Laszlo J Kecskes

List of Publications by Year
in descending order

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111 papers	4,958 citations	94269 37 h-index	91712 69 g-index
118 all docs	118 docs citations	118 times ranked	3526 citing authors

#	Article	IF	Citations
1	Strengthening magnesium by design: Integrating alloying and dynamic processing. Mechanics of Materials, 2022, 167, 104203.	1.7	11
2	Magnesium alloy design: Examples from the Materials in Extreme Dynamic Environments Metals Collaborative Research Group. Mechanics of Materials, 2022, 165, 104136.	1.7	4
3	Site Occupation and Structural Phase Transformation of the (010) Antiphase Boundary in Boron-Modified L12 Ni3Al. Jom, 2021, 73, 2285-2292.	0.9	2
4	Recrystallization mechanisms, grain refinement, and texture evolution during ECAE processing of Mg and its alloys. Mechanics of Materials, 2021, 162, 104067.	1.7	10
5	High-throughput investigations of configurational-transformation-dominated serrations in CuZr/Cu nanolaminates. Journal of Materials Science and Technology, 2020, 53, 192-199.	5.6	14
6	When a defect is a pathway to improve stability: a case study of the L12 Co3TM superlattice intrinsic stacking fault. Journal of Materials Science, 2019, 54, 13609-13618.	1.7	16
7	Mechanical properties and failure of ECAE processed Mg97Y2Zn1 at different strain rates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 762, 138094.	2.6	4
8	The effect of strain rate on the mechanisms of plastic flow and failure of an ECAE AZ31B magnesium alloy. Journal of Materials Science, 2019, 54, 13394-13419.	1.7	16
9	Characterization of spalled AZ31B processed by ECAE. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 767, 138298.	2.6	13
10	Dynamic precipitation and recrystallization in Mg-9wt.%Al during equal-channel angular extrusion: A comparative study to conventional aging. Acta Materialia, 2019, 172, 185-199.	3.8	99
11	Local lattice distortion mediated formation of stacking faults in Mg alloys. Acta Materialia, 2019, 170, 231-239.	3.8	45
12	Semi-Continuous Equal-Channel Angular Extrusion and Rolling of AA5083 and AZ31 Alloys. Metals, 2019, 9, 1035.	1.0	6
13	Atomic and electronic basis for solutes strengthened (010) anti-phase boundary of L12 Co3(Al, TM): A comprehensive first-principles study. Acta Materialia, 2018, 145, 30-40.	3.8	40
14	Revealing the Microstates of Body-Centered-Cubic (BCC) Equiatomic High Entropy Alloys. Journal of Phase Equilibria and Diffusion, 2017, 38, 404-415.	0.5	21
15	Atomic and electronic basis for the serrations of refractory high-entropy alloys. Npj Computational Materials, 2017, 3, .	3.5	64
16	Strengthening Mg by self-dispersed nano-lamellar faults. Materials Research Letters, 2017, 5, 415-425.	4.1	17
17	Power law scaled hardness of Mn strengthened nanocrystalline Al Mn non-equilibrium solid solutions. Scripta Materialia, 2016, 120, 31-36.	2.6	24
18	Solid Solution Hardening in Mg-Gd-TM (TM=Ag, Zn and Zr) Alloys: An Integrated Density Functional Theory and Electron Work Function Study. , 2016, , 157-157.		0

