Sviatlana Lamaka

List of Publications by Year
in descending order

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125 papers	8,650 citations	44444 50 h-index	51423 90 g-index
125 all docs	125 docs citations	125 times ranked	4758 citing authors

#	Article	IF	Citations
1	Experimental and quantum chemical studies of carboxylates as corrosion inhibitors for AM50 alloy in pH neutral NaCl solution. Journal of Magnesium and Alloys, 2022, 10, 555-568.	5.5	16
2	Biodegradation behaviour of Fe-based alloys in Hanksâ€™ Balanced Salt Solutions: Part II. The evolution of local pH and dissolved oxygen concentration at metal interface. Bioactive Materials, 2022, 7, 412-425.	8.6	14
3	Biodegradation behaviour of Fe-based alloys in Hanksâ€™ Balanced Salt Solutions: Part I. material characterisation and corrosion testing. Bioactive Materials, 2022, 7, 426-440.	8.6	28
4	Enhancement of discharge performance for aqueous Mg-air batteries in 2,6-dihydroxybenzoate-containing electrolyte. Chemical Engineering Journal, 2022, 429, 132369.	6.6	22
5	The effect of carboxylate compounds on Volta potential and corrosion inhibition of Mg containing different levels of iron. Corrosion Science, 2022, 194, 109937.	3.0	25
6	Revealing physical interpretation of time constants in electrochemical impedance spectra of Mg via Tribo-EIS measurements. Electrochimica Acta, 2022, 404, 139582.	2.6	23
7	Local pH and oxygen concentration at the interface of Zn alloys in Tris-HCl or HEPES buffered Hanksâ€™ balanced salt solution. Corrosion Science, 2022, 197, 110061.	3.0	12
8	Low interfacial pH discloses the favorable biodegradability of several Mg alloys. Corrosion Science, 2022, 197, 110059.	3.0	9
9	In situ formation of LDH-based nanocontainers on the surface of AZ91 magnesium alloy and detailed investigation of their crystal structure. Journal of Magnesium and Alloys, 2022, 10, 1268-1285.	5.5	21
10	Exploring the effect of sodium salt of Ethylenediaminetetraacetic acid as an electrolyte additive on electrochemical behavior of a commercially pure Mg in primary Mg-air batteries. Journal of Power Sources, 2022, 527, 231176.	4.0	13
11	Exploring the corrosion inhibition mechanism of 8-hydroxyquinoline for a PEO-coated magnesium alloy. Corrosion Science, 2022, 203, 110344.	3.0	24
12	CORDATA: an open data management web application to select corrosion inhibitors. Npj Materials Degradation, 2022, 6, .	2.6	12
13	A mathematical model describing the surface evolution of Mg anode during discharge of aqueous Mg-air battery. Journal of Power Sources, 2022, 542, 231745.	4.0	6
14	Rational Design of Effective Mg Degradation Modulators. Corrosion, 2021, 77, 204-208.	0.5	9
15	Approaching â€œstainless magnesiumâ€•by Ca micro-alloying. Materials Horizons, 2021, 8, 589-596.	6.4	76
16	Indium chloride as an electrolyte additive for primary aqueous Mg batteries. Electrochimica Acta, 2021, 373, 137916.	2.6	26
17	Degradation of Titanium Sintered with Magnesium: Effect of Hydrogen Uptake. Metals, 2021, 11, 527.	1.0	2
18	Flash-PEO as an alternative to chromate conversion coatings for corrosion protection of Mg alloy. Corrosion Science, 2021, 180, 109189.	3.0	74

