Gildas Guillemot

List of Publications by Year
in descending order

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63	1,197	331259	395343
papers	citations	21 h-index	33 g-index

66	66	66	968
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Multiphysics simulation of single pulse laser powder bed fusion: comparison of front capturing and front tracking methods. International Journal of Numerical Methods for Heat and Fluid Flow, 2022, 32, 2149-2176.	1.6	2
2	Growth competition between columnar dendritic grains â€“ The role of microstructural length scales. Acta Materialia, 2022, 223, 117395.	3.8	15
3	Structure and texture simulations in fusion welding processes â€“ comparison with experimental data. Materialia, 2022, 21, 101305.	1.3	4
4	Hybrid Cellular Automaton - Parabolic Thick Needle model for equiaxed dendritic solidification. Journal of Materials Science and Technology, 2022, 124, 26-40.	5.6	6
5	Thermodynamic coupling in the computation of dendrite growth kinetics for multicomponent alloys. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2022, 77, 102429.	0.7	8
6	A review of microstructural changes occurring during FSW in aluminium alloys and their modelling. Journal of Materials Processing Technology, 2021, 288, 116706.	3.1	66
7	Morphological stability of spherical particles - Extension of the Mullins-Sekerka criteria to multi-component alloys under a non-stationary diffusive regime. Acta Materialia, 2021, 205, 116539.	3.8	4
8	Effect of processing parameters during the laser beam melting of Inconel 738: Comparison between simulated and experimental melt pool shape. Journal of Materials Processing Technology, 2021, 289, 116897.	3.1	26
9	A Partitioned Solution Algorithm for Concurrent Computation of Stressâ€“Strain and Fluid Flow in Continuous Casting Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 978-995.	1.0	4
10	Concurrent and coupled resolution of fluid flow and solid deformation in solidification processes. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012068.	0.3	0
11	3D cellular automaton modelling of silicon crystallization including grains in twin relationship. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012052.	0.3	1
12	Three-dimensional cellular automaton modeling of silicon crystallization with grains in twin relationships. Acta Materialia, 2020, 191, 230-244.	3.8	9
13	Impact of solute flow during directional solidification of a Ni-based alloy: In-situ and real-time X-radiography. Acta Materialia, 2020, 194, 68-79.	3.8	45
14	Numerical study of the impact of vaporisation on melt pool dynamics in Laser Powder Bed Fusion - Application to IN718 and Tiâ€“6Alâ€“4V. Additive Manufacturing, 2020, 35, 101249.	1.7	16
15	A partitioned two-step solution algorithm for concurrent fluid flow and stressâ€“strain numerical simulation in solidification processes. Computer Methods in Applied Mechanics and Engineering, 2019, 356, 294-324.	3.4	10
16	Additive manufacturing of an oxide ceramic by laser beam meltingâ€”Comparison between finite element simulation and experimental results. Journal of Materials Processing Technology, 2019, 270, 106-117.	3.1	21
17	A partitioned solution algorithm for fluid flow and stress-strain computations applied to continuous casting. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012082.	0.3	0
18	Level-set modelling of Laser Beam Melting process applied onto ceramic materials â€“ Comparison with experimental results. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012002.	0.3	2

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19	Finite diffusion microsegregation model applied to multicomponent alloys. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012029.	0.3	1
20	Numerical modelling of the impact of energy distribution and Marangoni surface tension on track shape in selective laser melting of ceramic material. Additive Manufacturing, 2018, 21, 713-723.	1.7	54
21	Investigation of the Effect of Residual Stress Gradient on the Wear Behavior of PVD Thin Films. Journal of Materials Engineering and Performance, 2018, 27, 457-470.	1.2	14
22	Finite Element Modeling of Ceramic Deposition by LBM(SLM) Additive Manufacturing. , 2018, , 49-58.		0
23	Macroscopic Finite Element Thermal Modelling of Selective Laser Melting for IN718 Real Part Geometries. , 2018, , 82-92.		0
24	Macroscopic thermal finite element modeling of additive metal manufacturing by selective laser melting process. Computer Methods in Applied Mechanics and Engineering, 2018, 331, 514-535.	3.4	56
25	Numerical modelling of fluid and solid thermomechanics in additive manufacturing by powder-bed fusion: Continuum and level set formulation applied to track- and part-scale simulations. Comptes Rendus - Mecanique, 2018, 346, 1055-1071.	2.1	32
26	Modeling of eutectic growth kinetics with thermodynamic couplings. Acta Materialia, 2018, 161, 110-126.	3.8	2
27	Growth competition between columnar dendritic grains â€“ Cellular automaton versus phase field modeling. Acta Materialia, 2018, 155, 286-301.	3.8	61
28	Columnar and Equiaxed Solidification of Al-7Âwt.% Si Alloys in Reduced Gravity in the Framework of the CETSOL Project. Jom, 2017, 69, 1269-1279.	0.9	17
29	Three-dimensional finite element thermomechanical modeling of additive manufacturing by selective laser melting for ceramic materials. Additive Manufacturing, 2017, 16, 124-137.	1.7	62
30	An analytical model with interaction between species for growth and dissolution of precipitates. Acta Materialia, 2017, 134, 375-393.	3.8	12
31	Finite element modeling of deposition of ceramic material during SLM additive manufacturing. MATEC Web of Conferences, 2016, 80, 08001.	0.1	6
32	Three-dimensional cellular automaton-finite element modeling of solidification grain structures for arc-welding processes. Acta Materialia, 2016, 115, 448-467.	3.8	82
33	Analytical model for equiaxed globular solidification in multicomponent alloys. Acta Materialia, 2015, 97, 419-434.	3.8	14
34	Influence of process-induced microstructure on hardness of two Alâ€“Si alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 646, 190-200.	2.6	25
35	3D parameter to quantify the anisotropy measurement of periodic structures on rough surfaces. Scanning, 2014, 36, 127-133.	0.7	7
36	Vickers microhardness of oxidized and nonoxidized porous silicon. , 2014, , .		1

