

# Jiawei Mi

## List of Publications by Year in descending order

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58  
papers

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257450

24  
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233421

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59  
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docs citations

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times ranked

1149  
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization of the Convolved 3D Intermetallic Phases in a Recycled Al Alloy by Synchrotron X-ray Tomography and Machine Learning. <i>Acta Metallurgica Sinica (English Letters)</i> , 2022, 35, 115-123.	2.9	7
2	Ultrafast synchrotron X-ray imaging and multiphysics modelling of liquid phase fatigue exfoliation of graphite under ultrasound. <i>Carbon</i> , 2022, 186, 227-237.	10.3	14
3	Synchrotron x-ray total scattering and modeling study of high-pressure-induced inhomogeneous atom reconfiguration in an equiatomic Zr50Cu50 metallic glassy alloy. <i>Physical Review B</i> , 2022, 105, .	3.2	1
4	Multiscale characterization of the 3D network structure of metal carbides in a Ni superalloy by synchrotron X-ray microtomography and ptychography. <i>Scripta Materialia</i> , 2021, 193, 71-76.	5.2	11
5	3D Phase Field Modeling of Multi-Dendrites Evolution in Solidification and Validation by Synchrotron X-ray Tomography. <i>Materials</i> , 2021, 14, 520.	2.9	2
6	Synchrotron X-ray imaging and ultrafast tomography in situ study of the fragmentation and growth dynamics of dendritic microstructures in solidification under ultrasound. <i>Acta Materialia</i> , 2021, 209, 116796.	7.9	36
7	New insights into sono-exfoliation mechanisms of graphite: In situ high-speed imaging studies and acoustic measurements. <i>Materials Today</i> , 2021, 49, 10-22.	14.2	36
8	Environment friendly dual-frequency ultrasonic exfoliation of few-layer graphene. <i>Carbon</i> , 2021, 185, 536-545.	10.3	20
9	The correlation between X-ray scattering structure factor and shear bands density of a metallic glass and a composite. <i>Materials Letters</i> , 2021, 304, 130727.	2.6	0
10	Effect of Temperature and Acoustic Pressure During Ultrasound Liquid-Phase Processing of Graphite in Water. <i>Jom</i> , 2021, 73, 3745-3752.	1.9	4
11	Ultrasound cavitation induced nucleation in metal solidification: An analytical model and validation by real-time experiments. <i>Ultrasonics Sonochemistry</i> , 2021, 80, 105832.	8.2	20
12	In-situ multiscale shear failure of a bistable composite tape-spring. <i>Composites Science and Technology</i> , 2020, 200, 108348.	7.8	13
13	A novel electromagnetic apparatus for in-situ synchrotron X-ray imaging study of the separation of phases in metal solidification. <i>HardwareX</i> , 2020, 7, e00104.	2.2	4
14	Ultrasonic exfoliation of graphene in water: A key parameter study. <i>Carbon</i> , 2020, 168, 737-747.	10.3	76
15	Characterization of Ultrasonic Bubble Clouds in A Liquid Metal by Synchrotron X-ray High Speed Imaging and Statistical Analysis. <i>Materials</i> , 2020, 13, 44.	2.9	8
16	Multiscale characterization of the nucleation and 3D structure of Al3Sc phases using electron microscopy and synchrotron X-ray tomography. <i>Materials Characterization</i> , 2020, 164, 110353.	4.4	18
17	Non-destructive testing and evaluation of composite materials/structures: A state-of-the-art review. <i>Advances in Mechanical Engineering</i> , 2020, 12, 168781402091376.	1.6	231
18	Understanding the Highly Dynamic Phenomena in Ultrasonic Melt Processing by Ultrafast Synchrotron X-ray Imaging. <i>Minerals, Metals and Materials Series</i> , 2019, , 1539-1544.	0.4	0

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19	Synchrotron X-Ray Real-Time Studies of the Nucleation and Growth of Intermetallic Phases in Solidification. Minerals, Metals and Materials Series, 2019, , 65-71.	0.4	0
20	CO2 capture using mesocellular siliceous foam (MCF)-supported CaO. Journal of the Energy Institute, 2019, 92, 1591-1598.	5.3	10
21	Fundamental studies of ultrasonic melt processing. Ultrasonics Sonochemistry, 2019, 52, 455-467.	8.2	127
22	In situ high speed imaging study and modelling of the fatigue fragmentation of dendritic structures in ultrasonic fields. Acta Materialia, 2019, 165, 388-397.	7.9	58
23	3D characterisation of the Fe-rich intermetallic phases in recycled Al alloys by synchrotron X-ray microtomography and skeletonisation. Scripta Materialia, 2018, 146, 321-326.	5.2	52
24	Data and videos for ultrafast synchrotron X-ray imaging studies of metal solidification under ultrasound. Data in Brief, 2018, 17, 837-841.	1.0	5
25	In-situ synchrotron X-ray radiography observation of primary Al <sub>2</sub> Cu intermetallic growth on fragments of aluminium oxide film. Materials Letters, 2018, 213, 303-305.	2.6	19
26	Ultrafast synchrotron X-ray imaging studies of microstructure fragmentation in solidification under ultrasound. Acta Materialia, 2018, 144, 505-515.	7.9	112
27	In Situ Studies of the Solidification Dynamics of Metal Alloys. Springer Series in Materials Science, 2018, , 19-74.	0.6	4
28	Pulse External Fields Processing of Metal Alloys. Springer Series in Materials Science, 2018, , 243-275.	0.6	1
29	Modelling and neutron diffraction characterization of the interfacial bonding of spray formed dissimilar steels. Acta Materialia, 2018, 155, 318-330.	7.9	10
30	In Situ Observation of Fragmentation of Primary Crystals by Ultrasonic Cavitation in Water. Minerals, Metals and Materials Series, 2017, , 213-219.	0.4	0
31	In situ observation of ultrasonic cavitation-induced fragmentation of the primary crystals formed in Al alloys. Ultrasonics Sonochemistry, 2017, 39, 66-76.	8.2	86
32	Numerical and physical simulation of rapid microstructural evolution of gas atomised Ni superalloy powders. Materials and Design, 2017, 117, 157-167.	7.0	4
33	A synchrotron X-radiography study of the fragmentation and refinement of primary intermetallic particles in an Al-35 Cu alloy induced by ultrasonic melt processing. Acta Materialia, 2017, 141, 142-153.	7.9	131
34	Design and Characterisation of Metallic Glassy Alloys of High Neutron Shielding Capability. Scientific Reports, 2016, 6, 36998.	3.3	15
35	A refining mechanism of primary Al <sub>3</sub> Ti intermetallic particles by ultrasonic treatment in the liquid state. Acta Materialia, 2016, 116, 354-363.	7.9	109
36	Multi-scale Characterisation of the 3D Microstructure of a Thermally-Shocked Bulk Metallic Glass Matrix Composite. Scientific Reports, 2016, 6, 18545.	3.3	7

