Stefan Pogatscher

List of Publications by Year
in descending order

81 papers	2,887 citations	196777 29 h-index	206121 51 g-index
88 all docs	88 docs citations	88 times ranked	2061 citing authors

#	Article	IF	Citations
1	On the potential of aluminum crossover alloys. Progress in Materials Science, 2022, 124, 100873.	16.0	54
2	Alloy design strategy for microstructural-tailored scandium-modified aluminium alloys for additive manufacturing. Scripta Materialia, 2022, 207, 114277.	2.6	30
3	Stabilization of Al3Zr allotropes in dilute aluminum alloys via the addition of ternary elements. Materialia, 2022, 21, 101321.	1.3	6
4	Making sustainable aluminum by recycling scrap: The science of â€œdirtyâ€• alloys. Progress in Materials Science, 2022, 128, 100947.	16.0	134
5	High Fe content in Al-Mg-Si wrought alloys facilitates excellent mechanical properties. Scripta Materialia, 2022, 215, 114701.	2.6	12
6	Ce post-treatment for increased corrosion resistance of AA2024-T3 anodized in tartaric-sulfuric acid. Corrosion Science, 2022, 204, 110371.	3.0	13
7	Mitigating the detrimental effects of galvanic corrosion by nanoscale composite architecture design. Npj Materials Degradation, 2022, 6, .	2.6	4
8	A Fast and Implantation-Free Sample Production Method for Large Scale Electron-Transparent Metallic Samples Destined for MEMS-Based In Situ S/TEM Experiments. Materials, 2021, 14, 1085.	1.3	9
9	Synergistic alloy design concept for new high-strength Alâ€“Mgâ€“Si thick plate alloys. Materialia, 2021, 15, 100997.	1.3	3
10	Giant hardening response in AlMgZn(Cu) alloys. Acta Materialia, 2021, 206, 116617.	3.8	70
11	Deviating from the pure MAX phase concept: Radiation-tolerant nanostructured dual-phase Cr ₂ AlC. Science Advances, 2021, 7, .	4.7	19
12	Two stepâ€“ageing of 7xxx series alloys with an intermediate warm-forming step. Journal of Materials Research and Technology, 2021, 12, 1508-1515.	2.6	10
13	Influence of Fe and Mn on the Microstructure Formation in 5xxx Alloysâ€"Part II: Evolution of Grain Size and Texture. Materials, 2021, 14, 3312.	1.3	4
14	Enhanced aging kinetics in Al-Mg-Si alloys by up-quenching. Communications Materials, 2021, 2, .	2.9	18
15	Influence of Fe and Mn on the Microstructure Formation in 5xxx Alloysâ€"Part I: Evolution of Primary and Secondary Phases. Materials, 2021, 14, 3204.	1.3	9
16	Lean Wrought Magnesium Alloys. Materials, 2021, 14, 4282.	1.3	3
17	Irradiation stability and induced ferromagnetism in a nanocrystalline CoCrCuFeNi highly-concentrated alloy. Nanoscale, 2021, 13, 20437-20450.	2.8	9
18	Prototypic Lightweight Alloy Design for Stellarâ€Radiation Environments. Advanced Science, 2020, 7, 2002397.	5.6	7

