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Solidification microstructures and solid-state parallels: Recent developments, future directions

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578	Weakly faceted cellular patterns versus growth-induced plastic deformation in thin-sample directional solidification of monoclinic biphenyl. 2009 , 80, 051601		10
577	Pattern formation during diffusional transformations in the presence of triple junctions and elastic effects. <i>Journal of Physics Condensed Matter</i> , 2009 , 21, 464106	1.8	7
576	Phase-field simulations of dendrite morphologies and selected evolution of primary E Mg phases during the solidification of Mg-rich MgâAl-based alloys. <i>Scripta Materialia</i> , 2009 , 61, 777-780	5.6	25
575	Phase-field modelling of as-cast microstructure evolution in nickel-based superalloys. <i>Acta Materialia</i> , 2009 , 57, 5862-5875	8.4	59
574	Decarburization as a tool to explore parallels between solid-solid and liquid-solid transformations: Fe-C-Mn-Si steels. 2009 , 62, 255-260		
573	Growth and melting of nanoparticles in liquid iron: A molecular dynamics study. 2009 , 475, 264-268		44
572	Diffusion-controlled anisotropic growth of stable and metastable crystal polymorphs in the phase-field crystal model. 2009 , 103, 035702		85
571	Numerical Simulation of Microstructure Evolution During Alloy Solidification by Using Cellular Automaton Method. 2010 , 50, 1851-1858		16
570	Methodological Progress for Computer Simulation of Solidification and Casting. 2010 , 50, 1724-1734		9
569	Elastic and plastic effects on solid-state transformations: A phase field study. 2010 , 101, 462-466		7
568	X-Ray Video Microscopy Studies of Irregular Eutectic Solidification Microstructures in AlâBiâLu Alloys. 2010 , 50, 1936-1940		1
567	A stochastic phase-field model determined from molecular dynamics. 2010 , 44, 627-646		1
566	Molecular-dynamics study of solidâliquid interface migration in fcc metals. 2010 , 18, 074002		71
565	Selection criterion for the growing dendritic tip in a non-isothermal binary system under forced convective flow. <i>Journal of Crystal Growth</i> , 2010 , 312, 2122-2127	1.6	31
564	Polydimensional modelling of dendritic growth and microsegregation in multicomponent alloys. <i>Acta Materialia</i> , 2010 , 58, 2738-2751	8.4	34
563	On the Formulation of a Freckling Criterion for Ni-Based Superalloy Vacuum Arc Remelting Ingots. 2010 , 41, 2408-2416		17

Microstructure and age characterization of Cuâl 5Niâ BSn alloy coatings by laser cladding. 2010, 256, 5837-584231 562 Preparation of the initial solidallquid interface and melt in directional solidification of Aladasat%Ni 561 1.6 23 peritectic alloy. Journal of Crystal Growth, 2010, 312, 2441-2448 Kinetic stages in the crystallization of deeply undercooled body-centered-cubic and 560 8.4 61 face-centered-cubic metals. Acta Materialia, 2010, 58, 524-530 Dendrite growth simulation during solidification in the LENS process. Acta Materialia, 2010, 58, 1455-14654 559 131 Kinetics of isothermal phase transformations above and below the peritectic temperature: 8.4 558 27 Phase-field simulations. Acta Materialia, 2010, 58, 1750-1760 Modeling of solidification: Grain structures and segregations in metallic alloys. 2010, 11, 216-225 557 29 556 A Modified Method of Latent Heat Release during AlâBi Alloy Solidification. 2010, 50, 1875-1878 3 Design Methods for Solidification Structures in Micro Continuous Casting. 2010, 50, 1819-1828 555 Modelling and Experiments Concerning Dendrite Re-Melting and Its Role in Microstructural 554 1 Evolution in Spray Formed Ni Superalloys. 2010, 654-656, 1363-1366 Pattern formation during diffusion limited transformations in solids. 2010, 90, 265-286 8 553 Grain-boundary fluctuations in two-dimensional colloidal crystals. 2010, 105, 168301 552 52 Ni self-diffusion in refractory Al-Ni melts. 2010, 81, 551 Growth mechanism of the Si <110> faceted dendrite. 2010, 81, 550 22 Amplitude equations for polycrystalline materials with interaction between composition and stress. 549 49 2010, 81, 548 Phase field simulation of grain growth with grain boundary segregation. 2010, 101, 555-559 4 Effect of magnetic stirring on grain structure refinement: Part 1 âlAutogenous nickel alloy welds. 547 27 **2010**, 15, 583-589 Polymorphism, crystal nucleation and growth in the phase-field crystal model in 2D and 3D. Journal 1.8 68 546 of Physics Condensed Matter, 2010, 22, 364101 A Cellular Automaton Model with the Lower Mesh-Induced Anisotropy for Dendritic Solidification 545 of Pure Substance. 2010, 654-656, 1528-1531

544	Structural disjoining potential for grain-boundary premelting and grain coalescence from molecular-dynamics simulations. 2010 , 81, 031601		40
543	Spiral two-phase dendrites. 2010 , 104, 056101		31
542	Simplistic Model for the Dendritic Growth of a Monolayer in Dip Pen Nanolithography. 2010 , 114, 1922-7	1927	14
541	The solidification behavior of the AZ61 magnesium alloy during electromagnetic vibration processing. 2010 , 494, 116-122		34
540	Microstructure evolution of directionally solidified DZ125 superalloy with melt superheating treatment. 2010 , 508, 440-445		26
539	Phase-field study for the influence of solute interactions on solidification process in multicomponent alloys. <i>Computational Materials Science</i> , 2010 , 47, 832-838	3.2	12
538	3D finite element model of semi-solid permeability in an equiaxed granular structure. <i>Computational Materials Science</i> , 2010 , 49, 158-170	3.2	26
537	Molecular dynamics simulation of the thermophysical properties of an undercooled liquid Ni50Al50 alloy. <i>Computational Materials Science</i> , 2010 , 50, 465-473	3.2	19
536	Atomistic modeling of interfaces and their impact on microstructure and properties. <i>Acta Materialia</i> , 2010 , 58, 1117-1151	8.4	379
535	Phase-field investigation of rod eutectic morphologies under geometrical confinement. 2011 , 84, 01161	4	20
535 534	Phase-field investigation of rod eutectic morphologies under geometrical confinement. 2011 , 84, 01161 Microstructure evolution and modification mechanism of the ytterbium modified Alâ\(\bar{u}\).5%Siâ\(\bar{v}\).45%Mg alloys. 2011 , 509, 3387-3392	4	20 52
	Microstructure evolution and modification mechanism of the ytterbium modified AlâII.5%SiâII.45%Mg alloys. 2011 , 509, 3387-3392 Numerical modeling of crystal growth of a nickel-based superalloy with applied direct current.	1.6	
534	Microstructure evolution and modification mechanism of the ytterbium modified AlâII.5%SiâII.45%Mg alloys. 2011 , 509, 3387-3392 Numerical modeling of crystal growth of a nickel-based superalloy with applied direct current.		
534 533	Microstructure evolution and modification mechanism of the ytterbium modified AlâII.5%SiâID.45%Mg alloys. 2011, 509, 3387-3392 Numerical modeling of crystal growth of a nickel-based superalloy with applied direct current. Journal of Crystal Growth, 2011, 334, 170-176 The interface morphology of a spherical crystal in the undercooled melt affected by a far-field uniform flow. 2011, 109, 103517		52 7
534533532	Microstructure evolution and modification mechanism of the ytterbium modified Alâ\(\tilde{\mathbb{I}}\).5%Siâ\(\tilde{\mathbb{D}}\).45%Mg alloys. 2011 , 509, 3387-3392 Numerical modeling of crystal growth of a nickel-based superalloy with applied direct current. <i>Journal of Crystal Growth</i> , 2011 , 334, 170-176 The interface morphology of a spherical crystal in the undercooled melt affected by a far-field uniform flow. 2011 , 109, 103517 Shape rheocasting of high purity aluminium. <i>Scripta Materialia</i> , 2011 , 64, 479-482	1.6	5277
534533532531	Microstructure evolution and modification mechanism of the ytterbium modified Alâiī.5%Siâiī.45%Mg alloys. 2011, 509, 3387-3392 Numerical modeling of crystal growth of a nickel-based superalloy with applied direct current. Journal of Crystal Growth, 2011, 334, 170-176 The interface morphology of a spherical crystal in the undercooled melt affected by a far-field uniform flow. 2011, 109, 103517 Shape rheocasting of high purity aluminium. Scripta Materialia, 2011, 64, 479-482 Enhancement of mechanical properties of Alâiīg alloy with a high Mg content solidified under high pressures. Scripta Materialia, 2011, 64, 588-591 Dendritic morphology of £Mg during the solidification of Mg-based alloys: 3D experimental	1.6 5.6	527720
534533532531530	Microstructure evolution and modification mechanism of the ytterbium modified AlâM.5%SiâD.45%Mg alloys. 2011, 509, 3387-3392 Numerical modeling of crystal growth of a nickel-based superalloy with applied direct current. Journal of Crystal Growth, 2011, 334, 170-176 The interface morphology of a spherical crystal in the undercooled melt affected by a far-field uniform flow. 2011, 109, 103517 Shape rheocasting of high purity aluminium. Scripta Materialia, 2011, 64, 479-482 Enhancement of mechanical properties of AlâMg alloy with a high Mg content solidified under high pressures. Scripta Materialia, 2011, 64, 588-591 Dendritic morphology of EMg during the solidification of Mg-based alloys: 3D experimental characterization by X-ray synchrotron tomography and phase-field simulations. Scripta Materialia, 2011, 65, 855-858	1.65.65.6	52772034

