# Hongbaio Dong

List of Publications by Year
in descending order

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| 187 papers | 4,299 citations | 126907 33 h-index | 161849 54 g-index |
| 188 all docs | 188 docs citations | 188 times ranked | 3229 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Characterisation of Aluminium Niâ€“40Feâ€“10Ti fabricated by friction stir processing. Advances in Materials and Processing Technologies, 2022, 8, 1194-1205. | 1.4 | 2 |
| 2 | Comparison of desulfurization mechanism in liquid CaO-SiO2 and MnO-SiO2: An ab initio molecular dynamics simulation. Journal of Alloys and Compounds, 2022, 896, 163008. | 5.5 | 5 |
| 3 | The Effect of Heat Source Path on Thermal Evolution during Electro-Gas Welding of Thick Steel Plates. Materials, 2022, 15, 2215. | 2.9 | 4 |
| 4 | Evaluating data-driven algorithms for predicting mechanical properties with small datasets: A case study on gear steel hardenability. International Journal of Minerals, Metallurgy and Materials, 2022, 29, 836-847. | 4.9 | 14 |
| 5 | Insight into the sensitivities of freckles in the directional solidification of single-crystal turbine blades. Journal of Manufacturing Processes, 2022, 77, 219-228. | 5.9 | 13 |
| 6 | Metallurgical Data Science for Steel Industry: A Case Study on Basic Oxygen Furnace. Steel Research International, 2022, 93, . | 1.8 | 7 |
| 7 | Î³â€³ variant-sensitive deformation behaviour of Inconel 718 superalloy. Journal of Materials Science and Technology, 2022, 126, 169-181. | 10.7 | 7 |
| 8 | In-Situ Determination of Precipitation Kinetics During Heat Treatment of Superalloy 718. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 500-511. | 2.2 | 7 |
| 9 | Analysis of critical slag entrapment speed at the steelâ€“slag interface. Ironmaking and Steelmaking, 2021, 48, 343-350. | 2.1 | 0 |
| 10 | Morphological changes of elongated MnS inclusions during heat treatment process. Ironmaking and Steelmaking, 2021, 48, 222-228. | 2.1 | 4 |
| 11 | A Fast-Acting Method for Simulating Precipitation During Heat Treatment of Superalloy 718. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 483-499. | 2.2 | 8 |
| 12 | Solute-adsorption enhanced heterogeneous nucleation: the effect of Cu adsorption on Î±-Al nucleation at the sapphire substrate. Physical Chemistry Chemical Physics, 2021, 23, 5270-5282. | 2.8 | 12 |
| 13 | High Entropy Alloys as Filler Metals for Joining. Entropy, 2021, 23, 78. | 2.2 | 19 |
| 14 | Applying Stereological Characterisation to the Solidification Structure of Single Crystal Alloys to Deduce the 3D Macroscopic Solid/Liquid Interface Shape. Minerals, Metals and Materials Series, 2021, , 15-25. | 0.4 | 1 |
| 15 | Microstructure and Thermal Analysis of Metastable Intermetallic Phases in High-Entropy Alloy CoCrFeMo0.85Ni. Materials, 2021, 14, 1073. | 2.9 | 10 |
| 16 | The Effect of Aluminum on the Divorced Eutectic Transformation of MnS Inclusions. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 1118-1131. | 2.1 | 15 |
| 17 | Microstructure and mechanical properties of SiCp/AZ91 composite processed with extrusion and EPT. Materials Science and Technology, 2021, 37, 269-279. | 1.6 | 8 |
| 18 | Grain selection and growth orientation of prior-Î² phase for Ti-6-4 during additive manufacturing: insights from a modeling perspective. China Foundry, 2021, 18, 83-93. | 1.4 | 3 |

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| 19 | Thermal-solutal-fluid flow of channel segregation during directional solidification of single-crystal nickel-based superalloys. Acta Materialia, 2021, 206, 116620. | 7.9 | 34 |
| 20 | Effect of Chemical Potential and Atomic-Scale Vibration of Nucleant Surface on Liquid Layering and Heterogeneous Nucleation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 2136-2143. | 2.2 | 4 |
