Carolin KÃ¶rner

List of Publications by Year
in descending order

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201	10,550	34493 54	42259 96
papers	citations	h-index	g-index

205	205	205	7321
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Digital Twin-enabled Collaborative Data Management for Metal Additive Manufacturing Systems. Journal of Manufacturing Systems, 2022, 62, 857-874.	7.6	89
2	Influence of the microstructural homogeneity on the high-temperature oxidation behavior of a single crystalline Ni-base superalloy. Scripta Materialia, 2022, 207, 114301.	2.6	18
3	Electron-optical in-situ metrology for electron beam powder bed fusion: calibration and validation. Measurement Science and Technology, 2022, 33, 014001.	1.4	4
4	Microstructural evolution and mechanical properties in Zrâ€“Cuâ€“Alâ€“Nb bulk metallic glass composites prepared by laser metal deposition. Intermetallics, 2022, 140, 107393.	1.8	3
5	In-situ Al3Ti particle reinforcement for stiff aluminum die castings. Journal of Alloys and Compounds, 2022, 904, 163984.	2.8	11
6	Impact of Endothelial Progenitor Cells in the Vascularization of Osteogenic Scaffolds. Cells, 2022, 11, 926.	1.8	3
7	Very high cycle fatigue durability of an additively manufactured single-crystal Ni-based superalloy. Additive Manufacturing, 2022, 54, 102759.	1.7	6
8	Practically applicable water oxidation electrodes from 3D-printed Ti6Al4V scaffolds with surface nanostructuration and iridium catalyst coating. Electrochimica Acta, 2022, 417, 140308.	2.6	6
9	Actual state-of-the-art of electron beam powder bed fusion. European Journal of Materials, 2022, 2, 54-116.	0.8	32
10	Microvascular development in the rat arteriovenous loop model in vivoâ€”A step by step intravital microscopy analysis. Journal of Biomedical Materials Research - Part A, 2022, , .	2.1	4
11	Microstructure analysis and mechanical properties of electron beam powder bed fusion (PBF-EB)-manufactured Î³-titanium aluminide (TiAl) at elevated temperatures. Materialpruefung/Materials Testing, 2022, 64, 636-646.	0.8	4
12	Evolution of an industrial-grade Zr-based bulk metallic glass during multiple laser beam melting. Journal of Non-Crystalline Solids, 2022, 589, 121649.	1.5	11
13	Correlation of powder degradation, energy absorption and gas pore formation in laser-based powder bed fusion process of AlSi10Mg0.4. Additive Manufacturing, 2022, 56, 102917.	1.7	0
14	In-situ synchrotron X-ray analysis of metal Additive Manufacturing: Current state, opportunities and challenges. Materials and Design, 2022, 219, 110790.	3.3	23
15	A novel approach for powder bed-based additive manufacturing of compositionally graded composites. Additive Manufacturing, 2022, 56, 102916.	1.7	2
16	Revealing dynamic processes in laser powder bed fusion with in situ X-ray diffraction at PETRA III. Review of Scientific Instruments, 2022, 93, 065104.	0.6	3
17	Laser powder bed fusion of FeCoBSiNb-Cu bulk metallic glass composites: Processing, microstructure and mechanical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 849, 143405.	2.6	4
18	Basic Mechanism of Surface Topography Evolution in Electron Beam Based Additive Manufacturing. Materials, 2022, 15, 4754.	1.3	5

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19	Human Umbilical Vein Endothelial Cell Support Bone Formation of Adipose-Derived Stem Cell-Loaded and 3D-Printed Osteogenic Matrices in the Arteriovenous Loop Model. Tissue Engineering - Part A, 2021, 27, 413-423.	1.6	18
20	Secondary Recrystallization of Nickel-Base Superalloy CM 247 LC After Processing by Metal Injection Molding. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 512-519.	1.1	0
21	Automatised quality assessment in additive layer manufacturing using layer-by-layer surface measurements and deep learning. Procedia CIRP, 2021, 99, 342-347.	1.0	4
22	Thermoelastic properties and Î³â€™-solvus temperatures of single-crystal Ni-base superalloys. Journal of Materials Science, 2021, 56, 7637-7658.	1.7	12
23	Comparison of Transmission Measurement Methods of Elastic Waves in Phononic Band Gap Materials. Materials, 2021, 14, 1133.	1.3	1
