

Da Shu

List of Publications by Year in descending order

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papers

2,809
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186209

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1908
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#	ARTICLE	IF	CITATIONS
1	Elemental mapping and quantitative characterization of dendrite structure in IN718 superalloy based on micro beam X-ray fluorescence and EPMA. <i>Vacuum</i> , 2022, 198, 110859.	1.6	3
2	Niobium nanoparticle-enabled grain refinement of a crack-free high strength Al-Zn-Mg-Cu alloy manufactured by selective laser melting. <i>Journal of Alloys and Compounds</i> , 2022, 900, 163427.	2.8	25
3	Decreasing Zr content to improve tensile properties of non-equiatomic TiZrHfNb medium entropy alloys with transformation-induced plasticity. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 832, 142476.	2.6	8
4	Revealing the influence of Fe on Fe-rich phases formation and mechanical properties of cast Al-Mg-Mn-Fe alloys. <i>Journal of Alloys and Compounds</i> , 2022, 901, 163666.	2.8	29
5	Designing lightweight dual-phase refractory VNbTiSi-based eutectic high-entropy alloys for use at elevated temperatures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 842, 143112.	2.6	12
6	Effect of trace boron on grain refinement of commercially pure aluminum by Al-5Ti-1B. <i>Transactions of Nonferrous Metals Society of China</i> , 2022, 32, 1061-1069.	1.7	7
7	Precipitation, transformation, and coarsening of carbides in a high-carbon Ni-based superalloy during selective laser melting and hot isostatic pressing processes. <i>Journal of Alloys and Compounds</i> , 2022, 913, 165196.	2.8	16
8	Microstructure and Crystallization Evolution of Directionally Solidified Al-Cu-Si Alloys With the Assistance of a Static Magnetic Field. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2022, 53, 3166-3178.	1.1	6
9	Microstructures and mechanical properties of GTD222 superalloy fabricated by selective laser melting. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 807, 140668.	2.6	12
10	High Temperature Behaviors of a Casting Nickel-Based Superalloy Used for 815 °C. <i>Materials</i> , 2021, 14, 716.	1.3	3
11	In Situ Investigation of the Solidification of Al-20 wt.% Zn Alloys Inoculated by Al-5Ti-1B. <i>Journal of Materials Engineering and Performance</i> , 2021, 30, 5742-5749.	1.2	1
12	Hydrogen production using AlGaInSn alloy with semi-solid structures. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 32595-32601.	3.8	5
13	A novel AlGa@Gr material for ultrasound enhanced hydrogen generation. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 39499-39508.	3.8	2
14	Ultrasound cavitation induced nucleation in metal solidification: An analytical model and validation by real-time experiments. <i>Ultrasonics Sonochemistry</i> , 2021, 80, 105832.	3.8	20
15	The growth restriction effect of TiCN nanoparticles on Al-Cu-Zr alloys via ultrasonic treatment. <i>Ultrasonics Sonochemistry</i> , 2021, 80, 105829.	3.8	7
16	Grain size prediction and investigation of 7055 aluminum alloy inoculated by Al-5Ti-1B master alloy. <i>Journal of Alloys and Compounds</i> , 2020, 821, 153504.	2.8	23
17	Formation of multilayer interfaces and the load transfer in graphene nanoplatelets reinforced Al matrix composites. <i>Materials Characterization</i> , 2020, 159, 110018.	1.9	32
18	CALPHAD aided eutectic high-entropy alloy design. <i>Materials Letters</i> , 2020, 262, 127175.	1.3	40