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19	Tartaric-sulphuric acid anodized clad AA2024-T3 post-treated in Ce-containing solutions at different temperatures: Corrosion behaviour and Ce ions distribution. Applied Surface Science, 2020, 534, 147634.	3.1	17
20	Mechanism of low temperature deformation in aluminium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 795, 139935.	2.6	69
21	Degradation of Cu nanowires in a low-reactive plasma environment. Npj Materials Degradation, 2020, 4, .	2.6	3
22	Age-hardening response of AlMgZn alloys with Cu and Ag additions. Acta Materialia, 2020, 195, 541-554.	3.8	59
23	Microstructural Change during the Interrupted Quenching of the AlZnMg(Cu) Alloy AA7050. Materials, 2020, 13, 2554.	1.3	7
24	Warm-forming of pre-aged Al-Zn-Mg-Cu alloy sheet. Materials and Design, 2020, 193, 108837.	3.3	29
25	Ageing Behaviour of Alâ€"Mgâ€"Si Alloys After Cryogenic and Room Temperature Deformation. Materials, 2020, 13, 554.	1.3	7
26	Mg-Alloys for Forging Applicationsâ€"A Review. Materials, 2020, 13, 985.	1.3	64
27	Evolution of Microstructure and Texture in Laboratory- and Industrial-Scaled Production of Automotive Al-Sheets. Materials, 2020, 13, 469.	1.3	14
28	Thermodynamics of polymorphism in a bulk metallic glass: Heat capacity measurements by fast differential scanning calorimetry. Thermochimica Acta, 2020, 685, 178518.	1.2	21
29	Room temperature recovery of cryogenically deformed aluminium alloys. Materials and Design, 2020, 193, 108819.	3.3	23
30	Radiation Damage Suppression in AISI-316 Steel Nanoparticles: Implications for the Design of Future Nuclear Materials. ACS Applied Nano Materials, 2020, 3, 9652-9662.	2.4	3
31	Metal Alloy Space Materials: Prototypic Lightweight Alloy Design for Stellarâ€Radiation Environments (Adv. Sci. 22/2020). Advanced Science, 2020, 7, .	5.6	0
32	Age-hardening of high pressure die casting AlMg alloys with Zn and combined Zn and Cu additions. Materials and Design, 2019, 181, 107927.	3.3	43
33	Size-dependent diffusion controls natural aging in aluminium alloys. Nature Communications, 2019, 10, 4746.	5.8	57
34	Exceptional Strengthening of Biodegradable Mg-Zn-Ca Alloys through High Pressure Torsion and Subsequent Heat Treatment. Materials, 2019, 12, 2460.	1.3	26
35	Influence of Zn and Sn on the Precipitation Behavior of New Alâ€"Mgâ€"Si Alloys. Materials, 2019, 12, 2547.	1.3	8
36	Thermodynamics of an austenitic stainless steel (AISI-348) under in situ TEM heavy ion irradiation. Acta Materialia, 2019, 179, 360-371.	3.8	14

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37	Effect of Compositional and Processing Variations in New 5182-Type AlMgMn Alloys on Mechanical Properties and Deformation Surface Quality. Materials, 2019, 12, 1645.	1.3	16
38	Effect of Thermal Treatments on Sn-Alloyed Al-Mg-Si Alloys. Materials, 2019, 12, 1801.	1.3	7
39	Measurement of specific heat capacity via fast scanning calorimetryâ€"Accuracy and loss corrections. Thermochimica Acta, 2019, 677, 12-20.	1.2	23
40	Processing-controlled suppression of LÃ¼ders elongation in AlMgMn alloys. Scripta Materialia, 2019, 166, 64-67.	2.6	25
41	Microstructure characterization of SLM-processed Al-Mg-Sc-Zr alloy in the heat treated and HIPed condition. Additive Manufacturing, 2018, 20, 173-181.	1.7	89
42	Monotropic polymorphism in a glass-forming metallic alloy. Journal of Physics Condensed Matter, 2018, 30, 234002.	0.7	8
43	Clustering in Ageâ€Hardenable Aluminum Alloys. Advanced Engineering Materials, 2018, 20, 1800255.	1.6	58
44	Atom Probe Tomography Study of Asâ€Quenched Alâ€"Mgâ€"Si Alloys. Advanced Engineering Materials, 2017, 19, 1600668.	1.6	17
45	Effect of Interrupted Quenching on Alâ€"Znâ€"Mgâ€"Cu Alloys. Minerals, Metals and Materials Series, 2017, , 385-389.	0.3	1
46	Differential Scanning Calorimetry and Thermodynamic Predictionsâ€"A Comparative Study of Al-Zn-Mg-Cu Alloys. Metals, 2016, 6, 180.	1.0	9
47	Material Characterization by Fast Scanning Calorimetry: Practice and Applications. , 2016, , 3-80.		28
48	Design strategy for controlled natural aging in Alâ€"Mgâ€"Si alloys. Acta Materialia, 2016, 118, 296-305.	3.8	98
49	Hardening of Alâ€"Mgâ€"Si alloys: Effect of trace elements and prolonged natural aging. Materials and Design, 2016, 107, 257-268.	3.3	83
50	Solidâ€"solid phase transitions via melting in metals. Nature Communications, 2016, 7, 11113.	5.8	69
51	Ultrafast artificial aging of Alâ€"Mgâ€"Si alloys. Scripta Materialia, 2016, 112, 148-151.	2.6	70
52	Thermodynamics of Pdâ€"Mn phases and extension to the Feâ€"Mnâ€"Pd system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2015, 51, 314-333.	0.7	5
53	Influence of trace impurities on the in vitro and in vivo degradation of biodegradable Mgâ€"5Znâ€"0.3Ca alloys. Acta Biomaterialia, 2015, 23, 347-353.	4.1	67
54	Secondary Al-Si-Mg High-pressure Die Casting Alloys with Enhanced Ductility. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 1035-1045.	1.1	39