24	A Novel Approach to Predict the Process-Induced Mechanical Behavior of Additively Manufactured Materials. Journal of Materials Engineering and Performance, 2021, 30, 5235-5246.	1.2	6
25	In Situ Observation of Î³â€² Phase Transformation Dynamics During Selective Laser Melting of CMSXâ€4. Advanced Engineering Materials, 2021, 23, 2100112.	1.6	11
26	Modeling Laser Beam Absorption of Metal Alloys at High Temperatures for Selective Laser Melting. Advanced Engineering Materials, 2021, 23, 2100137.	1.6	12
27	Multi-material model for the simulation of powder bed fusion additive manufacturing. Computational Materials Science, 2021, 194, 110415.	1.4	21
28	New Grain Formation Mechanisms during Powder Bed Fusion. Materials, 2021, 14, 3324.	1.3	8
29	Watching the Vessels Grow: Establishment of Intravital Microscopy in the Arteriovenous Loop Rat Model. Tissue Engineering - Part C: Methods, 2021, 27, 357-365.	1.1	4
30	A Single Crystal Process Window for Electron Beam Powder Bed Fusion Additive Manufacturing of a CMSX-4 Type Ni-Based Superalloy. Materials, 2021, 14, 3785.	1.3	19
31	Numerical Alloy Development for Additive Manufacturing towards Reduced Cracking Susceptibility. Crystals, 2021, 11, 902.	1.0	7
32	A scale-bridging study of the influence of TCP phases on the mechanical properties of an additive manufactured Ni-base superalloy combining microcompression testing, X-ray nanotomography and TEM. Microscopy and Microanalysis, 2021, 27, 938-942.	0.2	0
33	Personalized medicine for reconstruction of critical-size bone defects â€“ a translational approach with customizable vascularized bone tissue. Npj Regenerative Medicine, 2021, 6, 49.	2.5	19
34	Free Transplantation of a Tissue Engineered Bone Graft into an Irradiated, Critical-Size Femoral Defect in Rats. Cells, 2021, 10, 2256.	1.8	3
35	A multivariate meltpool stability criterion for fabrication of complex geometries in electron beam powder bed fusion. Additive Manufacturing, 2021, 45, 102051.	1.7	8
36	In-situ electron optical measurement of thermal expansion in electron beam powder bed fusion. Additive Manufacturing, 2021, 46, 102213.	1.7	5

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37	Isothermal crystallization kinetics of an industrial-grade Zr-based bulk metallic glass. Journal of Non-Crystalline Solids, 2021, 573, 121145.	1.5	20
38	How electron beam melting tailors the Al-sensitive microstructure and mechanical response of a novel process-adapted <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si53.svg"><mml:mrow><mml:mi>Î³</mml:mi></mml:mrow></mml:math>-TiAl based alloy. Materials and Design, 2021, 212, 110187.	3.3	22
39	Effect of AlSi10Mg0.4 long-term reused powder in PBF-LB/M on the mechanical properties. Materials and Design, 2021, 212, 110176.	3.3	21
40	Improving the Effectiveness of the Solid-Solution-Strengthening Elements Mo, Re, Ru and W in Single-Crystalline Nickel-Based Superalloys. Metals, 2021, 11, 1707.	1.0	11
41	Electron-Optical In Situ Imaging for the Assessment of Accuracy in Electron Beam Powder Bed Fusion. Materials, 2021, 14, 7240.	1.3	7
42	A novel mechanism to generate metallic single crystals. Scientific Reports, 2021, 11, 24482.	1.6	20
43	Comparison of passive scalar transport models coupled with the Lattice Boltzmann method. Computers and Mathematics With Applications, 2020, 79, 55-65.	1.4	13
44	Additively manufactured RANEYÂ®-type copper catalyst for methanol synthesis. Catalysis Science and Technology, 2020, 10, 164-168.	2.1	8
45	In Operando Monitoring by Analysis of Backscattered Electrons during Electron Beam Melting. Advanced Engineering Materials, 2020, 22, 1901102.	1.6	10
46	S??PLE: A Software Suite to Predict Consolidation and Microstructure for Powder Bed Fusion Additive Manufacturing. Advanced Engineering Materials, 2020, 22, 1901270.	1.6	11
47	Microstructure and properties of TiAl processed via an electron beam powder bed fusion capsule technology. Intermetallics, 2020, 126, 106929.	1.8	24
48	Exploring the fundamentals of Ni-based superalloy single crystal (SX) alloy design: Chemical composition vs. microstructure. Materials and Design, 2020, 195, 108976.	3.3	37
