Dietmar Letzig

List of Publications by Citations

98 papers	2,986 citations	23 h-index	54 g-index
101 ext. papers	3,406 ext. citations	2.8 avg, IF	5.08 L-index

#	Paper	IF	Citations
98	The texture and anisotropy of magnesium–zinc–rare earth alloy sheets. *Acta Materialia*, **2007**, 55, 2101-2112	8.4	867
97	Effect of rare earth elements on the microstructure and texture development in magnesium–manganese alloys during extrusion. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 7092-7098	5.3	277
96	Mechanical anisotropy and deep drawing behaviour of AZ31 and ZE10 magnesium alloy sheets. *Acta Materialia*, **2010**, 58, 592-605	8.4	260
95	Role of Solute in the Texture Modification During Hot Deformation of Mg-Rare Earth Alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 1347-1362	2.3	254
94	On the influence of the grain size and solute content on the AE response of magnesium alloys tested in tension and compression. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 462, 302-306	5.3	139
93	Grain size effects on deformation twinning in an extruded magnesium alloy tested in compression. *Scripta Materialia*, **2011**, 65, 424-427	5.6	100
92	Microstructural evolution during the annealing of an extruded AZ31 magnesium alloy. *Journal of Alloys and Compounds*, **2010**, 506, 364-371	5.7	94
91	Metallographische Gefügeuntersuchungen von Magnesiumlegierungen / The Metallographical Examination of Magnesium Alloys. *Praktische Metallographie/Practical Metallography*, **2004**, 41, 233-246	0.3	86
90	Effects of Solute and Second-Phase Particles on the Texture of Nd-Containing Mg Alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 1363-1375	2.3	82
89	Anisotropic Properties of Magnesium Sheet AZ31. *Materials Science Forum*, **2003**, 419-422, 315-320	0.4	76
88	Calcium and zirconium as texture modifiers during rolling and annealing of magnesium–zinc alloys. *Materials Characterization*, **2015**, 101, 144-152	3.9	67
87	Effect of processing route on texture and cold formability of AZ31 Mg alloy sheets processed by ECAP. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 669, 159-170	5.3	61
86	In vitro evaluation of the ZX11 magnesium alloy as potential bone plate: Degradability and mechanical integrity. *Acta Biomaterialia*, **2019**, 97, 608-622	10.8	43
85	Enhanced mechanical behavior and reduced mechanical anisotropy of AZ31 Mg alloy sheet processed by ECAP. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 650, 523-529	5.3	42
84	Static recrystallization behaviour of cold rolled Mg-Zn-Y alloy and role of solute segregation in microstructure evolution. *Scripta Materialia*, **2017**, 136, 41-45	5.6	37
83	Mg sheet: the effect of process parameters and alloy composition on texture and mechanical properties. *Jom*, **2009**, 61, 38-42	2.1	36
82	Modeling of the work hardening in magnesium alloy sheets. *International Journal of Plasticity*, **2016**, 76, 166-185	7.6	34

