

# Hongbiao Dong

## List of Publications by Year in descending order

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92  
papers

2,857  
citations

147726

31  
h-index

197736

49  
g-index

92  
all docs

92  
docs citations

92  
times ranked

2342  
citing authors

#	ARTICLE	IF	CITATIONS
1	Using deep neural network with small dataset to predict material defects. Materials and Design, 2019, 162, 300-310.	3.3	333
2	Effect of dietary Clostridium butyricum on growth, intestine health status and resistance to ammonia stress in Pacific white shrimp Litopenaeus vannamei. Fish and Shellfish Immunology, 2017, 65, 25-33.	1.6	121
3	Oxidative stress response of the black tiger shrimp Penaeus monodon to Vibrio parahaemolyticus challenge. Fish and Shellfish Immunology, 2015, 46, 354-365.	1.6	118
4	Atomistics of pre-nucleation layering of liquid metals at the interface with poor nucleants. Communications Chemistry, 2019, 2, .	2.0	115
5	Effects of dietary Lactobacillus plantarum in different treatments on growth performance and immune gene expression of white shrimp Litopenaeus vannamei under normal condition and stress of acute low salinity. Fish and Shellfish Immunology, 2017, 62, 195-201.	1.6	110
6	Changes in the Intestine Microbial, Digestive, and Immune-Related Genes of Litopenaeus vannamei in Response to Dietary Probiotic Clostridium butyricum Supplementation. Frontiers in Microbiology, 2018, 9, 2191.	1.5	99
7	Effect of dietary poly- $\beta$ -hydroxybutyrate (PHB) on growth performance, intestinal health status and body composition of Pacific white shrimp Litopenaeus vannamei (Boone, 1931). Fish and Shellfish Immunology, 2017, 60, 520-528.	1.6	98
8	Toxic effects of ammonia and thermal stress on the intestinal microbiota and transcriptomic and metabolomic responses of Litopenaeus vannamei. Science of the Total Environment, 2021, 754, 141867.	3.9	74
9	Effect of the dietary probiotic Clostridium butyricum on growth, intestine antioxidant capacity and resistance to high temperature stress in kuruma shrimp Marsupenaeus japonicus. Journal of Thermal Biology, 2017, 66, 93-100.	1.1	63
10	Microstructure evolution and mechanical properties of twinned AZ31 alloy plates at lower elevated temperature. Journal of Alloys and Compounds, 2014, 615, 687-692.	2.8	58
11	Recrystallization and microstructure evolution of the rolled Mg-3Al-1Zn alloy strips under electropulsing treatment. Journal of Alloys and Compounds, 2015, 622, 229-235.	2.8	58
12	Improved mechanical properties of AZ31 magnesium alloy sheets by repeated cold rolling and annealing using a small pass reduction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 637, 243-250.	2.6	57
13	Effect of desiccation on oxidative stress and antioxidant response of the black tiger shrimp Penaeus monodon. Fish and Shellfish Immunology, 2016, 58, 10-17.	1.6	56
14	Effects of Dietary Lactobacillus plantarum on Growth Performance, Digestive Enzymes and Gut Morphology of Litopenaeus vannamei. Probiotics and Antimicrobial Proteins, 2018, 10, 504-510.	1.9	54
15	Deep drawability and drawing behaviour of AZ31 alloy sheets with different initial texture. Journal of Alloys and Compounds, 2014, 615, 302-310.	2.8	53
16	Effect of desiccation and resubmersion on the oxidative stress response of the kuruma shrimp Marsupenaeus japonicus. Fish and Shellfish Immunology, 2016, 49, 91-99.	1.6	51
17	extension twins on mechanical properties, microstructure evolution and dynamic recrystallization of AZ31 Mg alloy during uniaxial compression	2.6	51
18	Effects of dietary poly- $\beta$ -hydroxybutyrate (PHB) on microbiota composition and the mTOR signaling pathway in the intestines of litopenaeus vannamei. Journal of Microbiology, 2017, 55, 946-954.	1.3	50

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19	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
20	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
21	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
22	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
23	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
24	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
25	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
26	A general and transferable deep learning framework for predicting phase formation in materials. <i>Npj Computational Materials</i> , 2021, 7, .	3.5	40
27	Solute enrichment induced dendritic fragmentation in directional solidification of nickel-based superalloys. <i>Acta Materialia</i> , 2021, 215, 117043.	3.8	38
28	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
29	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
30	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
31	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
32	On Directional Dendritic Growth and Primary Spacing—A Review. <i>Crystals</i> , 2020, 10, 627.	1.0	33
33	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
34	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
35	Grain refining and improving mechanical properties of a warm rolled AZ31 alloy plate. <i>Materials Letters</i> , 2014, 135, 31-34.	1.3	30
36	Detailed Analysis of the Solution Heat Treatment of a Third-Generation Single-Crystal Nickel-Based Superalloy CMSX-10K®. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016, 47, 889-906.	1.1	28

