

# Hongbiao Dong

## List of Publications by Year in descending order

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92  
papers

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docs citations

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2342  
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#	ARTICLE	IF	CITATIONS
1	Synergistic effect of Mo and Zr additions on microstructure and mechanical properties of Nb-Ti-Si-based alloys additively manufactured by laser directed energy deposition. <i>Journal of Materials Science and Technology</i> , 2022, 103, 84-97.	5.6	13
2	Precipitation behavior of Nb-Si-based in-situ composite manufactured by laser directed energy deposition. <i>Scripta Materialia</i> , 2022, 207, 114288.	2.6	12
3	Comparison of desulfurization mechanism in liquid CaO-SiO <sub>2</sub> and MnO-SiO <sub>2</sub> : An ab initio molecular dynamics simulation. <i>Journal of Alloys and Compounds</i> , 2022, 896, 163008.	2.8	5
4	Evaluating data-driven algorithms for predicting mechanical properties with small datasets: A case study on gear steel hardenability. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2022, 29, 836-847.	2.4	14
5	Insight into the sensitivities of freckles in the directional solidification of single-crystal turbine blades. <i>Journal of Manufacturing Processes</i> , 2022, 77, 219-228.	2.8	13
6	An engineering route to synthesize stable bulk nanocrystalline magnesium with an average grain size of 20nm. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 843, 143134.	2.6	1
7	Toxicological effects of microplastics in <i>Litopenaeus vannamei</i> as indicated by an integrated microbiome, proteomic and metabolomic approach. <i>Science of the Total Environment</i> , 2021, 761, 143311.	3.9	45
8	Toxic effects of ammonia and thermal stress on the intestinal microbiota and transcriptomic and metabolomic responses of <i>Litopenaeus vannamei</i> . <i>Science of the Total Environment</i> , 2021, 754, 141867.	3.9	74
9	The effect of Mo on microstructure and mechanical properties of Nb-22Ti-16Si alloy additively manufactured via laser directed energy deposition. <i>Journal of Alloys and Compounds</i> , 2021, 858, 158143.	2.8	11
10	Extraordinary mechanical properties of AZ61 alloy processed by ECAP with 160° channel angle and EPT. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 548-559.	5.5	34
11	Porous solid carbon source-supported denitrification in simulated mariculture wastewater. <i>Environmental Technology (United Kingdom)</i> , 2021, 42, 1196-1203.	1.2	6
12	Solute-adsorption enhanced heterogeneous nucleation: the effect of Cu adsorption on $\alpha$ -Al nucleation at the sapphire substrate. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 5270-5282.	1.3	12
13	Applying Stereological Characterisation to the Solidification Structure of Single Crystal Alloys to Deduce the 3D Macroscopic Solid/Liquid Interface Shape. <i>Minerals, Metals and Materials Series</i> , 2021, , 15-25.	0.3	1
14	Microstructure and mechanical properties of SiCp/AZ91 composite processed with extrusion and EPT. <i>Materials Science and Technology</i> , 2021, 37, 269-279.	0.8	8
15	Thermal-solutal-fluid flow of channel segregation during directional solidification of single-crystal nickel-based superalloys. <i>Acta Materialia</i> , 2021, 206, 116620.	3.8	34
16	Effect of Chemical Potential and Atomic-Scale Vibration of Nucleant Surface on Liquid Layering and Heterogeneous Nucleation. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2021, 52, 2136-2143.	1.1	4
17	The compressive behavior and energy absorption performance of nano-crystalline porous magnesium fabricated by hydrogenation-dehydrogenation and spark plasma sintering technique. <i>Journal of Alloys and Compounds</i> , 2021, 862, 158698.	2.8	2
18	Interaction between M(C, N) and Ferrite in Electropulsing Microalloyed Steel. <i>ISIJ International</i> , 2021, 61, 1550-1555.	0.6	1

