review of deep learning in the study of materials degradation. *Npj Materials Degradation*, **2018**, 2,	5.7	57
286	The pH Dependence of Magnesium Dissolution and Hydrogen Evolution during Anodic Polarization. *Journal of the Electrochemical Society*, **2015**, 162, C333-C339	3.9	55
285	A review of the protection strategies against internal corrosion for the safe transport of supercritical CO 2 via steel pipelines for CCS purposes. *International Journal of Greenhouse Gas Control*, **2014**, 29, 185-199	4.2	55
284	Interfacial structure between particles in an aluminum deposit produced by cold spray. *Materials Letters*, **2011**, 65, 1576-1578	3.3	55
283	Modeling the environmental dependence of pit growth using neural network approaches. *Corrosion Science*, **2010**, 52, 3070-3077	6.8	55
282	Revisiting the electrochemical impedance spectroscopy of magnesium with online inductively coupled plasma atomic emission spectroscopy. *ChemPhysChem*, **2015**, 16, 536-9	3.2	54
281	On the corrosion of additively manufactured aluminium alloy AA2024 prepared by selective laser melting. *Corrosion Science*, **2018**, 143, 93-106	6.8	54
280	Improved solution treatment for an as-rolled Al□Zn□Mg□Cu alloy. Part II. Microstructure and mechanical properties. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2012**, 534, 244-252	5.3	54
279	Texture evolution during cold rolling of dilute Mg alloys. *Scripta Materialia*, **2015**, 108, 6-10	5.6	53
278	Controlling factors in localised corrosion morphologies observed for magnesium immersed in chloride containing electrolyte. *Faraday Discussions*, **2015**, 180, 313-30	3.6	53
277	Microstructure and corrosion properties of the low-density single-phase compositionally complex alloy AlTiVCr. *Corrosion Science*, **2018**, 133, 386-396	6.8	52
276	Exploring the electrochemistry of 6xxx series aluminium alloys as a function of Si to Mg ratio, Cu content, ageing conditions and microstructure. *Electrochimica Acta*, **2016**, 190, 92-103	6.7	52

275	A Compilation of Corrosion Potentials for Magnesium Alloys. *Corrosion*, **2014**, 70, 1043-1051	1.8	52
274	The influence of zirconium additions on the corrosion of magnesium. *Corrosion Science*, **2014**, 81, 27-35	6.8	51
273	Quantification of Sensitization in AA5083-H131 via Imaging Ga-Embrittled Fracture Surfaces. *Corrosion*, **2013**, 69, 396-402	1.8	51
272	Electrochemical studies on the effect of residual stress on the corrosion of 316L manufactured by selective laser melting. *Corrosion Science*, **2020**, 164, 108314	6.8	51
271	Electrosprayed PLGA smart containers for active anti-corrosion coating on magnesium alloy AMlite. *Journal of Materials Chemistry A*, **2014**, 2, 5738	13	50
270	Corrosion resistance of biomimetic calcium phosphate coatings on magnesium due to varying pretreatment time. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2011**, 176, 1756-1760	3.1	50
269	Effect of pH on the Grain Size Dependence of Magnesium Corrosion. *Corrosion*, **2012**, 68, 507-517	1.8	50
268	Surface Grain Size Effects on the Corrosion of Magnesium. *Key Engineering Materials*, **2008**, 384, 229-240	0.4	50
267	Electrochemical Characterization of Intermetallic Phases Common to Aluminum Alloys as a Function of Solution Temperature. *Journal of the Electrochemical Society*, **2014**, 161, C535-C543	3.9	49
266	Investigating the Passivity and Dissolution of a Corrosion Resistant Mg-33at.%Li Alloy in Aqueous Chloride Using Online ICP-MS. *Journal of the Electrochemical Society*, **2016**, 163, C324-C329	3.9	48
265	A homogenisation pre-treatment for adherent and corrosion-resistant Ni electroplated coatings on Mg-alloy AZ91D. *Corrosion Science*, **2014**, 79, 41-49	6.8	47
264	Influence of Mg Content on the Sensitization and Corrosion of Al-xMg(-Mn) Alloys. *Corrosion*, **2013**, 69, 1081-1087	1.8	47
263	Precipitation strengthening in an ultralight magnesium alloy. *Nature Communications*, **2019**, 10, 1003	17.4	47
262	Corrosion behaviour and hardness of in situ consolidated nanostructured Al and Al□r alloys produced via high-energy ball milling. *Corrosion Science*, **2015**, 98, 643-650	6.8	46
261	Annealing strengthening in a dilute Mg□n□a sheet alloy. *Scripta Materialia*, **2015**, 107, 127-130	5.6	46
