

Peter J Uggowitzer

List of Publications by Citations

Source: <https://exaly.com/author-pdf/6943268/peter-j-uggowitzer-publications-by-citations.pdf>

Version: 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

208
papers

10,337
citations

56
h-index

96
g-index

216
ext. papers

11,808
ext. citations

5.2
avg, IF

6.38
L-index

#	Paper	IF	Citations
208	MgZnCa glasses without clinically observable hydrogen evolution for biodegradable implants. <i>Nature Materials</i> , 2009 , 8, 887-91	27	669
207	Magnesium alloys for temporary implants in osteosynthesis: in vivo studies of their degradation and interaction with bone. <i>Acta Biomaterialia</i> , 2012 , 8, 1230-8	10.8	412
206	Mechanical anisotropy of extruded Mg β % Al α % Zn alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 379, 258-263	5.3	341
205	Design strategy for biodegradable Fe-based alloys for medical applications. <i>Acta Biomaterialia</i> , 2010 , 6, 1705-13	10.8	331
204	On the in vitro and in vivo degradation performance and biological response of new biodegradable Mg-Y-Zn alloys. <i>Acta Biomaterialia</i> , 2010 , 6, 1824-33	10.8	261
203	Mechanisms controlling the artificial aging of AlMgBi Alloys. <i>Acta Materialia</i> , 2011 , 59, 3352-3363	8.4	253
202	The influence of yttrium (Y) on the corrosion of Mg γ binary alloys. <i>Corrosion Science</i> , 2010 , 52, 3687-3706	6.8	246
201	Calculated phase diagrams and the corrosion of die-cast MgAl alloys. <i>Corrosion Science</i> , 2009 , 51, 602-610	6.8	246
200	Microstructural features of Sc- and Zr-modified Al-Mg alloys processed by selective laser melting. <i>Materials and Design</i> , 2017 , 115, 52-63	8.1	229
199	Corrosion of ultra-high-purity Mg in 3.5% NaCl solution saturated with Mg(OH) $_2$. <i>Corrosion Science</i> , 2013 , 75, 78-99	6.8	201
198	High Nitrogen Steels. Nickel Free High Nitrogen Austenitic Steels.. <i>ISIJ International</i> , 1996 , 36, 901-908	1.7	201
197	Selective interfacial bonding in Al(Si) β diamond composites and its effect on thermal conductivity. <i>Composites Science and Technology</i> , 2006 , 66, 2677-2685	8.6	199
196	Investigations on the microstructure and crack formation of IN738LC samples processed by selective laser melting using Gaussian and doughnut profiles. <i>Materials and Design</i> , 2016 , 89, 770-784	8.1	171
195	On the silicon spheroidization in AlBi alloys. <i>Journal of Light Metals</i> , 2002 , 2, 263-269		166
194	On the biodegradation performance of an Mg-Y-RE alloy with various surface conditions in simulated body fluid. <i>Acta Biomaterialia</i> , 2009 , 5, 162-71	10.8	162
193	Biodegradable Fe-based alloys for use in osteosynthesis: outcome of an in vivo study after 52 weeks. <i>Acta Biomaterialia</i> , 2014 , 10, 3346-53	10.8	158
192	In vivo degradation performance of micro-arc-oxidized magnesium implants: a micro-CT study in rats. <i>Acta Biomaterialia</i> , 2013 , 9, 5411-20	10.8	158