49	Nanoscaled eutectic NiAl-(Cr,Mo) composites with exceptional mechanical properties processed by electron beam melting. Scientific Reports, 2020, 10, 15153.	1.6	10
50	Processing of in situ Al3Ti/Al composites by advanced high shear technology: influence of mixing speed. International Journal of Advanced Manufacturing Technology, 2020, 110, 1589-1599.	1.5	6
51	Modeling and Simulation of Microstructure Evolution for Additive Manufacturing of Metals: A Critical Review. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 4970-4983.	1.1	79
52	New Grain Formation by Constitutional Undercooling Due to Remelting of Segregated Microstructures during Powder Bed Fusion. Materials, 2020, 13, 5517.	1.3	10
53	Processing 4th generation titanium aluminides via electron beam based additive manufacturing â€“ characterization of microstructure and mechanical properties. Materialia, 2020, 14, 100902.	1.3	50
54	Formation kinetics and phase stability of in-situ Al3Ti particles in aluminium casting alloys with varying Si content. Results in Materials, 2020, 7, 100103.	0.9	9

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55	Measuring procedures for surface evaluation of additively manufactured powder bed-based polymer and metal parts. Measurement Science and Technology, 2020, 31, 095202.	1.4	17
56	Fabrication of Single Crystals through a Âµ-Helix Grain Selection Process during Electron Beam Metal Additive Manufacturing. Metals, 2020, 10, 313.	1.0	42
57	Small scale testing of IN718 single crystals manufactured by EB-PBF. Additive Manufacturing, 2020, 36, 101449.	1.7	11
58	Effect of the oxygen content of pure copper powder on selective electron beam melting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 779, 139106.	2.6	40
59	Preparation of Fe-Co-B-Si-Nb bulk metallic glasses by laser powder bed fusion: Microstructure and properties. Materials Characterization, 2020, 162, 110206.	1.9	34
60	Periodic Open Cellular Raneyâ€€Copper Catalysts Fabricated via Selective Electron Beam Melting. Advanced Engineering Materials, 2020, 22, 1901524.	1.6	5
61	Grain Structure Evolution of Alâ€“Cu Alloys in Powder Bed Fusion with Laser Beam for Excellent Mechanical Properties. Materials, 2020, 13, 82.	1.3	17
62	On the Influence of Alloy Composition on Creep Behavior of Ni-Based Single-Crystal Superalloys (SXs). Minerals, Metals and Materials Series, 2020, , 60-70.	0.3	2
63	Microstructures and Mechanical Properties of Al 3 Ti/Al Composites Produced In Situ by High Shearing Technology. Advanced Engineering Materials, 2019, 21, 1800259.	1.6	16
64	Predictive simulation of process windows for powder bed fusion additive manufacturing: Influence of the powder size distribution. Computers and Mathematics With Applications, 2019, 78, 2351-2359.	1.4	32
65	Creep properties of single crystal Ni-base superalloys (SX): A comparison between conventionally cast and additive manufactured CMSX-4 materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 762, 138098.	2.6	38
66	In situ Al₃Ti/Al composites fabricated by high shear technology: microstructure and mechanical properties. Materials Science and Technology, 2019, 35, 2294-2303.	0.8	9
67	Growth and coarsening kinetics of gamma prime precipitates in CMSX-4 under simulated additive manufacturing conditions. Acta Materialia, 2019, 180, 84-96.	3.8	28
68	Effect of heat treatment on the high temperature fatigue life of single crystalline nickel base superalloy additively manufactured by means of selective electron beam melting. Scripta Materialia, 2019, 168, 124-128.	2.6	28
69	Numerical microstructure prediction by a coupled finite element cellular automaton model for selective electron beam melting. Computational Materials Science, 2019, 162, 148-155.	1.4	57
70	Immediate development of processing windows for selective electron beam melting using layerwise monitoring via backscattered electron detection. Materials Letters, 2019, 249, 70-72.	1.3	34
71	Advanced process strategy to realize microducts free of powder using selective electron beam melting. International Journal of Advanced Manufacturing Technology, 2019, 103, 1291-1296.	1.5	7