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19	Toxic effects of cadmium and lead exposure on intestinal histology, oxidative stress response, and microbial community of Pacific white shrimp <i>Litopenaeus vannamei</i> . <i>Marine Pollution Bulletin</i> , 2021, 167, 112220.	2.3	40
20	An Ab Initio Molecular Dynamics Simulation of Liquid FeO-SiO <sub>2</sub> Silicate System with Sulfur Dissolving. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2021, 52, 3346-3353.	1.0	5
21	Application of deep transfer learning to predicting crystal structures of inorganic substances. <i>Computational Materials Science</i> , 2021, 195, 110476.	1.4	11
22	Solute enrichment induced dendritic fragmentation in directional solidification of nickel-based superalloys. <i>Acta Materialia</i> , 2021, 215, 117043.	3.8	38
23	On the origin of mosaicity in directionally solidified Ni-base superalloys. <i>Acta Materialia</i> , 2021, 217, 117180.	3.8	14
24	A general and transferable deep learning framework for predicting phase formation in materials. <i>Npj Computational Materials</i> , 2021, 7, .	3.5	40
25	Enhancing compressive mechanical properties of rolled AZ31 Mg alloy plates by pre-compression. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 772, 138686.	2.6	27
26	Transcriptomic analysis of juvenile Chinese sea bass ( <i>Lateolabrax maculatus</i> ) anesthetized by MS-222 (tricaine methanesulfonate) and eugenol. <i>Fish Physiology and Biochemistry</i> , 2020, 46, 909-920.	0.9	7
27	Protection of teprenone against hypoxia and reoxygenation stress in stomach and intestine of <i>Lateolabrax maculatus</i> . <i>Fish Physiology and Biochemistry</i> , 2020, 46, 575-584.	0.9	16
28	Rapid production of pillar structures on the surface of single crystal CMSX-4 superalloy by femtosecond laser machining. <i>Optics and Lasers in Engineering</i> , 2020, 127, 105941.	2.0	19
29	The preparation and mechanical properties of nano-magnesium alloy bulks. <i>Journal of Alloys and Compounds</i> , 2020, 819, 153253.	2.8	6
30	Physiological and molecular differences in the thermal tolerance of two varieties of kuruma prawn <i>Marsupenaeus japonicus</i> : critical thermal maximum and heat shock protein $\gamma$ 70. <i>Fisheries Science</i> , 2020, 86, 163-169.	0.7	4
31	On the nature of hexagonality within the solidification structure of single crystal alloys: Mechanisms and applications. <i>Acta Materialia</i> , 2020, 200, 417-431.	3.8	16
32	Exceptional mechanical properties of AZ31 alloy wire by combination of cold drawing and EPT. <i>Journal of Materials Science and Technology</i> , 2020, 51, 111-118.	5.6	19
33	On Directional Dendritic Growth and Primary Spacing—A Review. <i>Crystals</i> , 2020, 10, 627.	1.0	33
34	Effect of electropulsing on the precipitation of NbC <sub>x</sub> from austenite phase. <i>Materials Science and Technology</i> , 2020, 36, 1566-1573.	0.8	1
35	2D single crystal Bragg-dip mapping by time-of-flight energy-resolved neutron imaging on IMAT@ISIS. <i>Scientific Reports</i> , 2020, 10, 20751.	1.6	8
36	Automatic Recognition of Dendritic Solidification Structures: DenMap. <i>Journal of Imaging</i> , 2020, 6, 19.	1.7	16

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37	Effects of <i>Microcystis aeruginosa</i> and microcystin-LR on intestinal histology, immune response, and microbial community in <i>Litopenaeus vannamei</i> . <i>Environmental Pollution</i> , 2020, 265, 114774.	3.7	37
38	Microstructure evolution and mechanical properties of an AZ61 alloy processed with TS-ECAP and EPT. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 780, 139195.	2.6	17
39	Microstructure and isothermal oxidation behavior of Nb-Ti-Si-based alloy additively manufactured by powder-feeding laser directed energy deposition. <i>Corrosion Science</i> , 2020, 173, 108757.	3.0	14
40	Unveiling the influence of interfacial bonding and dynamics on solid/liquid interfacial structures: An <i>ab initio</i> molecular dynamics study of (0001) sapphire-liquid Al interfaces. <i>Physical Review Materials</i> , 2020, 4, .	0.9	12
41	5th UK-China Steel Research Forum. <i>Metals</i> , 2019, 9, 738.	1.0	0
42	A New Efficient Quantitative Multi-component Phase Field: Lattice Boltzmann Model for Simulating Ti6Al4V Solidified Dendrite Under Forced Flow. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019, 50, 2487-2497.	1.0	14
43	Compressive Deformation Behavior of AZ31Mg Alloy Containing {100} Extension Twins at Different Temperature. <i>Metals and Materials International</i> , 2019, 25, 1170-1181.	1.8	7
44	Changes in the intestine microbial, digestion and immunity of <i>Litopenaeus vannamei</i> in response to dietary resistant starch. <i>Scientific Reports</i> , 2019, 9, 6464.	1.6	50
45	Phase field study of spacing evolution during wire and laser additive manufacturing under transient conditions. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 529, 012003.	0.3	3
46	Using deep neural network with small dataset to predict material defects. <i>Materials and Design</i> , 2019, 162, 300-310.	3.3	333
47	Effect of electropulsing treatment on static recrystallization behavior of cold-rolled magnesium alloy ZK60 with different reductions. <i>Journal of Materials Science and Technology</i> , 2019, 35, 1113-1120.	5.6	41
48	Atomistics of pre-nucleation layering of liquid metals at the interface with poor nucleants. <i>Communications Chemistry</i> , 2019, 2, .	2.0	115
49	GPU-accelerated three-dimensional large-scale simulation of dendrite growth for Ti6Al4V alloy based on multi-component phase-field model. <i>Computational Materials Science</i> , 2019, 160, 149-158.	1.4	23
50	Zirconium modified Nb-22Ti-16Si alloys fabricated by laser additive manufacturing: Microstructure and fracture toughness. <i>Journal of Alloys and Compounds</i> , 2019, 783, 66-76.	2.8	31
51	Microstructure evolution and dynamic recrystallization of AZ31 Mg alloy during uniaxial compression. <i>Materials Science and Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 750, 139195.	2.6	51
52	The efficacy of eugenol and tricaine methanesulphonate as anaesthetics for juvenile Chinese sea bass ( <i>Lateolabrax maculatus</i> ) during simulated transport. <i>Journal of Applied Ichthyology</i> , 2019, 35, 551-557.	0.3	18
53	First-principle study of interfacial properties between $\hat{\Gamma}^3$ -TiAl and TiC, VN. <i>Molecular Simulation</i> , 2019, 45, 50-57.	0.9	5
54	Microstructure evolution and deformation behaviors of AZ31 Mg alloy with different grain orientation during uniaxial compression. <i>Journal of Alloys and Compounds</i> , 2018, 741, 514-526.	2.8	32