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37	Effect of ultrasonic melt treatment on the refinement of primary Al <sub>3</sub> Ti intermetallic in an Al-0.4Ti alloy. <i>Journal of Crystal Growth</i> , 2016, 435, 24-30.	1.5	53
38	Characterization of the residual stresses in spray-formed steels using neutron diffraction. <i>Scripta Materialia</i> , 2015, 100, 82-85.	5.2	8
39	Ab initio simulation: The correlation between the local melt structure and segregation behavior of Fe, V, Ti and Si in liquid Al. <i>Computational Materials Science</i> , 2015, 109, 41-48.	3.0	11
40	High-Speed Synchrotron X-ray Imaging Studies of the Ultrasound Shockwave and Enhanced Flow during Metal Solidification Processes. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 2851-2861.	2.2	53
41	In Situ Synchrotron X-ray Study of Ultrasound Cavitation and Its Effect on Solidification Microstructures. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2015, 46, 1615-1619.	2.1	41
42	Solidification of Al Alloys Under Electromagnetic Pulses and Characterization of the 3D Microstructures Using Synchrotron X-ray Tomography. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 2908-2915.	2.2	18
43	RICH TOMOGRAPHY TECHNIQUES FOR THE ANALYSIS OF MICROSTRUCTURE AND DEFORMATION. <i>International Journal of Computational Methods</i> , 2014, 11, 1343006.	1.3	10
44	Understanding the deformation mechanism of individual phases of a ZrTi-based bulk metallic glass matrix composite using <i>in situ</i> diffraction and imaging methods. <i>Applied Physics Letters</i> , 2014, 104, 031912.	3.3	18
45	The onset of plasticity of a Zr-based bulk metallic glass. <i>International Journal of Plasticity</i> , 2014, 60, 87-100.	8.8	52
46	Phase field study of the tip operating state of a freely growing dendrite against convection using a novel parallel multigrid approach. <i>Journal of Computational Physics</i> , 2014, 257, 278-297.	3.8	35
47	Phase Field Simulation of Binary Alloy Dendrite Growth Under Thermal- and Forced-Flow Fields: An Implementation of the Parallel Multigrid Approach. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2013, 44, 924-937.	2.1	47
48	In situ study of the evolution of atomic strain of bulk metallic glass and its effects on shear band formation. <i>Scripta Materialia</i> , 2013, 69, 207-210.	5.2	18
49	A High-Speed Imaging and Modeling Study of Dendrite Fragmentation Caused by Ultrasonic Cavitation. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 3755-3766.	2.2	118
50	An implicit parallel multigrid computing scheme to solve coupled thermal-solute phase-field equations for dendrite evolution. <i>Journal of Computational Physics</i> , 2012, 231, 1781-1796.	3.8	35
51	Modelling the Electromagnetic Separation of Non-metallic Particles from Liquid Metal Flowing through a Two-stage Multichannel. <i>ISIJ International</i> , 2011, 51, 21-26.	1.4	6
52	An Al-Ti hierarchical metal-metal composite manufactured by co-spray forming. <i>Journal of Materials Processing Technology</i> , 2011, 211, 2045-2049.	6.3	3
53	A quantitative study of solute diffusion field effects on heterogeneous nucleation and the grain size of alloys. <i>Acta Materialia</i> , 2011, 59, 2135-2144.	7.9	166
54	Microstructure and property development in spray formed and extruded Al-Mg-Li-Zr alloys for aerospace and autosport applications. <i>Materialwissenschaft Und Werkstofftechnik</i> , 2010, 41, 562-567.	0.9	3

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55	Modelling the shape and thermal dynamics of Ni superalloy rings during spray forming Part 1: Shape modelling “ Droplet deposition, splashing and redeposition. <i>Acta Materialia</i> , 2008, 56, 1588-1596.	7.9	38
56	Modelling the shape and thermal dynamics of Ni superalloy rings during spray forming. Part 2: Thermal modelling “ Heat flow and solidification. <i>Acta Materialia</i> , 2008, 56, 1597-1608.	7.9	33
57	Multiphysics modelling of the spray forming process. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 477, 2-8.	5.6	28
58	The tilt casting process. <i>International Journal of Cast Metals Research</i> , 2002, 14, 325-334.	1.0	25