72	Formation of topologically closed packed phases within CMSX-4 single crystals produced by additive manufacturing. Materials Letters: X, 2019, 1, 100003.	0.3	7

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73	3D Printed Copper Waveguides by Selective Electron Beam Melting Process for E-Band. , 2019, , .		5
74	Selective electron beam melting of an aluminum bronze: Microstructure and mechanical properties. Materials Letters, 2019, 238, 241-244.	1.3	21
75	MultOpt++: a fast regression-based model for the development of compositions with high robustness against scatter of element concentrations. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 024001.	0.8	6
76	MultOpt++: a fast regression-based model for the constraint violation fraction due to composition uncertainties. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 025001.	0.8	1
77	Processing windows for Ti-6Al-4V fabricated by selective electron beam melting with improved beam focus and different scan line spacings. Rapid Prototyping Journal, 2019, 25, 665-671.	1.6	15
78	Crushing Behavior of Graded Auxetic Structures Built from Inverted Tetrapods under Impact. Physica Status Solidi (B): Basic Research, 2019, 256, 1800040.	0.7	17
79	Impact of build envelope on the properties of additive manufactured parts from AlSi10Mg. Optics and Laser Technology, 2019, 111, 51-57.	2.2	36
80	Process development of 99.95% pure copper processed via selective electron beam melting and its mechanical and physical properties. Materials Characterization, 2018, 143, 163-170.	1.9	101
81	3D multi-layer grain structure simulation of powder bed fusion additive manufacturing. Acta Materialia, 2018, 152, 119-126.	3.8	131
82	Selective electron beam melting of a copper-chrome powder mixture. Materials Letters, 2018, 223, 250-252.	1.3	24
83	Powder layer deposition algorithm for additive manufacturing simulations. Powder Technology, 2018, 330, 125-136.	2.1	30
84	Pedicled Transplantation of Axially Vascularized Bone Constructs in a Critical Size Femoral Defect. Tissue Engineering - Part A, 2018, 24, 479-492.	1.6	23
85	3D grain growth simulation and experimental verification in laser beam melting of IN718. Procedia CIRP, 2018, 74, 82-86.	1.0	1
86	Highâ€Volume Productionâ€Compatible Technologies for Light Metal and Fiber Compositeâ€Based Components with Integrated Piezoceramic Sensors and Actuators. Advanced Engineering Materials, 2018, 20, 1801001.	1.6	3
87	Layerwise monitoring of electron beam melting via backscatter electron detection. Rapid Prototyping Journal, 2018, 24, 1401-1406.	1.6	48
88	Selective Electron Beam Melting of Oxide Dispersion Strengthened Copper. Advanced Engineering Materials, 2018, 20, 1800068.	1.6	15
89	Development of Single-Crystal Ni-Base Superalloys Based on Multi-criteria Numerical Optimization and Efficient Use of Refractory Elements. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 4134-4145.	1.1	18
90	Microstructure and Mechanical Properties of CMSX-4 Single Crystals Prepared by Additive Manufacturing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3781-3792.	1.1	114

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91	Optimization of Mechanical Properties of Alâ€“Alâ€Compound Castings by Adapted Heat Treatment. Advanced Engineering Materials, 2018, 20, 1800400.	1.6	5
92	Additive manufacturing of Ti-45Al-4Nb-C by selective electron beam melting for automotive applications. Additive Manufacturing, 2018, 22, 118-126.	1.7	70
93	Modeling of Laser Beam Absorption in a Polymer Powder Bed. Polymers, 2018, 10, 784.	2.0	34
94	Macroscopic simulation and experimental measurement of melt pool characteristics in selective electron beam melting of Ti-6Al-4V. International Journal of Advanced Manufacturing Technology, 2017, 88, 1309-1317.	1.5	88
95	Influence of the hatching strategy on consolidation during selective electron beam melting of Ti-6Al-4V. International Journal of Advanced Manufacturing Technology, 2017, 92, 2809-2818.	1.5	37