191	The in vivo and in vitro corrosion of high-purity magnesium and magnesium alloys WZ21 and AZ91. <i>Corrosion Science</i> , 2013 , 75, 354-366	6.8	152
190	Aluminium carbide formation in interpenetrating graphite/aluminium composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 448, 1-6	5.3	139
189	The influence of MgSi particle reactivity and dissolution processes on corrosion in AlMgSi alloys. <i>Electrochimica Acta</i> , 2008 , 54, 844-855	6.7	123
188	Microstructure and mechanical properties of squeeze cast and semi-solid cast MgAl alloys. <i>Journal of Light Metals</i> , 2002 , 2, 277-280		114
187	Microstructure and mechanical properties of as-processed scandium-modified aluminium using selective laser melting. <i>CIRP Annals - Manufacturing Technology</i> , 2016 , 65, 213-216	4.9	112
186	Corrosion resistance of super duplex stainless steels in chloride ion containing environments: investigations by means of a new microelectrochemical method. <i>Corrosion Science</i> , 2001 , 43, 707-726	6.8	110
185	On the effect of nitrogen on the dislocation structure of austenitic stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1993 , 164, 164-169	5.3	108
184	Influence of SLM scan-speed on microstructure, precipitation of Al ₃ Sc particles and mechanical properties in Sc- and Zr-modified Al-Mg alloys. <i>Materials and Design</i> , 2018 , 140, 134-143	8.1	104
183	Wear/corrosion behavior of biocompatible austenitic stainless steels. <i>Wear</i> , 2000 , 239, 48-58	3.5	102
182	Diffusion on demand to control precipitation aging: application to Al-Mg-Si alloys. <i>Physical Review Letters</i> , 2014 , 112, 225701	7.4	101
181	Corrosion resistance of super duplex stainless steels in chloride ion containing environments: investigations by means of a new microelectrochemical method. <i>Corrosion Science</i> , 2001 , 43, 727-745	6.8	100
180	Cytotoxicity of Zr-based bulk metallic glasses. <i>Intermetallics</i> , 2006 , 14, 729-734	3.5	97
179	Microstructure evolution during reheating of an extruded MgAlZn alloy into the semisolid state. <i>Scripta Materialia</i> , 2004 , 51, 405-410	5.6	97
178	Degradation performance of biodegradable Fe-Mn-C(-Pd) alloys. <i>Materials Science and Engineering C</i> , 2013 , 33, 1882-93	8.3	95
177	Brittle fracture in austenitic steel. <i>Acta Metallurgica Et Materialia</i> , 1994 , 42, 2211-2217		94
176	High-Strength Low-Alloy (HSLA) MgZnTa Alloys with Excellent Biodegradation Performance. <i>Jom</i> , 2014 , 66, 566-572	2.1	92
175	Interface formation in aluminium-aluminium compound casting. <i>Acta Materialia</i> , 2008 , 56, 3036-3043	8.4	88
174	Partitioning of chromium and molybdenum in super duplex stainless steels with respect to nitrogen and nickel content. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1998 , 242, 222-229	5.3	87

173	Processing and microstructure-property relations of high-strength low-alloy (HSLA) MgZnCa alloys. <i>Acta Materialia</i> , 2015 , 98, 423-432	8.4	86
172	Assessing the degradation performance of ultrahigh-purity magnesium in vitro and in vivo. <i>Corrosion Science</i> , 2015 , 91, 29-36	6.8	86
171	Tensile properties of glassy MgZnCa wires and reliability analysis using Weibull statistics. <i>Acta Materialia</i> , 2009 , 57, 3223-3231	8.4	81
170	On the cytocompatibility of biodegradable Fe-based alloys. <i>Materials Science and Engineering C</i> , 2013 , 33, 782-9	8.3	76
169	High-strength magnesium alloys for degradable implant applications. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011 , 528, 1047-1054	5.3	73
168	Influence of the thermal route on the peak-aged microstructures in an AlMgSi aluminum alloy. <i>Scripta Materialia</i> , 2013 , 68, 158-161	5.6	72
167	Calculated phase diagrams, iron tolerance limits, and corrosion of Mg-Al alloys. <i>Jom</i> , 2008 , 60, 39-44	2.1	70
166	The effect of main alloying elements on the physical properties of AlSi foundry alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 560, 481-491	5.3	68
165	Design strategy for microalloyed ultra-ductile magnesium alloys. <i>Philosophical Magazine Letters</i> , 2009 , 89, 377-390	1	68
164	Long-term in vivo degradation behavior and near-implant distribution of resorbed elements for magnesium alloys WZ21 and ZX50. <i>Acta Biomaterialia</i> , 2016 , 42, 440-450	10.8	67
163	Design strategy for controlled natural aging in AlMgSi alloys. <i>Acta Materialia</i> , 2016 , 118, 296-305	8.4	67
162	Microstructural characteristics of the nickel-based alloy IN738LC and the cobalt-based alloy Mar-M509 produced by selective laser melting. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 658, 68-76	5.3	66
161	On the microstructure formation in chromium steels rapidly cooled from the semi-solid state. <i>Acta Materialia</i> , 2007 , 55, 1033-1042	8.4	65
160	In-vitro characterization of stress corrosion cracking of aluminium-free magnesium alloys for temporary bio-implant applications. <i>Materials Science and Engineering C</i> , 2014 , 42, 629-36	8.3	64
159	Structure and properties of a hypoeutectic chromium steel processed in the semi-solid state. <i>Acta Materialia</i> , 2006 , 54, 2727-2734	8.4	64
158	Hardening of AlMgSi alloys: Effect of trace elements and prolonged natural aging. <i>Materials and Design</i> , 2016 , 107, 257-268	8.1	62
157	Influence of interrupted quenching on artificial aging of AlMgSi alloys. <i>Acta Materialia</i> , 2012 , 60, 4496-4505	8.4	61
156	Recrystallization behavior, microstructure evolution and mechanical properties of biodegradable FeMnTi(Bd) TWIP alloys. <i>Acta Materialia</i> , 2012 , 60, 2746-2756	8.4	59