| 21 | Interaction between M(C, N) and Ferrite in Electropulsing Microalloyed Steel. ISIJ International, 2021, 61, 1550-1555. | 1.4 | 1 |
| 22 | A New Approach to Calculate the Velocity of Interdendritic Fluid Flow during Solidification Using Etched Surface Height of Actual Metal Ingot. Metals, 2021, 11, 927. | 2.3 | 2 |
| 23 | Simulation of solidified Î² grain for Tiâ€“6Alâ€“4V during wire laser additive manufacturing by three-dimensional cellular automaton method. Modelling and Simulation in Materials Science and Engineering, 2021, 29, 065006. | 2.0 | 6 |
| 24 | An Ab Initio Molecular Dynamics Simulation of Liquid FeOâ€“SiO2 Silicate System with Sulfur Dissolving. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 3346-3353. | 2.1 | 5 |
| 25 | Application of deep transfer learning to predicting crystal structures of inorganic substances. Computational Materials Science, 2021, 195, 110476. | 3.0 | 11 |
| 26 | The Application of Differential Scanning Calorimetry to Investigate Precipitation Behavior in Nickel-Base Superalloys Under Continuous Cooling and Heating Conditions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 3706-3726. | 2.2 | 4 |
| 27 | Solute enrichment induced dendritic fragmentation in directional solidification of nickel-based superalloys. Acta Materialia, 2021, 215, 117043. | 7.9 | 38 |
| 28 | On the origin of mosaicity in directionally solidified Ni-base superalloys. Acta Materialia, 2021, 217, 117180. | 7.9 | 14 |
| 29 | A simulation and experiment study on phase transformations of Ti-6Al-4V in wire laser additive manufacturing. Materials and Design, 2021, 207, 109843. | 7.0 | 22 |
| 30 | Grain-size dependent elastic-plastic deformation behaviour of inconel 625 alloy studied by in-situ neutron diffraction. Intermetallics, 2021, 138, 107340. | 3.9 | 6 |
| 31 | A general and transferable deep learning framework for predicting phase formation in materials. Npj Computational Materials, 2021, 7, . | 8.7 | 40 |
| 32 | The study of hot deformation on laser cladding remanufactured 316L stainless steel. Materials and Design, 2021, 212, 110255. | 7.0 | 13 |
| 33 | Vaporization of Ni, Al and Cr in Ni-Base Alloys and Its Influence on Surface Defect Formation During Manufacturing of Single-Crystal Components. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 309-322. | 2.2 | 12 |
| 34 | Evolution of Lattice Spacing of Gamma Double Prime Precipitates During Aging of Polycrystalline Ni-Base Superalloys: An In Situ Investigation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 574-585. | 2.2 | 20 |
| 35 | Enhancing compressive mechanical properties of rolled AZ31 Mg alloy plates by pre-compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 772, 138686. | 5.6 | 27 |
| 36 | A Phenomenological Analysis of Freckling in Directional Solidification of Ni-Base Superalloy: The Role of Edge and Curvature in Casting Components. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 88-92. | 2.2 | 8 |

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| 37 | Hydrogen embrittlement in super duplex stainless steels. Materialia, 2020, 9, 100524. | 2.7 | 24 |
| 38 | The influence of Ce micro-alloying on the precipitation of intermetallic sigma phase during solidification of super-austenitic stainless steels. Journal of Alloys and Compounds, 2020, 815, 152418. | 5.5 | 32 |
| 39 | The orientation dependence of liquid ordering at Î±-Al2O3/Al solidâ€“liquid interfaces: A molecular dynamics study. Computational Materials Science, 2020, 174, 109489. | 3.0 | 12 |
| 40 | Rapid production of pillar structures on the surface of single crystal CMSX-4 superalloy by femtosecond laser machining. Optics and Lasers in Engineering, 2020, 127, 105941. | 3.8 | 19 |
| 41 | On the nature of hexagonality within the solidification structure of single crystal alloys: Mechanisms and applications. Acta Materialia, 2020, 200, 417-431. | 7.9 | 16 |