96	On the Influence of Ta and Ti on Heatâ€Treatability and Î³/Î³â€™â€Partitioning of High W Containing Reâ€Free Nickelâ€Based Superalloys. Advanced Engineering Materials, 2017, 19, 1700150.	1.6	17
97	Numerical simulation of multi-component evaporation during selective electron beam melting of TiAl. Journal of Materials Processing Technology, 2017, 247, 280-288.	3.1	99
98	A multi-component evaporation model for beam melting processes. Modelling and Simulation in Materials Science and Engineering, 2017, 25, 025003.	0.8	42
99	Fabrication and characterisation of a fully auxetic 3D lattice structure via selective electron beam melting. Smart Materials and Structures, 2017, 26, 025013.	1.8	84
100	Evolution of full phononic band gaps in periodic cellular structures. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	1.1	18
101	Electrophoretic Deposition of Boehmite on Additively Manufactured, Interpenetrating Periodic Open Cellular Structures for Catalytic Applications. Industrial & Engineering Chemistry Research, 2017, 56, 13402-13410.	1.8	15
102	Single phase 3D phononic band gap material. Scientific Reports, 2017, 7, 3843.	1.6	56
103	A process chain for integrating piezoelectric transducers into aluminum die castings to generate smart lightweight structures. Results in Physics, 2017, 7, 2534-2539.	2.0	10
104	Simulation of grain structure evolution during powder bed based additive manufacturing. Additive Manufacturing, 2017, 13, 124-134.	1.7	82
105	Design and Additive Manufacturing of 3D Phononic Band Gap Structures Based on Gradient Based Optimization. Materials, 2017, 10, 1125.	1.3	52
106	Predictive Simulation of Process Windows for Powder Bed Fusion Additive Manufacturing: Influence of the Powder Bulk Density. Materials, 2017, 10, 1117.	1.3	74
107	Transmission Electron Microscopy of a CMSX-4 Ni-Base Superalloy Produced by Selective Electron Beam Melting. Metals, 2016, 6, 258.	1.0	20
108	Wrought Al - Cast Al compound casting based on zincate treatment for aluminum wrought alloy inserts. Journal of Materials Processing Technology, 2016, 238, 160-168.	3.1	18

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109	Multiscale Modeling of Powder Bedâ€“Based Additive Manufacturing. Annual Review of Materials Research, 2016, 46, 93-123.	4.3	281
110	Additive manufacturing of metallic components by selective electron beam melting â€” a review. International Materials Reviews, 2016, 61, 361-377.	9.4	683
111	A coupled Cellular Automatonâ€“Lattice Boltzmann model for grain structure simulation during additive manufacturing. Computational Materials Science, 2016, 124, 37-48.	1.4	152
112	Thermal and Electrical Conductivity of 99.9% Pure Copper Processed via Selective Electron Beam Melting. Advanced Engineering Materials, 2016, 18, 1661-1666.	1.6	81
113	Impact of hot isostatic pressing on microstructures of CMSX-4 Ni-base superalloy fabricated by selective electron beam melting. Materials and Design, 2016, 110, 720-727.	3.3	68
114	The effect of a negative Poissonâ€™s ratio on thermal stresses in cellular metallic structures. Smart Materials and Structures, 2016, 25, 115038.	1.8	5
115	Grain structure evolution in Inconel 718 during selective electron beam melting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 668, 180-187.	2.6	238
116	Microstructure of the Nickel-Base Superalloy CMSX-4 Fabricated by Selective Electron Beam Melting. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 1469-1480.	1.1	159
117	Fabrication and pressure drop behavior of novel monolithic structures with zeolitic architectures. Chemical Engineering Journal, 2016, 288, 223-227.	6.6	10
118	Lattice Boltzmann method for Oldroyd-B fluids. Computers and Fluids, 2016, 124, 190-196.	1.3	21
119	Solution Heat Treatment of the Single Crystal Nickelâ€Base Superalloy CMSXâ€4 Fabricated by Selective Electron Beam Melting. Advanced Engineering Materials, 2015, 17, 1486-1493.	1.6	84
120	Active Vibration Damping in Structural Aluminum Die Castings via Piezoelectricity â€“ Technology and Characterization. Advanced Engineering Materials, 2015, 17, 969-975.	1.6	13