155	In-situ probing of metallic glass formation and crystallization upon heating and cooling via fast differential scanning calorimetry. <i>Applied Physics Letters</i> , 2014 , 104, 251908	3.4	58
154	Experimental investigation and thermodynamic assessment of the Cu ₅ Ni ₃ ternary system. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 2011 , 35, 82-94	1.9	58
153	Design strategy for new biodegradable Mg ₉₂ Zn alloys for medical applications. <i>International Journal of Materials Research</i> , 2009 , 100, 1127-1136	0.5	58
152	Influence of yttrium additions on the hot tearing susceptibility of magnesium-zinc alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 7074-7079	5.3	55
151	On the microstructure and properties of 100Cr6 steel processed in the semi-solid state. <i>Acta Materialia</i> , 2007 , 55, 6553-6560	8.4	55
150	Corrosion behaviour of an Mg ₉₂ RE alloy used in biomedical applications studied by electrochemical techniques. <i>Comptes Rendus Chimie</i> , 2008 , 11, 1043-1054	2.7	55
149	Physical properties of graphite/aluminium composites produced by gas pressure infiltration method. <i>Carbon</i> , 2003 , 41, 1017-1024	10.4	54
148	Solid-solid phase transitions via melting in metals. <i>Nature Communications</i> , 2016 , 7, 11113	17.4	53
147	Ultrafast artificial aging of AlMgSi alloys. <i>Scripta Materialia</i> , 2016 , 112, 148-151	5.6	51
146	Martensitic-austenitic 9-12% Cr steels Alloy design, microstructural stability and mechanical properties. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 476, 186-194	5.3	49
145	Influence of trace impurities on the in vitro and in vivo degradation of biodegradable Mg-5Zn-0.3Ca alloys. <i>Acta Biomaterialia</i> , 2015 , 23, 347-353	10.8	48
144	Property Criteria for Automotive Al-Mg-Si Sheet Alloys. <i>Materials</i> , 2014 , 7, 5047-5068	3.5	47
143	Influence of Low Oxygen Contents and Alloy Refinement on the Glass Forming Ability of Zr52.5Cu17.9Ni14.6Al10Ti5. <i>Materials Transactions</i> , 2002 , 43, 3206-3210	1.3	47
142	The influence of biodegradable magnesium implants on the growth plate. <i>Acta Biomaterialia</i> , 2018 , 66, 109-117	10.8	47
141	Production of High Purity Magnesium Alloys by Melt Purification with Zr. <i>Advanced Engineering Materials</i> , 2012 , 14, 477-490	3.5	45
140	Stress corrosion cracking and corrosion fatigue characterisation of MgZn1Ca0.3 (ZX10) in a simulated physiological environment. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017 , 65, 634-643	4.1	43
139	Cellular reactions to biodegradable magnesium alloys on human growth plate chondrocytes and osteoblasts. <i>International Orthopaedics</i> , 2014 , 38, 881-9	3.8	43
138	Effect of main alloying elements on strength of AlSi foundry alloys at elevated temperatures. <i>International Journal of Cast Metals Research</i> , 2012 , 25, 215-224	1	43

