

# Wenchao Yang

## List of Publications by Year in descending order

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57  
papers

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citations

361413

20  
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345221

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57  
docs citations

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times ranked

1029  
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of iron on the microstructure and mechanical property of Al-Mg-Si-Mn and Al-Mg-Si diecast alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 564, 130-139.	5.6	231
2	Precipitation behaviour of Al-Zn-Mg-Cu alloy and diffraction analysis from $\text{Al}_2\text{Cu}$ precipitates in four variants. <i>Journal of Alloys and Compounds</i> , 2014, 610, 623-629.	5.5	129
3	Investigation of mechanical and corrosion properties of an Al-Zn-Mg-Cu alloy under various ageing conditions and interface analysis of $\text{Al}_2\text{Cu}$ precipitate. <i>Materials and Design</i> , 2015, 85, 752-761.	7.0	116
4	The diffraction patterns from $\text{Al}_2\text{Cu}$ precipitates in 12 orientations in Al-Mg-Si alloy. <i>Scripta Materialia</i> , 2010, 62, 705-708.	5.2	89
5	Effect of Mg level on the microstructure and mechanical properties of die-cast Al-Si-Cu alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 642, 340-350.	5.6	66
6	Electron microscopy studies of the age-hardening behaviors in 6005A alloy and microstructural characterizations of precipitates. <i>Journal of Alloys and Compounds</i> , 2012, 514, 220-233.	5.5	56
7	Stress dependence of the creep behaviors and mechanisms of a third-generation Ni-based single crystal superalloy. <i>Journal of Materials Science and Technology</i> , 2019, 35, 752-763.	10.7	45
8	The role of vacuum degree in the bonding of Al/Mg bimetal prepared by a compound casting process. <i>Journal of Materials Processing Technology</i> , 2019, 265, 112-121.	6.3	42
9	Grain boundary precipitation induced by grain crystallographic misorientations in an extruded Al-Mg-Si-Cu alloy. <i>Journal of Alloys and Compounds</i> , 2015, 624, 27-30.	5.5	37
10	Effect of alloying elements on stacking fault energies of $\text{Al}_2\text{Cu}$ and $\text{Al}_3\text{Cu}$ phases in Ni-based superalloy calculated by first principles. <i>Vacuum</i> , 2020, 181, 109682.	3.5	34
11	Initial precipitation and hardening mechanism during non-isothermal aging in an Al-Mg-Si-Cu 6005A alloy. <i>Materials Characterization</i> , 2014, 94, 170-177.	4.4	31
12	Heterogeneous Nucleation of $\text{Al}_2\text{Cu}$ Grain on Primary $\text{Al}_2\text{Cu}$ -AlFeMnSi Intermetallic Investigated Using 3D SEM Ultramicrotomy and HRTEM. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 3971-3980.	2.2	30
13	Studies of Orientations of $\text{Al}_2\text{Cu}$ Precipitates in Al-Mg-Si-(Cu) Alloys by Electron Diffraction and Transition Matrix Analysis. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011, 42, 2917-2929.	2.2	27
14	Stress dependence of dislocation networks in elevated temperature creep of a Ni-based single crystal superalloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 742, 132-137.	5.6	27
15	Precipitate characteristics and selected area diffraction patterns of the $\text{Al}_2\text{Cu}$ and $\text{Al}_3\text{Cu}$ precipitates in Al-Mg-Si-Cu alloys. <i>Philosophical Magazine Letters</i> , 2011, 91, 150-160.	1.2	26
16	Solid-liquid interface and growth rate range of $\text{Al}_2\text{O}_3$ -based eutectic in situ composites grown by laser floating zone melting. <i>Journal of Alloys and Compounds</i> , 2016, 662, 634-639.	5.5	26
17	Heterogeneous nucleation in Mg-Zr alloy under die casting condition. <i>Materials Letters</i> , 2015, 160, 263-267.	2.6	23
18	Effect of Co on microstructural stability of the third generation Ni-based single crystal superalloys. <i>Journal of Materials Research</i> , 2016, 31, 1328-1337.	2.6	22