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55	Quench-induced precipitates in Alâ€“Si alloys: Calorimetric determination of solute content and characterisation of microstructure. Thermochimica Acta, 2015, 602, 63-73.	1.2	38
56	Reprint of: Characterization of bulk metallic glasses via fast differential scanning calorimetry. Thermochimica Acta, 2015, 603, 46-52.	1.2	6
57	Dynamic properties of major shear bands in Zrâ€“Cuâ€“Al bulk metallic glasses. Acta Materialia, 2015, 96, 428-436.	3.8	28
58	Processing and microstructureâ€“property relations of high-strength low-alloy (HSLA) Mgâ€“Znâ€“Ca alloys. Acta Materialia, 2015, 98, 423-432.	3.8	126
59	Influence of Temperature on Natural Aging Kinetics of AA6061 Modified with Sn. , 2015, , 367-371.		1
60	Atom Probe Tomography Investigations of Modified Early Stage Clustering in Si-Containing Aluminum Alloys. Acta Physica Polonica A, 2015, 128, 643-647.	0.2	7
61	Statistical and Thermodynamic Optimization of Trace-Element Modified Al-Mg-Si-Cu Alloys. , 2015, , 265-270.		0
62	Property Criteria for Automotive Al-Mg-Si Sheet Alloys. Materials, 2014, 7, 5047-5068.	1.3	75
63	<i>In-situ</i> probing of metallic glass formation and crystallization upon heating and cooling via fast differential scanning calorimetry. Applied Physics Letters, 2014, 104, .	1.5	73
64	Characterization of bulk metallic glasses via fast differential scanning calorimetry. Thermochimica Acta, 2014, 590, 84-90.	1.2	33
65	High-Strength Low-Alloy (HSLA) Mgâ€“Znâ€“Ca Alloys with Excellent Biodegradation Performance. Jom, 2014, 66, 566-572.	0.9	115
66	Reverse Î±â€²â†’Î³ transformation mechanisms of martensitic Feâ€“Mn and age-hardenable Feâ€“Mnâ€“Pd alloys upon fast and slow continuous heating. Acta Materialia, 2014, 72, 99-109.	3.8	35
67	Diffusion on Demand to Control Precipitation Aging: Application to Al-Mg-Si Alloys. Physical Review Letters, 2014, 112, 225701.	2.9	132
68	Process-controlled suppression of natural aging in an Alâ€“Mgâ€“Si alloy. Scripta Materialia, 2014, 89, 53-56.	2.6	42
69	Compositional dependence of shear-band dynamics in the Zrâ€“Cuâ€“Al bulk metallic glass system. Applied Physics Letters, 2014, 104, 101910.	1.5	28
70	Influence of starting temperature on differential scanning calorimetry measurements of an Alâ€“Mgâ€“Si alloy. Materials Letters, 2013, 100, 163-165.	1.3	11
71	Influence of the thermal route on the peak-aged microstructures in an Alâ€“Mgâ€“Si aluminum alloy. Scripta Materialia, 2013, 68, 158-161.	2.6	86
72	Influence of interrupted quenching on artificial aging of Alâ€“Mgâ€“Si alloys. Acta Materialia, 2012, 60, 4496-4505.	3.8	71

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73	Interdependent effect of chemical composition and thermal history on artificial aging of AA6061. Acta Materialia, 2012, 60, 5545-5554.	3.8	35
74	The Role of Co-Clusters in the Artificial Aging of AA6061 and AA6060. , 2012, , 415-420.		5
75	Mechanisms controlling the artificial aging of Alâ€"Mgâ€"Si Alloys. Acta Materialia, 2011, 59, 3352-3363.	3.8	315
76	Correlation between Supersaturation of Solid Solution and Mechanical Behaviour of Two Binary Al-Si-Alloys. Materials Science Forum, 0, 794-796, 508-514.	0.3	11
77	The Role of Vacancies in the Aging of Al-Mg-Si Alloys. Materials Science Forum, 0, 794-796, 1008-1013.	0.3	17
78	Room Temperature Recovery of Cryogenically Deformed Aluminium Alloys. SSRN Electronic Journal, 0, , .	0.4	1
79	Age-Hardening Response of AlMgZn Alloys with Cu and Ag Additions. SSRN Electronic Journal, 0, , .	0.4	0
80	Synergistic Alloy Design Concept for New High-Strength Al-Mg-Si Thick Plate Alloys. SSRN Electronic Journal, 0, , .	0.4	0
81	Giant Hardening Response in AlMgZn(Cu) Alloys. SSRN Electronic Journal, 0, , .	0.4	0