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19	Solid-Solution Hardening in Mg-Gd-TM (TMÂ=ÂAg, Zn, and Zr) Alloys: An Integrated Density Functional Theory and Electron Work Function Study. Jom, 2015, 67, 2433-2441.	0.9	17
20	Lattice distortion induced anomalous ferromagnetism and electronic structure in FCC Fe and Fe-TM (TMÂ=ÂCr, Ni, Ta and Zr) alloys. Materials Chemistry and Physics, 2015, 162, 748-756.	2.0	17
21	Scratch induced deformation behavior of hafnium based bulk metallic glass at multiple load scales. Journal of Non-Crystalline Solids, 2015, 410, 118-126.	1.5	21
22	Influence of Mn solute content on grain size reduction and improved strength in mechanically alloyed Alâ€“Mn alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 589, 57-65.	2.6	44
23	A rate dependent constitutive model for ECAE Cu based on instrumented nanoindentation results. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 597, 279-287.	2.6	4
24	Effects of Alloying Elements on Stacking Fault Energies and Electronic Structures of Binary Mg Alloys: A First-Principles Study. Materials Research Letters, 2014, 2, 29-36.	4.1	95
25	Electronic structures of long periodic stacking order structures in Mg: A first-principles study. Journal of Alloys and Compounds, 2014, 586, 656-662.	2.8	42
26	Generalized stacking fault energy, ideal strength and twinnability of dilute Mg-based alloys: A first-principles study of shear deformation. Acta Materialia, 2014, 67, 168-180.	3.8	193
27	Glass formability of W-based alloys through thermodynamic modeling: Wâ€“Feâ€“Hfâ€“Pdâ€“Ta and Wâ€“Feâ€“Siâ€“C. Intermetallics, 2014, 48, 79-85.	1.8	6
28	Enhancing grain refinement in polycrystalline materials using surface mechanical attrition treatment at cryogenic temperatures. Scripta Materialia, 2013, 69, 461-464.	2.6	54
29	Effect of low-temperature rolling on the propensity to adiabatic shear banding of commercial purity tungsten. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 578, 394-401.	2.6	33
30	Experimental and computational studies of the Cuâ€“Hf binary system. Acta Materialia, 2013, 61, 660-669.	3.8	8
31	Mechanical behavior of microstructure engineered multi-length-scale titanium over a wide range of strain rates. Acta Materialia, 2013, 61, 3781-3798.	3.8	39
32	Thermal stability of nanocrystalline nickel with yttrium additions. Journal of Materials Research, 2013, 28, 1813-1819.	1.2	36
33	Grain size stabilization of nanocrystalline copper at high temperatures by alloying with tantalum. Journal of Alloys and Compounds, 2013, 573, 142-150.	2.8	145
34	Effect of grain size on prismatic slip in Mgâ€“3Alâ€“1Zn alloy. Scripta Materialia, 2012, 67, 439-442.	2.6	136
35	First-principles calculations and thermodynamic re-modeling of the Hfâ€“W system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2012, 38, 92-99.	0.7	17
36	Microstructural evolution and mechanical properties of niobium processed by equal channel angular extrusion up to 24 passes. Acta Materialia, 2012, 60, 2310-2323.	3.8	34

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37	Stabilization and strengthening of nanocrystalline copper by alloying with tantalum. Acta Materialia, 2012, 60, 2158-2168.	3.8	151
38	Amorphous Hf-based foams with aligned, elongated pores. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 533, 124-127.	2.6	7
39	Effect of Titanium-Aluminum Ratio on the Thermal Explosion Processing of TiAl-TiB_{0.6}Layered Composites. Materials and Manufacturing Processes, 2011, 26, 1157-1163.	2.7	6
40	Grain refinement vs. crystallographic texture: Mechanical anisotropy in a magnesium alloy. Scripta Materialia, 2011, 64, 193-196.	2.6	94
41	Deformation twinning in a nanocrystalline hcp Mg alloy. Scripta Materialia, 2011, 64, 213-216.	2.6	116
42	Microstructure and mechanical properties at different length scales and strain rates of nanocrystalline tantalum produced by high-pressure torsion. Acta Materialia, 2011, 59, 2423-2436.	3.8	105
43	Correlation of mechanical properties in bulk metallic glasses with 27Al NMR characteristics. Science Bulletin, 2011, 56, 3937-3941.	1.7	8
44	Dislocationâ€“twin interactions in nanocrystalline fcc metals. Acta Materialia, 2011, 59, 812-821.	3.8	327
45	High hardness in a nanocrystalline Mg97Y2Zn1 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7494-7499.	2.6	18
46	Microstructure, crystallographic texture, and plastic anisotropy evolution in an Mg alloy during equal channel angular extrusion processing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7616-7627.	2.6	94
47	Stabilized nanocrystalline iron-based alloys: Guiding efforts in alloy selection. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 4365-4371.	2.6	120
48	Mechanical Behavior and Deformation Mechanism of FCC Metals With Nanoscale Twins. , 2011, , 175-204.		0
49	Uniaxial and biaxial compressive response of a bulk metallic glass composite over a range of strain rates and temperatures. Journal of Materials Research, 2009, 24, 66-78.	1.2	13
50	Microstructures and recrystallization behavior of severely hot-deformed tungsten. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 503, 28-31.	2.6	69
51	Combustion Synthesis Reactions in Cold-Rolled Ni/Al and Ti/Al Multilayers. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 1541-1546.	1.1	29
52	Quasi-static and dynamic mechanical properties of commercial-purity tungsten processed by ECAE at low temperatures. Journal of Materials Science, 2008, 43, 7379-7384.	1.7	11
53	Effects of Test Temperature and Loading Conditions on the Tensile Properties of a Zr-Based Bulk Metallic Glass. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 1922-1934.	1.1	35
54	Effects of Changes in Test Temperature and Loading Conditions on Fracture Toughness of a Zr-Based Bulk Metallic Glass. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 2077-2085.	1.1	28