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19	Control of the Mg alloy biodegradation via PEO and polymer-containing coatings. Corrosion Science, 2021, 182, 109254.	3.0	46
20	Mg Biodegradation Mechanism Deduced from the Local Surface Environment under Simulated Physiological Conditions. Advanced Healthcare Materials, 2021, 10, e2100053.	3.9	17
21	Insight into physical interpretation of high frequency time constant in electrochemical impedance spectra of Mg. Corrosion Science, 2021, 187, 109501.	3.0	64
22	Corrosion behavior of Mg wires for ureteral stent in artificial urine solution. Corrosion Science, 2021, 189, 109567.	3.0	27
23	Computational modeling of degradation process of biodegradable magnesium biomaterials. Corrosion Science, 2021, 190, 109674.	3.0	24
24	Adverse effect of 2,5PDC corrosion inhibitor on PEO coated magnesium. Corrosion Science, 2021, 192, 109830.	3.0	21
25	High-energy and durable aqueous magnesium batteries: Recent advances and perspectives. Energy Storage Materials, 2021, 43, 238-247.	9.5	54
26	Spatially resolved electrochemical tools: micropotentiometry and scanning vibrating electrode technique to detail localized corrosion problems in coated parts. , 2021, , 437-468.		0
27	Exploring structure-property relationships in magnesium dissolution modulators. Npj Materials Degradation, 2021, 5, .	2.6	17
28	Predicting the inhibition efficiencies of magnesium dissolution modulators using sparse machine learning models. Npj Computational Materials, 2021, 7, .	3.5	17
29	Localized Corrosion Degradation of Bioresorbable Mg Alloys Promising for Medicine. , 2021, 6, .		0
30	In silico screening of modulators of magnesium dissolution. Corrosion Science, 2020, 163, 108245.	3.0	38
31	Active protection of Mg alloy by composite PEO coating loaded with corrosion inhibitors. Applied Surface Science, 2020, 504, 144462.	3.1	68
32	Clarifying the influence of albumin on the initial stages of magnesium corrosion in Hank's balanced salt solution. Journal of Magnesium and Alloys, 2020, , .	5.5	36
33	Synergistic Mixture of Electrolyte Additives: A Route to a High-Efficiency Mgâ€“Air Battery. Journal of Physical Chemistry Letters, 2020, 11, 8790-8798.	2.1	29
34	Corrosion and discharge properties of Ca/Ge micro-alloyed Mg anodes for primary aqueous Mg batteries. Corrosion Science, 2020, 177, 108958.	3.0	53
35	High rate oxygen reduction reaction during corrosion of ultra-high-purity magnesium. Npj Materials Degradation, 2020, 4, .	2.6	30
36	Selecting medium for corrosion testing of bioabsorbable magnesium and other metals â€“ A critical review. Corrosion Science, 2020, 171, 108722.	3.0	152

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37	Tailoring the Mg-air primary battery performance using strong complexing agents as electrolyte additives. Journal of Power Sources, 2020, 453, 227880.	4.0	36
38	Ca/In micro alloying as a novel strategy to simultaneously enhance power and energy density of primary Mg-air batteries from anode aspect. Journal of Power Sources, 2020, 472, 228528.	4.0	76
39	Electrochemical behaviour of the MA8 Mg alloy in minimum essential medium. Corrosion Science, 2020, 168, 108552.	3.0	30
40	Thixomolded AZ91D and MRI153M magnesium alloys and their enhanced corrosion resistance. Materials and Corrosion - Werkstoffe Und Korrosion, 2020, 71, 339-351.	0.8	4
41	In situ surface film evolution during Mg aqueous corrosion in presence of selected carboxylates. Corrosion Science, 2020, 171, 108484.	3.0	32
42	Localized currents and pH distribution studied during corrosion of MA8 Mg alloy in the cell culture medium. Corrosion Science, 2020, 170, 108689.	3.0	47
43	ATR-FTIR in Kretschmann configuration integrated with electrochemical cell as in situ interfacial sensitive tool to study corrosion inhibitors for magnesium substrates. Electrochimica Acta, 2020, 345, 136166.	2.6	37
44	Tailoring electrolyte additives for controlled Mg-Ca anode activity in aqueous Mg-air batteries. Journal of Power Sources, 2020, 460, 228106.	4.0	37
45	Use of synergistic mixture of chelating agents for in situ LDH growth on the surface of PEO-treated AZ91. Scientific Reports, 2020, 10, 8645.	1.6	28
46	(Invited) Selective Response of Magnesium Corrosion Inhibitors Incorporated in PEO Coatings. ECS Meeting Abstracts, 2020, MA2020-02, 1295-1295.	0.0	0
47	Clarifying the decisive factors for utilization efficiency of Mg anodes for primary aqueous batteries. Journal of Power Sources, 2019, 441, 227201.	4.0	86
48	Influence of inhibitor adsorption on readings of microelectrode during SVET measurements. Electrochimica Acta, 2019, 322, 134761.	2.6	14
49	Galvanic corrosion of Ti6Al4V -AA2024 joints in aircraft environment: Modelling and experimental validation. Corrosion Science, 2019, 157, 70-78.	3.0	51
50	Effect of unequal levels of deformation and fragmentation on the electrochemical response of friction stir welded AA2024-T3 alloy. Electrochimica Acta, 2019, 313, 271-281.	2.6	26
51	Corrosion protection of steel cutâ€edges by hotâ€dip galvanized Al(Zn,Mg) coatings in 1â€‰wt% NaCl: Part I. Experimental study. Materials and Corrosion - Werkstoffe Und Korrosion, 2019, 70, 768-779.	0.8	7
52	Mutual interplay of ZnO micro- and nanowires and methylene blue during cyclic photocatalysis process. Journal of Environmental Chemical Engineering, 2019, 7, 103016.	3.3	92
53	Revealing the impact of second phase morphology on discharge properties of binary Mg-Ca anodes for primary Mg-air batteries. Corrosion Science, 2019, 153, 225-235.	3.0	67
54	The effect of small-molecule bio-relevant organic components at low concentration on the corrosion of commercially pure Mg and Mg-0.8Ca alloy: An overall perspective. Corrosion Science, 2019, 153, 258-271.	3.0	76