| 42 | Experimental and numerical investigation of the melting process and heat transfer characteristics of multiple phase change materials. International Journal of Energy Research, 2020, 44, 11219-11232. | 4.5 | 12 |
| 43 | On Directional Dendritic Growth and Primary Spacingâ€”A Review. Crystals, 2020, 10, 627. | 2.2 | 33 |
| 44 | Effect of electropulsing on the precipitation of NbC<sub>x</sub>N<sub>1â^'x</sub> from austenite phase. Materials Science and Technology, 2020, 36, 1566-1573. | 1.6 | 1 |
| 45 | Reduced Annealing Time and Enhanced Magnetocaloric Effect of La(Fe, Al)13 Alloy by La-nonstoichiometry and Si-doping. Acta Metallurgica Sinica (English Letters), 2020, 33, 1535-1542. | 2.9 | 3 |
| 46 | 2D single crystal Bragg-dip mapping by time-of-flight energy-resolved neutron imaging on IMAT@ISIS. Scientific Reports, 2020, 10, 20751. | 3.3 | 8 |
| 47 | Automatic Recognition of Dendritic Solidification Structures: DenMap. Journal of Imaging, 2020, 6, 19. | 3.0 | 16 |
| 48 | Predicting solidification cracking susceptibility of stainless steels using machine learning. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012073. | 0.6 | 2 |
| 49 | Prediction of re-oxidation behaviour of ultra-low carbon steel by different slag series. Scientific Reports, 2020, 10, 9423. | 3.3 | 4 |
| 50 | Temperature-Dependent Misfit Stress in Gamma Double Prime Strengthened Ni-Base Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 1860-1873. | 2.2 | 19 |
| 51 | Microstructure evolution and mechanical properties of an AZ61 alloy processed with TS-ECAP and EPT. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 780, 139195. | 5.6 | 17 |
| 52 | The solidâ€“liquid interface free energy of Al: A comparison between molecular dynamics calculations and experimental measurements. Computational Materials Science, 2020, 184, 109910. | 3.0 | 10 |
| 53 | Unveiling the influence of interfacial bonding and dynamics on solid/liquid interfacial structures: An ab initio molecular dynamics study of (0001) sapphire-liquid Al interfaces. Physical Review Materials, 2020, 4, . | 2.4 | 12 |
| 54 | Stress-Induced Variant Selection of Î³â€³ Phase in Inconel 718 During Service: Mechanism and Effects on Mechanical Behavior. Minerals, Metals and Materials Series, 2020, , 713-725. | 0.4 | 2 |

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| 55 | Equations of heat generation during friction stir welding for tapered polygonal tools. Science and Technology of Welding and Joining, 2019, 24, 93-100. | 3.1 | 10 |
| 56 | Solidification of niobium-silicide-based alloys during laser additive manufacturing process. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012006. | 0.6 | 2 |
| 57 | 5th UKâ€“China Steel Research Forum. Metals, 2019, 9, 738. | 2.3 | 0 |
| 58 | Using Variant Selection to Facilitate Accurate Fitting of Î³â€³ Peaks in Neutron Diffraction. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 5421-5432. | 2.2 | 9 |
| 59 | A New Efficient Quantitative Multi-component Phase Field: Lattice Boltzmann Model for Simulating Ti6Al4V Solidified Dendrite Under Forced Flow. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 2487-2497. | 2.1 | 14 |
| 60 | Compressive Deformation Behavior of AZ31Mg Alloy Containing {10â€“12} Extension Twins at Different Temperature. Metals and Materials International, 2019, 25, 1170-1181. | 3.4 | 7 |
| 61 | Getting the Strain Under Control: Trans-Varestraint Tests for Hot Cracking Susceptibility. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 1748-1762. | 2.2 | 11 |
| 62 | Solidification cracking during welding of steel: In situ X-ray observation. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012026. | 0.6 | 0 |
| 63 | Phase field study of spacing evolution during wire and laser additive manufacturing under transient conditions. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012003. | 0.6 | 3 |