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19	Mechanical instability and tensile properties of TiZrHfNbTa high entropy alloy at cryogenic temperatures. <i>Acta Materialia</i> , 2020, 201, 517-527.	3.8	103
20	Engineering computing and data-driven for gating system design in investment casting. <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 111, 829-837.	1.5	13
21	Influence of Static Magnetic Field on the Microstructure of Nickel-Based Superalloy by Laser-Directed Energy Deposition. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020, 51, 3354-3359.	1.1	18
22	Composite sodium metal anodes for practical applications. <i>Journal of Materials Chemistry A</i> , 2020, 8, 15399-15416.	5.2	36
23	An enhanced strength Ni matrix composite reinforced by a 3D network structure of TiN nano-particles. <i>Materials and Design</i> , 2020, 191, 108638.	3.3	15
24	Inhibition of cracking by grain boundary modification in a non-weldable nickel-based superalloy processed by laser powder bed fusion. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 791, 139745.	2.6	51
25	Kinking in a refractory TiZrHfNb _{0.7} medium-entropy alloy. <i>Materials Letters</i> , 2020, 264, 127369.	1.3	28
26	Multiscale characterization of the nucleation and 3D structure of Al ₃ Sc phases using electron microscopy and synchrotron X-ray tomography. <i>Materials Characterization</i> , 2020, 164, 110353.	1.9	18
27	Reversible Photodriven Droplet Motion on Ti ₃ C ₂ MXene Film for Diverse Liquids. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 19194-19200.	4.0	8
28	Design of high-ductile medium entropy alloys for dental implants. <i>Materials Science and Engineering C</i> , 2020, 113, 110959.	3.8	54
29	Influence of static magnetic field on microstructure and mechanical behavior of selective laser melted AlSi10Mg alloy. <i>Materials and Design</i> , 2019, 181, 107923.	3.3	51
30	Relationship of particle stimulated nucleation, recrystallization and mechanical properties responding to Fe and Si contents in hot-extruded 7055 aluminum alloys. <i>Journal of Materials Science and Technology</i> , 2019, 35, 2570-2581.	5.6	68
31	Rapid casting of complex impeller based on 3D printing wax pattern and simulation optimization. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 100, 2629-2635.	1.5	28
32	Physical simulation of investment casting for GTD-222 Ni-based superalloy processed by controlled cooling rates. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 105, 3531-3542.	1.5	3
33	Process parameter effects on solidification behavior of the superalloy during investment casting. <i>Materials and Manufacturing Processes</i> , 2019, 34, 1726-1736.	2.7	5
34	On Formation of Abnormally Large Grains in Annealing Prestrained Aluminum Alloy Multiport Extrusion Tubes. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019, 50, 5734-5749.	1.1	6
35	Strength Variation in Processing Multiport Extrusion Tubes of A1100 and A3102 Alloys. <i>Journal of Materials Engineering and Performance</i> , 2019, 28, 3576-3589.	1.2	3
36	Influence of build orientation on microstructure, mechanical and corrosion behavior of Inconel 718 processed by selective laser melting. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 760, 469-480.	2.6	66

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37	Novel in situ synthesized carbide reinforced Ni base composite for structural castings with high creep resistance. <i>Materials and Design</i> , 2019, 172, 107711.	3.3	13
38	Creep behaviors of MC carbide reinforced nickel based composite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 756, 11-17.	2.6	13
39	An in situ investigation of the solute suppressed nucleation zone in an Al-15wt% Cu alloy inoculated by Al-Ti-B. <i>Scripta Materialia</i> , 2019, 167, 6-10.	2.6	47
40	Cryogenic quenching enhancement of a nanoporous surface. <i>International Journal of Heat and Mass Transfer</i> , 2019, 134, 1061-1072.	2.5	21
41	FCC-L12 ordering transformation in equimolar FeCoNiV multi-principal element alloy. <i>Materials and Design</i> , 2019, 168, 107648.	3.3	21
42	In situ Investigation of the Heterogeneous Nucleation Sequence in Al-15 Weight Percent Cu Alloy Inoculated by Al-Ti-B. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019, 50, 1795-1804.	1.1	17
43	Prediction of core deflection in wax injection for investment casting by using SVM and BPNN. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 101, 2165-2173.	1.5	16
44	The propagation and accumulation of dimensional shrinkage for ring-to-ring structure in investment casting. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 96, 623-629.	1.5	5
45	Microstructure evolution and properties of graphene nanoplatelets reinforced aluminum matrix composites. <i>Materials Characterization</i> , 2018, 140, 172-178.	1.9	111
46	Prediction of Cavitation Depth in an Al-Cu Alloy Melt with Bubble Characteristics Based on Synchrotron X-ray Radiography. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 2193-2201.	1.1	10
47	Fracture surface characterization of laser welding processed Ti alloy to stainless steel joints. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2018, 62, 947-960.	1.3	14
48	Dispersoids and Ti_3Al precipitates in an ultrafine grained RenÃ© 88DT Al -5vol.% Y_2O_3 alloy with outstanding thermal stability. <i>Materials Characterization</i> , 2018, 141, 139-147.	1.9	11
49	In situ synthesised WC reinforced nickel coating by laser cladding. <i>Surface Engineering</i> , 2018, 34, 276-282.	1.1	24
50	In-situ fabrication of graded material with the application of a horizontal magnetic field during directional solidification. <i>Materials Characterization</i> , 2018, 141, 423-432.	1.9	10
51	Microstructure and mechanical properties of the TiN particles reinforced IN718C composite. <i>Journal of Alloys and Compounds</i> , 2018, 762, 237-245.	2.8	30
52	An optimization method of gating system for impeller by RSM and simulation in investment casting. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 98, 3105-3114.	1.5	13
53	Effect of Ag Content on the Microstructure and Crystallization of Coupled Eutectic Growth in Directionally Solidified Al-Cu-Ag Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 4735-4747.	1.1	7
54	In Situ Observation of the Zr Poisoning Effect in Al Alloys Inoculated by Al-Ti-B. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 4771-4784.	1.1	15