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55	The wettability and interfacial characterization between $\hat{I}^3$ -TiAl alloy and ceramic reinforcements. <i>Composite Interfaces</i> , 2018, 25, 713-723.	1.3	6
56	Effects of Dietary <i>Lactobacillus plantarum</i> on Growth Performance, Digestive Enzymes and Gut Morphology of <i>Litopenaeus vannamei</i> . <i>Probiotics and Antimicrobial Proteins</i> , 2018, 10, 504-510.	1.9	54
57	Molecular cloning of heat shock protein 60 from <i>Marsupenaeus japonicus</i> and its expression profiles at early developmental stages and response to heat stress. <i>Aquaculture Research</i> , 2018, 49, 301-312.	0.9	6
58	The In-Plane Structure and Dynamic Property of the Homogeneous Al-Al Solid-Liquid Interface. <i>Metals</i> , 2018, 8, 602.	1.0	7
59	Changes in the Intestine Microbial, Digestive, and Immune-Related Genes of <i>Litopenaeus vannamei</i> in Response to Dietary Probiotic <i>Clostridium butyricum</i> Supplementation. <i>Frontiers in Microbiology</i> , 2018, 9, 2191.	1.5	99
60	Grain refining and improving mechanical properties of AZ31 Mg alloy sheets by multi-pass warm rolling with falling temperature. <i>Journal of Materials Research</i> , 2018, 33, 2827-2834.	1.2	3
61	Cellular tip splitting instability during transient growth. <i>Computational Materials Science</i> , 2018, 155, 364-372.	1.4	3
62	Exceptional mechanical properties of ultra-fine grain AZ31 alloy by the combined processing of ECAP, rolling and EPT. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 731, 54-60.	2.6	41
63	Physiological and immune response in the gills of <i>Litopenaeus vannamei</i> exposed to acute sulfide stress. <i>Fish and Shellfish Immunology</i> , 2018, 81, 161-167.	1.6	25
64	Effects of the Dietary Probiotic <i>Clostridium butyricum</i> on Intestine Digestive and Metabolic Capacities, SCFA Content and Body Composition in <i>Marsupenaeus japonicus</i> . <i>Journal of Ocean University of China</i> , 2018, 17, 690-696.	0.6	17
65	Substrate-Induced Liquid Layering: A New Insight into the Heterogeneous Nucleation of Liquid Metals. <i>Metals</i> , 2018, 8, 521.	1.0	14
66	Effects of dietary <i>Lactobacillus plantarum</i> in different treatments on growth performance and immune gene expression of white shrimp <i>Litopenaeus vannamei</i> under normal condition and stress of acute low salinity. <i>Fish and Shellfish Immunology</i> , 2017, 62, 195-201.	1.6	110
67	Formation and mechanism of nanocrystalline AZ91 powders during HDDR processing. <i>Materials Characterization</i> , 2017, 125, 134-141.	1.9	4
68	Intestine oxidative stress and immune response to sulfide stress in Pacific white shrimp <i>Litopenaeus vannamei</i> . <i>Fish and Shellfish Immunology</i> , 2017, 63, 201-207.	1.6	36
69	Effect of the dietary probiotic <i>Clostridium butyricum</i> on growth, intestine antioxidant capacity and resistance to high temperature stress in kuruma shrimp <i>Marsupenaeus japonicus</i> . <i>Journal of Thermal Biology</i> , 2017, 66, 93-100.	1.1	63
70	A green porous solid carbon source supports denitrification in low C/N salinity wastewater. <i>RSC Advances</i> , 2017, 7, 18305-18310.	1.7	9
71	Effect of dietary <i>Clostridium butyricum</i> on growth, intestine health status and resistance to ammonia stress in Pacific white shrimp <i>Litopenaeus vannamei</i> . <i>Fish and Shellfish Immunology</i> , 2017, 65, 25-33.	1.6	121
72	Effects of dietary poly- $\hat{I}^2$ -hydroxybutyrate (PHB) on microbiota composition and the mTOR signaling pathway in the intestines of <i>litopenaeus vannamei</i> . <i>Journal of Microbiology</i> , 2017, 55, 946-954.	1.3	50