| 64 | Roadmap of China steel industry in the past 70 years. Ironmaking and Steelmaking, 2019, 46, 922-927. | 2.1 | 12 |
| 65 | Using deep neural network with small dataset to predict material defects. Materials and Design, 2019, 162, 300-310. | 7.0 | 333 |
| 66 | Study of precipitation-assisted stress relaxation and creep behavior during the ageing of a nickel-iron superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 742, 493-500. | 5.6 | 28 |
| 67 | Effect of electropulsing treatment on static recrystallization behavior of cold-rolled magnesium alloy ZK60 with different reductions. Journal of Materials Science and Technology, 2019, 35, 1113-1120. | 10.7 | 41 |
| 68 | Atomistics of pre-nucleation layering of liquid metals at the interface with poor nucleants. Communications Chemistry, 2019, 2, . | 4.5 | 115 |
| 69 | GPU-accelerated three-dimensional large-scale simulation of dendrite growth for Ti6Al4V alloy based on multi-component phase-field model. Computational Materials Science, 2019, 160, 149-158. | 3.0 | 23 |
| 70 | Effect of pre-existing <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0003.gif" overflow="scroll"><mml:mrow><mml:mo stretchy="false">{</mml:mo><mml:mn>10</mml:mn><mml:mover accent="true"><mml:mn>1</mml:mn><mml:mo>Â¯</mml:mo></mml:mover><mml:mn>2</mml:mn><mml:mo stretchy="false">}</mml:mo></mml:mrow></mml:math> extension twins on mechanical properties, microstructure evolution and dynamic recrystallization of AZ31 Mg alloy during uniaxial compressio | 5.6 | 51 |
| 71 | Using transmission Kikuchi diffraction in a scanning electron microscope to quantify geometrically necessary dislocation density at the nanoscale. Ultramicroscopy, 2019, 197, 39-45. | 1.9 | 37 |
| 72 | First-principle study of interfacial properties between Î³-TiAl and TiC, VN. Molecular Simulation, 2019, 45, 50-57. | 2.0 | 5 |

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| 73 | Halo Formation During Solidification of Refractory Metal Aluminide Ternary Systems. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1749-1761. | 2.2 | 3 |
| 74 | A Three-Stage Mechanistic Model for Solidification Cracking During Welding of Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1674-1682. | 2.2 | 27 |
| 75 | The initiation and propagation mechanism of the overlapping zone cracking during laser solid forming of IN-738LC superalloy. Journal of Alloys and Compounds, 2018, 749, 859-870. | 5.5 | 79 |
| 76 | Microstructure evolution and deformation behaviors of AZ31 Mg alloy with different grain orientation during uniaxial compression. Journal of Alloys and Compounds, 2018, 741, 514-526. | 5.5 | 32 |
| 77 | The wettability and interfacial characterization between Î³-TiAl alloy and ceramic reinforcements. Composite Interfaces, 2018, 25, 713-723. | 2.3 | 6 |
| 78 | Micro-mechanism of central damage formation during cross wedge rolling. Journal of Materials Processing Technology, 2018, 252, 322-332. | 6.3 | 47 |
| 79 | Effect of hydrogen charging on dislocation multiplication in pre-strained super duplex stainless steel. Scripta Materialia, 2018, 143, 20-24. | 5.2 | 22 |
| 80 | Deformation Mechanism and Hot Workability of Extruded Magnesium Alloy AZ31. Acta Metallurgica Sinica (English Letters), 2018, 31, 71-81. | 2.9 | 14 |
| 81 | Revealing internal flow behaviour in arc welding and additive manufacturing of metals. Nature Communications, 2018, 9, 5414. | 12.8 | 158 |
| 82 | The In-Plane Structure and Dynamic Property of the Homogeneous Al-Al Solid-Liquid Interface. Metals, 2018, 8, 602. | 2.3 | 7 |
| 83 | Grain refining and improving mechanical properties of AZ31 Mg alloy sheets by multi-pass warm rolling with falling temperature. Journal of Materials Research, 2018, 33, 2827-2834. | 2.6 | 3 |