137	ICP-MS, SKPFM, XPS, and Microcapillary Investigation of the Local Corrosion Mechanisms of WC-Co Hardmetal. <i>Journal of the Electrochemical Society</i> , 2008 , 155, C415	3.9	42
136	Nickel-free duplex stainless steels. <i>Scripta Materialia</i> , 1998 , 40, 123-129	5.6	41
135	Thermodynamic Assessment of the Sn-Ni System. <i>Monatshefte für Chemie</i> , 2005 , 136, 1921-1930	1.4	41
134	ZrN, Zr _x Al _y N and Zr _x Ga _y N thin films novel materials for hard coatings grown using pulsed laser deposition. <i>Applied Physics A: Materials Science and Processing</i> , 2001 , 73, 441-450	2.6	41
133	In situ monitoring of corrosion processes within the bulk of AlMgSi alloys using X-ray microtomography. <i>Corrosion Science</i> , 2008 , 50, 3455-3466	6.8	39
132	Process-controlled suppression of natural aging in an AlMgBi alloy. <i>Scripta Materialia</i> , 2014 , 89, 53-56	5.6	37
131	Silicon Spheroidization Treatment of Thixoformed Al-Si-Mg Alloys. <i>Materials Science Forum</i> , 2002 , 396-402, 149-154	0.4	36
130	Interface formation between liquid and solid Mg alloys—An approach to continuously metallurgic joining of magnesium parts. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 2274-2279	5.3	35
129	Clustering in Age-Hardenable Aluminum Alloys. <i>Advanced Engineering Materials</i> , 2018 , 20, 1800255	3.5	34
128	Rational design of a lean magnesium-based alloy with high age-hardening response. <i>Acta Materialia</i> , 2018 , 158, 214-229	8.4	33
127	Precipitation strengthening of Nb-stabilized TP347 austenitic steel by a dispersion of secondary Nb(C,N) formed upon a short-term hardening heat treatment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 647, 294-302	5.3	32
126	Light metal compound casting. <i>Science in China Series D: Earth Sciences</i> , 2009 , 52, 46-51		32
125	High toughness and high strength spray-deposited AlCuMgAg-base alloys for use at moderately elevated temperatures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1995 , 191, 121-134	5.3	31
124	The tensile fracture of ferritic-martensitic carbon steels. <i>Materials Science and Engineering</i> , 1982 , 55, 181-189		31
123	PHB, crystalline and amorphous magnesium alloys: promising candidates for bioresorbable osteosynthesis implants?. <i>Materials Science and Engineering C</i> , 2012 , 32, 1503-10	8.3	30
122	Precipitation hardening of biodegradable FeMnPd alloys. <i>Acta Materialia</i> , 2011 , 59, 981-991	8.4	30
121	Design considerations for achieving simultaneously high-strength and highly ductile magnesium alloys. <i>Philosophical Magazine Letters</i> , 2012 , 92, 417-427	1	30
120	Corrosion and stress corrosion cracking of ultra-high-purity Mg5Zn. <i>Corrosion Science</i> , 2015 , 93, 330-335	6.8	29

119	Age-hardening of high pressure die casting AlMg alloys with Zn and combined Zn and Cu additions. <i>Materials and Design</i> , 2019 , 181, 107927	8.1	28
118	The Effect of Ni on the High-Temperature Strength of Al-Si Cast Alloys. <i>Materials Science Forum</i> , 2011 , 690, 274-277	0.4	28
117	The role of zinc in the biocorrosion behavior of resorbable Mg-Zn-Ca alloys. <i>Acta Biomaterialia</i> , 2019 , 100, 398-414	10.8	27
116	Mg-Alloys for Forging Applications-A Review. <i>Materials</i> , 2020 , 13,	3.5	27
115	Interdependent effect of chemical composition and thermal history on artificial aging of AA6061. <i>Acta Materialia</i> , 2012 , 60, 5545-5554	8.4	27
114	Size-dependent diffusion controls natural aging in aluminium alloys. <i>Nature Communications</i> , 2019 , 10, 4746	17.4	26
113	On the Immersion Testing of Degradable Implant Materials in Simulated Body Fluid: Active pH Regulation Using CO ₂ . <i>Advanced Engineering Materials</i> , 2013 , 15, 434-441	3.5	26
112	Biodegradable wound-closing devices for gastrointestinal interventions: Degradation performance of the magnesium tip. <i>Materials Science and Engineering C</i> , 2011 , 31, 1098-1103	8.3	26
111	Influence of decomposition on the thermal stability of undercooled Zr-Ti-Cu-Ni-Al alloys. <i>Scripta Materialia</i> , 2001 , 44, 1269-1273	5.6	26
110	Age-hardening response of AlMgZn alloys with Cu and Ag additions. <i>Acta Materialia</i> , 2020 , 195, 541-554	8.4	25
109	Characterization of bulk metallic glasses via fast differential scanning calorimetry. <i>Thermochimica Acta</i> , 2014 , 590, 84-90	2.9	25
108	Microstructures and yield strength of nitrogen alloyed super duplex steels. <i>Acta Materialia</i> , 1997 , 45, 1645-1654	8.4	25
107	Configuration at the 2-position of oxazolidines derived from l-ephedrine and p-bromobenzaldehyde. An x-ray structure redetermination. <i>Journal of Organic Chemistry</i> , 1983 , 48, 2923-2924	4.3	25
106	Mechanism of low temperature deformation in aluminium alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 795, 139935	5.3	25
105	Reverse β - β' transformation mechanisms of martensitic FeMn and age-hardenable FeMnPd alloys upon fast and slow continuous heating. <i>Acta Materialia</i> , 2014 , 72, 99-109	8.4	24
104	Investigation of the exfoliation-like attack mechanism in relation to AlMgSi alloy microstructure. <i>Corrosion Science</i> , 2008 , 50, 2085-2093	6.8	24
103	Preparation of high aspect ratio surface microstructures out of a Zr-based bulk metallic glass. <i>Microelectronic Engineering</i> , 2003 , 67-68, 405-409	2.5	24
102	Semi-Solid Metal Processing of Aluminum Alloy A356 and Magnesium Alloy AZ91: Comparison Based on Metallurgical Consideration. <i>Advanced Engineering Materials</i> , 2003 , 5, 653-658	3.5	24