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55	Temperature and concentration dependence of the physical properties and local structures of molten NaCl-KCl-LiCl mixtures. <i>Journal of Molecular Liquids</i> , 2017, 229, 330-338.	2.3	11
56	Thermal degradation behaviour of resins in aluminium composite under isothermal condition. <i>Polymer Testing</i> , 2017, 61, 448-454.	2.3	3
57	Phase constituents and growth mechanism of laser in situ synthesized WC reinforced composite coating with W-C-Ni system. <i>Journal of Materials Research</i> , 2017, 32, 557-565.	1.2	10
58	Study of age hardening in a Mg-2.2 wt%Nd alloy by in situ synchrotron X-ray diffraction and mechanical tests. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 708, 319-328.	2.6	21
59	Influence Factors of Aluminum-Slag Interfacial Reaction Under Electric Field. <i>Acta Metallurgica Sinica (English Letters)</i> , 2017, 30, 753-761.	1.5	0
60	Effect of Mg on the Microstructure and Corrosion Resistance of the Continuously Hot-Dip Galvanizing Zn-Mg Coating. <i>Materials</i> , 2017, 10, 980.	1.3	16
61	The Removal of Impurity Silicon from Aluminum Melt by the Addition of K_2TiF_6 . <i>Key Engineering Materials</i> , 2017, 748, 192-196.	0.4	1
62	Online Electromagnetic Filtration of Molten Aluminum Using a Multistage Separator System. <i>Journal for Manufacturing Science and Production</i> , 2015, 15, 89-92.	0.1	0
63	Study of Microsegregation and Laves Phase in INCONEL718 Superalloy Regarding Cooling Rate During Solidification. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 354-361.	1.1	48
64	In situ small angle X-ray scattering investigation of ultrasound induced nucleation in a metallic alloy melt. <i>Scripta Materialia</i> , 2015, 106, 21-25.	2.6	41
65	Effects of silicon content on microstructure and stress corrosion cracking resistance of 7050 aluminum alloy. <i>Transactions of Nonferrous Metals Society of China</i> , 2014, 24, 2307-2313.	1.7	18
66	Synchrotron radiation X-ray imaging of cavitation bubbles in Al-Cu alloy melt. <i>Ultrasonics Sonochemistry</i> , 2014, 21, 1275-1278.	3.8	58
67	Effect of ultrasonic melt treatment on structure refinement of solidified high purity aluminum. <i>Transactions of Nonferrous Metals Society of China</i> , 2014, 24, 2414-2419.	1.7	22
68	Effects of Mg Addition on Inclusions Formation and Resultant Solidification Structure Changes of Ti-stabilized Ultra-pure Ferritic Stainless Steel. <i>Journal of Iron and Steel Research International</i> , 2014, 21, 583-588.	1.4	12
69	In Situ and Real-Time Observation of the Solidification Process of Al-20 mass%Cu Alloy by Synchrotron X-ray Radiography. <i>Materials Transactions</i> , 2014, 55, 774-778.	0.4	8
70	Hydrothermal synthesis and luminescence properties of YF ₃ :Ln (Ln=Sm, Dy, Tb and Pr) nano-/microcrystals. <i>Ceramics International</i> , 2013, 39, 4089-4098.	2.3	16
71	Microstructural Aspects of Second Phases in As-cast and Homogenized 7055 Aluminum Alloy with Different Impurity Contents. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013, 44, 3504-3510.	1.1	25
72	Iron reduction in aluminum by electros slag refining. <i>Transactions of Nonferrous Metals Society of China</i> , 2012, 22, 964-969.	1.7	1