526	Anchoring functional molecules on TiO2 surfaces: A comparison between the carboxylic and the phosphonic acid group. 2011 , 126, 1	30
525	Atomistic simulations of nonequilibrium crystal-growth kinetics from alloy melts. 2011 , 107, 025505	82
524	Solidification interface morphology pattern in the undercooled Coâ24.0 at.% Sn eutectic melt. <i>Acta Materialia</i> , 2011 , 59, 5558-5567	48
523	A green method for synthesis of silver nanodendrites. <i>Journal of Materials Science</i> , 2011 , 46, 839-845 $_{4\cdot3}$	19
522	A molecular dynamics study of cooling rate during solidification of metal nanoparticles. 2011 , 502, 82-86	47
521	Gleeble experiments concerning dendrite re-melting and its role in microstructural evolution in spray formed high-alloy metals. 2011 , 30, 401-404	Ο
520	Three-dimensional microstructure simulation of Ni-based superalloy investment castings. 2011 , 54, 851-855	7
519	X-Ray Videomicroscopy Studies of Eutectic Al-Si Solidification in Al-Si-Cu. 2011 , 42, 170-180	40
518	Crystal-Growth Transition and Homogenous Nucleation Undercooling of Bismuth. 2011, 42, 3785-3796	3
517	Interdigitating biocalcite dendrites form a 3-D jigsaw structure in brachiopod shells. 2011 , 7, 2237-43	53
516	Thermodynamic phase-field model for microstructure with multiple components and phases: the possibility of metastable phases. 2011 , 83, 061602	40
515	Study of Solidification Microstructures of Multi-Principal High-Entropy Alloy FeCoNiCrMn by Using Experiments and Simulation. 2011 , 399-401, 1746-1749	3
514	Crystal Growth in Al 72.9 Ge 27.1 Alloy Melt under Acoustic Levitation Conditions. 2011, 28, 078101	3
513	Metamorphic Record of High-pressure Dehydration of Antigorite Serpentinite to Chlorite Harzburgite in a Subduction Setting (Cerro del Almirez, Nevadoâ E ilBride Complex, Southern Spain). 2011 , 52, 2047-2078	99
512	Solidification of tetragonal Ni 2 B from the undercooled melt. 2012 , 97, 36003	8
511	Microstructural Study of as-cast Fe-Si Alloys. Effect of Percentage of Silicon. 2012 , 1372, 173	
510	A modified cellular automaton method for polydimensional modelling of dendritic growth and microsegregation in multicomponent alloys. 2012 , 33, 012100	1
509	Channel segregation during columnar solidification influence of inertia. 2012 ,	

A study on the formation of crystalline phases during solidification and crystallisation in the bulk metallic glass of Zr53Cu21Al10Ni8Ti8 composition. **2012**, 92, 2136-2149

507	Disorder trapping during crystallization of the B2-ordered NiAl compound. 2012 , 85, 041601	28
506	Influence of natural convection on microstructure evolution during the initial solidification transient: comparison of phase-field modeling with in situ synchrotron X-ray monitoring data. 2012 , 33, 012102	8
505	Phase field simulation of multi-dendrite growth in a coupled thermal-solute-convective environment. 2012 , 33, 012101	4
504	Investigating thermal effects on morphological evolution during crystallisation of hcp metals: three-dimensional phase field study. 2012 , 27, 355-363	13
503	Phase-field modeling of the dendrite orientation transition in Al-Zn alloys. 2012 , 33, 012111	13
502	Phase-field-crystal models for condensed matter dynamics on atomic length and diffusive time scales: an overview. 2012 , 61, 665-743	248
501	Step free energies at faceted solid-liquid interfaces from equilibrium molecular dynamics simulations. 2012 , 137, 214108	12
500	Studying flow effects on dendrite fragmentation using Rayleighâ B ĥard convection. 2012 , 28, 1014-1017	3
499	Freeze casting of porous materials: review of critical factors in microstructure evolution. 2012 , 57, 37-60	247
498	Relationship between equilibrium fluctuations and shear-coupled motion of grain boundaries. 2012 , 109, 095501	50
497	The role of crystallography and thermodynamics on phase selection in binary magnesiumâEare earth (Ce or Nd) alloys. <i>Acta Materialia</i> , 2012 , 60, 4420-4430	57
496	Measurements of dendrite tip growth and sidebranching in succinonitrileâlcetone alloys. <i>Journal of Crystal Growth</i> , 2012 , 340, 175-189	34
495	Anomalous eutectic formation in the solidification of undercooled CoâBn alloys. <i>Journal of Crystal Growth</i> , 2012 , 358, 20-28	21
494	A cellular automaton model for a pure substance solidification with interface reconstruction method. <i>Computational Materials Science</i> , 2012 , 54, 66-74	17
493	Primary Solidification Phase and Lamellar Orientation in Directionally Solidified Ti-45Al-7Nb Alloy. 2012 , 25, 489-492	3
492	Construction of a pseudo-binary phase diagram for multi-component Ni-base superalloys. <i>Calphad:</i> Computer Coupling of Phase Diagrams and Thermochemistry, 2012 , 38, 85-91	5
491	Rapid colloidal solidifications under local nonequilibrium diffusion conditions. 2012 , 376, 3563-3566	17

(2013-2012)

490	Growth orientations and morphologies of ⊞Mg dendrites in Mgâ⊠n alloys. <i>Scripta Materialia</i> , 2012 , 67, 629-632	5.6	42	
489	Dendrite Bending during Directional Solidification. 2012 , 615-624		4	
488	Chemical Composition and Morphology of M7C3 Eutectic Carbide in High Chromium White Cast Iron Alloyed with Vanadium. 2012 , 52, 2200-2204		21	
487	Three Dimensional (3D) Microstructural Characterization and Quantitative Analysis of Solidified Microstructures in Magnesium-Based Alloys. 2012 , 1, 7-13		24	
486	In Situ X-Ray Video Microscopy as a Tool in Solidification Science. 2012 , 64, 76-82		50	
485	Control and Interpretation of Finite-Size Effects and Initial Morphology in Directional Solidification of a Rod-Type Eutectic Transparent Metal-Analog. 2012 , 64, 68-75		5	
484	Secondary dendrite arm migration caused by temperature gradient zone melting during peritectic solidification. <i>Acta Materialia</i> , 2012 , 60, 2679-2688	8.4	39	
483	Local non-equilibrium diffusion model for solute trapping during rapid solidification. <i>Acta Materialia</i> , 2012 , 60, 2711-2718	8.4	48	
482	Temperature dependence of the crystalâthelt interfacial energy of metals. <i>Acta Materialia</i> , 2012 , 60, 3590-3603	8.4	20	
481	Orientation selection of equiaxed dendritic growth by three-dimensional cellular automaton model. 2012 , 407, 2471-2475		25	
480	Effect of solidification path on the microstructure of Al2O3â\(2O3â\(2O3â\) 2O3â\(2O3â\) rO2 ternary oxide eutectic ceramic system. 2012 , 32, 3137-3142		7	
479	Why Solidification? Why Phase-Field?. 2013 , 65, 1096-1102		45	
478	Selection of stable growth conditions for the parabolic dendrite tip in crystallization of multicomponent melts. 2013 , 58, 309-315		9	
477	On the theory of dendritic growth: Soret and temperature-dependent diffusion effects. 2013 , 2013, 123-129		1	
476	Effect of rotating magnetic field on microstructure formation of directionally solidified Snâll.6Cd peritectic alloy. 2013 , 113, 177-183		5	
475	A numerical simulation of columnar solidification: influence of inertia on channel segregation. 2013 , 21, 045016		11	
474	Phase Field Simulation of Binary Alloy Dendrite Growth Under Thermal- and Forced-Flow Fields: An Implementation of the ParallelâMultigrid Approach. 2013 , 44, 924-937		41	
473	Electromagnetic melt flow control during solidification of metallic alloys. 2013 , 220, 123-137		46	

472	Developments and future directions of phase diagram, physicochemical and optical studies of binary organic complexes. 2013 , 59, 73-111		17
471	On the origin of sliver defects in single crystal investment castings. <i>Acta Materialia</i> , 2013 , 61, 5162-5171	18.4	47
470	Unexpected selection of growing dendrites by very-large-scale phase-field simulation. <i>Journal of Crystal Growth</i> , 2013 , 382, 21-25	1.6	95
469	On the transition from diffusion-limited to kinetic-limited regimes of alloy solidification. <i>Acta Materialia</i> , 2013 , 61, 7881-7888	8.4	40
468	Local nonequilibrium solute trapping model for non-planar interface. <i>Journal of Crystal Growth</i> , 2013 , 380, 68-71	1.6	12
467	Hybrid Potts-phase field model for coupled microstructuraladompositional evolution. <i>Computational Materials Science</i> , 2013 , 69, 414-423	3.2	25
466	Dendritic Growth Morphologies in Al-Zn Alloysâ P art II: Phase-Field Computations. 2013 , 44, 5532-5543		60
465	Phase-field simulation of dendritic growth in a forced liquid metal flow coupling with boundary heat flux. 2013 , 56, 2586-2593		10
464	Phase-Field Simulation of Solidification Microstructure Evolution in the Presence of Lateral Constraints. 2013 , 2765-2772		
463	Relationship between Growth Rates and Dendritic Microstructure Parameters in Al-5wt. Zn Binary Alloy. 2013 , 765, 215-219		1
462	Influence of initial solidâllquid interface morphology on further microstructure evolution during directional solidification. 2013 , 110, 443-451		5
461	Phase-field-crystal study of grain boundary premelting and shearing in bcc iron. 2013, 87,		70
460	Solidâllquid interfacial energy and its anisotropy measurement from double grain boundary grooves. <i>Scripta Materialia</i> , 2013 , 69, 1-4	5.6	6
459	Structural short-range forces between solid-melt interfaces. 2013 , 87,		18
458	Calculation of crystal-melt interfacial free energies of fcc metals. <i>Journal of Crystal Growth</i> , 2013 , 366, 82-87	1.6	12
457	Phase field simulation for non-isothermal solidification of multicomponent alloys coupled with thermodynamics database. 2013 , 23, 2361-2367		5
456	Recrystallization of as-solidified highly-undercooled Fe40Ni40B20 eutectic alloy: In situ formation of duplex structure. 2013 , 575, 444-448		
455	Microstructural Aspects of Second Phases in As-cast and Homogenized 7055 Aluminum Alloy with Different Impurity Contents. 2013 , 44, 3504-3510		20

454	Sulfation of Condensed Potassium Chloride by SO2. 2013 , 27, 3283-3289		28
453	Calculation of solidaliquid interfacial free energy of Cu by two different methods. <i>Journal of Crystal Growth</i> , 2013 , 377, 107-111	1.6	11
452	Molecular dynamics calculation of solidâllquid interfacial free energy and its anisotropy during iron solidification. <i>Computational Materials Science</i> , 2013 , 74, 92-100	3.2	36
451	The effect of interfacial kinetics on the morphological stability of a spherical particle. <i>Journal of Crystal Growth</i> , 2013 , 362, 20-23	1.6	4
450	Using the interface Peclet number to select the maximum simulation interface width in phase-field solidification modelling. <i>Computational Materials Science</i> , 2013 , 70, 71-76	3.2	4
449	Growth Directions of Primary Phases in Directionally Solidified Ti-45Al-7Nb Alloys. 2013 , 32, 69-75		
448	Interface evolution of a particle in a supersaturated solution affected by a far-field uniform flow. 2013 , 22, 098104		О
447	Negative expansions of interatomic distances in metallic melts. 2013 , 110, 10068-72		101
446	A method to model the transient performance of high frequency vibration in crystal growth. 2014 , 49, 850-859		
445	Dependence of solidâllquid interface free energy on liquid structure. 2014 , 22, 065004		15
444	Modelling of dendritic growth during alloy solidification under natural convection. 2014 , 22, 034006		19
443	Anisotropic solidâlīquid interfacial energy measurement by grain boundary groove method. <i>Journal of Crystal Growth</i> , 2014 , 406, 85-93	1.6	7
442	Phase Diagram Study of Succinonitrile-Vanillin Organic Alloy System. 2014 , 605, 240-258		2
441	The Influences on Microstructure and Segregation of the Jumbo Slab Ingot by Different Cooling Speed. 2014 , 941-944, 1782-1787		
440	Carbon diffusion mechanism of two-liquid bimetal bond interface on dissimilar carbon steel. 2014 , 18, S2-350-S2-353		1
439	Dynamic evolution of initial instability during non-steady-state growth. 2014 , 89, 062403		8
439			8