101	Evolution of Globular Microstructure in New Rheocasting and Super Rheocasting Semi-Solid Slurries. <i>Steel Research International</i> , 2004 , 75, 525-530	1.6	23
100	Secondary Al-Si-Mg High-pressure Die Casting Alloys with Enhanced Ductility. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015 , 46, 1035-1045	2.3	22
99	Parallel nano-assembling of a multifunctional GO/HapNP coating on ultrahigh-purity magnesium for biodegradable implants. <i>Applied Surface Science</i> , 2015 , 345, 387-393	6.7	22
98	Experimental investigation of the Cu ₃ Zr system at 800°C. <i>Intermetallics</i> , 2007 , 15, 1666-1671	3.5	22
97	Microstructure, crystallographic texture and mechanical behaviour of friction stir processed Mg-Zn-Ca-Zr alloy ZKX50. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 685, 253-264	5.3	21
96	Immunological Response to Biodegradable Magnesium Implants. <i>Jom</i> , 2014 , 66, 573-579	2.1	20
95	In Vivo Performance and Structural Relaxation of Biodegradable Bone Implants Made from Mg ₇₀ Zn ₂₀ Ca Bulk Metallic Glasses. <i>Advanced Engineering Materials</i> , 2012 , 14, B357-B364	3.5	19
94	Elektrochemische Korrosionsuntersuchungen an der Magnesiumlegierung AZ91: Beschreibung kritischer Parameter und deren Einfluss auf die Angriffsmechanismen auf NRC-Proben. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2004 , 55, 5-17	1.6	19
93	Alloy compositions and mechanical properties of 912% chromium steels with martensitic/austenitic microstructure. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1999 , 272, 292-299	5.3	19
92	Corrosion properties of glassy Mg ₇₀ Al ₁₅ Ga ₁₅ in 0.1M NaCl solution. <i>Intermetallics</i> , 2009 , 17, 811-817	3.5	18
91	Influence of annealing temperature on the microstructure and mechanical properties of a high nitrogen containing austenitic stainless steel. <i>Scripta Metallurgica</i> , 1987 , 21, 513-518		18
90	Giant hardening response in AlMgZn(Cu) alloys. <i>Acta Materialia</i> , 2021 , 206, 116617	8.4	18
89	In Situ Microtomographically Monitored and Electrochemically Controlled Corrosion Initiation and Propagation in AlMgSi Alloy AA6016. <i>Journal of the Electrochemical Society</i> , 2009 , 156, C1	3.9	17
88	Effect of recrystallisation and grain size on the mechanical properties of spray formed AlCuMgAg-alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1998 , 248, 1-8	5.3	17
87	Processing-controlled suppression of Lüders elongation in AlMgMn alloys. <i>Scripta Materialia</i> , 2019 , 166, 64-67	5.6	15
86	Microstructure and mechanical properties of microalloyed and equal channel angular extruded Mg alloys. <i>Scripta Materialia</i> , 2008 , 59, 207-210	5.6	15
85	Measurement of specific heat capacity via fast scanning calorimetry: Accuracy and loss corrections. <i>Thermochimica Acta</i> , 2019 , 677, 12-20	2.9	14
84	On the potential of aluminum crossover alloys. <i>Progress in Materials Science</i> , 2021 , 124, 100873	42.2	14