| 84 | Cellular tip splitting instability during transient growth. Computational Materials Science, 2018, 155, 364-372. | 3.0 | 3 |
| 85 | Structural and mechanical properties of homogeneous solid-liquid interface of Al modelled with COMB3 potential. Computational Materials Science, 2018, 155, 136-143. | 3.0 | 11 |
| 86 | The adhesion, stability, and electronic structure of Î³-TiAl/VN interface: a first-principle study. Applied Physics A: Materials Science and Processing, 2018, 124, 1. | 2.3 | 4 |
| 87 | HAZ Liquation Cracking Mechanism of IN-738LC Superalloy Prepared by Laser Solid Forming. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 5118-5136. | 2.2 | 55 |
| 88 | Substrate-Induced Liquid Layering: A New Insight into the Heterogeneous Nucleation of Liquid Metals. Metals, 2018, 8, 521. | 2.3 | 14 |
| 89 | Formation and mechanism of nanocrystalline AZ91 powders during HDDR processing. Materials Characterization, 2017, 125, 134-141. | 4.4 | 4 |
| 90 | Initiation and growth kinetics of solidification cracking during welding of steel. Scientific Reports, 2017, 7, 40255. | 3.3 | 49 |

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| 91 | Key aspects of carbide precipitation during solidification in the Ni-base superalloy, MAR M002. Journal of Alloys and Compounds, 2017, 702, 6-12. | 5.5 | 13 |
| 92 | Interlayer Engineering on Friction Welded Titanium Tube to Stainless Steel Tube Plate by External Tool Process. Transactions of the Indian Institute of Metals, 2017, 70, 691-701. | 1.5 | 1 |
| 93 | Solidification Reaction Sequence of Co-Rich Nb-Al-Co Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 3814-3822. | 2.2 | 4 |
| 94 | Effects of solute trapping on solidification path in Ta-rich Ta-Al-Fe ternary alloys under rapid freezing. Journal of Alloys and Compounds, 2017, 698, 375-383. | 5.5 | 7 |
| 95 | Differential Scanning Calorimetry (DSC) and Thermodynamic Prediction of Liquid Fraction vs Temperature for Two High-Performance Alloys for Semi-Solid Processing (Al-Si-Cu-Mg (319s) and) Tj ETQq1 1 0.784314 rgBT /Overloc Science, 2017, 48, 4701-4712. | 2.2 | 12 |
| 96 | Determination of solid/liquid fraction of three aluminium binary alloys using a new single-pan scanning calorimeter. Journal of Thermal Analysis and Calorimetry, 2017, 130, 1847-1854. | 3.6 | 2 |
| 97 | Precipitation of chromium nitride nano-rods on lamellar carbides along austenite-ferrite boundaries in super duplex stainless steel. Scripta Materialia, 2017, 127, 45-48. | 5.2 | 25 |
| 98 | Influence of Secondary Cooling Mode on Solidification Structure and Macro-segregation Behavior for High-carbon Continuous Casting Bloom. High Temperature Materials and Processes, 2017, 36, 741-753. | 1.4 | 9 |
| 99 | A time-dependent power law viscosity model and its application in modelling semi-solid die casting of 319s alloy. Acta Materialia, 2017, 124, 410-420. | 7.9 | 58 |
| 100 | Improved mechanical properties of Mg matrix composites reinforced with Al and carbon nanotubes fabricated by spark plasma sintering followed by hot extrusion. Journal of Materials Research, 2016, 31, 3745-3756. | 2.6 | 11 |
| 101 | The Kinetics of Melting: Liquid Fraction versus Time. Solid State Phenomena, 2016, 256, 94-99. | 0.3 | 0 |
| 102 | Detailed Analysis of the Solution Heat Treatment of a Third-Generation Single-Crystal Nickel-Based Superalloy CMSX-10KÂ®. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 889-906. | 2.2 | 28 |
| 103 | What is the Process Window for Semi-solid Processing?. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 1-5. | 2.2 | 83 |
| 104 | Discontinuous Precipitation in Ni-Base Superalloys During Solution Heat Treatment. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4298-4315. | 2.2 | 21 |
| 105 | Measuring Solid Liquid Interfacial Energy by Grain Boundary Groove Profile Method (GBG). Materials Today: Proceedings, 2015, 2, S306-S313. | 1.8 | 1 |