436	Dendrite growth under forced convection: analysis methods and experimental tests. 2014 , 57, 771-786	65
435	Development of a Phase-Field Model for Simulating Dendritic Growth in a Convection-Dominated Flow Field. 2014 , 66, 563-585	
434	Study on coatedâliquidâliquid trimetal composite casting hammer. 2014 , 18, S2-316-S2-322	2
433	Morphological stability analysis for planar interface during rapidly directional solidification of concentrated multi-component alloys. <i>Acta Materialia</i> , 2014 , 67, 220-231	10
432	The effect of the shear flow on particle growth in the undercooled melt. <i>Journal of Crystal Growth</i> , 2014 , 401, 116-119	5
431	Time-resolved X-ray diffraction studies of solidification microstructure evolution in welding. <i>Acta Materialia</i> , 2014 , 68, 159-168	17
430	The effect of anisotropic surface tension on the interface evolution of a particle in the undercooled melt. <i>Journal of Crystal Growth</i> , 2014 , 385, 115-120	8
429	The dynamics of rapid fracture: instabilities, nonlinearities and length scales. 2014 , 77, 046501	61
428	Formation mechanism of banded structure during directional solidification of Snated peritectic alloy under convection condition. 2014 , 114, 769-776	4
427	Solidification Modeling: Evolution, Benchmarks, Trends in Handling Turbulence, and Future Directions. 2014 , 45, 1456-1471	16
426	Dendritic Growth in Mg-Based Alloys: Phase-Field Simulations and Experimental Verification by X-ray Synchrotron Tomography. 2014 , 45, 2562-2574	27
425	A Three-Dimensional Cellular Automata Model for Dendrite Growth with Various Crystallographic Orientations During Solidification. 2014 , 45, 719-725	11
424	Scale bridging between atomistic and mesoscale modelling: applications of amplitude equation descriptions. 2014 , 22, 034001	5
423	Diffusion-stress coupling in liquid phase during rapid solidification of binary mixtures. 2014 , 378, 475-479	11
422	Nonlocal diffusion models: Application to rapid solidification of binary mixtures. 2014 , 71, 295-302	46
421	Effects of lanthanum addition on microstructure and mechanical properties of as-cast pure copper. 2014 , 32, 1056-1063	30
420	Modern Simulations by the Molecular Dynamics Method. 2014 , 245-299	
419	Onset of the initial instability during the solidification of welding pool of aluminum alloy under transient conditions. <i>Journal of Crystal Growth</i> , 2014 , 402, 203-209	17

418	Molecular dynamic simulation of the atomic structure of aluminum solidâlīquid interfaces. 2014 , 1, 02570)5	5
417	Phase field simulation of dendrite growth with boundary heat flux. 2014 , 3, 225-239		8
416	Solidification. 2014 , 639-850		7
415	Separation mechanism of the primary Si phase from the hypereutectic AlâBi alloy using a rotating magnetic field during solidification. <i>Acta Materialia</i> , 2014 , 72, 57-66	3.4	71
414	Thermal Microstructural Multiscale Simulation of Solidification and Eutectoid Transformation of Hypereutectic Gray Cast Iron. 2014 , 45, 3954-3970		4
413	The Solidification Mode of Fe-Mn-Al-C Lightweight Steel. 2014 , 66, 1794-1799		7
412	References. 2014 , 171-190		
411	Two-dimensional phase-field simulations of dendrite competitive growth during the directional solidification of a binary alloy bicrystal. <i>Acta Materialia</i> , 2014 , 81, 272-283	3.4	101
410	An analytical model for solute diffusion in multicomponent alloy solidification. <i>Journal of Crystal Growth</i> , 2014 , 395, 46-54	1.6	8
409	The influence of rapid solidification on the microstructure of the 17CrâBNiâBMo precipitation hardened steel. 2014 , 615, S627-S632		5
408	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	ļ.1	30
407	Phase-field simulation of dendrite growth in the presence of lateral constraints. 2014 , 24, 291-294		3
406	Isothermal solidification in peritectic systems. <i>Acta Materialia</i> , 2014 , 75, 212-218	3.4	8
405	Free energy of the bccâllquid interface and the Wulff shape as predicted by the phase-field crystal model. <i>Journal of Crystal Growth</i> , 2014 , 385, 148-153	1.6	15
404	Advances in Phase-field Simulation of Solidification Microstructure. 2014 , 53, 458-461		
403	Phase-field Modeling and Simulations of Dendrite Growth. 2014 , 54, 437-444		122
402	Analysis of the effect of water activity on ice formation using a new thermodynamic framework. 2014 , 14, 7665-7680		11
401	Analysis of crystal growth kinetics in undercooled melts by infrared thermography. 2015 , 12, 237-251		10

400	Modified phase-field-crystal model for solid-liquid phase transitions. 2015 , 92, 013309		12
399	Phase-field modeling of liquid droplet migration in a temperature gradient. 2015 , 84, 012073		3
398	Experiments and Modeling of Three-Dimensional Dendritic Morphology of Magnesium Alloy. 2015 , 55-6	51	1
397	In situ synchrotron X-ray studies of the coupled effects of thermal and solutal supercoolings on the instability of dendrite growth. 2015 , 109, 9-18		14
396	The Effect of Convection on Microstructures and Interface Stability of Al-4.5wtpctCu Alloy Made by Directional Solidification. 2015 , 46, 2423-2429		1
395	Phase-Field Study of Anisotropic & Coarsening Kinetics in Ni-Base Superalloys with Varying Re and Ru Contents. 2015 , 17, 1149-1157		18
394	Two- and three- dimensional studies of dendritic morphology in magnesium alloy by means of synchrotron X-ray microtomography and cellular automaton modelling. 2015 , 84, 012040		2
393	. 2015,		1
392	Microstructural Study on Molten Marks of Fire-Causing Copper Wires. 2015 , 8, 3776-3790		7
391	Driving force for binary alloy solidification under far from local equilibrium conditions. <i>Acta Materialia</i> , 2015 , 93, 256-263	8.4	8
390	Controlling Phase Growth During Solidification by Nanoparticles. <i>Materials Research Letters</i> , 2015 , 3, 43-49	7.4	27
389	A selective laser melting and solution heat treatment refined Alâll 2Si alloy with a controllable ultrafine eutectic microstructure and 25% tensile ductility. <i>Acta Materialia</i> , 2015 , 95, 74-82	8.4	352
388	Microstructure refinement for high modulus in-situ metal matrix composite steels via controlled solidification of the system FeâlliB 2. <i>Acta Materialia</i> , 2015 , 96, 47-56	8.4	54
387	Atomic investigation of steady-state dendrite tips by using phase-field crystal method. 2015 , 84, 01207	0	1
386	Topology-generating interfacial pattern formation during liquid metal dealloying. 2015, 6, 8887		92
385	Rapid phase transformation under local non-equilibrium diffusion conditions. 2015 , 31, 1607-1617		24
384	Liquid droplet migration under static and dynamic conditions: Analytical model, phase-field simulation and experiment. <i>Acta Materialia</i> , 2015 , 86, 229-239	8.4	27
383	Interfacial morphology evolution in directionally solidified Al-1.5%Cu alloy. 2015 , 25, 405-411		8

382	Anisotropy of the solidâllquid interface properties of the Niâldr B33 phase from molecular dynamics simulation. 2015 , 95, 224-241	46
381	A Sharp Computational Method for the Simulation of the Solidification of Binary Alloys. 2015 , 63, 330-354	24
380	Investigation on the formation of microporosity in aluminum alloys. 2015 , 629, 221-229	14
379	A phase-field-lattice Boltzmann method for modeling motion and growth of a dendrite for binary alloy solidification in the presence of melt convection. <i>Journal of Computational Physics</i> , 2015 , 298, 29-40 ⁻¹	91
378	Molecular dynamics study of phonon-mediated thermal transport in a Ni50Al50 melt: case analysis of the influence of the process on the kinetics of solidification. 2015 , 95, 90-111	10
377	Asymmetric crystallization during cooling and heating in model glass-forming systems. 2015 , 91, 032309	10
376	Two hardening mechanisms in high-level undercooled AlâŒuâŒe alloys. <i>Acta Materialia</i> , 2015 , 91, 183-19 8 .4	15
375	Microstructural characteristics and mechanical properties of peritectic CuâBn alloy solidified within ultrasonic field. 2015 , 72, 43-50	35
374	Characterisation of the 3-D dendrite morphology of magnesium alloys using synchrotron X-ray tomography and 3-D phase-field modelling. <i>Acta Materialia</i> , 2015 , 92, 8-17	59
373	Solid-liquid interface free energies of pure bcc metals and B2 phases. 2015 , 142, 134705	25
372	New interpretation of experimental data on SiâAs alloy solidification with planar interface. 2015 , 25, 2797-2806	2
371	A 4-D dataset for validation of crystal growth in a complex three-phase material, ice cream. 2015 , 84, 012076	5
370	Ternary eutectic and peritectic solidification of undercooled liquid FeâMoâBi alloys. 2015 , 110, 252-257	2
369	Ginzburg-Landau theory of the bcc-liquid interface kinetic coefficient. 2015 , 91,	18
368	Large-Scale Three-Dimensional Simulation of Dendritic Solidification Using Lattice Boltzmann Method. 2015 , 67, 1786-1792	28
367	Growth competition of columnar dendritic grains: A phase-field study. <i>Acta Materialia</i> , 2015 , 82, 64-83 8.4	146
366	A simple model for spherical growth in alloy solidification. 2016 , 117, 012016	О
365	Anomalous Halo Formation in an Arc-Melted ScNi-ScâNi Off-Eutectic Binary Alloy. 2016 , 9,	5