83	Atom Probe Tomography Study of As-Quenched AlMgSi Alloys . <i>Advanced Engineering Materials</i> , 2017 , 19, 1600668	3.5	13
82	Exceptional Strengthening of Biodegradable Mg-Zn-Ca Alloys through High Pressure Torsion and Subsequent Heat Treatment. <i>Materials</i> , 2019 , 12,	3.5	13
81	The Role of Vacancies in the Aging of Al-Mg-Si Alloys. <i>Materials Science Forum</i> , 2014 , 794-796, 1008-1013.	0.4	13
80	Design Strategy for Microalloyed Ultra-Ductile Magnesium Alloys for Medical Applications. <i>Materials Science Forum</i> , 2009 , 618-619, 75-82	0.4	13
79	Micro-Alloyed Wrought Magnesium for Room-Temperature Forming. <i>Advanced Engineering Materials</i> , 2007 , 9, 799-802	3.5	13
78	Approaching Representative Volume Element size in Interpenetrating Phase Composites. <i>Advanced Engineering Materials</i> , 2005 , 7, 225-229	3.5	13
77	Room temperature recovery of cryogenically deformed aluminium alloys. <i>Materials and Design</i> , 2020 , 193, 108819	8.1	13
76	The influence of two common sterilization techniques on the corrosion of Mg and its alloys for biomedical applications. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2018 , 106, 1907-1917	3.5	12
75	Influence of variations in alloy composition on castability and process stability. Part 1: Gravity and pressure casting processes. <i>International Journal of Cast Metals Research</i> , 2005 , 18, 273-278	1	12
74	High Nitrogen Steels. Precipitation Behaviour and Stability of Nitrides in High Nitrogen Martensitic 9% and 12% Chromium Steels.. <i>ISIJ International</i> , 1996 , 36, 768-776	1.7	12
73	Atomic-scale characterization of prior austenite grain boundaries in FeMn-based maraging steel using site-specific atom probe tomography. <i>Acta Materialia</i> , 2014 , 73, 215-226	8.4	11
72	Interface Reactions of Al and Binary Al-Alloys on Mild Steel Substrates in Controlled Atmosphere. <i>Materials Science Forum</i> , 2006 , 519-521, 1157-1162	0.4	11
71	Improved boron-containing 9 to 12% chromium steel with high creep rupture strength. <i>Journal of Materials Science Letters</i> , 1986 , 5, 835-839		11
70	Effect of Compositional and Processing Variations in New 5182-Type AlMgMn Alloys on Mechanical Properties and Deformation Surface Quality. <i>Materials</i> , 2019 , 12,	3.5	10
69	Correlation between Supersaturation of Solid Solution and Mechanical Behaviour of Two Binary Al-Si-Alloys. <i>Materials Science Forum</i> , 2014 , 794-796, 508-514	0.4	10
68	High aspect ratio micro mechanical structures made of bulk metallic glass. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 375-377, 327-331	5.3	10
67	Influence of starting temperature on differential scanning calorimetry measurements of an AlMgSi alloy. <i>Materials Letters</i> , 2013 , 100, 163-165	3.3	9
66	Influence of compositional variations on microstructural evolution, mechanical properties and fluidity of secondary foundry alloy AlSi9Cu3. <i>International Journal of Cast Metals Research</i> , 2010 , 23, 375-383	1	9