121	Influence of the Scanning Strategy on the Microstructure and Mechanical Properties in Selective Electron Beam Melting of Tiâ€“6Alâ€“4V. Advanced Engineering Materials, 2015, 17, 1573-1578.	1.6	61
122	Phononic Band Gaps in 2D Quadratic and 3D Cubic Cellular Structures. Materials, 2015, 8, 8327-8337.	1.3	33
123	Process development for the manufacturing of 99.94% pure copper via selective electron beam melting. Materials Letters, 2015, 143, 298-301.	1.3	110
124	Numerical investigations on hatching process strategies for powder-bed-based additive manufacturing using an electron beam. International Journal of Advanced Manufacturing Technology, 2015, 78, 239-247.	1.5	40
125	Evaluation of polarisation state of light metal embedded piezoelectrics. Advances in Applied Ceramics, 2015, 114, 226-230.	0.6	4
126	Free surface Neumann boundary condition for the advectionâ€“diffusion lattice Boltzmann method. Journal of Computational Physics, 2015, 301, 230-246.	1.9	10

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127	A systematic approach to identify cellular auxetic materials. Smart Materials and Structures, 2015, 24, 025013.	1.8	83
128	Efficient hydrogen release from perhydro-N-ethylcarbazole using catalyst-coated metallic structures produced by selective electron beam melting. Energy and Environmental Science, 2015, 8, 641-649.	15.6	71
129	Additive manufacturing of nickel-based superalloy Inconel 718 by selective electron beam melting: Processing window and microstructure. Journal of Materials Research, 2014, 29, 1987-1996.	1.2	156
130	Zellulare 3D-Strukturen mit periodisch kubischen Einheitszellen: Einfluss der PorositÃt und der Zellorientierung auf den Druckverlust. Chemie-Ingenieur-Technik, 2014, 86, 1599-1600.	0.4	0
131	Validation experiments for LBM simulations of electron beam melting. International Journal of Modern Physics C, 2014, 25, 1441009.	0.8	12
132	Aluminum integral foam castings with microcellular cores by nano-functionalization. Journal of Materials Science, 2014, 49, 79-87.	1.7	4
133	Selective electron beam melting of Tiâ€“48Alâ€“2Nbâ€“2Cr: Microstructure and aluminium loss. Intermetallics, 2014, 49, 29-35.	1.8	176
134	Simulating fast electron beam melting with a parallel thermal free surface lattice Boltzmann method. Computers and Mathematics With Applications, 2014, 67, 318-330.	1.4	93
135	Melt pool dynamics during selective electron beam melting. Applied Physics A: Materials Science and Processing, 2014, 114, 1303-1307.	1.1	36
136	Modelling of electron beam absorption in complex geometries. Journal Physics D: Applied Physics, 2014, 47, 065307.	1.3	70
137	Phononic Band Gaps in Periodic Cellular Materials. Advanced Engineering Materials, 2014, 16, 328-334.	1.6	34
138	Aluminum integral foams with tailored density profile by adapted blowing agents. Applied Physics A: Materials Science and Processing, 2014, 115, 651-660.	1.1	1
139	Evaporation model for beam based additive manufacturing using free surface lattice Boltzmann methods. Journal Physics D: Applied Physics, 2014, 47, 275303.	1.3	112
140	Defect generation and propagation mechanism during additive manufacturing by selective beam melting. Journal of Materials Processing Technology, 2014, 214, 2522-2528.	3.1	273
141	Periodic open cellular structures with ideal cubic cell geometry: Effect of porosity and cell orientation on pressure drop behavior. Chemical Engineering Journal, 2014, 242, 364-378.	6.6	96
142	Processing window and evaporation phenomena for Tiâ€“6Alâ€“4V produced by selective electron beam melting. Acta Materialia, 2014, 76, 252-258.	3.8	179
143	Tailoring the grain structure of IN718 during selective electron beam melting. MATEC Web of Conferences, 2014, 14, 08001.	0.1	94
144	Mesh resolution consideration for the viability prediction of lost salt cores in the high pressure die casting process. Progress in Computational Fluid Dynamics, 2014, 14, 24.	0.1	5

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145	The influence of sandblasting on the morphology of electroless deposited zinclayers on aluminum sheets. Applied Surface Science, 2013, 283, 202-208.	3.1	20