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55	Dynamic behaviors of body-centered cubic metals with ultrafine grained and nanocrystalline microstructures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 493, 58-64.	2.6	42
56	Effect of low-temperature rolling on the tensile behavior of commercially pure tungsten. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 491, 62-69.	2.6	133
57	Dynamic compression of a zirconium-based bulk metallic glass confined by a stainless steel sleeve. Scripta Materialia, 2008, 59, 688-691.	2.6	21
58	Effects of Zn addition on the improvement of glass forming ability and plasticity of Mgâ€“Cuâ€“Tb bulk metallic glasses. Journal of Non-Crystalline Solids, 2008, 354, 5368-5371.	1.5	9
59	Exothermic reactions in cold-rolled Ni/Al reactive multilayer foils. Journal of Materials Research, 2008, 23, 367-375.	1.2	31
60	Ultrafine and Nanostructured Refractory Metals Processed by SPD: Microstructure and Mechanical Properties. Materials Science Forum, 2008, 579, 75-90.	0.3	16
61	High-strain-rate dynamic mechanical behavior of a bulk metallic glass composite. Journal of Materials Research, 2008, 23, 998-1008.	1.2	6
62	DYNAMIC COMPRESSION OF A ZIRCONIUM-BASED BULK METALLIC GLASS CONFINED BY A 316 STAINLESS STEEL SLEEVE. , 2008, , .		1
63	Initial plasticity onset in Zr- and Hf-rich bulk metallic glasses during instrumented indentation. Journal of Materials Research, 2007, 22, 1265-1269.	1.2	5
64	Grain size engineering of bcc refractory metals: Top-down and bottom-upâ€”Application to tungsten. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 467, 33-43.	2.6	100
65	High-Pressure Equation of the State of a Zirconium-Based Bulk Metallic Glass. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2689-2696.	1.1	44
66	Properties of as-cast and structurally relaxed Zr-based bulk metallic glasses. Journal of Non-Crystalline Solids, 2006, 352, 174-179.	1.5	17
67	Shear-Band Deformation in Amorphous Alloys and Composites. Materials Transactions, 2006, 47, 817-821.	0.4	11
68	Microstructure and mechanical properties of super-strong nanocrystalline tungsten processed by high-pressure torsion. Acta Materialia, 2006, 54, 4079-4089.	3.8	302
69	Micromechanical modeling of tungsten-based bulk metallic glass matrix composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 429, 115-123.	2.6	28
70	Severe plastic deformation of nickel-coated aluminum precursor powders at elevated temperatures. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 449-457.	1.1	5
71	Nanoengineering opens a new era for tungsten as well. Jom, 2006, 58, 40-44.	0.9	37
72	Observation of incongruent melting in Cu10Hf7. Journal of Phase Equilibria and Diffusion, 2006, 27, 477-481.	0.5	3

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73	Instrumented anvil-on-rod impact testing of a bulk metallic glass composite for constitutive model validation. Scripta Materialia, 2006, 55, 1019-1022.	2.6	17
74	HAFNIUM-BASED BULK METALLIC GLASSES FOR KINETIC ENERGY PENETRATORS. , 2006, , .		3
75	Hot Explosive Consolidation of WC-AlNi Composites. Advances in Science and Technology, 2006, 45, 905-916.	0.2	0
76	Evaluation of hardnessâ€“yield strength relationships for bulk metallic glasses. Philosophical Magazine Letters, 2006, 86, 333-345.	0.5	50
77	Mechanical Behavior of Bulk Amorphous Alloys Reinforced by Ductile Particles at Cryogenic Temperatures. Physical Review Letters, 2006, 96, 145506.	2.9	85
78	Observation of Incongruent Melting in Cu₁₀Hf₇. Journal of Phase Equilibria and Diffusion, 2006, 27, 477-481.	0.5	0
79	Refinement and Densification of Aluminum Nickelides by Severe Plastic Deformation. , 2006, , 89-94.		0
80	Mechanical behavior of tungsten preform reinforced bulk metallic glass composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 403, 134-143.	2.6	48
81	Tensile properties of in situ consolidated nanocrystalline Cu. Acta Materialia, 2005, 53, 1521-1533.	3.8	445
82	Investigation of shear band evolution in amorphous alloys beneath a Vickers indentation. Acta Materialia, 2005, 53, 3849-3859.	3.8	104
83	Mechanical behavior and dynamic failure of high-strength ultrafine grained tungsten under uniaxial compression. Acta Materialia, 2005, , .	3.8	36
84	Phase Equilibria Studies of Hf44.5Ti5Cu27Ni13.5Al10 and Hf44.5Nb5Cu27Ni13.5Al10. Materials Research Society Symposia Proceedings, 2005, 903, 1.	0.1	0
85	High-Strain-Rate Dynamic Mechanical Properties of a W-Reinforced Zr-Based Bulk Metallic Glass Composite. Materials Research Society Symposia Proceedings, 2005, 903, 1.	0.1	0
86	Hot explosive compaction of aluminum-nickelide composites. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 1125-1131.	1.1	2
87	Hot explosive compaction of aluminum-nickelide composites. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 1125-1131.	1.1	6
88	Adiabatic shear banding in ultrafine-grained Fe processed by severe plastic deformation. Acta Materialia, 2004, 52, 1859-1869.	3.8	252
89	Effect of powder characteristics on the sinterability of a microwave-plasma-synthesized iron nanopowder. Scripta Materialia, 2003, 48, 1041-1046.	2.6	6
90	Mechanical behavior of bulk (ZrHf)TiCuNiAl amorphous alloys. Scripta Materialia, 2003, 49, 447-452.	2.6	14