364	Validation and Simulation of Cellular Automaton Model for Dendritic Growth during the Solidification of Feâl Binary Alloy with Fluid Flow. 2016 , 56, 564-573		4
363	A Phase Field Technique for Modeling and Predicting Flow Induced Crystallization Morphology of Semi-Crystalline Polymers. 2016 , 8,		14
362	Comparison Between Segregation of High-Manganese Steels from 2-D Phase-Field Simulations, 1-D Analytical Theories, and Solidification Experiments. 2016 , 87, 1179-1189	,	5
361	Evidence for the transition from primary to peritectic phase growth during solidification of undercooled Ni-Zr alloy levitated by electromagnetic field. 2016 , 6, 39042		15
360	Faceted interfaces: a key feature to quantitative understanding of transformation morphology. 2016 , 2,		13
359	Degenerate seaweed to tilted dendrite transition and their growth dynamics in directional solidification of non-axially oriented crystals: a phase-field study. 2016 , 6, 26625		42
358	Morphological instability of spherical nano iron-rich crystal in copper melt. <i>Materials Letters</i> , 2016 , 172, 125-127	3 .	4
357	Hydrogen behavior in Al Cr alloys: Synchrotron-based photoelectron microscopy of the rapidly solidified structure. 2016 , 41, 9100-9107		5
356	Capillary-mediated interface perturbations: Deterministic pattern formation. <i>Journal of Crystal Growth</i> , 2016 , 450, 119-139	6 :	12
355	Interfacial free energy adjustable phase field crystal model for homogeneous nucleation. 2016 , 12, 4666-7	73	17
354	Effect of different solute additions on dendrite morphology and orientation selection in cast binary magnesium alloys. <i>Acta Materialia</i> , 2016 , 112, 261-272	4 .	52
353	Atomistic characterization of solid-liquid interfaces in the Cu-Ni binary alloy system. <i>Computational Materials Science</i> , 2016 , 125, 72-81	2 :	14
352	Primary arm array during directional solidification of a single-crystal binary alloy: Large-scale phase-field study. <i>Acta Materialia</i> , 2016 , 118, 230-243	4 :	72
351	Anomalous EMg Dendrite Growth During Directional Solidification of a Mg-Zn Alloy. 2016 , 47, 4368-4373		13
350	Direct formation of peritectic phase but no primary phase appearance within Ni83.25Zr16.75 peritectic alloy during free fall. 2016 , 6, 22641		21
349	Prediction of Melt Flow Effects on Dendrite Growth. 2016 , 850, 334-340		1
348	Variational formulation and numerical accuracy of a quantitative phase-field model for binary alloy solidification with two-sided diffusion. 2016 , 93, 012802	:	24
347	Scaling of alloy interfacial properties under compositional strain. 2016 , 93, 022803		6

346	Effect of Nb on the Growth Behavior of Co3Sn2 Phase in Undercooled Co-Sn Melts. 2016 , 47, 6187-6196	5	5
345	Numerical Simulation of Dendritic Growth of Fe-C Binary Alloy with Natural Convection. 2016 , 117-124		
344	A unified relation for the solid-liquid interface free energy of pure FCC, BCC, and HCP metals. 2016 , 144, 144707		25
343	Formation mechanism of bimetal composite layer between LCS and HCCI. China Foundry, 2016, 13, 396-	40.8	3
342	Refinement of primary Si grains in AlâØ0%Si alloy slurry through serpentine channel pouring process. 2016 , 23, 572-580		6
341	Grain refinement of AZCa912 alloys solidified by an optimized electromagnetic stirring technique. 2016 , 235, 114-120		36
340	Influence of Al content on non-equilibrium solidification behavior of NiâAlâIIa model single crystal alloys. <i>Journal of Crystal Growth</i> , 2016 , 434, 96-103	1.6	2
339	The effects of microstructure and growth rate on microhardness, tensile strength, and electrical resistivity for directionally solidified AlâNiâEe alloys. 2016 , 660, 23-31		32
338	Can Pearlite form Outside of the Hultgren Extrapolation of the Ae3 and Acm Phase Boundaries?. 2016 , 47, 649-660		8
337	Quantitative isothermal phase-field simulations of peritectic phase transformation in FeMn system. 2016 , 5, 84-91		7
336	Metal solidificationâflucleationâflate model under coupling effects of shearing flow and vibration. 2016 , 32, 154-163		4
335	Phase-field modeling of microstructure evolution during solidification in presence of gas bubble. <i>Computational Materials Science</i> , 2016 , 114, 94-98	3.2	12
334	In situ observation of solidification patterns in diffusive conditions. <i>Acta Materialia</i> , 2016 , 108, 325-346	8.4	55
333	Modified YoungN equation for equilibrium dihedral angles of grain boundary grooves in thin films at the nanoscale. <i>Acta Materialia</i> , 2016 , 102, 364-372	8.4	6
332	A molecular dynamics study of growth anisotropy in Al melt. 2016 , 24, 015008		2
331	Amorphization and nanocrystallization of silicon under shock compression. <i>Acta Materialia</i> , 2016 , 103, 519-533	8.4	77
330	Phase Field Methods. Springer Series in Materials Science, 2016 , 195-217	0.9	2
329	Atomistic to continuum modeling of solidification microstructures. 2016 , 20, 25-36		64

328	Eutectic and peritectic solidification patterns. 2016 , 20, 46-54		77
327	Recent advances in grain refinement of light metals and alloys. 2016 , 20, 13-24		160
326	Numerical Simulation of Fracking in Shale Rocks: Current State and Future Approaches. 2017 , 24, 281-3	17	15
325	Multi-GPUs parallel computation of dendrite growth in forced convection using the phase-field-lattice Boltzmann model. <i>Journal of Crystal Growth</i> , 2017 , 474, 154-159	1.6	59
324	Microstructures and mechanical properties of directionally solidified Al2O3/GdAlO3 eutectic ceramic by laser floating zone melting with high temperature gradient. 2017 , 37, 1617-1626		44
323	Three-dimensional modeling of grain structure evolution during welding of an aluminum alloy. <i>Acta Materialia</i> , 2017 , 126, 413-425	8.4	90
322	The morphological stability of dendritic growth from the binary alloy melt with an external flow. 2017 , 42, 382-400		2
321	Coarsening kinetics of lamellar microstructures: Experiments and simulations on a fully-lamellar Fe-Al in situ composite. <i>Acta Materialia</i> , 2017 , 127, 230-243	8.4	11
320	Solidification modelling for coupling prediction of porosity and segregation. <i>Acta Materialia</i> , 2017 , 127, 277-286	8.4	21
319	Microstructure selection in thin-sample directional solidification of an Al-Cu alloy: In situ X-ray imaging and phase-field simulations. <i>Acta Materialia</i> , 2017 , 129, 203-216	8.4	99
318	Phase-field simulation of tip splitting in dendritic growth of Fe-C alloy. 2017, 24, 171-176		7
317	Modulating laser intensity profile ellipticity for microstructural control during metal additive manufacturing. <i>Acta Materialia</i> , 2017 , 128, 197-206	8.4	118
316	Dendritic solidification and thermal expansion of refractory Nbâdr alloys investigated by electrostatic levitation. 2017 , 123, 1		1
315	Observation of the transition from primary dendrites to coupled growth induced by undercooling within NiZr hyperperitectic alloy. <i>Scripta Materialia</i> , 2017 , 137, 31-35	5.6	18
314	Numerical testing of quantitative phase-field models with different polynomials for isothermal solidification in binary alloys. <i>Journal of Computational Physics</i> , 2017 , 335, 621-636	4.1	16
313	Anisotropic nanocrystalline SmCo 4.8 Cr 0.12 C 0.08 permanent magnets fabricated using melt-spinning method. 2017 , 714, 194-197		8
312	Solid-liquid interfacial free energy and its anisotropy in the Cu-Ni binary system investigated by molecular dynamics simulations. 2017 , 708, 1073-1080		18
311	Formation of metastable cellular microstructures in selective laser melted alloys. 2017 , 707, 27-34		235

310	Phase-field-lattice Boltzmann studies for dendritic growth with natural convection. <i>Journal of Crystal Growth</i> , 2017 , 474, 146-153	1.6	45
309	Numerical simulation of dendrite growth in nickel-based superalloy and validated by in-situ observation using high temperature confocal laser scanning microscopy. <i>Journal of Crystal Growth</i> , 2017 , 479, 22-33	1.6	3
308	Structural evolution and micromechanical properties of ternary Al Ag Ge alloy solidified under microgravity condition. <i>Acta Materialia</i> , 2017 , 141, 456-465	8.4	16
307	From Solidification Processing to Microstructure to Mechanical Properties: A Multi-scale X-ray Study of an Al-Cu Alloy Sample. 2017 , 48, 5529-5546		13
306	316L stainless steel designed to withstand intermediate temperature. <i>Materials and Design</i> , 2017 , 135, 1-8	8.1	30
305	The Molecular Dynamics Study of Vacancy Formation During Solidification of Pure Metals. 2017 , 7, 1024	1	10
304	The origins for tensile properties of selective laser melted aluminium alloy A357. 2017 , 17, 113-122		50
303	Phase field modeling of rapid crystallization in the phase-change material AIST. 2017 , 122, 045108		7
302	Some physicochemical studies on organic eutectics and inter-molecular compounds. 2017, 130, 967-974		9
301	General evolution equation for the specific interface area of dendrites during alloy solidification. <i>Acta Materialia</i> , 2017 , 140, 87-96	8.4	32
300	Melting point depression method for determining the solidal quid interfacial energy of metal elements: theoretical validation and updated compilation of data. 2017 , 97, 328-334		
299	Extraction of effective solid-liquid interfacial free energies for full 3D solid crystallites from equilibrium MD simulations. 2017 , 147, 194704		12
298	Variational formulation of a quantitative phase-field model for nonisothermal solidification in a multicomponent alloy. 2017 , 96, 033311		19
297	Topological defects in two-dimensional orientation-field models for grain growth. 2017 , 96, 052802		5
296	Effects of lateral constraints on the morphology evolution and solute diffusion during solidification in a binary alloy. 2017 , 123, 1		1
295	Microstructure and mechanical properties of as-cast Mg-5Sn-2Ce-xZn alloys. 2017 , 35, 585-592		2
294	Numerical simulation of mechanical deformation of semi-solid material using a level-set based finite element method. 2017 , 25, 065020		5
293	Effect of Grade on ThermalâMechanical Behavior of Steel During Initial Solidification. 2017 , 48, 3777-37	93	12