260	Electrochemical assessment of interfacial characteristics of intermetallic phases present in aluminium alloy 2024-T3. *Corrosion Science*, **2015**, 101, 155-164	6.8	45
259	Corrosion of Mg alloy AZ91 □the role of microstructure. *Corrosion Engineering Science and Technology*, **2004**, 39, 346-350	1.7	45
258	Influence of alloyed Nd content on the corrosion of an Al□Mg alloy. *Corrosion Science*, **2013**, 73, 181-187	6.8	44

257	Coating pretreatment for Mg alloy AZ91D. *Applied Surface Science*, **2012**, 258, 5472-5481	6.7	44
256	On the Fe Enrichment during Anodic Polarization of Mg and Its Impact on Hydrogen Evolution. *Journal of the Electrochemical Society*, **2015**, 162, C396-C402	3.9	43
255	Influence of cooling rate on the microstructure and corrosion behavior of Al–Fe alloys. *Corrosion Science*, **2015**, 100, 396-403	6.8	43
254	Nuclear Microprobe Analysis for Determination of Element Enrichment Following Magnesium Dissolution. *ECS Electrochemistry Letters*, **2015**, 4, C34-C37		43
253	High resolution microstructure characterization of the interface between cold sprayed Al coating and Mg alloy substrate. *Applied Surface Science*, **2014**, 289, 366-369	6.7	42
252	Localized Corrosion of Binary Mg-Nd Alloys in Chloride-Containing Electrolyte Using a Scanning Vibrating Electrode Technique. *Corrosion*, **2012**, 68, 489-498	1.8	42
251	Effect of Sm additions on the microstructure and corrosion behavior of magnesium alloy AZ91. *Corrosion Science*, **2019**, 149, 144-152	6.8	42
250	Electrochemical Stability of Magnesium Surfaces in an Aqueous Environment. *Journal of Physical Chemistry C*, **2016**, 120, 26922-26933	3.8	41
249	Influence of surface chemistry on the formation of crystalline hydroxide coatings on Mg alloys in liquid water and steam systems. *Corrosion Science*, **2016**, 113, 145-159	6.8	41
248	CALPHAD simulation of the Mg–(Mn, Zr)–Fe system and experimental comparison with as-cast alloy microstructures as relevant to impurity driven corrosion of Mg-alloys. *Materials Chemistry and Physics*, **2014**, 143, 1082-1091	4.4	41
247	Electrochemical Techniques for Studying Corrosion of Reinforcing Steel: Limitations and Advantages. *Corrosion*, **2005**, 61, 37-50	1.8	41
246	Microstructure characterization and nanomechanics of cold-sprayed pure Al and Al-Al2O3 composite coatings. *Surface and Coatings Technology*, **2013**, 232, 216-223	4.4	40
245	Exfoliation corrosion of 7150 Al alloy with various tempers and its electrochemical impedance spectroscopy in EXCO solution. *Materials and Corrosion - Werkstoffe Und Korrosion*, **2009**, 60, 407-414	1.6	40
244	Controlling the corrosion and cathodic activation of magnesium via microalloying additions of Ge. *Scientific Reports*, **2016**, 6, 28747	4.9	39
243	Intergranular corrosion of Zn-free and Zn-microalloyed Al–Cu–Li alloys. *Corrosion Science*, **2016**, 105, 44-57	6.8	39
242	The role of microstructure and microchemistry on intergranular corrosion of aluminium alloy AA7085-T7452. *Corrosion Science*, **2018**, 143, 414-427	6.8	39
241	Investigating the Effect of Water Content in Supercritical CO2as Relevant to the Corrosion of Carbon Capture and Storage Pipelines. *Corrosion*, **2014**, 70, 185-195	1.8	39
240	Corrosion protection of magnesium and its alloys by metal phosphate conversion coatings. *Surface Engineering*, **2014**, 30, 871-879	2.6	39

239	A comparative study of the role of Ag in microstructures and mechanical properties of Mg-Gd and Mg-Y alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 731, 609-622	5.3	39
238	Simultaneous improvement in the strength and corrosion resistance of Al via high-energy ball milling and Cr alloying. *Materials and Design*, **2015**, 84, 270-276	8.1	38
237	A closer look at constituent induced localised corrosion in Al-Cu-Mg alloys. *Corrosion Science*, **2016**, 113, 160-171	6.8	38
236	The Role of Surface Films and Dissolution Products on the Negative Difference Effect for Magnesium: Comparison of Cl Versus Cl Free Solutions. *Journal of the Electrochemical Society*, **2017**, 164, C300-C311	3.9	37
235	On the Precipitation in an Ag-Containing Mg-Gd-Zr Alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2018**, 49, 673-694	2.3	36
