Kevin J Laws

List of Publications by Year
in descending order

66 papers	1,488 citations	331670 21 h-index	330143 37 g-index
70 all docs	70 docs citations	70 times ranked	1740 citing authors

#	Article	IF	Citations
1	Accelerated discovery of metallic glasses through iteration of machine learning and high-throughput experiments. Science Advances, 2018, 4, eaaq1566.	10.3	354
2	Caâ€“Mgâ€“Zn bulk metallic glasses as bioresorbable metals. Acta Biomaterialia, 2012, 8, 2375-2383.	8.3	85
3	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.	2.9	61
4	Influence of Casting Parameters on the Critical Casting Size of Bulk Metallic Glass. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 2377-2387.	2.2	57
5	Effect of loading rate on the serrated flow of a bulk metallic glass during nanoindentation. Acta Materialia, 2008, 56, 4829-4835.	7.9	54
6	General trends between solute segregation tendency and grain boundary character in aluminum - An ab inito study. Acta Materialia, 2018, 158, 257-268.	7.9	49
7	High entropy brasses and bronzes â€“ Microstructure, phase evolution and properties. Journal of Alloys and Compounds, 2015, 650, 949-961.	5.5	46
8	Superplastic flow of a Mg-based bulk metallic glass in the supercooled liquid region. Journal of Non-Crystalline Solids, 2006, 352, 3896-3902.	3.1	41
9	Static and dynamic crystallization in Mgâ€“Cuâ€“Y bulk metallic glass. Journal of Non-Crystalline Solids, 2006, 352, 3887-3895.	3.1	38
10	Large-scale production of Ca65Mg15Zn20 bulk metallic glass samples by low-pressure die-casting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 475, 348-354.	5.6	37
11	Formation of a phosphate conversion coating on bioresorbable Mg-based metallic glasses and its effect on corrosion performance. Corrosion Science, 2017, 129, 214-225.	6.6	37
12	Effect of die-casting parameters on the production of high quality bulk metallic glass samples. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 425, 114-120.	5.6	33
13	Alloy design strategies for sustained ductility in Mg-based amorphous alloys â€“ Tackling structural relaxation. Acta Materialia, 2016, 103, 735-745.	7.9	32
14	A High-Throughput Structural and Electrochemical Study of Metallic Glass Formation in Niâ€“Tiâ€“Al. ACS Combinatorial Science, 2020, 22, 330-338.	3.8	31
15	Recent developments in ductile bulk metallic glass composites. MRS Communications, 2013, 3, 1-12.	1.8	29
16	Dynamic properties of major shear bands in Zrâ€“Cuâ€“Al bulk metallic glasses. Acta Materialia, 2015, 96, 428-436.	7.9	28
17	Elevated temperature flow behaviour of a Mg-based bulk metallic glass. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 471, 130-134.	5.6	25
18	Prediction of Glass-Forming Compositions in Metallic Systems: Copper-Based Bulk Metallic Glasses in the Cu-Mg-Ca System. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 1699-1705.	2.2	25

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19	Locating new Mg-based bulk metallic glasses free of rare earth elements. Journal of Alloys and Compounds, 2012, 542, 105-110.	5.5	24
20	Mechanical stability of Ca65Mg15Zn20 bulk metallic glass during deformation in the supercooled liquid region. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 480, 198-204.	5.6	22
21	Synthesis of Ag-based bulk metallic glass in the Agâ€“Mgâ€“Caâ€“[Cu] alloy system. Journal of Alloys and Compounds, 2012, 513, 10-13.	5.5	22
22	Ultra magnesium-rich, low-density Mgâ€“Niâ€“Ca bulk metallic glasses. Scripta Materialia, 2014, 88, 37-40.	5.2	21
23	Quantitative in vitro assessment of Mg₆₅Zn₃₀Ca₅ degradation and its effect on cell viability. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2013, 101B, 43-49.	3.4	19
24	A first principles molecular dynamics study of the relationship between atomic structure and elastic properties of Mgâ€“Znâ€“Ca amorphous alloys. Computational Materials Science, 2015, 96, 246-255.	3.0	19
25	EXAFS and molecular dynamics simulation studies of Cu-Zr metallic glass: Short-to-medium range order and glass forming ability. Materials Characterization, 2018, 141, 41-48.	4.4	18
26	Zr-Co-Al bulk metallic glass composites containing B2 ZrCo via rapid quenching and annealing. Journal of Alloys and Compounds, 2020, 820, 153079.	5.5	18
27	Exceptionally broad bulk metallic glass formation in the Mgâ€“Cuâ€“Yb system. Acta Materialia, 2017, 128, 188-196.	7.9	17
28	Synthesis of copper-based bulk metallic glasses in the ternary Cuâ€“Mgâ€“Ca system. Journal of Alloys and Compounds, 2009, 486, L27-L29.	5.5	16
29	Examining the elemental contribution towards the biodegradation of Mgâ€“Znâ€“Ca ternary metallic glasses. Journal of Materials Chemistry B, 2016, 4, 2679-2690.	5.8	16
30	Partial Coordination Numbers in Binary Metallic Glasses. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 2649-2661.	2.2	15
31	The Prediction of Glass-Forming Compositions in Metallic Systems - The Development of New Bulk Metallic Glasses. Materials Science Forum, 2010, 638-642, 1637-1641.	0.3	13
32	In situ formation of crystalline flakes in Mg-based metallic glass composites by controlled inoculation. Acta Materialia, 2011, 59, 7776-7786.	7.9	13
33	Amorphous phase stability and the interplay between electronic structure and topology. Acta Materialia, 2017, 131, 131-140.	7.9	12
34	Analysis of dynamic segregation and crystallisation in Mg65Cu25Y10 bulk metallic glass using atom probe tomography. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 556, 558-566.	5.6	11
35	An atomic-scale insight into the effects of hydrogen microalloying on the glass-forming ability and ductility of Zr-based bulk metallic glasses. Computational Materials Science, 2016, 125, 197-205.	3.0	11
36	Transition towards ultrastable metallic glasses in Zr-based thin films. Applied Surface Science, 2020, 533, 147453.	6.1	11