65	Corrosion of AZ91 - Influence of the Phase Morphology. <i>Materials Science Forum</i> , 2009 , 618-619, 473-478.	4	9
64	Local creep in SnAg3.8Cu0.7 lead-free solder. <i>Journal of Electronic Materials</i> , 2005 , 34, 1206-1214	1.9	9
63	On material immanent ratchetting of two-phase materials under cyclic purely thermal loading. <i>Archive of Applied Mechanics</i> , 1999 , 69, 727-750	2.2	9
62	Structure and properties of AlMgSi1 alloy tailored for semi-solid forming. <i>Journal of Materials Science</i> , 2002 , 37, 1173-1178	4.3	8
61	Nickel-Free High Nitrogen Austenitic Stainless Steels Produced by Metal Injection Moulding. <i>Materials Science Forum</i> , 1999 , 318-320, 663-672	0.4	8
60	The fracture toughness behaviour of a 18 Ni (300 grade) maraging steel in various solution treated and aged conditions. <i>Scripta Metallurgica</i> , 1984 , 18, 373-378		8
59	Alloy design strategy for microstructural-tailored scandium-modified aluminium alloys for additive manufacturing. <i>Scripta Materialia</i> , 2022 , 207, 114277	5.6	8
58	Making sustainable aluminum by recycling scrap: The science of DirtyAlloys. <i>Progress in Materials Science</i> , 2022 , 100947	42.2	8
57	Monotropic polymorphism in a glass-forming metallic alloy. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 234002	1.8	7
56	Magnetic properties of Cr-Mn austenitic stainless steels. <i>Journal of Magnetism and Magnetic Materials</i> , 1992 , 110, 185-196	2.8	7
55	Influence of Zn and Sn on the Precipitation Behavior of New Al-Mg-Si Alloys. <i>Materials</i> , 2019 , 12,	3.5	6
54	Evolution of Microstructure and Texture in Laboratory- and Industrial-Scaled Production of Automotive Al-Sheets. <i>Materials</i> , 2020 , 13,	3.5	6
53	Structural and chemical characterization of the hardening phase in biodegradable Fe-Mn-Pd maraging steels. <i>Journal of Materials Research</i> , 2014 , 29, 1069-1076	2.5	6
52	The influence of heat treatment and plastic deformation on the bio-degradation of a Mg-Y-RE alloy. <i>Journal of Biomedical Materials Research - Part A</i> , 2010 , 92, 409-18	5.4	6
51	SIMS Investigations on the Distribution of Trace Elements in Modified AluminiumSiliconMagnesium Alloys. <i>Mikrochimica Acta</i> , 2003 , 141, 23-27	5.8	6
50	Differential Scanning Calorimetry and Thermodynamic Predictions - A Comparative Study of Al-Zn-Mg-Cu Alloys. <i>Metals</i> , 2016 , 6, 180	2.3	6
49	Effect of Thermal Treatments on Sn-Alloyed Al-Mg-Si Alloys. <i>Materials</i> , 2019 , 12,	3.5	5
48	Reprint of: Characterization of bulk metallic glasses via fast differential scanning calorimetry. <i>Thermochimica Acta</i> , 2015 , 603, 46-52	2.9	5

47	Microstructural Change during the Interrupted Quenching of the AlZnMg(Cu) Alloy AA7050. <i>Materials</i> , 2020 , 13,	3.5	5
46	Thermodynamics of PdMn phases and extension to the FeMnPd system. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 2015 , 51, 314-333	1.9	5
45	Influence of variations in alloy composition on castability and process stability. Part 2: Semi-solid casting processes. <i>International Journal of Cast Metals Research</i> , 2005 , 18, 279-285	1	5
44	Strength and fracture toughness of spray formed AlCuMgAg alloys. <i>Materials Science and Technology</i> , 1999 , 15, 926-932	1.5	5
43	Mechanical and Thermophysical Properties of Graphite/Al Composites Produced by Casting Infiltration Methods. <i>Materials Science Forum</i> , 2002 , 396-402, 1247-1254	0.4	4
42	Metallurgical Aspects of Thixoforming of AlMgSi - Wrought Alloys. <i>Materials Science Forum</i> , 2000 , 331-337, 235-240	0.4	4
41	Properties of Cold Worked High Nitrogen Chromium-Based Alloys. <i>Materials Science Forum</i> , 1999 , 318-320, 241-248	0.4	4
40	The effect of crack branching on the residual lifetime of machine components containing stress corrosion cracks. <i>Corrosion Science</i> , 1985 , 25, 745-756	6.8	4
39	Atom Probe Tomography Investigations of Modified Early Stage Clustering in Si-Containing Aluminum Alloys. <i>Acta Physica Polonica A</i> , 2015 , 128, 643-647	0.6	4
38	Enhanced aging kinetics in Al-Mg-Si alloys by up-quenching. <i>Communications Materials</i> , 2021 , 2,	6	4
37	Formation of Die Soldering and the Influence of Alloying Elements on the Intermetallic Interface. <i>Materials</i> , 2021 , 14,	3.5	4
36	Characterization of Fe-C/N Steel. <i>Materials Science Forum</i> , 1999 , 318-320, 757-762	0.4	3
35	The Role of Co-Clusters in the Artificial Aging of AA6061 and AA6060 2012 , 415-420		3
34	Prototypic Lightweight Alloy Design for Stellar-Radiation Environments. <i>Advanced Science</i> , 2020 , 7, 2002397	2.3	3
33	Mechanical Properties and Casting Characteristics of the Secondary Aluminum Alloy AlSi9Cu3(Fe) (A226)237-244		3
32	Statistical and Thermodynamic Optimization of Trace-Element Modified Al-Mg-Si-Cu Alloys 2015 , 263-270		2
31	Degradation of Cu nanowires in a low-reactive plasma environment. <i>Npj Materials Degradation</i> , 2020 , 4,	5.7	2
30	Ageing Behaviour of Al-Mg-Si Alloys After Cryogenic and Room Temperature Deformation. <i>Materials</i> , 2020 , 13,	3.5	2