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37	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
38	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
39	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
40	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
41	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
42	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
43	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
44	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
45	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
46	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
47	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
48	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
49	Automatic Recognition of Dendritic Solidification Structures: DenMap. <i>Journal of Imaging</i> , 2020, 6, 19.	1.7	16
50	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
51	Substrate-Induced Liquid Layering: A New Insight into the Heterogeneous Nucleation of Liquid Metals. <i>Metals</i> , 2018, 8, 521.	1.0	14
52	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
53	On the origin of mosaicity in directionally solidified Ni-base superalloys. <i>Acta Materialia</i> , 2021, 217, 117180.	3.8	14
54	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

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55	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
56	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
57	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
58	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
59	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
60	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
61	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
62	Application of deep transfer learning to predicting crystal structures of inorganic substances. <i>Computational Materials Science</i> , 2021, 195, 110476.	1.4	11
63	Biological denitrification in high salinity wastewater using semen litchi as a carbon source. <i>RSC Advances</i> , 2015, 5, 92836-92842.	1.7	10
64	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
65	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
66	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
67	The In-Plane Structure and Dynamic Property of the Homogeneous Al-Al Solid-Liquid Interface. <i>Metals</i> , 2018, 8, 602.	1.0	7
68	Compressive Deformation Behavior of AZ31Mg Alloy Containing $\{10\bar{1}2\}$ Extension Twins at Different Temperature. <i>Metals and Materials International</i> , 2019, 25, 1170-1181.	1.8	7
69	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
70	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
71	The wettability and interfacial characterization between $\hat{\gamma}$ -TiAl alloy and ceramic reinforcements. <i>Composite Interfaces</i> , 2018, 25, 713-723.	1.3	6
72	Molecular cloning of heat shock protein 60 from <i>Marsupinaeus 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

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73	The preparation and mechanical properties of nano-magnesium alloy bulks. <i>Journal of Alloys and Compounds</i> , 2020, 819, 153253.	2.8	6
74	Porous solid carbon source-supported denitrification in simulated mariculture wastewater. <i>Environmental Technology (United Kingdom)</i> , 2021, 42, 1196-1203.	1.2	6
75	A Multi-Scale Approach to Simulate Solidification Structure Evolution and Solute Segregation in a Weld Pool. <i>Journal of Algorithms and Computational Technology</i> , 2013, 7, 489-507.	0.4	5
76	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
77	First-principle study of interfacial properties between $\text{TiAl}$ and $\text{TiC}$ , VN. <i>Molecular Simulation</i> , 2019, 45, 50-57.	0.9	5
78	An Ab Initio Molecular Dynamics Simulation of Liquid $\text{FeO-SiO}_2$ 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
79	Comparison of desulfurization mechanism in liquid $\text{CaO-SiO}_2$ and $\text{MnO-SiO}_2$ : An ab initio molecular dynamics simulation. <i>Journal of Alloys and Compounds</i> , 2022, 896, 163008.	2.8	5
80	Formation and mechanism of nanocrystalline AZ91 powders during HDDR processing. <i>Materials Characterization</i> , 2017, 125, 134-141.	1.9	4
81	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 $\beta$ 70. <i>Fisheries Science</i> , 2020, 86, 163-169.	0.7	4
82	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
83	Grain Selection during Directional Solidification of Aero-Engine Turbine Blades. <i>AIP Conference Proceedings</i> , 2008, , .	0.3	3
84	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
85	Cellular tip splitting instability during transient growth. <i>Computational Materials Science</i> , 2018, 155, 364-372.	1.4	3
86	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
87	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
88	Effect of electropulsing on the precipitation of $\text{NbC}$ from austenite phase. <i>Materials Science and Technology</i> , 2020, 36, 1566-1573.	0.8	1
89	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
90	Interaction between $\text{M(C, N)}$ and Ferrite in Electropulsing Microalloyed Steel. <i>ISIJ International</i> , 2021, 61, 1550-1555.	0.6	1

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91	An engineering route to synthesize stable bulk nanocrystalline magnesium with an average grain size of 20nm. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 843, 143134.	2.6	1
92	5th UK-China Steel Research Forum. Metals, 2019, 9, 738.	1.0	0