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37	Phase redistribution in an in situ Mg-based bulk metallic glass composite during deformation in the supercooled liquid region. Scripta Materialia, 2010, 63, 556-559.	5.2	10
38	Heterogeneous nucleation at inoculant particles in a glass forming alloy: An ab initio molecular dynamics investigation of interfacial properties and local chemical bonding. Computational Materials Science, 2015, 108, 94-102.	3.0	10
39	Ab initio study of the likely orientation relationships of interphase and homophase interfaces in a two-phase HCP + BCC Mg-Li alloy. Computational Materials Science, 2017, 139, 406-411.	3.0	10
40	Atomistic origin of stress overshoots and serrations in a CuZr metallic glass. Materialia, 2018, 1, 121-127.	2.7	10
41	Supercooled liquid fusion of carbon fibre-bulk metallic glass composites with superplastic forming properties. Scripta Materialia, 2016, 111, 127-130.	5.2	9
42	Stacking fault energies of nondilute binary alloys using special quasirandom structures. Physical Review B, 2017, 95, .	3.2	9
43	Electron-band theory inspired design of magnesiumâ€“precious metal bulk metallic glasses with high thermal stability and extended ductility. Scientific Reports, 2017, 7, 3400.	3.3	9
44	Effect of the Degree of Crystallinity on the Electrochemical Behavior of Mg65Cu25Y10 and Mg70Zn25Ca5 Bulk Metallic Glasses. Corrosion, 2013, 69, 781-792.	1.1	8
45	Recent progress in high Bs and low Hc Fe-based nanocrystalline alloys. Nanotechnology Reviews, 2014, 3, .	5.8	8
46	Softening of phonon spectra in metallic glasses. Npj Computational Materials, 2016, 2, .	8.7	7
47	Corrosion performance of Ni-based structural alloys for applications in molten-salt based energy systems: Experiment & numerical validation. Corrosion Science, 2021, 190, 109607.	6.6	7
48	Viscosity-related properties of Mg65Cu25Y10 bulk metallic glass determined by uniaxial tension in the supercooled liquid region. Journal of Alloys and Compounds, 2010, 496, 582-588.	5.5	6
49	Fabrication of an In Situ Bulk Metallic Glass Composite with High Magnesium Content. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 2352-2356.	2.2	6
50	Thermodynamic modelling to predict phase stability in BCC + B2 Alâ€“Tiâ€“Coâ€“Niâ€“Feâ€“Cr high entropy alloys. Materials Chemistry and Physics, 2022, 276, 125395.	4.0	6
51	A blended NPT/NVT scheme for simulating metallic glasses. Computational Materials Science, 2017, 130, 130-137.	3.0	5
52	3D-EBSD Studies of Deformation, Recrystallization and Phase Transformations. Materials Science Forum, 0, 715-716, 41-50.	0.3	2
53	Solvent-rich magnesium-based bulk metallic glasses in the Mgâ€“Pdâ€“Ca and Mgâ€“Pdâ€“Yb alloy systems. Scripta Materialia, 2021, 204, 114120.	5.2	2
54	Thermoplastic formability of CaMgZn bulk metallic glasses for biomedical applications. International Journal of Materials and Product Technology, 2013, 47, 233.	0.2	1

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55	Effect of transition metals in the development of Alâ€“Cuâ€“Mg based metallic glass. Materials Research Innovations, 2013, 17, s67-s72.	2.3	1
56	Predicting ductility in quaternary B2 -like alloys. Physical Review Materials, 2021, 5, .	2.4	1
57	Assessing Mgâ€“Scâ€“(rare earth) ternary phase stability via constituent binary cluster expansions. Computational Materials Science, 2022, 207, 111240.	3.0	1
58	Corrigendum to: â€œPhase redistribution in an in situ Mg-based bulk metallic glass composite during deformation in the supercooled liquid regionâ€•[Scripta Materialia 63 (2010) 556â€“559]. Scripta Materialia, 2010, 63, 903.	5.2	0
59	The Application of 3D-EBSD for Investigating Texture Development in Metals and Alloys. Materials Science Forum, 0, 702-703, 469-474.	0.3	0
60	The Redistribution and Alignment of Crystalline Flakes in a Bulk Metallic Glass Composite during Thermoplastic Forming. Materials Science Forum, 0, 702-703, 971-974.	0.3	0
61	Optimization of Glass Forming Ability of Al-Ni-Si Alloys by a Thermodynamic and Kinetic Approach. Materials Science Forum, 0, 773-774, 466-470.	0.3	0
62	Production of Mg-Based Bulk Metallic Glass Composites with High Magnesium Content. Materials Science Forum, 0, 773-774, 263-267.	0.3	0
63	Fabrication of Bulk Metallic Glass Composites at Low Processing Temperatures. Materials Science Forum, 0, 773-774, 461-465.	0.3	0
64	Crystallization Kinetics and Fragility of Al-Based Amorphous Alloy. Materials Science Forum, 0, 1010, 3-8.	0.3	0
65	Developments in High Magnesium-Content Bulk Metallic Glasses and Future Possibilities. , 2016, , 13-14.		0
66	Stabilisation of Disordered bcc Phases in Magnesium-Rare Earth Alloys. Minerals, Metals and Materials Series, 2017, , 497-503.	0.4	0