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73	A High-Speed Imaging and Modeling Study of Dendrite Fragmentation Caused by Ultrasonic Cavitation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 3755-3766.	1.1	118
74	Hydrogen diffusion in aluminum melts: An ab initio molecular dynamics study. Journal Wuhan University of Technology, Materials Science Edition, 2012, 27, 560-567.	0.4	4
75	Removal of Non-Metallic Inclusions from Aluminum by Electroslag Refining. Materials Transactions, 2011, 52, 2266-2269.	0.4	5
76	First-principles study of point defects and Si site preference in Al ₃ Ti. Computational Materials Science, 2011, 50, 2636-2639.	1.4	12
77	Diffusion mechanisms of vacancy and doped Si in Al ₃ Ti from first-principles calculations. Intermetallics, 2011, 19, 1036-1040.	1.8	15
78	Modelling the Electromagnetic Separation of Non-metallic Particles from Liquid Metal Flowing through a Two-stage Multichannel. ISIJ International, 2011, 51, 21-26.	0.6	6
79	A Novel Method to Remove Iron Impurity from Aluminum. Materials Transactions, 2011, 52, 1629-1633.	0.4	16
80	Removal of Iron Impurity from Aluminum by Electroslag Refining. Materials Transactions, 2011, 52, 1320-1323.	0.4	3
81	Structure of liquid aluminum and hydrogen absorption. Journal Wuhan University of Technology, Materials Science Edition, 2011, 26, 93-97.	0.4	4
82	A quantitative study of solute diffusion field effects on heterogeneous nucleation and the grain size of alloys. Acta Materialia, 2011, 59, 2135-2144.	3.8	166
83	Effects of Electromagnetic Purification on Properties of Al-RE Rod for Electrical Purpose. Materials Science Forum, 2010, 638-642, 345-349.	0.3	1
84	Substitution behavior of Si in Al ₃ Ti (D ₀₂₂): a first-principles study. Journal of Physics Condensed Matter, 2009, 21, 415503.	0.7	22
85	In-situ XRD study on the peritectic reaction of YBCO thin film on MgO substrate. Journal of Alloys and Compounds, 2008, 461, L29-L33.	2.8	12
86	Study of hydrogen absorption of aluminum melt. International Journal of Materials Research, 2008, 99, 212-215.	0.1	1
87	Microstructure and Grain Refining Performance of a Rapidly Solidified Al-5Ti-1B Master Alloy. Materials Science Forum, 2007, 546-549, 755-760.	0.3	2
88	Performance of Electromagnetic Purification System in Continuous Twin Roll Casting of Aluminum Sheet. Materials Science Forum, 2007, 546-549, 1043-1048.	0.3	2
89	Flow Field and Gas-Bubble Size Analysis in Water Model for the Process of Aluminum Melt Degassing by Particle Image Velocimetry. Materials Science Forum, 2007, 546-549, 1087-1092.	0.3	2
90	Spray Degassing as a Method for Hydrogen Removal in Aluminum Melts. Materials Transactions, 2007, 48, 1029-1033.	0.4	4