81	Acoustic emission during stress relaxation of pure magnesium and AZ magnesium alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 462, 307-310	5.3	32
80	Deformation mechanisms in an AZ31 cast magnesium alloy as investigated by the acoustic emission technique. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 462, 297-301	5.3	32
79	Role of deformation mechanisms and grain growth in microstructure evolution during recrystallization of Mg-Nd based alloys. *Scripta Materialia*, **2019**, 166, 53-57	5.6	29
78	Influence of the Processing of Magnesium Alloys AZ31 and ZE10 on the Sheet Formability at Elevated Temperature. *Key Engineering Materials*, **2011**, 473, 335-342	0.4	25
77	A study of mechanical anisotropy of Mg□Zn□Rare earth alloy sheet. *Journal of Alloys and Compounds*, **2014**, 588, 628-632	5.7	24
76	Damping Measurements of the Magnesium Wrought Alloys AZ31, AZ61 and AZ80 after Indirect and Hydrostatic Extrusion. *Materials Science Forum*, **2005**, 482, 387-390	0.4	23
75	Influence of Process Parameters on Twin Roll Cast Strip of the Alloy AZ31. *Materials Science Forum*, **2013**, 765, 205-209	0.4	20
74	Influence of Nd or Ca addition on the dislocation activity and texture changes of Mg□n alloy sheets under uniaxial tensile loading. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 761, 138053	5.3	18
73	Processing Effects on the Formability of Magnesium Alloy Sheets. *Metals*, **2018**, 8, 147	2.3	16
72	The Effect of Nd on the Tension and Compression Deformation Behavior of Extruded Mg-1Mn (wt pct) at Temperatures Between 298 K and 523 K (25 □C and 250 □C). *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2014**, 45, 3254-3274	2.3	15
71	Mobility of pinned twin boundaries during mechanical loading of extruded binary Mg-1Zn alloy. *Materials Characterization*, **2018**, 139, 81-88	3.9	13
70	Improvement of Magnesium Sheet Formability by Alloying Addition of Rare Earth Elements. *Materials Science Forum*, **2010**, 638-642, 1506-1511	0.4	12
69	Experimental study on incremental sheet forming of magnesium alloy AZ31 with hot air heating. *Procedia Manufacturing*, **2018**, 15, 1192-1199	1.5	11
68	Mechanical properties and degradation behavior of binary magnesium-silver alloy sheets. *Journal of Physics and Chemistry of Solids*, **2019**, 133, 142-150	3.9	10
67	Development of the Microstructure and Texture of RE Containing Magnesium Alloys during Hot Rolling. *Materials Science Forum*, **2010**, 654-656, 580-585	0.4	10
66	Alloying and Processing Effects on the Microstructure, Mechanical Properties, and Degradation Behavior of Extruded Magnesium Alloys Containing Calcium, Cerium, or Silver. *Materials*, **2020**, 13,	3.5	9
65	On the Direct Extrusion of Magnesium Wires from Mg-Al-Zn Series Alloys. *Metals*, **2020**, 10, 1208	2.3	9
64	Modification of Microstructure and Texture in Highly Non-Flammable Mg-Al-Zn-Y-Ca Alloy Sheets by Controlled Thermomechanical Processes. *Metals*, **2019**, 9, 181	2.3	8

63	Magnesium Process and Alloy Development for Applications in the Automotive Industry. *Minerals, Metals and Materials Series*, **2019**, 15-20	0.3	7
62	Effect of Ca and Nd on the microstructural development during dynamic and static recrystallization of indirectly extruded Mg[illegible]Zn based alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2020**, 793, 139527	5.3	7
61	A constitutive law for the thermo-mechanical modelling of magnesium alloy extrusion. *International Journal of Material Forming*, **2012**, 5, 325-339	2	7
60	Mg Alloys: Challenges and Achievements in Controlling Performance, and Future Application Perspectives. *Minerals, Metals and Materials Series*, **2018**, 3-14	0.3	6
59	Acoustic emission study of the deformation behaviour of magnesium sheets. *International Journal of Materials Research*, **2009**, 100, 790-795	0.5	6
58	Enabling intelligent Mg-sheet processing utilizing efficient machine-learning algorithm. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2020**, 794, 139846	5.3	6
57	Corrosion behavior of Mg wires for ureteral stent in artificial urine solution. *Corrosion Science*, **2021**, 189, 109567	6.8	6
56	Emerging Hot Topics and Research Questions in Wrought Magnesium Alloy Development. *Jom*, **2020**, 72, 2561-2567	2.1	5
55	Effects of Processing, Texture and Temperature on the Formability of AZ31 and ZE10 Sheets. *Materials Science Forum*, **2011**, 690, 298-301	0.4	5
54	Alloying effect of silver in magnesium on the development of microstructure and mechanical properties by indirect extrusion. *Journal of Magnesium and Alloys*, **2021**, 9, 112-122	8.8	5
53	Processing Effects on the Formability of Extruded Flat Products of Magnesium Alloys. *Frontiers in Materials*, **2019**, 6,	4	4
52	Hydrostatic and Indirect Extrusion of AZ-Magnesium Alloys. *Materials Science Forum*, **2005**, 488-489, 491-494	0.4	4
51	Formability of Magnesium Sheet ZE10 and AZ31 with Respect to Initial Texture **2011**, 373-378		4
50	Comparison of the Mechanical Properties and Forming Behavior of Two Texture-Weakened Mg-Sheet Alloys Produced by Twin Roll Casting. *Frontiers in Materials*, **2019**, 6,	4	4
49	Excellent age hardenability with the controllable microstructure of AXW100 magnesium sheet alloy. *Scientific Reports*, **2020**, 10, 22413	4.9	3
48	Plastic instability and texture modification in extruded Mg-Mn-Nd alloy. *Journal of Magnesium and Alloys*, **2021**, 10, 146-146	8.8	3
47	Unexpected cytotoxicity of TiO2-coated magnesium alloys. *Materials Letters*, **2020**, 276, 128236	3.3	2
46	Deformation and Recrystallization Mechanisms and Their Influence on the Microstructure Development of Rare Earth Containing Magnesium Sheets. *Minerals, Metals and Materials Series*, **2018**, 209-216	0.3	2