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37	A level set approach for the simulation of the multipass hybrid laser/GMA welding process. Computational Materials Science, 2014, 91, 240-250.	1.4	18
38	3D Coupled Cellular Automaton (CA)â€“Finite Element (FE) Modeling for Solidification Grain Structures in Gas Tungsten Arc Welding (GTAW). ISIJ International, 2014, 54, 401-407.	0.6	43
39	Direct Modeling of Structures and Segregations Up to Industrial Casting Scales. Jom, 2013, 65, 1122-1130.	0.9	24
40	Relevance of Wavelet Shape Selection in a complex signal. Mechanical Systems and Signal Processing, 2013, 41, 14-33.	4.4	13
41	DÃ©veloppement d'une approche couplÃ©e Automates Cellulaires â€“ ElÃ©ments Finis pour la modÃ©lisation du dÃ©veloppement des structures de grains en soudage TIG. MATEC Web of Conferences, 2013, 7, 02002.	0.1	0
42	ModÃ©lisation du procÃ©dÃ© de soudage hybride Arc / Laser par une approche level set application aux toles d'aciers de fortes Ã©paisseurs. MATEC Web of Conferences, 2013, 7, 02003.	0.1	1
43	Estimation of the Constitutive Law by Dual Small Punch Test and Instrumented Indentation. Solid State Phenomena, 2012, 188, 193-198.	0.3	1
44	A comparison of models for predicting the true hardness of thin films. Thin Solid Films, 2012, 524, 229-237.	0.8	28
45	CaractÃ©risation des propriÃ©tÃ©s mÃ©caniques par nanoindentation dâ€™un traitement de diffusion et dâ€™un revÃªtement pour lâ€™amÃ©lioration de la rÃ©sistance Ã lâ€™usure des aciers Ã bas carbone. Mecanique Et Industries, 2011, 12, 379-387.	0.2	2
46	A generic statistical methodology to predict the maximum pit depth of a localized corrosion process. Corrosion Science, 2011, 53, 2453-2467.	3.0	30
47	How to characterize the regularity of surface topographies?. Journal of Physics: Conference Series, 2011, 311, 012012.	0.3	0
48	Wavelet theory and belt finishing process, influence of wavelet shape on the surface roughness parameter values. Journal of Physics: Conference Series, 2011, 311, 012013.	0.3	1
49	Elaboration, characterization of CrN- based coatings. , 2011, , .		0
50	A Cellular Automaton âˆ• Finite Element model for predicting grain texture development in galvanized coatings. , 2011, , .		0
51	CaractÃ©risation des aciers innovants par essais mÃ©caniques croisÃ©s. Materiaux Et Techniques, 2011, 99, 227-238.	0.3	0
52	Comments on the paper â€œModification of composite hardness models to incorporate indentation size effects in thin filmsâ€, D. Beegan, S. Chowdhury and M.T. Laugier, Thin Solid Films 516 (2008), 3813â€“3817. Thin Solid Films, 2010, 518, 2097-2101.	0.8	7
53	Correlation between thermal properties and aluminum fractions in CrAlN layers deposited by PVD technique. Vacuum, 2010, 84, 1067-1074.	1.6	47
54	On the detection of corrosion pit interactions using two-dimensional spectral analysis. Corrosion Science, 2010, 52, 303-313.	3.0	12

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55	Feature of solidâ€“liquid metals reaction revealed by conversion electron MÃ¶ssbauer spectrometry. Hyperfine Interactions, 2009, 190, 29-36.	0.2	1
56	A multilayer model for describing hardness variations of aged porous silicon low-dielectric-constant thin films. Thin Solid Films, 2009, 518, 213-221.	0.8	44
57	Interaction between single grain solidification and macrosegregation: Application of a cellular automatonâ€”Finite element model. Journal of Crystal Growth, 2007, 303, 58-68.	0.7	62
58	Columnar-to-Equiaxed Transition in SOLidification Processing (CETSOL): A Project of the European Space Agency (ESA) - Microgravity Applications Promotion (MAP) Programme. Materials Science Forum, 2006, 508, 393-404.	0.3	6
59	Modeling of Macrosegregation and Solidification Grain Structures with a Coupled Cellular Automaton-Finite Element Model. ISIJ International, 2006, 46, 880-895.	0.6	63
60	A new cellular automatonâ€”finite element coupling scheme for alloy solidification. Modelling and Simulation in Materials Science and Engineering, 2004, 12, 545-556.	0.8	41
61	Boundary layer correlation for dendrite tip growth with fluid flow. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 342, 44-50.	2.6	56
62	Three-dimensional diamond growth film simulations: correlations between nucleation and surface parameters. Diamond and Related Materials, 1999, 8, 150-154.	1.8	3
63	Thermo-mechanical simulation of track development in the Laser Beam Melting process - Effect of laser-metal interaction. IOP Conference Series: Materials Science and Engineering, 0, 529, 012005.	0.3	3