146	Electron Beam Absorption Algorithms for Electron Beam Melting Processes Simulated by a Three-Dimensional Thermal Free Surface Lattice Boltzmann Method in a Distributed and Parallel Environment. Procedia Computer Science, 2013, 18, 2127-2136.	1.2	25
147	Integration of PZT-Ceramic Modules using Hybrid Structures in High Pressure Die Casting. , 2013, 2, 166-172.		11
148	Fundamental consolidation mechanisms during selective beam melting of powders. Modelling and Simulation in Materials Science and Engineering, 2013, 21, 085011.	0.8	215
149	Core Viability Simulation for Salt Core Technology in High-Pressure Die Casting. International Journal of Metalcasting, 2013, 7, 39-45.	1.5	19
150	Biomechanical behavior of bone scaffolds made of additive manufactured tricalciumphosphate and titanium alloy under different loading conditions. Journal of Applied Biomaterials and Functional Materials, 2013, 11, 159-166.	0.7	15
151	Maintenance of a bone collagen phenotype by osteoblast-like cells in 3D periodic porous titanium (Ti-6Al-4â€‰V) structures fabricated by selective electron beam melting. Connective Tissue Research, 2013, 54, 351-360.	1.1	33
152	Application of ICME Methods for the Development of Rapid Manufacturing Technologies. , 2013, , 75-80.		0
153	Influence of the fabrication process on the functionality of piezoceramic patch transducers embedded in aluminum die castings. Smart Materials and Structures, 2012, 21, 115014.	1.8	18
154	In situ flaw detection by IRâ€imaging during electron beam melting. Rapid Prototyping Journal, 2012, 18, 259-263.	1.6	108
155	Combination of Extrinsic and Intrinsic Pathways Significantly Accelerates Axial Vascularization of Bioartificial Tissues. Plastic and Reconstructive Surgery, 2012, 129, 55e-65e.	0.7	49
156	Mechanical characterisation of a periodic auxetic structure produced by SEBM. Physica Status Solidi (B): Basic Research, 2012, 249, 1347-1352.	0.7	86
157	Beschichtung von MetalltrÃgern mit nanoporÃ¶sem Kohlenstoff fÃ¼r die Katalyse. Chemie-Ingenieur-Technik, 2012, 84, 1320-1321.	0.4	0
158	Process specific catalyst supportsâ€"Selective electron beam melted cellular metal structures coated with microporous carbon. Chemical Engineering Journal, 2012, 181-182, 725-733.	6.6	30
159	Mesoscopic simulation of selective beam melting processes. Journal of Materials Processing Technology, 2011, 211, 978-987.	3.1	357
160	Aluminum Integral Foams with Nearâ€Microcellular Structure. Advanced Engineering Materials, 2011, 13, 1050-1055.	1.6	16
161	Design of Auxetic Structures via Mathematical Optimization. Advanced Materials, 2011, 23, 2650-2654.	11.1	159
162	Finding Auxetic Frameworks in Periodic Tessellations. Advanced Materials, 2011, 23, 2669-2674.	11.1	67

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163	AUXETIC TILINGS: Finding Auxetic Frameworks in Periodic Tessellations (Adv. Mater. 22-23/2011). Advanced Materials, 2011, 23, 2662-2662.	11.1	0
164	Compressionâ€compression fatigue of selective electron beam melted cellular titanium (Tiâ€6Alâ€4V). Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2011, 99B, 313-320.	1.6	151
165	Periodic open-cell foams: Pressure drop measurements and modeling of an ideal tetrakaidecahedra packing. Chemical Engineering Science, 2011, 66, 2758-2763.	1.9	104
166	Lattice Boltzmann model for thermal free surface flows with liquidâ€“solid phase transition. International Journal of Heat and Fluid Flow, 2011, 32, 156-163.	1.1	84
167	Aluminiumâ€“aluminium compound fabrication by high pressure die casting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7024-7029.	2.6	54
168	In vivo performance of selective electron beamâ€melted Tiâ€6Alâ€4V structures. Journal of Biomedical Materials Research - Part A, 2010, 92A, 56-62.	2.1	154
169	Auxetic cellular structures through selective electron-beam melting. Physica Status Solidi (B): Basic Research, 2010, 247, 269-272.	0.7	134
170	Lattice Boltzmann method for dynamic wetting problems. Journal of Colloid and Interface Science, 2009, 335, 84-93.	5.0	55
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