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91	Microstructure and properties of Cu-11Fe-6Ag in situ composite after thermo-mechanical treatments. <i>Journal of Alloys and Compounds</i> , 2007, 438, 268-273.	2.8	34
92	Electronic and bonding properties of TiB ₂ . <i>Journal of Alloys and Compounds</i> , 2007, 438, 327-331.	2.8	54
93	Effects of spray degassing parameters on hydrogen content and properties of commercial purity aluminum. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007, 456, 386-390.	2.6	16
94	Microstructure and strength of Cu-Fe-Ag in situ composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007, 452-453, 367-373.	2.6	18
95	Strength of deformation processed Cu-Fe-Ag in situ composites. <i>Materials Letters</i> , 2007, 61, 1002-1006.	1.3	43
96	The effects of purge gases on the hydrogen content and mechanical properties of spray-degassed Al. <i>Jom</i> , 2007, 59, 62-64.	0.9	2
97	Nucleation and growth of high purity aluminum grains in directional solidification bulk sample without electromagnetic stirring. <i>Transactions of Nonferrous Metals Society of China</i> , 2006, 16, 1-7.	1.7	24
98	Microstructure and grain refining performance of Al-5Ti-1B master alloy prepared under high-intensity ultrasound. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 430, 326-331.	2.6	50
99	Effect of Ag on the aging characteristics of Cu-Fe in situ composites. <i>Scripta Materialia</i> , 2006, 54, 1931-1935.	2.6	41
100	Manufacturing OFC with recycled copper by charcoal-filtration. <i>Materials Letters</i> , 2006, 60, 481-484.	1.3	5
101	First-principles calculations on the stability of Al-TiB ₂ interface. <i>Applied Physics Letters</i> , 2006, 89, 144107.	1.5	86
102	First-principles study of TiB ₂ (0001) surfaces. <i>Journal of Physics Condensed Matter</i> , 2006, 18, 4197-4205.	0.7	54
103	Influence of high-intensity ultrasound on grain refining performance of Al-5Ti-1B master alloy on aluminium. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 405, 306-312.	2.6	113
104	Theoretical analysis and experimental study of spray degassing method. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 408, 19-25.	2.6	19
105	Effect of Ag on the microstructure and properties of Cu-Fe in situ composites. <i>Scripta Materialia</i> , 2005, 53, 1105-1109.	2.6	92
106	Effects of melt temperature on mechanical properties and fracture structure of commercial purity aluminum purified with salt-based flux. <i>Journal of Materials Science</i> , 2004, 39, 6867-6869.	1.7	3
107	Purification technology of molten aluminum. <i>Central South University</i> , 2004, 11, 134-141.	0.5	13
108	Effects of structure and processing technique on the properties of thermal spray WC-Co and NiCrAl/WC-Co coatings. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004, 371, 187-192.	2.6	21

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109	Theoretical Study on Separation of Nonmetallic Inclusion Particles from a Hollow Cylindrical Melt in Alternating Electromagnetic Field. ISIJ International, 2004, 44, 647-652.	0.6	1
110	Particle trajectories in aluminium melt flowing in a square channel under an alternating magnetic field generated by a solenoid. Scripta Materialia, 2003, 48, 1385-1390.	2.6	9
111	Effect of JDN-I flux on DAS of A356 alloy at different cooling rate. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 348, 1-5.	2.6	4
112	The apparent viscosity of fine particle reinforced composite melt. Journal of Materials Processing Technology, 2003, 136, 60-63.	3.1	19
113	Effects of Secondary Flow on the Electromagnetic Separation of Inclusions from Aluminum Melt in a Square Channel by a Solenoid.. ISIJ International, 2002, 42, 1241-1250.	0.6	24
114	Continuous separation of non-metallic inclusions from aluminum melt using alternating magnetic field. Materials Letters, 2002, 55, 322-326.	1.3	35
115	Effects of melt thermal treatment on hypoeutectic Al-Si alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 338, 101-107.	2.6	45
116	Numerical calculation of the electromagnetic expulsive force upon nonmetallic inclusions in an aluminum melt: Part I. Spherical particles. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2000, 31, 1527-1533.	1.0	24
117	Numerical calculation of the electromagnetic expulsive force upon nonmetallic inclusions in an aluminum melt: Part II. Cylindrical particles. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2000, 31, 1535-1540.	1.0	15
118	Refinement of TiB ₂ in Al-Ti-B Grain Refiner Alloys by Ultrasound and the Effect on Al Grain Size. Materials Science Forum, 0, 654-656, 958-961.	0.3	8
119	Investigation on Structures of Aluminum Melts Containing Small Amount of Silicon Element. Materials Science Forum, 0, 850, 271-280.	0.3	0
120	Investigation on NaCl Structure and Properties in External Electric Field. Materials Science Forum, 0, 898, 1940-1946.	0.3	0
121	In Situ Investigation of Si-Poisoning Effect in Al-Cu-Si Alloys Inoculated by TiB ₂ . Acta Metallurgica Sinica (English Letters), 0, , 1.	1.5	6
122	Investigation of Thin-Walled IN718 Castings by Counter-Gravity Investment Casting. , 0, , 399-406.		0