| 106 | Enhanced Heterogeneous Nucleation by Pulsed Magnetoâ€Oscillation Treatment of Liquid Aluminum Containing Al3Ti1B Additions. Advanced Engineering Materials, 2015, 17, 1465-1469. | 3.5 | 13 |
| 107 | Electroless Plating of Ni-P-W Coatings Containing Scattered Nb2O5 on Sintered NdFeB Substrate. Materials Research, 2015, 18, 1089-1096. | 1.3 | 16 |
| 108 | Microstructure, mechanical properties and static recrystallization behavior of the rolled ZK60 magnesium alloy sheets processed by electropulsing treatment. Journal of Alloys and Compounds, 2015, 646, 1-9. | 5.5 | 45 |

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| 109 | Phase Characterization of CRA Fastener INCONEL718 in Relation of Hydrogen Assisted Cracking. Materials Today: Proceedings, 2015, 2, S383-S392. | 1.8 | 4 |
| 110 | In-situ neutron diffraction measurement of stress redistribution in a dissimilar joint during heat treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 627, 161-170. | 5.6 | 10 |
| 111 | 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. | 5.6 | 57 |
| 112 | Modelling of Secondary Dendrite Arms Evolution during Solidification by a Phase-field Method. Materials Today: Proceedings, 2015, 2, S466-S473. | 1.8 | 5 |
| 113 | Effect of Al on the Wetting Behavior Between TiC x and Molten Ti-Al Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4783-4792. | 2.2 | 6 |
| 114 | Modelling of Microstructure Evolution during Thermoplastic Deformation of Steel by a Finite Element Method. Materials Today: Proceedings, 2015, 2, S460-S465. | 1.8 | 4 |
| 115 | The role of Ti carbonitride precipitates on fusion zone strength-toughness in submerged arc welded linepipe joints. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 622, 194-203. | 5.6 | 15 |
| 116 | Deep drawability and drawing behaviour of AZ31 alloy sheets with different initial texture. Journal of Alloys and Compounds, 2014, 615, 302-310. | 5.5 | 53 |
| 117 | Effect of post-weld heat treatment on microstructure evolution in dissimilar joints for subsea oil and gas systems. Materials Research Innovations, 2014, 18, S4-907-S4-913. | 2.3 | 3 |
| 118 | Fusion Zone Microstructure Associated With Embrittlement of Subsea Dissimilar Joints. , 2014, , . | | 4 |
| 119 | On the Relationship of Microstructure, Toughness, and Hardness Properties in a Submerged Arc Welded API-5L Grade X65 Pipeline Steel Section. , 2014, , . | | 0 |
| 120 | Effect of Electromagnetic Stirring on Molten Steel Flow and Solidification in Bloom Mold. Journal of Iron and Steel Research International, 2014, 21, 1095-1103. | 2.8 | 28 |
| 121 | Microstructure evolution and mechanical properties of twinned AZ31 alloy plates at lower elevated temperature. Journal of Alloys and Compounds, 2014, 615, 687-692. | 5.5 | 58 |
| 122 | Growth of Secondary Dendrite Arms of Feâ€“C Alloy during Transient Directional Solidification by Phase-field Method. ISIJ International, 2014, 54, 430-436. | 1.4 | 13 |
| 123 | Time-resolved X-ray diffraction studies of solidification microstructure evolution in welding. Acta Materialia, 2014, 68, 159-168. | 7.9 | 24 |
| 124 | In situ observation of the orientation relationship at the interface plane between substrate and nucleus using X-ray scattering techniques. Scripta Materialia, 2014, 77, 60-63. | 5.2 | 16 |
| 125 | Porous alumina infiltrated with melt and its dynamic analysis during pressureless infiltration. Ceramics International, 2014, 40, 6293-6299. | 4.8 | 11 |
| 126 | Grain refining and improving mechanical properties of a warm rolled AZ31 alloy plate. Materials Letters, 2014, 135, 31-34. | 2.6 | 30 |

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| 127 | Intrinsic ductility of Mg-based binary alloys: A first-principles study. Scripta Materialia, 2014, 89, 13-16. | 5.2 | 39 |
