

# Douglas C Hofmann

## List of Publications by Year in descending order

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Version: 2024-02-01

46  
papers

4,781  
citations

236925

25  
h-index

233421

45  
g-index

47  
all docs

47  
docs citations

47  
times ranked

3561  
citing authors

#	ARTICLE	IF	CITATIONS
1	Designing metallic glass matrix composites with high toughness and tensile ductility. <i>Nature</i> , 2008, 451, 1085-1089.	27.8	1,302
2	A damage-tolerant glass. <i>Nature Materials</i> , 2011, 10, 123-128.	27.5	562
3	Functionally graded material of 304L stainless steel and inconel 625 fabricated by directed energy deposition: Characterization and thermodynamic modeling. <i>Acta Materialia</i> , 2016, 108, 46-54.	7.9	432
4	Development of tough, low-density titanium-based bulk metallic glass matrix composites with tensile ductility. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 20136-20140.	7.1	308
5	Developing Gradient Metal Alloys through Radial Deposition Additive Manufacturing. <i>Scientific Reports</i> , 2014, 4, 5357.	3.3	222
6	Beating Crystallization in Glass-Forming Metals by Millisecond Heating and Processing. <i>Science</i> , 2011, 332, 828-833.	12.6	201
7	Shape Memory Bulk Metallic Glass Composites. <i>Science</i> , 2010, 329, 1294-1295.	12.6	196
8	Compositionally graded metals: A new frontier of additive manufacturing. <i>Journal of Materials Research</i> , 2014, 29, 1899-1910.	2.6	187
9	Structured fabrics with tunable mechanical properties. <i>Nature</i> , 2021, 596, 238-243.	27.8	155
10	Submerged friction stir processing (SFSP): An improved method for creating ultra-fine-grained bulk materials. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 402, 234-241.	5.6	153
11	Solution to the problem of the poor cyclic fatigue resistance of bulk metallic glasses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 4986-4991.	7.1	84
12	Welding and additive manufacturing with nanoparticle-enhanced aluminum 7075 wire. <i>Journal of Alloys and Compounds</i> , 2020, 834, 154987.	5.5	77
13	Shape-morphing architected sheets with non-periodic cut patterns. <i>Soft Matter</i> , 2018, 14, 9744-9749.	2.7	72
14	Low-Density High-Strength Bulk Metallic Glasses and Their Composites: A Review. <i>Advanced Engineering Materials</i> , 2015, 17, 761-780.	3.5	68
15	Glass forming ability, flexural strength, and wear properties of additively manufactured Zr-based bulk metallic glasses produced through laser powder bed fusion. <i>Additive Manufacturing</i> , 2018, 21, 312-317.	3.0	56
16	Castable Bulk Metallic Glass Strain Wave Gears: Towards Decreasing the Cost of High-Performance Robotics. <i>Scientific Reports</i> , 2016, 6, 37773.	3.3	54
17	Optimizing Bulk Metallic Glasses for Robust, Highly Wear-Resistant Gears. <i>Advanced Engineering Materials</i> , 2017, 19, 1600541.	3.5	54
18	Thermal history analysis of friction stir processed and submerged friction stir processed aluminum. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007, 465, 165-175.	5.6	53