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55	Data Science Based Mg Corrosion Engineering. Frontiers in Materials, 2019, 6, .	1.2	34
56	Corrosion protection of steel cutâ€edges by hotâ€dip galvanized Al(Zn,Mg) coatings in 1â€‰wt% NaCl: Part II. Numerical simulations. Materials and Corrosion - Werkstoffe Und Korrosion, 2019, 70, 780-792.	0.8	15
57	Evaporation of Electrolyte during SVET Measurements: The Scale of the Problem and the Solutions. Electroanalysis, 2019, 31, 2290-2298.	1.5	4
58	The role of individual components of simulated body fluid on the corrosion behavior of commercially pure Mg. Corrosion Science, 2019, 147, 81-93.	3.0	97
59	CHAPTER 12. Aqueous Mg Batteries. RSC Energy and Environment Series, 2019, , 275-308.	0.2	6
60	Towards Active Corrosion Protection of Mg Alloys Using Corrosion Inhibition Approaches. Minerals, Metals and Materials Series, 2018, , 19-20.	0.3	0
61	Chelating agent-assisted in situ LDH growth on the surface of magnesium alloy. Scientific Reports, 2018, 8, 16409.	1.6	46
62	The Reduction of Dissolved Oxygen During Magnesium Corrosion. ChemistryOpen, 2018, 7, 664-668.	0.9	66
63	Nanoporous magnesium. Nano Research, 2018, 11, 6428-6435.	5.8	46
64	Performance boost for primary magnesium cells using iron complexing agents as electrolyte additives. Scientific Reports, 2018, 8, 7578.	1.6	45
65	Validating the early corrosion sensing functionality in poly (ether imide) coatings for enhanced protection of magnesium alloy AZ31. Corrosion Science, 2018, 140, 307-320.	3.0	36
66	Local pH and Its Evolution Near Mg Alloy Surfaces Exposed to Simulated Body Fluids. Advanced Materials Interfaces, 2018, 5, 1800169.	1.9	63
67	Corrosion inhibition of pure Mg containing a high level of iron impurity in pH neutral NaCl solution. Corrosion Science, 2018, 142, 222-237.	3.0	72
68	Enhanced Wear Performance of Hybrid Epoxy-Ceramic Coatings on Magnesium Substrates. ACS Applied Materials & Interfaces, 2018, 10, 30741-30751.	4.0	21
69	Mg-Ca binary alloys as anodes for primary Mg-air batteries. Journal of Power Sources, 2018, 396, 109-118.	4.0	193
70	Corrosion protection properties of inhibitor containing hybrid PEO-epoxy coating on magnesium. Corrosion Science, 2018, 140, 99-110.	3.0	103
71	Kelvin Microprobe Analytics on Iron-Enriched Corroded Magnesium Surface. Corrosion, 2017, 73, 583-595.	0.5	13
72	Hierarchically organized Liâ€“Al-LDH nano-flakes: a low-temperature approach to seal porous anodic oxide on aluminum alloys. RSC Advances, 2017, 7, 35357-35367.	1.7	34