45	Challenges and Solutions in the Development of Magnesium Sheet for Sustainable Vehicle Concepts. *Materials Science Forum*, **2015**, 828-829, 15-22	0.4	2
44	FormabiHty of Magnesium Sheet ZE10 and AZ31 with Respect to Initial Texture **2011**, 373-378		2
43	Microstructural Evolution during Recrystallization of Magnesiun Alloys. *Materials Science Forum*, **2012**, 706-709, 1291-1296	0.4	2
42	New Developments in Extruded Magnesium Alloys for Structural Applications. *Materials Science Forum*, **2007**, 561-565, 1545-1548	0.4	2
41	Microstructure and Mechanical Properties of Ca Containing AZX310 Alloy Sheets Produced via Twin Roll Casting Technology **2016**, 383-387		2
40	Development of Magnesium Sheets. *Minerals, Metals and Materials Series*, **2018**, 355-360	0.3	2
39	Formability of Magnesium Sheet ZE10 AND AZ31 with Respect to Initial Texture357-362		2
38	Formability of Extruded Magnesium Alloy Sheets With Different Textures **2016**, 251-256		1
37	Microstructure Evolution of Different Magnesium Alloys During Twin Roll Casting **2015**, 465-470		1
36	The Microstructure and Texture Development During Twin Roll Casting and Rolling of Magnesium Alloy AZ31 **2015**, 471-476		1
35	Modelling of Thermo-Mechanical Behaviour of Magnesium Alloys during Indirect Extrusion. *Key Engineering Materials*, **2009**, 424, 167-171	0.4	1
34	Effects of Ceramic Inoculants and Intermetallic Phases on Hot Rolled AZ Magnesium Wrought Alloys. *Materials Science Forum*, **2011**, 690, 306-310	0.4	1
33	Influence of Crystallographic Texture on the High Cycle Fatigue of Extruded AZ31 Magnesium Alloy. *Materials Science Forum*, **2011**, 690, 319-322	0.4	1
32	Achievements in Deep Drawing of Magnesium Alloy Sheets. *Materials Science Forum*, **2011**, 690, 302-305	0.4	1
31	Low Temperature Superplasticity of Hydrostatically Extruded Mg-Al-Zn Alloys. *Materials Science Forum*, **2012**, 735, 307-315	0.4	1
30	Effect of Al Content on Texture Evolution and Recrystallization Behavior of Non-Flammable Magnesium Sheet Alloys. *Metals*, **2021**, 11, 468	2.3	1
29	Substitution of Rare Earths in Magnesium Alloys. *Materials Science Forum*, **2016**, 854, 51-56	0.4	1
28	Effect of Thermomechanical Treatment on Subsequent Deformation Behavior in a Binary Z1 Magnesium Alloy Studied by the Acoustic Emission Technique. *Advanced Engineering Materials*, **2019**, 21, 1800915	3.5	1