292	Composition dependence of diffusion and thermotransport in Ni-Al melts: A step towards molecular dynamics assisted databases. <i>Acta Materialia</i> , 2017 , 136, 74-89	8.4	17
291	On the Nonequilibrium Interface Kinetics of Rapid Coupled Eutectic Growth. 2017 , 48, 3823-3830		5
290	Phase-field-crystal investigation of the morphology of a steady-state dendrite tip on the atomic scale. 2017 , 95, 062803		6
289	Solidification velocity of undercooled Feâ©o alloys. <i>Acta Materialia</i> , 2017 , 122, 431-437	8.4	29
288	Phase field modeling of solidification in multi-component alloys with a case study on the Inconel 718 alloy. 2017 , 32, 4605-4615		4
287	Simulation of dendritic growth of magnesium alloys with fluid flow. <i>China Foundry</i> , 2017 , 14, 359-364	0.8	
286	Phase-field topology optimization model that removes the curvature effects. 2017 , 4, 16-00462-16-004	62	4
285	Correlaß entre variūeis tfmicas de solidificaß, microestrutura e resistßcia mecßica da liga Al-10%Si-2%Cu. 2017 , 22,		7
284	Effects of Undercooling and Cooling Rate on Peritectic Phase Crystallization Within Ni-Zr Alloy Melt. 2018 , 49, 499-508		12
283	Tilted Dendritic Growth Dynamics and Dendrite to Degenerate Seaweed Transition in Directional Solidification: Insights from Phase-Field Simulations. 2018 , 15, 128-153		
282	Phase field method simulation of faceted dendrite growth with arbitrary symmetries. 2018 , 28, 290-29	7	3
281	Phase Diagram of Kob-Andersen-Type Binary Lennard-Jones Mixtures. 2018 , 120, 165501		31
280	Key Lubrication Concepts to Understand the Role of Flow, Heat Transfer and Solidification for Modelling Defect Formation during Continuous Casting. 2018 , 58, 201-210		17
279	Study of hot cracking potential in a 6-ton steel ingot casting. 2018 , 115, 308		1
278	Phase filed simulation of dendritic growth of copper films irradiated by ultrashort laser pulses. <i>Computational Materials Science</i> , 2018 , 148, 60-68	3.2	4
277	Crystal-melt interface mobility in bcc Fe: Linking molecular dynamics to phase-field and phase-field crystal modeling. 2018 , 97,		14
276	Multi-scale simulation of single crystal hollow turbine blade manufactured by liquid metal cooling process. 2018 , 28, 78-84		4
275	Phase-field simulation on dendritic to semi-circular morphology transition induced by forced liquid flow. 2018 , 124, 1		1

274	Lamellar Ni3Si Microchannels and Ni3Si Micropore Arrays in Ni-Ni3Si Hypereutectic Alloys. 2018 , 165, E45-E49		4
273	Pattern selection of twinned growth in aluminum alloys during Bridgman solidification. 2018, 741, 131	-140	4
272	Phase-field simulation and analytical modelling of CaSiO3 growth in CaO-Al2O3-SiO2 melts. <i>Computational Materials Science</i> , 2018 , 144, 126-132	3.2	3
271	A phase-field-crystal alloy model for late-stage solidification studies involving the interaction of solid, liquid and gas phases. 2018 , 376,		3
270	Predictive modeling of solidification during laser additive manufacturing of nickel superalloys: recent developments, future directions. 2018 , 5, 012001		21
269	Morphological instability of lamellar structures in directionally solidified NiâNi3Si alloys. <i>Journal of Crystal Growth</i> , 2018 , 483, 275-280	1.6	7
268	Modeling studies on divorced eutectic formation of high pressure die cast magnesium alloy. <i>China Foundry</i> , 2018 , 15, 58-65	0.8	7
267	A new concept for growth restriction during solidification. <i>Acta Materialia</i> , 2018 , 152, 248-257	8.4	23
266	Thermal conductivity and electrical resistivity dependences on growth rate in the directionally solidified Alâtuâtii eutectic alloy. 2018 , 753, 695-702		10
265	Interfacial morphology evolution in directionally solidified FeCrAl alloys. 2018, 139, 303-310		6
264	Additive manufacturing of fine-structured copper alloy by selective laser melting of pre-alloyed Cu-15Ni-8Sn powder. 2018 , 96, 4223-4230		31
263	The Role of Carbon in Grain Refinement of Cast CrFeCoNi High-Entropy Alloys. 2018 , 49, 2151-2160		33
262	Cellular automaton modeling of dendritic growth of Fe-C binary alloy with thermosolutal convection. 2018 , 116, 940-950		14
261	Insight into interrelation between single-particle and collective diffusion in binary melts. 2018 , 490, 14	46-14!	535
260	Microstructures and thermodynamic properties of high-entropy alloys CoCrCuFeNi. 2018, 93, 40-46		29
259	Three-dimensional morphologies of inclined equiaxed dendrites growing under forced convection by phase-field-lattice Boltzmann method. <i>Journal of Crystal Growth</i> , 2018 , 483, 147-155	1.6	33
258	Calculation of solidâllquid interfacial free energy and its anisotropy in undercooled system. 2018 , 37, 543-553		4
257	Imposition Time Dependent Microstructure Formation in 7150 Aluminum Alloy Solidified by an Electromagnetic Stirring Technique. <i>Materials Transactions</i> , 2018 , 59, 1603-1609	1.3	6

Nonlinear Data: Theory and Algorithms. **2018**, 15, 1161-1234

255	Solute partition at solid-liquid interface of binary alloy from molecular dynamics simulation. 2018 , 4, 553-557		9
254	Temperature dependence of the solid-liquid interface free energy of Ni and Al from molecular dynamics simulation of nucleation. 2018 , 149, 174501		12
253	Effect of fluid flow on solidified equiaxed dendrite morphology evolution based on phase field - lattice Boltzmann method. <i>China Foundry</i> , 2018 , 15, 422-427	0.8	4
252	On the theory of dendritic growth under convective heat and mass transfer in a binary alloy. 2018,		
251	High-gradient magnetic field-controlled migration of solutes and particles and their effects on solidification microstructure: A review. 2018 , 27, 118103		7
250	Modelling microstructure evolution during casting, homogenization and ageing heat treatment of Al-Mg-Si-Cu-Fe-Mn alloys. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 2018 , 63, 164-184	1.9	13
249	Recent advances in the metallurgy of aluminium alloys. Part I: Solidification and casting. 2018 , 19, 672-6	687	23
248	Solvability criterion for stable mode of dendritic evolution in the case of convective heat and mass transfer in a binary alloy. 2018 ,		
247	Nonequilibrium Solute Capture in Passivating Oxide Films. 2018 , 121, 145701		43
246	A Phase-Field Lattice-Boltzmann Study on Dendritic Growth of Al-Cu Alloy Under Convection. 2018 , 49, 3603-3615		39
245	Influence of Growth Rate on Eutectic Spacing, Microhardness, and Ultimate Tensile Strength in the Directionally Solidified Al-Cu-Ni Eutectic Alloy. 2018 , 49, 3293-3305		8
244	Mesostructure and porosity effects on the thermal conductivity of additively manufactured interpenetrating phase composites. 2018 , 22, 223-229		13
243	Non-uniplanar competitive growth of columnar dendritic grains during directional solidification in quasi-2D and 3D configurations. <i>Materials and Design</i> , 2018 , 151, 141-153	8.1	19
242	Modeling of binary alloy solidification under conditions representative of Additive Manufacturing. <i>Computational Materials Science</i> , 2018 , 150, 535-545	3.2	11
241	The effect of Ti addition on the microstructure and properties of high chromium iron-based coatings. 2018 , 765, 782-790		13
240	Second order front tracking algorithm for Stefan problem on a regular grid. <i>Journal of Computational Physics</i> , 2018 , 372, 956-971	4.1	8
239	Microstructure evolution during the direct-chill casting process in a NdâHeâB magnet investigated by a continuum-fieldâfhulti-phase-field method. 2018 , 26, 065009		1

238	Textural, morphological and compositional varieties of modern arc sulfides: A case study of the Tolbachik volcano, Kamchatka. 2018 , 318-319, 14-29		7
237	Experimental investigation and statistical analysis of icing nucleation characteristics of sessile water droplets. 2018 , 99, 26-34		14
236	Simulations of grain boundaries between ordered hard sphere monolayer domains: Orientation-dependent stiffness and its correlation with grain coarsening dynamics. 2018 , 149, 044503		3
235	Thermo-solutal growth of an anisotropic dendrite in the case of convective heat and mass transfer in a binary system. 2018 ,		
234	Phase-Field Modeling of Precipitation Growth and Ripening During Industrial Heat Treatments in Ni-Base Superalloys. 2018 , 49, 4146-4157		15
233	Phase-field modeling of Li-insertion kinetics in single LiFePO4-nano-particles for rechargeable Li-ion battery application. <i>Computational Materials Science</i> , 2018 , 153, 288-296	.2	11
232	Advent of Cross-Scale Modeling: High-Performance Computing of Solidification and Grain Growth. 2018 , 1, 1800065		30
231	Phase-field modelling and simulation of morphology transition induced by thermoelectric effects during solidification in pure metals. 2018 , 5, 096501		1
230	Effect of Ag content and drawing strain on microstructure and properties of directionally solidified Cu-Ag alloy. 2018 , 154, 190-199		16
229	Novel TiB2-reinforced 316L stainless steel nanocomposites with excellent room- and high-temperature yield strength developed by additive manufacturing. 2019 , 156, 51-63		109
228	Temperature Dependences of Peak Positions in Pair Distribution Function of Metallic Liquids. 2019 , 123, 7055-7060		2
227	The evolution of polycrystalline solidification in the entire weld: A phase-field investigation. 2019 , 142, 118450		8
226	Phase-field lattice-Boltzmann investigation of dendritic evolution under different flow modes. 2019 , 99, 2920-2940		11
225	Optimization of heat treatment process of AlâMgâBi cast alloys with Zn additions by simulation and experimental investigations. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 1 2019, 67, 101684	.9	4
224	The initial growth of sidebranches in ammonium chloride dendrites. <i>Journal of Crystal Growth</i> , 2019 , 523, 125162	.6	1
223	Analysis of the influence of deformation in microstructure formation during solidification of Pb-2.5% Sb alloy. 2019 , 41, 36118		
222	Conditions of Formation of Doping Superstructures at Phase Transitions. 2019 , 61, 1860-1866		4
221	Selective laser melting of 316L stainless steel: Influence of TiB2 addition on microstructure and mechanical properties. 2019 , 21, 100615		19