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73	Comprehensive screening of Mg corrosion inhibitors. Corrosion Science, 2017, 128, 224-240.	3.0	206
74	Role of steel and zinc coating thickness in cut edge corrosion of coil coated materials in atmospheric weathering conditions; Part 1: Laboratory study. Progress in Organic Coatings, 2016, 99, 356-364.	1.9	22
75	Corrosion inhibition synergies on a model Al-Cu-Mg sample studied by localized scanning electrochemical techniques. Corrosion Science, 2016, 112, 408-417.	3.0	61
76	Active corrosion protection coating for a ZE41 magnesium alloy created by combining PEO and solâ€“gel techniques. RSC Advances, 2016, 6, 12553-12560.	1.7	84
77	A new concept for corrosion inhibition of magnesium: Suppression of iron re-deposition. Electrochemistry Communications, 2016, 62, 5-8.	2.3	100
78	Application of scanning electrode techniques for the evaluation of ironâ€“zinc corrosion in nearly neutral chloride solutions. Corrosion Science, 2016, 104, 123-131.	3.0	24
79	Smart composite coatings for corrosion protection of aluminium alloys in aerospace applications. , 2016, , 85-121.		39
80	Simulation of the role of vibration on Scanning Vibrating Electrode Technique measurements close to a disc in plane. Electrochimica Acta, 2016, 203, 379-387.	2.6	29
81	Comparison of the synergistic effects of inhibitor mixtures tailored for enhanced corrosion protection of bare and coated AA2024-T3. Surface and Coatings Technology, 2016, 303, 342-351.	2.2	76
82	The effect of iron re-deposition on the corrosion of impurity-containing magnesium. Physical Chemistry Chemical Physics, 2016, 18, 1279-1291.	1.3	140
83	Quasi-simultaneous Mapping of Local Current Density, pH and Dissolved O2. Electroanalysis, 2015, 27, 2725-2730.	1.5	22
84	Novel use of a micro-optode in overcoming the negative influence of the amperometric micro-probe on localized corrosion measurements. Corrosion Science, 2015, 95, 1-5.	3.0	14
85	Fault-tolerant hybrid epoxy-silane coating for corrosion protection of magnesium alloy AZ31. Progress in Organic Coatings, 2015, 80, 98-105.	1.9	67
86	H+-selective microelectrodes with optimized measuring range for corrosion studies. Sensors and Actuators B: Chemical, 2015, 207, 967-975.	4.0	26
87	Synergistic Protection against Corrosion of AA2024-T3 by Sol-Gel Coating Modified with La and Mo-Enriched Zeolites. Journal of the Electrochemical Society, 2014, 161, C215-C222.	1.3	33
88	Cerium cinnamate as an environmentally benign inhibitor pigment for epoxy coatings on AA 2024-T3. Progress in Organic Coatings, 2014, 77, 765-773.	1.9	52
89	Multi-ion transport and reaction model used to improve the understanding of local current density measurements in presence of concentration gradients around a point current source. Electrochimica Acta, 2014, 127, 45-52.	2.6	14
90	pH-sensitive polymeric particles with increased inhibitor-loading capacity as smart additives for corrosion protective coatings for AA2024. Electrochimica Acta, 2014, 145, 123-131.	2.6	85

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91	Simulating corrosion of Al2CuMg phase by measuring ionic currents, chloride concentration and pH. Corrosion Science, 2014, 88, 178-186.	3.0	64
92	Plasticizer-free solid-contact pH-selective microelectrode for visualization of local corrosion. Journal of Electroanalytical Chemistry, 2014, 725, 32-38.	1.9	18
93	Plasma anodized ZE41 magnesium alloy sealed with hybrid epoxy-silane coating. Corrosion Science, 2013, 73, 300-308.	3.0	90
94	Study of local Na+ and Clâ¯ distributions during the cut-edge corrosion of aluminum rich metal-coated steel by scanning vibrating electrode and micro-potentiometric techniques. Electrochimica Acta, 2013, 102, 319-327.	2.6	25
95	Sodium- and chloride-selective microelectrodes optimized for corrosion studies. Journal of Electroanalytical Chemistry, 2013, 706, 13-24.	1.9	24
96	The role of Ce(III)-enriched zeolites on the corrosion protection of AA2024-T3. Electrochimica Acta, 2013, 112, 549-556.	2.6	51
97	Hybrid epoxyâ€“silane coatings for improved corrosion protection of Mg alloy. Corrosion Science, 2013, 67, 82-90.	3.0	162
98	Thermodynamic Simulation of Phosphate Precipitation based on Ion-Selective Microelectrode Measurements. Journal of the Brazilian Chemical Society, 2013, , .	0.6	0
99	Solâ€“gel coatings modified with zeolite fillers for active corrosion protection of AA2024. Corrosion Science, 2012, 62, 153-162.	3.0	159
100	â€œSMARTâ€•protective ability of water based epoxy coatings loaded with CaCO3 microbeads impregnated with corrosion inhibitors applied on AA2024 substrates. Electrochimica Acta, 2012, 83, 439-447.	2.6	177
101	Evaluation of self-healing ability in protective coatings modified with combinations of layered double hydroxides and cerium molibdate nanocontainers filled with corrosion inhibitors. Electrochimica Acta, 2012, 60, 31-40.	2.6	263
102	Cut-edge corrosion study on painted aluminum rich metallic coated steel by scanning vibrating electrode and micro-potentiometric techniques. Electrochimica Acta, 2012, 61, 107-117.	2.6	57
103	The combined use of scanning vibrating electrode technique and micro-potentiometry to assess the self-repair processes in defects on â€œsmartâ€•coatings applied to galvanized steel. Electrochimica Acta, 2011, 56, 4475-4488.	2.6	111
104	Quasi-simultaneous measurements of ionic currents by vibrating probe and pH distribution by ion-selective microelectrode. Electrochemistry Communications, 2011, 13, 20-23.	2.3	54
105	Inhibitor-doped solâ€“gel coatings for corrosion protection of magnesium alloy AZ31. Surface and Coatings Technology, 2010, 204, 1479-1486.	2.2	155
106	Localized electrochemical study of corrosion inhibition in microdefects on coated AZ31 magnesium alloy. Electrochimica Acta, 2010, 55, 5401-5406.	2.6	117
107	Micropotentiometric mapping of local distributions of Zn2+ relevant to corrosion studies. Electrochemistry Communications, 2010, 12, 394-397.	2.3	36
108	Hydroxyapatite Microparticles as Feedback-Active Reservoirs of Corrosion Inhibitors. ACS Applied Materials & Interfaces, 2010, 2, 3011-3022.	4.0	187