27	Microstructure Development and Related Mechanical Behavior of the ZEW200 Mg Alloy Processed by Differential Speed Rolling and Equal Channel Angular Pressing. *Materials Science Forum*, **2018**, 941, 931-936	0.4	1
26	Biocompatibility and electrochemical evaluation of ZrO2 thin films deposited by reactive magnetron sputtering on MgZnCa alloy. *Journal of Magnesium and Alloys*, **2021**, 9, 2019-2019	8.8	1
25	Superplasticity at Intermediate Temperatures of ZK60 Magnesium Alloy Processed by Indirect Extrusion. *Metals*, **2021**, 11, 606	2.3	0
24	On the Development of Mg Sheets with Improved Formability by Applying Additional Shear Strain during Processing. *Materials Science Forum*, **2015**, 828-829, 395-400	0.4	
23	Microstructure and Mechanical Properties of Ca Containing AZX310 Alloy Sheets Produced via Twin Roll Casting Technology **2016**, 383-387		
22	Der Einfluss des Gie□walzprozesses auf die Eigenschaften des D□nbands. *Lightweight Design*, **2013**, 6, 52-57	0.1	
21	Deformation Behavior of Rolled Magnesium Slabs and Twin Roll Cast Strips Studied by the Acoustic Emission Technique **2015**, 273-276		
20	Twin Roll Casting and Rolling of New Mg-Wrought Alloys for Body Protective Safety Equipment. *Materials Science Forum*, **2014**, 783-786, 534-536	0.4	
19	Acoustic Emission Study of Mg-Mn Extruded Alloys with Prospective Mechanical Properties. *Materials Science Forum*, **2013**, 765, 537-542	0.4	
18	Influence of Rare Earth Addition on Texture Development during Static Recrystallization and Mechanical Behaviour of Magnesium Alloy Sheets. *Materials Science Forum*, **2011**, 702-703, 651-654	0.4	
17	Influence of Third Alloying Element on Dislocation Slip and Twinning Activities in Mg□d-Based Alloys. *Minerals, Metals and Materials Series*, **2022**, 97-103	0.3	
16	Cold Formability of Extruded Magnesium Bands. *Minerals, Metals and Materials Series*, **2020**, 329-334	0.3	
15	Recrystallization Effects on the Forming Behaviour of Magnesium Alloy Sheets with Varied Calcium Concentration. *Minerals, Metals and Materials Series*, **2020**, 87-94	0.3	
14	Microstructure Evolution of Different Magnesium Alloys during Twin Roll Casting **2015**, 465-470		
13	Deformation Behavior of Rolled Magnesium Slabs and Twin Roll Cast Strips Studied by the Acoustic Emission Technique **2015**, 273-276		
12	The Microstructure and Texture Development during Twin Roll Casting and Rolling of Magnesium Alloy AZ31 **2015**, 471-476		
11	Formability of Extruded Magnesium Alloy Sheets with Different Textures **2016**, 251-256		
10	In-Situ EBSD Observations of Recrystallization and Texture Evolution in Rolled Mg-2Zn-xCe (wt.%) **2016**, 237-237		

9	Formability of Magnesium Sheet ZE10 and AZ31 with Respect to Initial Texture **2016**, 357-362	
8	On the Age Hardening Response of Aluminum Containing Magnesium Sheets with Zinc or Manganese (AZ- and AM Series Alloys). *Minerals, Metals and Materials Series*, **2017**, 113-121	0.3
7	On the Fatigue Behaviour of Wrought Magnesium Alloys*. *Materialpruefung/Materials Testing*, **2009**, 51, 542-546	1.9
6	Deformation Behavior of ZE10 Magnesium Alloy Sheet **2014**, 227-231	
5	Acoustic Emission Analysis of Plane Strain-Compressed Mg Single Crystals **2014**, 101-104	
4	Deformation Behavior of ZE10 Magnesium Alloy Sheet225-231	
3	Acoustic Emission Analysis of Plane Strain-Compressed Mg Single Crystals101-104	
2	In-Situ EBSD Observations of Recrystallization and Texture Evolution in Rolled Mg-2Zn-xCe (wt.%) **2016**, 235-237	
1	Microstructure and Texture of MX20 after Conventional Rolling and Rolling from Twin Rolled Cast Strip. *Materials Science Forum*, **2018**, 941, 1418-1423	0.4