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91	Negative strain rate sensitivity and compositional dependence of fracture strength in Zr/Hf based bulk metallic glasses. Scripta Materialia, 2003, 49, 1087-1092.	2.6	89
92	Crystallization and mechanical behavior of (Hf, Zr)â€“Tiâ€“Cuâ€“Niâ€“Al metallic glasses. Journal of Non-Crystalline Solids, 2003, 317, 112-117.	1.5	46
93	Infiltration Processing of Tungsten-Reinforced Bulk-Amorphous Metal Matrix Composites. Materials Research Society Symposia Proceedings, 2003, 806, 350.	0.1	0
94	‹title›Performance of a nanocrystalline tungsten composite in ballistic impacts‹/title›. , 2002, , .		1
95	Densification and Sintering of a Microwave-Plasma-Synthesized Iron Nanopowder. Materials Research Society Symposia Proceedings, 2002, 740, 1.	0.1	0
96	Glass-Forming Ability and Crystallization Behavior in High-Density Bulk Metallic Glasses. Materials Research Society Symposia Proceedings, 2002, 754, 1.	0.1	3
97	Effect of Loading Rate on Failure in Bulk Metallic Glasses. Materials Research Society Symposia Proceedings, 2002, 754, 1.	0.1	0
98	Characterization of uniaxial compressive response of bulk amorphous Zrâ€“Tiâ€“Cuâ€“Niâ€“Be alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 334, 33-40.	2.6	127
99	Densification and structural change of mechanically alloyed W-Cu composites. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 2885-2893.	1.1	53
100	Processing effects on the high-strain-rate response of hot-explosively-consolidated W-Ti alloys. , 2001, , 259-265.		0
101	Hot Explosive Consolidation of Mo-Ti and W-Ti Alloys. Materials and Manufacturing Processes, 1999, 14, 123-145.	2.7	4
102	High-strain-rate response of hot-explosively consolidated Wâ€“Ti alloys. Journal of Materials Research, 1999, 14, 2838-2848.	1.2	1
103	Microstructural effects in hot-explosively-consolidated Wâ€“Ti alloys. Journal of Materials Processing Technology, 1999, 94, 247-260.	3.1	14
104	Hot explosive compaction of Mo-Ti alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 2483-2489.	1.1	3
105	Dynamic Consolidation of Combustionâ€Synthesized Aluminaâ€Titanium Diboride Composite Ceramics. Journal of the American Ceramic Society, 1996, 79, 2687-2695.	1.9	20
106	Hot explosive consolidation of W-Ti alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1995, 26, 2407-2414.	1.1	17
107	Precursor Morphology Effects in Combustion-Synthesized and Dynamically Consolidated Titanium Carbide and Titanium Boride. Journal of the American Ceramic Society, 1993, 76, 2961-2970.	1.9	10
108	Microstructural Properties of Combustion-Synthesized and Dynamically Consolidated Titanium Boride and Titanium Carbide. Journal of the American Ceramic Society, 1990, 73, 1274-1282.	1.9	52

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109	Control of TiB2 SHS reactions by inert dilutions and mechanical constraint. AICHE Journal, 1990, 36, 1581-1584.	1.8	12
110	Impurities in the Combustion Synthesis of Titanium Carbide. Journal of the American Ceramic Society, 1989, 72, 655-661.	1.9	34
111	Local Lattice Distortion Mediated Formation of Stacking Faults in Mg Alloys. SSRN Electronic Journal, 0, , .	0.4	0