220	Phase-field modeling of &precipitate shapes in nickel-base superalloys and their classification by moment invariants. 2019 , 92, 1		6
219	Numerical simulation of dendrite growth in Ni-based superalloy casting during directional solidification process. 2019 , 29, 338-348		5
218	Phase-field investigation of dendrite growth in the molten pool with the deflection of solid/liquid interface. <i>Computational Materials Science</i> , 2019 , 169, 109128	3.2	3
217	Effect of heat treatment on microstructure and mechanical properties of 316L steel synthesized by selective laser melting. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 748, 205-212	5-3	97
216	Phase field simulation of dendrite sidebranching during directional solidification of Al-Si alloy. Journal of Crystal Growth, 2019 , 522, 183-190	1.6	6
215	Molecular Dynamics Simulation of Unstable Equilibrium of a Spherical Nucleus for Determining the Interfacial Energy in a Pbâlīu Two-Component System. 2019 , 81, 105-109		
214	The self-diffusion coefficients of liquid binary M-Si (M=Al, Fe, Mg and Au) alloy systems by first principles molecular dynamics simulation. 2019 , 9, 035328		6
213	Influence of morphological instability on grain boundary trajectory during directional solidification. <i>Acta Materialia</i> , 2019 , 175, 214-221	8.4	11
212	The in situ observation of faceted dendrite growth during the directional solidification of GaSb. <i>Scripta Materialia</i> , 2019 , 168, 56-60	5.6	5
211	A parametric study of morphology selection in equiaxed dendritic solidification. <i>Computational Materials Science</i> , 2019 , 162, 76-81	3.2	11
21 0	Alloy design in the 21st century: ICME, materials genome, and artificial intelligence strategies. 2019 , 81-101		1
209	Assessment of local cracking susceptibility based on an in-situ observation. 2019 , 151, 182-190		4
208	Structure and dynamics of glass-forming alloy melts investigated by application of levitation techniques. 2019 , 91, 895-910		2
207	Morphological Development of Sub-Grain Cellular/Bands Microstructures in Selective Laser Melting. 2019 , 12,		4
206	References. 2019 , 299-354		
205	An innovation for microstructural modification and mechanical improvement of TiAl alloy via electric current application. 2019 , 9, 5518		О
204	Supercluster-coupled crystal growth in metallic glass forming liquids. 2019 , 10, 915		19
203	Analysis of free dendritic growth considering both relaxation effect and effect of nonisothermal and nonisosolutal interface. 2019 , 134, 51-57		4

202	Nonlinear Dynamics of the Formation of a Periodic Superstructure of Impurity Bands during Rapid Directional Solidification of Binary Alloys. 2019 , 61, 2096-2103	4
201	Code generation for massively parallel phase-field simulations. 2019,	3
200	A review of selective laser melting of aluminum alloys: Processing, microstructure, property and developing trends. <i>Journal of Materials Science and Technology</i> , 2019 , 35, 270-284	400
199	Dendrite tip selection during isothermal free growth in multi-component alloys: Marginal stability theories and insights from phase-field simulations. <i>Computational Materials Science</i> , 2019 , 158, 209-218 ³⁻²	3
198	Study of dendrite growth with natural convection in superalloy directional solidification via a multiphase-field-lattice Boltzmann model. <i>Computational Materials Science</i> , 2019 , 158, 130-139	5
197	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	11
196	Permeability prediction for flow normal to columnar solidification structures by largeâlicale simulations of phaseâlield and lattice Boltzmann methods. <i>Acta Materialia</i> , 2019 , 164, 237-249	26
195	Effect of the misorientation angle and anisotropy strength on the initial planar instability dynamics during solidification in a molten pool. 2019 , 130, 204-214	5
194	Research on microstructure transformation and property of 18CrâD.2C Fe-based coatings. 2019 , 35, 604-610	2
193	Peritectic phase transformation in the FeâMn and FeâL system utilizing simulations with phase-field method. 2019 , 8, 233-242	9
192	A review on high stiffness aluminum-based composites and bimetallics. 2020 , 45, 1-21	15
191	LargeâBcale phaseâBeld lattice Boltzmann study on the effects of natural convection on dendrite morphology formed during directional solidification of a binary alloy. <i>Computational Materials</i> 3.2 <i>Science</i> , 2020 , 171, 109209	21
190	Microstructural control of an Alâโฟ aluminum matrix composite during direct laser metal deposition. 2020 , 813, 152208	21
189	Growth competition between columnar dendrite and degenerate seaweed during directional solidification of alloys: Insights from multi-phase field simulations. <i>Materials and Design</i> , 2020 , 185, 108250	24
188	Crystallization patterns of an aqueous dihydrate cupric chloride solution in the presence of different amounts of Bovine Serum Albumin. <i>Journal of Crystal Growth</i> , 2020 , 529, 125272	1
188		59
	different amounts of Bovine Serum Albumin. <i>Journal of Crystal Growth</i> , 2020 , 529, 125272 Transient Feature Extraction by the Improved Orthogonal Matching Pursuit and K-SVD Algorithm	

184	Modified embedded-atom method potential for high-temperature crystal-melt properties of TiâNi alloys and its application to phase field simulation of solidification. 2020 , 28, 015006		11
183	Numerical simulation of equiaxed growth of Ni-based alloy in multi-directional flowing melt. <i>Computational Materials Science</i> , 2020 , 173, 109408	3.2	2
182	The one-dimensional Stefan problem with non-Fourier heat conduction. 2020 , 150, 106210		5
181	Critical Review on the Chemical Reaction Pathways Underpinning the Primary Decomposition Behavior of Chlorine-Bearing Compounds under Simulated Municipal Solid Waste Incineration Conditions. 2020 , 34, 1-15		10
180	Rapid solidification kinetics and mechanical property characteristics of Niâdr eutectic alloys processed under electromagnetic levitation state. <i>Materials Science & amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 772, 138660	5.3	30
179	The integration of structural mechanics into microstructure solidification modelling. 2020 , 861, 012054		1
178	Macro-physical field of large diameter magnesium alloy billet electromagnetic direct-chill casting: A comparative study. 2020 , 8, 716-730		5
177	Role of SolidâBolid Interfacial Energy Anisotropy in the Formation of Broken Lamellar Structures in Eutectic Systems. 2020 , 51, 6327-6345		4
176	Crystallographic and Morphological Evidence of SolidâBolid Interfacial Energy Anisotropy in the Sn-Zn Eutectic System. 2020 , 51, 6387-6405		4
175	Thermoelectric effects induced dendrite branching dynamics in pure substances: An insight from morphological theory. 2020 , 43, 45		O
174	Rapid growth kinetics and microstructure modulation of intermetallic compounds within containerlessly solidifying Mo-Co refractory alloys. 2020 , 125, 106886		1
173	Kinetics of Crystallization and Orientational Ordering in Dipolar Particle Systems. 2020 , 20, 7862-7873		3
172	Processing metallic materials far from equilibrium. 2020 , 45, 906-909		3
171	Solute trapping in rapid solidification. 2020 , 45, 910-915		8
170	Observation of side arm splitting studied by high resolution X-ray radiography. 2020, 111, 11-16		2
169	Comparing mesoscopic models for dendritic growth. 2020 , 861, 012002		2
168	Microstructural evolution of Mg-Al-Re alloy reinforced with alumina fibers. 2020 , 8, 565-577		3
167	Overgrowth behavior at converging grain boundaries during competitive grain growth: A two-dimensional phase-field study. 2020 , 160, 120196		5

(2020-2020)

166	Phase-field crystal modeling of crystal growth patterns with competition of undercooling and atomic density. 2020 , 22, 21858-21871		3
165	Formation of Regular Layered Structures upon Solid-State Phase Transitions with Varying the Concentration. 2020 , 62, 1398-1406		3
164	Precipitation and Growth Simulation of 2 Phase in Single Crystal Superalloy DD6 with Multiphase-Field Method and Explicit Nucleation Algorithm. <i>Metals</i> , 2020 , 10, 1346	2.3	3
163	Bayesian inference of solid-liquid interfacial properties out of equilibrium. 2020 , 101, 052121		12
162	A comparative study of the primary phase formation in Alâll wt% Si and Alâll 7 wt% Si alloys solidified by electromagnetic stirring processing. 2020 , 24, 101146		2
161	Effects of Growth Rate on Eutectic Spacing, Microhardness, and Ultimate Tensile Strength in the Alâtuâti Eutectic Alloy. 2020 , 121, 382-390		O
160	Microstructure evolution and cracking behaviors of additively manufactured AlxCrCuFeNi2 high entropy alloys via selective laser melting. 2020 , 842, 155823		13
159	Size-dependent mechanical-diffusion responses of multilayered composite nanoplates. 2020 , 1-30		8
158	Influence of Chromium on the Chemical Composition and Surface Properties of Rapidly Solidified Alâlīr Alloys. 2020 , 14, 66-72		1
157	Two-dimensional large-scale phase-field lattice Boltzmann simulation of polycrystalline equiaxed solidification with motion of a massive number of dendrites. <i>Computational Materials Science</i> , 2020 , 178, 109639	3.2	23
156	Effect of secondary arm orientation on unusual overgrowth at converging grain boundary during directional solidification in 3D. <i>Computational Materials Science</i> , 2020 , 176, 109531	3.2	3
155	Uncovering the effects of interface-induced ordering of liquid on crystal growth using machine learning. 2020 , 11, 3260		11
154	Microstructure and properties of a high temperature Alâteât nalloy produced by additive manufacturing. <i>Acta Materialia</i> , 2020 , 196, 595-608	8.4	44
153	Phase-field modeling of M microstructure formation in Ni-based superalloys with high 2 volume fraction. 2020 , 120, 106745		12
152	Modeling remelting induced destabilization of lamellar eutectic structure in an undercooled Ni-18.7 at.% Sn eutectic alloy. 2020 , 826, 154018		2
151	Study of Solidification and Microstructure Characteristics for Aircraft Icing. 2020 , 41, 1		2
150	Ultrafast growth kinetics of titanium dendrites investigated by electrostatic levitation experiments and molecular dynamics simulations. 2020 , 742, 137141		О
149	Rapid growth mechanism of graphene fabricated by high-power laser irradiation. 2020 , 24, 101132		2

148	An In-Situ Diagnostic Study of Electromagnetic Stirring Effects on Peritectic Solidification Kinetics for Containerlessly Processed Liquid Fe-Ti Alloys. 2020 , 51, 2975-2989	1
147	Simulation of dendritic remelting and fragmentation using coupled cellular automaton and Eulerian multiphase model. <i>Computational Materials Science</i> , 2020 , 180, 109714	4
146	Size-dependent buckling analysis of Eulerâ B ernoulli nanobeam under non-uniform concentration. 2020 , 90, 1845-1860	6
145	A review on the porous medium approaches to model the flow of interdendritic liquid during the solidification of alloys in casting processes: theory and experiments. 2020 , 107, 4097-4121	1
144	Effect of grain structure and strain rate on dynamic recrystallization and deformation behavior: A phase field-crystal plasticity model. <i>Computational Materials Science</i> , 2020 , 180, 109707	6
143	Progress in modelling solidification microstructures in metals and alloys. Part II: dendrites from 2001 to 2018. 2021 , 66, 30-76	33
142	Nonlocal diffusion-elasticity based on nonlocal mass transfer and nonlocal elasticity and its application in shock-induced responses analysis. 2021 , 28, 827-838	10
141	Effect of cooling rates on as-cast microstructures of U-5.4Nb alloys. 2021 , 543, 152498	1
140	About metastable cellular structure in additively manufactured austenitic stainless steels. 2021 , 38, 101804	16
139	Computer Experiments on Self-diffusion Coefficients of Some Liquid Metals. 2021 , 42, 166-174	O
138	A front-tracking measurement technique for in-situ columnar and equiaxed structure growth with controlled solidification. 2021 , 32, 045903	1
137	Solution to Multiscale and Multiphysics Problems: A Phase-Field Study of Fully Coupled Thermal-Solute-Convection Dendrite Growth. 2021 , 4, 2000251	7
136	Crystalâthelt interface kinetic behaviors of iron. 2021 , 11, 035241	2
135	Numerical Simulation of Microstructure Evolution in Solidification Process of Ferritic Stainless Steel with Cellular Automaton. 2021 , 11, 309	1
134	Revealing the mechanisms for the nucleation and formation of equiaxed grains in commercial purity aluminum by fluid-solid coupling induced by a pulsed magnetic field. <i>Acta Materialia</i> , 2021 , 208, 116747	5
133	Reinforcements, Manufacturing Techniques, and Respective Property Changes of Al2O3/SiC Based Composites: A Review. 1	1
132	Monitoring molten pool temperature, grain size and molten pool plasma with integrated area of the spectrum during laser additive manufacturing. <i>Journal of Manufacturing Processes</i> , 2021 , 64, 851-860	2
131	Investigations of Electrical Resistivity and Thermal Conductivity Dependences on Growth Rate in the AlâʿŒuâʿŒi Eutectic Alloy. 2021 , 42, 1	1