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73	Effect of dietary poly- $\beta$ -hydroxybutyrate (PHB) on growth performance, intestinal health status and body composition of Pacific white shrimp <i>Litopenaeus vannamei</i> (Boone, 1931). <i>Fish and Shellfish Immunology</i> , 2017, 60, 520-528.	1.6	98
74	Artificial substrates in zero-water-exchange culture system regulate the rearing performance of Pacific white shrimp <i>Litopenaeus vannamei</i> (Boone, 1931) under the winter indoor condition. <i>Aquaculture Research</i> , 2016, 47, 91-100.	0.9	17
75	Effect of desiccation on oxidative stress and antioxidant response of the black tiger shrimp <i>Penaeus monodon</i> . <i>Fish and Shellfish Immunology</i> , 2016, 58, 10-17.	1.6	56
76	Detailed Analysis of the Solution Heat Treatment of a Third-Generation Single-Crystal Nickel-Based Superalloy CMSX-10K <sup>®</sup> . <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016, 47, 889-906.	1.1	28
77	Effect of desiccation and resubmersion on the oxidative stress response of the kuruma shrimp <i>Marsupenaeus japonicus</i> . <i>Fish and Shellfish Immunology</i> , 2016, 49, 91-99.	1.6	51
78	Discontinuous Precipitation in Ni-Base Superalloys During Solution Heat Treatment. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 4298-4315.	1.1	21
79	Microstructure, mechanical properties and static recrystallization behavior of the rolled ZK60 magnesium alloy sheets processed by electropulsing treatment. <i>Journal of Alloys and Compounds</i> , 2015, 646, 1-9.	2.8	45
80	Improved mechanical properties of AZ31 magnesium alloy sheets by repeated cold rolling and annealing using a small pass reduction. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 637, 243-250.	2.6	57
81	Oxidative stress response of the black tiger shrimp <i>Penaeus monodon</i> to <i>Vibrio parahaemolyticus</i> challenge. <i>Fish and Shellfish Immunology</i> , 2015, 46, 354-365.	1.6	118
82	Biological denitrification in high salinity wastewater using semen litchi as a carbon source. <i>RSC Advances</i> , 2015, 5, 92836-92842.	1.7	10
83	Effect of Al on the Wetting Behavior Between TiC <sub>x</sub> and Molten Ti-Al Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 4783-4792.	1.1	6
84	Recrystallization and microstructure evolution of the rolled Mg-3Al-1Zn alloy strips under electropulsing treatment. <i>Journal of Alloys and Compounds</i> , 2015, 622, 229-235.	2.8	58
85	Deep drawability and drawing behaviour of AZ31 alloy sheets with different initial texture. <i>Journal of Alloys and Compounds</i> , 2014, 615, 302-310.	2.8	53
86	Microstructure evolution and mechanical properties of twinned AZ31 alloy plates at lower elevated temperature. <i>Journal of Alloys and Compounds</i> , 2014, 615, 687-692.	2.8	58
87	Grain refining and improving mechanical properties of a warm rolled AZ31 alloy plate. <i>Materials Letters</i> , 2014, 135, 31-34.	1.3	30
88	Effects of processing technologies on mechanical properties of sic particulate reinforced magnesium matrix composites. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2014, 29, 769-772.	0.4	5
89	Investigation of the as-solidified microstructure of an Al-Mg-Si-Cu alloy. <i>Journal of Alloys and Compounds</i> , 2014, 602, 312-321.	2.8	14
90	Microstructure and properties of the super-hydrophobic films fabricated on magnesium alloys. <i>Journal of Alloys and Compounds</i> , 2013, 554, 142-146.	2.8	43

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91	A Multi-Scale Approach to Simulate Solidification Structure Evolution and Solute Segregation in a Weld Pool. Journal of Algorithms and Computational Technology, 2013, 7, 489-507.	0.4	5
92	Grain Selection during Directional Solidification of Aero-Engine Turbine Blades. AIP Conference Proceedings, 2008, , .	0.3	3