| 128 | Improved mechanical properties of AZ31 magnesium alloy plates by pre-rolling followed by warm compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 618, 540-545. | 5.6 | 44 |
| 129 | The tensile properties and fracture of the Ni/Cr2O3 interface: First principles simulation. Computational Materials Science, 2014, 82, 367-371. | 3.0 | 14 |
| 130 | Investigation of the as-solidified microstructure of an Alâ€“Mgâ€“Siâ€“Cu alloy. Journal of Alloys and Compounds, 2014, 602, 312-321. | 5.5 | 14 |
| 131 | Active screen plasma nitriding of 316 stainless steel for the application of bipolar plates in proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2014, 39, 21470-21479. | 7.1 | 56 |
| 132 | Characterisation of periodic variation in torque occurred in friction stir welding process. Science and Technology of Welding and Joining, 2014, 19, 350-354. | 3.1 | 6 |
| 133 | Effects of aluminum diffusion on the adhesive behavior of the Ni(111)/Cr2O3(0001) interface: First principle study. Computational Materials Science, 2013, 78, 116-122. | 3.0 | 36 |
| 134 | Role of Elemental Sublimation during Solution Heat Treatment of Ni-Based Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 4764-4773. | 2.2 | 13 |
| 135 | Tribocorrosion behavior of S-phase surface engineered medical grade Coâ€“Cr alloy. Wear, 2013, 302, 1615-1623. | 3.1 | 24 |
| 136 | Computational Modeling of Columnar to Equiaxed Transition in Alloy Solidification. Advanced Engineering Materials, 2013, 15, 216-229. | 3.5 | 25 |
| 137 | Microstructure and properties of the super-hydrophobic films fabricated on magnesium alloys. Journal of Alloys and Compounds, 2013, 554, 142-146. | 5.5 | 43 |
| 138 | Molecular dynamics calculation of solidâ€“liquid interfacial free energy and its anisotropy during iron solidification. Computational Materials Science, 2013, 74, 92-100. | 3.0 | 44 |
| 139 | Multiscale, Multiphysics Numerical Modeling of Fusion Welding with Experimental Characterization and Validation. Jom, 2013, 65, 99-106. | 1.9 | 13 |
| 140 | Using the interface Peclet number to select the maximum simulation interface width in phase-field solidification modelling. Computational Materials Science, 2013, 70, 71-76. | 3.0 | 5 |
| 141 | Environment-Induced Cracking in Weld Joints in Subsea Oil and Gas Systems: Part II. , 2013, , . | | 9 |
| 142 | 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. | 0.7 | 5 |
| 143 | Neutron Diffraction Measurement of Weld Residual Stresses in an UOE Linepipe Subjected to Mechanical Expansion. , 2013, , . | | 2 |
| 144 | An integrated framework for multi-scale multi-physics numerical modelling of interface evolution in welding. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012029. | 0.6 | 5 |

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| 145 | Environmentâ€“Induced Cracking in Weld Joints in Subsea Oil and Gas Systems: Part I. , 2012, , . | | 10 |
| 146 | Analysis of surface scale on the Ni-based superalloy CMSX-10N and proposed mechanism of formation. IOP Conference Series: Materials Science and Engineering, 2012, 27, 012038. | 0.6 | 3 |
| 147 | Molecular dynamics calculation of thermodynamic properties of iron solidification. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012113. | 0.6 | 2 |
| 148 | Mechanism for Formation of Surface Scale during Directional Solidification of Ni-Base Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1288-1302. | 2.2 | 23 |
| 149 | On the Fully Implicit Solution of a Phase-Field Model for Binary Alloy Solidification in Three Dimensions. Advances in Applied Mathematics and Mechanics, 2012, 4, 665-684. | 1.2 | 8 |
| 150 | Determination of transition temperatures during freezing and melting of interdendritic phases in Ni based superalloys. Materials Science and Technology, 2011, 27, 325-331. | 1.6 | 6 |
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