130	An In Situ High-Energy Synchrotron X-Ray Diffraction Study of Directional Solidification in Binary TiAl Alloys. 2100151		1
129	Simulations of Multiple Grains Growth of MgâAl Alloy Semisolid Structure by Phase-Field-Lattice Boltzmann Simulation. 2021 , 52, 2441		O
128	Modelling of defects in aluminium cast products. 2021 , 123, 100824		7
127	New Concepts for Prediction of Friction, Taper, and Evaluation of Powder Performance with an Advanced 3D Numerical Model for Continuous Casting of Steel Billets. 2021 , 52, 2760-2785		3
126	Phase-Field Modeling of Biomineralization in Mollusks and Corals: Microstructure vs Formation Mechanism. 2021 , 1, 1014-1033		4
125	Effect of Build Orientation on the Microstructure, Mechanical and Corrosion Properties of a Biodegradable High Manganese Steel Processed by Laser Powder Bed Fusion. <i>Metals</i> , 2021 , 11, 944	2.3	4
124	Molecular Dynamics Study of Mechanism of Solidâlliquid Interface Migration and Defect Formation in Al3Sm Alloy. 2021 , 73, 2312-2319		O
123	Oscillatory and tip-splitting instabilities in 2D dynamic fracture: The roles of intrinsic material length and time scales. 2021 , 151, 104372		2
122	Reducing porosity and optimizing performance for Al-Cu-based alloys with large solidification intervals by coupling travelling magnetic fields with sequential solidification. <i>Journal of Materials Science and Technology</i> , 2021 , 79, 1-14	9.1	4
121	Interface migration in Aluminum bicrystals via premelting. 2021 , 26, 101344		O
120	The stability of dendritic growth in a binary alloy melt with buoyancy effect. 2021 , 35, 2150203		О
119	Crystalâhelt coexistence in fcc and bcc metals: a molecular-dynamics study of kinetic coefficients. 2021 , 29, 065016		4
118	Microstructures and mechanical properties of the fusion zone of 316L-316LN stainless steel multi-pass gas tungsten arc welded joint. <i>Journal of Materials Science</i> , 2021 , 56, 17306-17318	4.3	
117	Microsegregation and solidification characteristics of an advanced high strength steel âlPart I: modelling and prediction on hot cracking susceptibility. 1-8		
116	Solute enrichment induced dendritic fragmentation in directional solidification of nickel-based superalloys. <i>Acta Materialia</i> , 2021 , 215, 117043	8.4	6
115	Microsegregation and solidification characteristics of an advanced high strength steel âlþart II: experimental validation. 1-9		
114	Bayesian Data Assimilation of Temperature Dependence of Solid-Liquid Interfacial Properties of Nickel. 2021 , 11,		2
113	Grain boundary heredity from Cu/Al solid-liquid interface via diffusion during the solidification processes. 2021 , 552, 111369		1

112	In-situ observation of asymmetrical deformation around inclusion in a heterogeneous additively manufactured 316L stainless steel. <i>Journal of Materials Science and Technology</i> , 2021 , 89, 133-140	7
111	Live record of vortex-shaped flow by microgravity solidification. <i>Materials and Design</i> , 2021 , 209, 10997%.1	O
110	Microstructural evolution in directionally solidified Al-Cu-Mg ternary eutectic. 2021, 883, 160818	3
109	Phase-field-lattice Boltzmann method for dendritic growth with melt flow and thermosolutal convectionadiffusion. 2021 , 385, 114026	O
108	Multiple dendrite tip tracking for in-situ directional solidification: Experiments and comparisons to theory. 2021 , 29, 102807	O
107	Effects of high static magnetic field on the microstructure of Zn-Bi monotectic alloys during directional solidification process. 2022 , 889, 161670	1
106	Defect-mediated crystal growth from deeply undercooled melts. <i>Computational Materials Science</i> , 2022 , 201, 110861	O
105	Improved multi-order parameter and multi-component model of polycrystalline solidification. Journal of Materials Science and Technology, 2022, 101, 217-225 9.1	1
104	Measurements of Crystal Growth Velocities in Undercooled Melts of Metals. 239-259	2
103	Measurements of Crystal Growth Dynamics in Glass-Fluxed Melts. 281-303	2
102	Phase-Field Crystal Modeling of Homogeneous and Heterogeneous Crystal Nucleation. 113-138	1
101	Modeling of Microstructure Evolution During Alloy Solidification. 2015 , 183-190	1
100	Experiments and Modeling of Three-Dimensional Dendritic Morphology of Magnesium Alloy. 2015 , 55-61	1
99	The solidâliquid interface free energy of Al: A comparison between molecular dynamics calculations and experimental measurements. <i>Computational Materials Science</i> , 2020 , 184, 109910	5
98	Microstructure and mechanical properties of AlCuFe eutectic alloy. 2020, 30, 3183-3194	1
97	Interdiffusion and thermotransport in NiâAl liquid alloys. 2018 , 98, 2221-2246	7
96	In-situ observation of transient columnar dendrite growth in the presence of thermo-solutal convection. 2012 , 33, 012033	14
95	General hierarchical structure to solve transport phenomena with dissimilar time scales: Application in large-scale three-dimensional thermosolutal phase-field problems. 2020 , 102, 043313	6

94	Investigating gas-phase defect formation in late-stage solidification using a novel phase-field crystal alloy model. <i>Physical Review Materials</i> , 2017 , 1,	3.2	3
93	Propagative selection of tilted array patterns in directional solidification. <i>Physical Review Materials</i> , 2018 , 2,	3.2	12
92	Mechanism of the growth pattern formation and three-dimensional morphological transition of hcp magnesium alloy dendrite. <i>Physical Review Materials</i> , 2018 , 2,	3.2	19
91	Measurement of the stiffness of hard-sphere colloidal crystal-liquid interfaces. <i>Physical Review Materials</i> , 2019 , 3,	3.2	2
90	Study on the surface crystallization mechanism and inhibition method in the CMP process of aluminum alloy mirrors. 2019 , 58, 6091-6097		4
89	Dendrite growth under forced convection: analysis methods and experimental tests. 2014 , 184, 833-85	0	2
88	Crystallization of Supercooled Liquids: Self-Consistency Correction of the Steady-State Nucleation Rate. 2020 , 22,		11
87	Phase-field simulation of solidified microstructure evolution in the presence of lateral constraint. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2013 , 62, 106401	0.6	5
86	Exotic three-phase microstructures in the ternary Ag-Cu-Sb eutectic system. <i>Acta Materialia</i> , 2021 , 221, 117400	8.4	0
85	Modeling of Hot Tearing and Other Defects in Casting Processes. 2009 , 362-374		2
84	Formation of Microstructures, Grain Textures, and Defects during Solidification. 2010 , 214-227		
83	Cellular automaton model with MeshTV interface reconstruction technique for alloy dendrite growth. Wuli Xuebao/Acta Physica Sinica, 2012, 61, 098104	0.6	2
82	Coupled Growth Structures in Univariant and Invariant Eutectic Solidification. 483-507		
81	Phase-Field Simulation of Solidification Microstructure Evolution in the Presence of Lateral Constraints. 2013 , 2765-2772		
80	Calculation of crystal-melt interfacial free energy of Cu by molecular dynamics simulation. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2013 , 62, 056803	0.6	1
79	Phase Field Simulation on Dendritic Growth in Pressurized Solidification of Mg-Al Alloy. 2015 , 107-113		
78	Phase-field modeling of free dendritic growth of magnesium based alloy. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2015 , 64, 060201	0.6	2
77	Modeling of Microstructure Evolution during Alloy Solidification. 181-190		

Phase Field Simulation on Dendritic Growth in Pressurized Solidification of Mg-Al Alloy. 107-113

75	Numerical Simulation of Dendritic Growth of Fe-C Binary Alloy with Natural Convection. <i>Minerals, Metals and Materials Series</i> , 2016 , 117-124	0.3	
74	Solid Solutions Mixed Crystals and Eutectics. 2017 , 109-125		
73	Divorced Eutectoid Transformation in the Spheroidization of Bearing Steels. 2017 , 210-223		2
72	Dendrite growth in undercooled Al-rich Al-Ni melts measured on Earth and in Space. <i>Physical Review Materials</i> , 2019 , 3,	3.2	3
71	Experiment Preparation and Performance for the Electromagnetic Levitator (EML) Onboard the International Space Station.		2
70	Metal powder bed fusion process chains: an overview of modelling techniques. <i>Progress in Additive Manufacturing</i> , 2022 , 7, 289	5	1
69	Chapter 8. Solid State Chemistry: Computational Chemical Analysis for Materials Science. <i>RSC Theoretical and Computational Chemistry Series</i> , 2020 , 287-334	1.2	
68	Coexistence of rod-like and lamellar eutectic growth patterns. Scripta Materialia, 2022, 207, 114314	5.6	1
67	Multi-scale dendritic patterns sequentially superimposed in a primary semi-solid matrix. <i>Journal of Materials Science and Technology</i> , 2022 , 107, 26-33	9.1	
66	Diffusion Kinetics in Binary Liquid Alloys with Ordering and Demixing Tendencies. <i>Springer Series in Materials Science</i> , 2020 , 109-132	0.9	
65	Surface boundary-dendrite interactions in thin metallic Al-alloy samples. <i>Scripta Materialia</i> , 2022 , 209, 114386	5.6	O
64	Design of Low-Pressure Sand Casting Process for Water-Cooled Motor Shell in Electric Vehicle. Journal of Physics: Conference Series, 2021 , 2101, 012052	0.3	
63	Competitive growth of diverging columnar grains during directional solidification: A three-dimensional phase-field study. <i>Computational Materials Science</i> , 2021 , 111061	3.2	1
62	Nano-scale dendrites within the conventional dendritic arm. <i>Materials and Design</i> , 2021 , 212, 110263	8.1	
61	Atomistic modeling of the propagation of the melting/crystallization front for metals based on the generalization of the modified transition state theory. <i>Keldysh Institute Preprints</i> , 2021 , 1-20	0.3	
60	A temperature-dependent atomistic-informed phase-field model to study dendritic growth. <i>Journal of Crystal Growth</i> , 2022 , 579, 126461	1.6	1
59	A phase-field study of the pattern selection between dendrite and seaweed during directional solidification. <i>Computational Materials Science</i> , 2022 , 203, 111171	3.2	

