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	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
2	Assessing Mgâ€“Scâ€“(rare earth) ternary phase stability via constituent binary cluster expansions. Computational Materials Science, 2022, 207, 111240.	3.0	1
3	Predicting ductility in quaternary B2 -like alloys. Physical Review Materials, 2021, 5, .	2.4	1
4	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
5	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
6	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
7	Transition towards ultrastable metallic glasses in Zr-based thin films. Applied Surface Science, 2020, 533, 147453.	6.1	11
8	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
9	Accelerated discovery of metallic glasses through iteration of machine learning and high-throughput experiments. Science Advances, 2018, 4, eaaq1566.	10.3	354
10	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
11	Atomistic origin of stress overshoots and serrations in a CuZr metallic glass. Materialia, 2018, 1, 121-127.	2.7	10
12	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
13	A blended NPT/NVT scheme for simulating metallic glasses. Computational Materials Science, 2017, 130, 130-137.	3.0	5
14	Exceptionally broad bulk metallic glass formation in the Mgâ€“Cuâ€“Yb system. Acta Materialia, 2017, 128, 188-196.	7.9	17
15	Amorphous phase stability and the interplay between electronic structure and topology. Acta Materialia, 2017, 131, 131-140.	7.9	12
16	Stacking fault energies of nondilute binary alloys using special quasirandom structures. Physical Review B, 2017, 95, .	3.2	9
17	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
18	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

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19	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
20	Stabilisation of Disordered bcc Phases in Magnesium-Rare Earth Alloys. Minerals, Metals and Materials Series, 2017, , 497-503.	0.4	0
21	Softening of phonon spectra in metallic glasses. Npj Computational Materials, 2016, 2, .	8.7	7
22	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
23	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
24	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
25	Alloy design strategies for sustained ductility in Mg-based amorphous alloys â€“ Tackling structural relaxation. Acta Materialia, 2016, 103, 735-745.	7.9	32
26	Supercooled liquid fusion of carbon fibre-bulk metallic glass composites with superplastic forming properties. Scripta Materialia, 2016, 111, 127-130.	5.2	9
27	Developments in High Magnesium-Content Bulk Metallic Glasses and Future Possibilities. , 2016, , 13-14.		0
28	High entropy brasses and bronzes â€“ Microstructure, phase evolution and properties. Journal of Alloys and Compounds, 2015, 650, 949-961.	5.5	46
29	Dynamic properties of major shear bands in Zrâ€“Cuâ€“Al bulk metallic glasses. Acta Materialia, 2015, 96, 428-436.	7.9	28
30	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
31	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
32	Recent progress in high Bs and low Hc Fe-based nanocrystalline alloys. Nanotechnology Reviews, 2014, 3, .	5.8	8
33	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
34	Ultra magnesium-rich, low-density Mgâ€“Niâ€“Ca bulk metallic glasses. Scripta Materialia, 2014, 88, 37-40.	5.2	21
35	Recent developments in ductile bulk metallic glass composites. MRS Communications, 2013, 3, 1-12.	1.8	29
36	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

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37	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
38	Thermoplastic formability of CaMgZn bulk metallic glasses for biomedical applications. International Journal of Materials and Product Technology, 2013, 47, 233.	0.2	1
39	Effect of transition metals in the development of Alâ€“Cuâ€“Mg based metallic glass. Materials Research Innovations, 2013, 17, s67-s72.	2.3	1
40	Locating new Mg-based bulk metallic glasses free of rare earth elements. Journal of Alloys and Compounds, 2012, 542, 105-110.	5.5	24
41	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
42	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
43	Partial Coordination Numbers in Binary Metallic Glasses. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 2649-2661.	2.2	15
44	Caâ€“Mgâ€“Zn bulk metallic glasses as bioresorbable metals. Acta Biomaterialia, 2012, 8, 2375-2383.	8.3	85
45	In situ formation of crystalline flakes in Mg-based metallic glass composites by controlled inoculation. Acta Materialia, 2011, 59, 7776-7786.	7.9	13
46	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
47	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
48	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
49	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
50	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
51	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
52	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
53	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
54	Effect of loading rate on the serrated flow of a bulk metallic glass during nanoindentation. Acta Materialia, 2008, 56, 4829-4835.	7.9	54

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55	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
56	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
57	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
58	Static and dynamic crystallization in Mgâ€“Cuâ€“Y bulk metallic glass. Journal of Non-Crystalline Solids, 2006, 352, 3887-3895.	3.1	38
59	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
60	The Application of 3D-EBSD for Investigating Texture Development in Metals and Alloys. Materials Science Forum, 0, 702-703, 469-474.	0.3	0
61	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
62	3D-EBSD Studies of Deformation, Recrystallization and Phase Transformations. Materials Science Forum, 0, 715-716, 41-50.	0.3	2
63	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
64	Production of Mg-Based Bulk Metallic Glass Composites with High Magnesium Content. Materials Science Forum, 0, 773-774, 263-267.	0.3	0
65	Fabrication of Bulk Metallic Glass Composites at Low Processing Temperatures. Materials Science Forum, 0, 773-774, 461-465.	0.3	0
66	Crystallization Kinetics and Fragility of Al-Based Amorphous Alloy. Materials Science Forum, 0, 1010, 3-8.	0.3	0