#	ARTICLE	IF	CITATIONS
19	Architected lattices with adaptive energy absorption. <i>Extreme Mechanics Letters</i> , 2019, 33, 100557.	4.1	52
20	Glassy steel optimized for glass-forming ability and toughness. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	49
21	Semi-solid induction forging of metallic glass matrix composites. <i>Jom</i> , 2009, 61, 11-17.	1.9	40
22	Investigating Amorphous Metal Composite Architectures as Spacecraft Shielding. <i>Advanced Engineering Materials</i> , 2013, 15, 27-33.	3.5	37
23	Hypervelocity Impact Testing of a Metallic Glass-stuffed Whipple Shield. <i>Advanced Engineering Materials</i> , 2015, 17, 1313-1322.	3.5	34
24	Galvanic Corrosion and Mechanical Behavior of Fiber Metal Laminates of Metallic Glass and Carbon Fiber Composites. <i>Advanced Engineering Materials</i> , 2018, 20, 1700711.	3.5	34
25	New Methods for Developing and Manufacturing Compliant Mechanisms Utilizing Bulk Metallic Glass. <i>Advanced Engineering Materials</i> , 2014, 16, 850-856.	3.5	30
26	Hypervelocity Impact Phenomenon in Bulk Metallic Glasses and Composites**. <i>Advanced Engineering Materials</i> , 2014, 16, 85-93.	3.5	29
27	Effect of cooling rate on the volume fraction of B2 phases in a CuZrAlCo metallic glass matrix composite. <i>Intermetallics</i> , 2013, 39, 89-93.	3.9	26
28	Enhanced mechanical properties of additively manufactured bulk metallic glasses produced through laser foil printing from continuous sheetmetal feedstock. <i>Additive Manufacturing</i> , 2018, 19, 95-103.	3.0	24
29	Developing Processing Parameters and Characterizing Microstructure and Properties of an Additively Manufactured FeCrMoBC Metallic Glass Forming Alloy. <i>Advanced Engineering Materials</i> , 2018, 20, 1800433.	3.5	23
30	Near-threshold fatigue crack growth in bulk metallic glass composites. <i>Journal of Materials Research</i> , 2009, 24, 3611-3619.	2.6	18
31	Three-Dimensionally Printed, Shaped, Engineered Material Inhomogeneous Lens Antennas for Next-Generation Spaceborne Weather Radar Systems. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2018, 17, 2080-2084.	4.0	18
32	Metallic-glass-matrix composite structures with benchmark mechanical performance. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	16
33	Controlling microstructure of FeCrMoBC amorphous metal matrix composites via laser directed energy deposition. <i>Journal of Alloys and Compounds</i> , 2021, 857, 157537.	5.5	15
34	Effect of processing on Charpy impact toughness of metallic glass matrix composites. <i>Journal of Materials Research</i> , 2011, 26, 1260-1268.	2.6	14
35	An experimental investigation on the notch toughness of Cu-Zr-based bulk metallic glasses with in-situ crystallization. <i>Journal of Non-Crystalline Solids</i> , 2017, 469, 70-78.	3.1	14
36	Towards additively manufacturing excavating tools for future robotic space exploration. <i>Engineering Reports</i> , 2020, 2, e12219.	1.7	13

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37	Infrared thermal processing history of a Ti-based bulk metallic glass matrix composite manufactured via semi-solid forging. <i>Acta Materialia</i> , 2015, 95, 192-200.	7.9	12
38	Measuring Demisability of Bulk Metallic Glasses for Potential Satellite Applications through Ablation Experiments. <i>Advanced Engineering Materials</i> , 2020, 22, 2000708.	3.5	10
39	Controlling the length scale and distribution of the ductile phase in metallic glass composites through friction stir processing. <i>Science and Technology of Advanced Materials</i> , 2014, 15, 035011.	6.1	8
40	Shear localization and its dependence on microstructural length scales in metallic glass composites. <i>Materialia</i> , 2020, 9, 100598.	2.7	7
41	Thermophysical Properties of an Fe 57.75 Ni 19.25 Mo 10 C 5 B 8 Glass-Forming Alloy Measured in Microgravity. <i>Advanced Engineering Materials</i> , 2021, 23, 2001143.	3.5	7
42	Deformation behavior of metallic glass composites and plasticity accommodation at microstructural length-scales. <i>Materials Today Communications</i> , 2020, 24, 101237.	1.9	6
43	Synthesis of Amorphous/Crystalline Laminated Metals via Accumulative Roll Bonding. <i>Jom</i> , 2019, 71, 585-592.	1.9	5
44	Effect of zirconium purity on the glass-forming-ability and notch toughness of Cu <sub>43</sub> Zr <sub>43</sub> Al <sub>7</sub> Be <sub>7</sub> . <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 674, 397-405.	5.6	3
45	Study of Mushy-Zone Development in Dendritic Microstructures with Glass-Forming Eutectic Matrices Using Electrostatic Levitation. <i>ISRN Materials Science</i> , 2013, 2013, 1-7.	1.0	1
46	Back Cover <i>Advanced Engineering Materials</i> 1-2/2013. <i>Advanced Engineering Materials</i> , 2013, 15, 70-70.	3.5	0