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109	Novel Solidâ€Contact Ionâ€Selective Microelectrodes for Localized Potentiometric Measurements. Electroanalysis, 2009, 21, 2447-2453.	1.5	12
110	Complex anticorrosion coating for ZK30 magnesium alloy. Electrochimica Acta, 2009, 55, 131-141.	2.6	145
111	Novel hybrid solâ€“gel coatings for corrosion protection of AZ31B magnesium alloy. Electrochimica Acta, 2008, 53, 4773-4783.	2.6	253
112	Solâ€Gel/Polyelectrolyte Active Corrosion Protection System. Advanced Functional Materials, 2008, 18, 3137-3147.	7.8	115
113	Monitoring local spatial distribution of Mg2+, pH and ionic currents. Electrochemistry Communications, 2008, 10, 259-262.	2.3	118
114	The synergistic combination of bis-silane and CeO2Â·ZrO2 nanoparticles on the electrochemical behaviour of galvanised steel in NaCl solutions. Electrochimica Acta, 2008, 53, 5913-5922.	2.6	120
115	Active Anticorrosion Coatings with Halloysite Nanocontainers. Journal of Physical Chemistry C, 2008, 112, 958-964.	1.5	340
116	High effective organic corrosion inhibitors for 2024 aluminium alloy. Electrochimica Acta, 2007, 52, 7231-7247.	2.6	287
117	Nanoporous titania interlayer as reservoir of corrosion inhibitors for coatings with self-healing ability. Progress in Organic Coatings, 2007, 58, 127-135.	1.9	280
118	Role of intermetallic phases in localized corrosion of AA5083. Electrochimica Acta, 2007, 52, 7651-7659.	2.6	267
119	Mechanism of Corrosion Inhibition of AA2024 by Rare-Earth Compounds. Journal of Physical Chemistry B, 2006, 110, 5515-5528.	1.2	315
120	Sulfate-selective electrode and its application for sulfate determination in aqueous solutions. Analytica Chimica Acta, 2006, 562, 216-222.	2.6	28
121	TiOx self-assembled networks prepared by templating approach as nanostructured reservoirs for self-healing anticorrosion pre-treatments. Electrochemistry Communications, 2006, 8, 421-428.	2.3	116
122	Layer-by-Layer Assembled Nanocontainers for Self-Healing Corrosion Protection. Advanced Materials, 2006, 18, 1672-1678.	11.1	653
123	Title is missing!. Russian Journal of Coordination Chemistry/Koordinatsionnaya Khimiya, 2002, 28, 709-725.	0.3	10
124	Extending the Lifetime of Weldable Primers by Means of Chemical Inhibitors. Materials Science Forum, 0, 587-588, 1003-1007.	0.3	1
125	Evaluation of Corrosion Protection of Sol-Gel Coatings on AZ31B Magnesium Alloy. Materials Science Forum, 0, 587-588, 390-394.	0.3	1