29	Analytical Characterization of the Corrosion Mechanisms of WC-Co by Electrochemical Methods and Inductively-Coupled Plasma Mass Spectroscopy. <i>ECS Transactions</i> , 2006 , 1, 251-262	1	2
28	Microstructure Control and Structure Analysis in the Semi-Solid State of Different Feedstock Materials for the Bearing Steel 100Cr6. <i>Solid State Phenomena</i> , 2006 , 116-117, 177-180	0.4	2
27	Struktur und Eigenschaften einer hochfesten spritzkompaktierten Aluminiumlegierung. <i>Materialwissenschaft Und Werkstofftechnik</i> , 1990 , 21, 459-463	0.9	2
26	Stabilization of Al3Zr allotropes in dilute aluminum alloys via the addition of ternary elements. <i>Materialia</i> , 2022 , 21, 101321	3.2	2
25	Influence of Fe and Mn on the Microstructure Formation in 5xxx Alloys-Part I: Evolution of Primary and Secondary Phases. <i>Materials</i> , 2021 , 14,	3.5	2
24	Influence of Temperature on Natural Aging Kinetics of AA6061 Modified with Sn 2015 , 367-371		1
23	Using Scrap in Recycling Alloys for Structural Applications in the Automotive Industry 2014 , 349-353		1
22	The Influence of Heat Treatment and Plastic Deformation on the Bio-Degradation of a Mg/RE Alloy. <i>Materials Science Forum</i> , 2009 , 618-619, 71-74	0.4	1
21	Effects of wear on static and dynamic failure loads of aluminium-based alloy climbing karabiners. <i>Sports Engineering</i> , 2009 , 11, 85-91	1.4	1
20	Metallurgical Aspects of SSM Processing		1
19	Material Aspects of Steel Thixoforming		1
18	Local Fatigue in Lead-Free SnAg3.8Cu0.7 Solder. <i>Advanced Engineering Materials</i> , 2006 , 8, 179-183	3.5	1
17	Influence of Composition and Roughness on Localized Corrosion of Al-Mg-Si Alloys Characterized by Microelectrochemistry. <i>Materials Science Forum</i> , 2006 , 519-521, 635-640	0.4	1
16	Nitrogen Alloyed 9-12% Chromium Steels with a Martensitic-Austenitic Microstructure. <i>Materials Science Forum</i> , 1999 , 318-320, 437-442	0.4	1
15	Influence of Temperature on Natural Aging Kinetics of AA6061 Modified with Sn 2015 , 367-371		1
14	The Effect of Nickel on the Thermal Conductivity of Al-Si Cast Alloys 2012 , 137-142		1
13	Effect of Interrupted Quenching on Al/Mg/Cu Alloys. <i>Minerals, Metals and Materials Series</i> , 2017 , 385-389	0.3	1
12	Synergistic alloy design concept for new high-strength Al/Mg/Si thick plate alloys. <i>Materialia</i> , 2021 , 15, 100997	3.2	1

11	Lean Wrought Magnesium Alloys. <i>Materials</i> , 2021 , 14,	3.5	1
10	The Role of Co-Clusters in the Artificial Aging of AA6061 and AA6060413-420		1
9	The Effect of Nickel on the Thermal Conductivity of Al-Si Cast Alloys137-142		1
8	Production of High Purity Mg-X Rare Earth Binary Alloys Using Zr. <i>Materials Science Forum</i> , 2013 , 765, 301-305	0.4	0
7	The Influence of Solution Treatment on the High-Temperature Strength of Al-Si Foundry Alloys with Ni 2012 , 431-434		0
6	High Fe content in Al-Mg-Si wrought alloys facilitates excellent mechanical properties. <i>Scripta Materialia</i> , 2022 , 215, 114701	5.6	0
5	Influence of Chemical Composition and Process Parameters on Mechanical Properties and Formability of AlMgSi-Sheets for Automotive Application 2014 , 227-232		
4	Influence of the Chemical Composition on the Ductility of an AlSiCuZnFe Recycling Foundry Alloy 2014 , 189-193		
3	Aluminum-Lithium alloy development for thixoforming. <i>International Journal of Materials Research</i> , 2022 , 95, 1097-1107	0.5	
2	Statistical and Thermodynamic Optimization of Trace-Element Modified Al-Mg-Si-Cu Alloys 2015 , 265-270		
1	The Influence of Solution Treatment on the High-Temperature Strength of Al-Si Foundry Alloys with Ni431-434		