58	A Phase-Field Method for Elastic Mechanics with Large Deformation. SSRN Electronic Journal,	1	
57	Effect of Zr addition on the microstructure and intermediate-temperature mechanical performance of a Niâ¤6Wâ¤Cr based superalloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 833, 142517	5.3	O
56	Orientation selection of particles growing in an alloy melt. Chinese Journal of Physics, 2022,	3.5	O
55	The effect of laser wavelength on surface layer melting of the AlSi/SiC composite. <i>Journal of Manufacturing Processes</i> , 2022 , 75, 627-636	5	O
54	Role of Interfacial Energy Anisotropy in Dendrite Orientation in Al-Zn Alloys. <i>SSRN Electronic Journal</i> ,	1	
53	Refinement of Microstructure of JIS A7204 and A6022 Aluminum Alloys Solidified by Electromagnetic Vibration Technique. <i>Materials Transactions</i> , 2022 ,	1.3	O
52	A Phase-Field Method for Elastic Mechanics with Large Deformation. SSRN Electronic Journal,	1	
51	Al-Ag-Ge????????????????????????????. Zhongguo Kexue Jishu Kexue/Scientia Sinica Technologica, 2022,	1.3	
50	Phase-field Modeling of Phase Transformations in Multicomponent Alloys: A Review. <i>Journal of the Indian Institute of Science</i> , 1	2.4	
49	Deformation processed high strength high conductivity Cu and Al matrix composite wires: An introductory review. <i>Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications</i> , 146442072210905	1.3	O
48	Numerical investigation of eutectic growth dynamics under convection by 3D phase-field method. <i>Computers and Mathematics With Applications</i> , 2022 , 114, 83-94	2.7	
47	Facet formation during the solidification of pure antimony. Journal of Crystal Growth, 2022, 586, 1266.	331.6	
46	Isotropic finite-difference approximations for phase-field simulations of polycrystalline alloy solidification. <i>Journal of Computational Physics</i> , 2022 , 457, 111069	4.1	1
45	Phase-field modeling of dendritic growth of magnesium alloys with a parallel-adaptive mesh refinement algorithm. <i>China Foundry</i> , 2021 , 18, 541-549	0.8	O
44	Gravity-induced Solidification Segregation and Its Effect On Dendrite Growth in Al-2.8 Wt.% Cu Alloy. <i>Microgravity Science and Technology</i> , 2021 , 33, 1	1.6	0
43	Additive manufacturing of high-performance 15-5PH stainless steel matrix composites. <i>Virtual and Physical Prototyping</i> , 2022 , 17, 366-381	10.1	3
42	Solidification of AlCuMgZn Single Crystal in Space. 2016 , 36, 445		1
41	Understanding the Kinetic Anisotropy of the Soft-sphere BCC Crystal-Melt Interfaces <i>Journal of Physics Condensed Matter</i> , 2022 ,	1.8	O

40	Formation Mechanism of "Fractured Columnar Dendrite" in Commercial Purity Al During Solidification with a Forced Flow Field Induced by Pulsed Magnetic Field. SSRN Electronic Journal,	1	
39	A review on the science of plastic deformation in laser-based additively manufactured steel. Journal of Materials Science,	4.3	1
38	Dual heterogeneous structure facilitating an excellent strength-ductility combination in an additively manufactured multi-principal-element alloy. <i>Materials Research Letters</i> , 2022 , 10, 575-584	7.4	O
37	Prediction of Microstructure for AISI316L Steel from Numerical Simulation of Laser Powder Bed Fusion. <i>Metals and Materials International</i> ,	2.4	O
36	A new method for computing the anisotropic free energy of the crystal-melt interface. <i>Computational Materials Science</i> , 2022 , 210, 111481	3.2	1
35	Progress in numerical simulation of casting process. <i>Measurement and Control</i> , 002029402211026	1.5	1
34	Effect of Vertical High Magnetic Field on the Morphology of Solid-Liquid Interface during the Directional Solidification of Zn-2wt.%Bi Immiscible Alloy. <i>Metals</i> , 2022 , 12, 875	2.3	
33	Quantifying Susceptibility to Solidification Cracking in Oscillated CM247LC Superalloy Welds via Varestraint Testing. <i>Metals and Materials International</i> ,	2.4	O
32	On the importance of interface stability in cellular automata models: Planar and dendritic solidification in laser melted YSZ. <i>Materials and Design</i> , 2022 , 219, 110823	8.1	1
31	Effect of addition of La and Ce on solidification behavior of Al-Cu alloys. <i>Materials Letters</i> , 2022 , 324, 132653	3.3	1
30	Numerical simulation of dendritic growth during solidification process using multiphase-field model aided with machine learning method. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 2022 , 78, 102450	1.9	1
29	A kinetic transition from peritectic crystallization to amorphous solidification of rapidly quenched refractory Nb-Ni alloy. <i>Acta Materialia</i> , 2022 , 237, 118127	8.4	O
28	Influence of Annealing Time on Microstructure and Mechanical Properties of Al-14.5Si Alloy Prepared by Super-Gravity Solidification and Cold-Rolling. 2022 , 15, 5475		1
27	Effects of undercooling on atomic crystallization behaviors and growth mechanisms of pure metals. 2022 , 132, 075301		
26	Local collective dynamics at the equilibrium BCC crystal-melt interfaces.		
25	Plastic injection molding dies using hybrid additively manufactured 420/CX stainless steels: electrochemical considerations. 2022 , 6,		O
24	Synthesis of single metallic crystal in microgravity simulated by static magnetic field. 2022 , 221, 11496	59	
23	Pseudo-4D view of the growth and form of locked eutectic colonies. 2022 , 240, 118335		O

22	Microstructure Evolution and Thermophysical Properties of Hypereutectic Al-Fe-Ni Alloys.	O
21	The Effect of the Shear Flow on the Morphological Pattern of Particles in an Undercooled Melt. 2022 , 12, 1469	O
20	Selection Criterion of Stable Dendritic Growth for a Ternary (Multicomponent) Melt with a Forced Convective Flow. 2022 , 12, 1288	0
19	Directional Solidification of Alâßiâ⊞i Irregular Ternary Eutectic Alloy and Thermophysical Properties.	O
18	A phase-field method for elastic mechanics with large deformation. 2022 , 471, 111630	О
17	Frictionless Motion of Diffuse Interfaces by Sharp Phase-Field Modeling. 2022 , 12, 1496	o
16	Formation Mechanism of Three-Layer Solidified Structure in Commercial Purity Al During Solidification With a Forced Flow Field Induced by Pulsed Magnetic Field.	О
15	On the calculation of crystalâthelt interface free energy and interface stiffness using Ni as a model system. 2022 , 132, 155104	О
14	Solidification Processing of Metallic Materials in Static Magnetic Field: A Review. 2022 , 12, 1778	O
13	The Tip of Dendritic Crystal in an Inclined Viscous Flow. 2022 , 12, 1590	O
13	The Tip of Dendritic Crystal in an Inclined Viscous Flow. 2022 , 12, 1590 Phase field modeling of topological magnetic structures in ferromagnetic materials: domain wall, vortex, and skyrmion.	0
	Phase field modeling of topological magnetic structures in ferromagnetic materials: domain wall,	
12	Phase field modeling of topological magnetic structures in ferromagnetic materials: domain wall, vortex, and skyrmion. Melting temperature, critical nucleus size, and interfacial free energy in single FCC metals â A	О
12	Phase field modeling of topological magnetic structures in ferromagnetic materials: domain wall, vortex, and skyrmion. Melting temperature, critical nucleus size, and interfacial free energy in single FCC metals âl'A Molecular Dynamics study of liquidâBolid phase equilibria. 2023, 603, 126987 Unveiling the dynamic instability mechanism of microstructure transformation in faceted oxide	0
12 11 10	Phase field modeling of topological magnetic structures in ferromagnetic materials: domain wall, vortex, and skyrmion. Melting temperature, critical nucleus size, and interfacial free energy in single FCC metals âlĀ Molecular Dynamics study of liquidâBolid phase equilibria. 2023, 603, 126987 Unveiling the dynamic instability mechanism of microstructure transformation in faceted oxide eutectic composite ceramics. 2023, 144, 224-234	o o o
12 11 10	Phase field modeling of topological magnetic structures in ferromagnetic materials: domain wall, vortex, and skyrmion. Melting temperature, critical nucleus size, and interfacial free energy in single FCC metals âl'A Molecular Dynamics study of liquidâBolid phase equilibria. 2023, 603, 126987 Unveiling the dynamic instability mechanism of microstructure transformation in faceted oxide eutectic composite ceramics. 2023, 144, 224-234 Microstructure Evolution and Thermophysical Properties of Hypereutectic Al-Fe-Ni Alloys. Large-scale phase-field simulations for dendrite growth: A review on current status and future	o o o
12 11 10 9 8	Phase field modeling of topological magnetic structures in ferromagnetic materials: domain wall, vortex, and skyrmion. Melting temperature, critical nucleus size, and interfacial free energy in single FCC metals âl'A Molecular Dynamics study of liquidâBolid phase equilibria. 2023, 603, 126987 Unveiling the dynamic instability mechanism of microstructure transformation in faceted oxide eutectic composite ceramics. 2023, 144, 224-234 Microstructure Evolution and Thermophysical Properties of Hypereutectic Al-Fe-Ni Alloys. Large-scale phase-field simulations for dendrite growth: A review on current status and future perspective. 2023, 1274, 012009 Grain refinement of a NiCoFe medium entropy alloy: composition design from solute interaction	0 0 0

4	Hot cracking susceptibility prediction from quantitative multi-phase field simulations with grain boundary effects. 2023 , 250, 118821	О
3	Monte-Carlo-Assisted Phase Field Simulations of Grain Structure Evolution during the Welding Process. 2023 , 13, 623	O
2	The criterion of planar instability in alloy solidification under varying conditions: A viewpoint from free energy. 2023 , 133, 125304	0
1	Characteristics of the Aluminized IN738 Superalloy Using Laser Cladding Method.	O