234	Improving Formability of Mg Ca Zr Sheet Alloy by Microalloying of Zn . *Advanced Engineering Materials*, **2016**, 18, 1763-1769	3.5	36
233	On the Electrochemical and Quasi In Situ Corrosion Response of the Q-Phase (AlxCuyMgzSiw) Intermetallic Particle in 6xxx Series Aluminum Alloys. *Corrosion*, **2017**, 73, 87-99	1.8	36
232	Correlation of intergranular corrosion behaviour with microstructure in Al-Cu-Li alloy. *Corrosion Science*, **2018**, 139, 215-226	6.8	35
231	Corrosion-Resistant Electrochemical Platings on Magnesium Alloys: A State-of-the-Art Review. *Corrosion*, **2012**, 68, 518-535	1.8	35
230	A detailed HAADF-STEM study of precipitate evolution in Mg Gd alloy. *Journal of Alloys and Compounds*, **2019**, 777, 531-543	5.7	35
229	Understanding multi-element alloy passivation in acidic solutions using operando methods. *Electrochemistry Communications*, **2017**, 80, 44-47	5.1	34
228	Possibilities and Limitations of Scanning Electrochemical Microscopy of Mg and Mg Alloys. *Corrosion*, **2015**, 71, 171-183	1.8	34
227	Hydrogen Evolution During Anodic Polarization of Mg Alloyed with Li, Ca, or Fe. *Corrosion*, **2015**, 71, 224-233	1.8	34
226	A closer inspection of a grain boundary immune to intergranular corrosion in a sensitised Al-Mg alloy. *Corrosion Science*, **2018**, 133, 1-5	6.8	34
225	Understanding the Origins of Intergranular Corrosion in Copper-Containing Al-Mg-Si Alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2016**, 47, 985-989	2.3	34
224	Simultaneously improving the corrosion resistance and strength of magnesium via low levels of Zn and Ge additions. *Corrosion Science*, **2018**, 140, 18-29	6.8	34
223	Evaluation of a simple microstructural-electrochemical model for corrosion damage accumulation in microstructurally complex aluminum alloys. *Engineering Fracture Mechanics*, **2009**, 76, 641-650	4.2	34
222	A closer look at the in vitro electrochemical characterisation of titanium alloys for biomedical applications using in-situ methods. *Acta Biomaterialia*, **2017**, 54, 469-478	10.8	33

221	Near boundary gradient zone and sensitization control in austenitic stainless steel. *Corrosion Science*, **2015**, 100, 544-555	6.8	33
220	Simultaneous improvement in corrosion resistance and hardness of a model 2xxx series Al-Cu alloy with the microstructural variation caused by Sc and Zr additions. *Corrosion Science*, **2019**, 158, 108095	6.8	33
219	The influence of biodegradable magnesium alloys on the osteogenic differentiation of human mesenchymal stem cells. *Journal of Biomedical Materials Research - Part A*, **2014**, 102, 4346-57	5.4	33
218	Investigating the effect of salt and acid impurities in supercritical CO2 as relevant to the corrosion of carbon capture and storage pipelines. *International Journal of Greenhouse Gas Control*, **2013**, 17, 534-541	4.2	33
217	Influence of Mn and Zr on the Corrosion of Al-Free Mg Alloys: Part 2: Impact of Mn and Zr on Mg Alloy Electrochemistry and Corrosion. *Corrosion*, **2013**, 69, 744-751	1.8	33
216	On the effect of Fe concentration on Mg dissolution and activation studied using atomic emission spectroelectrochemistry and scanning electrochemical microscopy. *Electrochimica Acta*, **2016**, 210, 271-284	6.7	33
215	On the Intergranular Corrosion and Hardness Evolution of 6xxx Series Al Alloys as a Function of Si:Mg Ratio, Cu Content, and Aging Condition. *Corrosion*, **2017**, 73, 1280-1295	1.8	32
214	Electrochemical microscopy: An approach for understanding localized corrosion in microstructurally complex metallic alloys. *Electrochimica Acta*, **2010**, 55, 7853-7859	6.7	32
213	Numerical Simulation of Micro-Galvanic Corrosion in Al Alloys: Effect of Geometric Factors. *Journal of the Electrochemical Society*, **2017**, 164, C75-C84	3.9	31
212	Theoretical Study of the Influence of Microalloying on Sensitization of AA5083 and Moderation of Sensitization of a Model Al-Mg-Mn Alloy via Sr Additions. *Corrosion*, **2014**, 70, 402-413	1.8	31
211	State of the aqueous phase in liquid and supercritical CO2 as relevant to CCS pipelines. *International Journal of Greenhouse Gas Control*, **2012**, 7, 82-88	4.2	31
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