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19	Effect of secondary dendrite orientations on competitive growth of converging dendrites of Ni-based bi-crystal superalloys. <i>Materials Characterization</i> , 2017, 125, 152-159.	4.4	22
20	Solidification characteristics and as-cast microstructures of a Ru-containing nickel-based single crystal superalloy. <i>Journal of Materials Research and Technology</i> , 2021, 11, 474-486.	5.8	22
21	Dendrite growth and defects formation with increasing withdrawal rates in the rejoined platforms of Ni-based single crystal superalloys. <i>Vacuum</i> , 2019, 161, 29-36.	3.5	21
22	Effect of Zn Concentration on the Microstructure and Mechanical Properties of Al-Mg-Si-Zn Alloys Processed by Gravity Die Casting. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 3247-3256.	2.2	20
23	Effect of solutionising and ageing on the microstructure and mechanical properties of a high strength die-cast Al-Mg-Zn-Si alloy. <i>Materials Chemistry and Physics</i> , 2015, 167, 88-96.	4.0	19
24	Formation of Accumulated Misorientation During Directional Solidification of Ni-Based Single-Crystal Superalloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019, 50, 1607-1610.	2.2	19
25	Influence of withdrawal rate on the porosity in a third-generation Ni-based single crystal superalloy. <i>Progress in Natural Science: Materials International</i> , 2017, 27, 236-243.	4.4	17
26	Investigation on solidification path of Ni-based single crystal superalloys with different Ru contents. <i>Materials Characterization</i> , 2017, 130, 211-218.	4.4	17
27	Formation of low-angle grain boundaries under different solidification conditions in the rejoined platforms of Ni-based single crystal superalloys. <i>Journal of Materials Research</i> , 2019, 34, 251-260.	2.6	17
28	Investigation on a ramp solution heat treatment for a third generation nickel-based single crystal superalloy. <i>Journal of Alloys and Compounds</i> , 2017, 723, 922-929.	5.5	16
29	Negative influence of rafted $\gamma'$ phases on 750°C/750MPa creep in a Ni-based single crystal superalloy with 4% Re addition. <i>Materials Characterization</i> , 2018, 137, 127-132.	4.4	16
30	Effect of substituting Mo for W on $\gamma'/\gamma''$ partitioning behaviors of alloying elements in heat-treated second generation Ni based single crystal superalloys: An atom probe tomography study. <i>Intermetallics</i> , 2021, 134, 107198.	3.9	16
31	Effect of aging temperature on the secondary $\gamma'$ precipitation in a model Ni based single crystal superalloy. <i>Journal of Alloys and Compounds</i> , 2020, 836, 155486.	5.5	16
32	Insight of the dendrite deformation in Ni-based superalloys for increased misorientation along convergent boundaries. <i>Progress in Natural Science: Materials International</i> , 2018, 28, 489-495.	4.4	15
33	Formation of Slivers in the Extended Cross-Section Platforms of Ni-Based Single Crystal Superalloy. <i>Advanced Engineering Materials</i> , 2018, 20, 1701189.	3.5	15
34	Precipitation behavior and chemical composition of secondary $\gamma'$ precipitates in a Re-containing Ni-based single crystal superalloy. <i>Intermetallics</i> , 2020, 119, 106725.	3.9	15
35	Melt superheating on the microstructure and mechanical properties of diecast Al-Mg-Si-Mn alloy. <i>Metals and Materials International</i> , 2015, 21, 382-390.	3.4	14
36	Formation of Lateral Sliver Defects in the Platform Region of Single-Crystal Superalloy Turbine Blades. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019, 50, 1119-1124.	2.2	14

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37	Investigation on solution heat treatment response and $\gamma$ solvus temperature of a Mo-rich second generation Ni based single crystal superalloy. <i>Intermetallics</i> , 2020, 125, 106896.	3.9	13
38	Investigation of the 12 orientations variants of nanoscale Al precipitates in eutectic Si of Al-7Si-0.6Mg alloy. <i>Journal of Materials Science and Technology</i> , 2021, 67, 186-196.	10.7	13
39	Competitive converging dendrites growth depended on dendrite spacing distribution of Ni-based bi-crystal superalloys. <i>Journal of Alloys and Compounds</i> , 2018, 735, 1878-1884.	5.5	12
40	The effects of misfit and diffusivity on $\gamma$ rafting in Re and Ru containing Nickel based single crystal superalloys details in thermodynamics and dynamics. <i>Vacuum</i> , 2021, 183, 109839.	3.5	12
41	The Element Segregation Between $\gamma/\gamma'$ Phases in a Ni-Based Single Crystal Superalloy Studied by 3D-APT and Its Potential Impact on Local Interfacial Misfit Strain. <i>Metals and Materials International</i> , 2021, 27, 1892-1896.	3.4	12
42	Orientation controlling of Ni-based single-crystal superalloy by a novel method: grain selection assisted by un-melted reused seed. <i>Journal of Materials Research and Technology</i> , 2019, 8, 1347-1352.	5.8	11
43	Insight into the partial solutionisation of a high pressure die-cast Al-Mg-Zn-Si alloy for mechanical property enhancement. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 682, 85-89.	5.6	10
44	Nucleation Crystallography of Ni Grains on CrFeNb Inoculants Investigated by Edge-to-Edge Matching Model in an IN718 Superalloy. <i>Advanced Engineering Materials</i> , 2018, 20, 1700568.	3.5	10
45	Influence of Secondary Dendrite Orientation on the Evolution of Misorientation in the Platform Region of Single Crystal Superalloy Turbine Blades. <i>Advanced Engineering Materials</i> , 2019, 21, 1800933.	3.5	10
46	Enhanced age-hardening by synergistic strengthening from Mg Si and Mg Zn precipitates in Al-Mg-Si alloy with Zn addition. <i>Materials Characterization</i> , 2020, 169, 110579.	4.4	10
47	Enhanced Grain Refinement and Porosity Control of the Polycrystalline Superalloy by a Modified Thermally Controlled Solidification. <i>Advanced Engineering Materials</i> , 2016, 18, 1785-1791.	3.5	9
48	Peritectic reaction during directional solidification in a Ru-containing nickel-based single crystal superalloy. <i>Journal of Alloys and Compounds</i> , 2021, 870, 159419.	5.5	9
49	Effect of withdrawal rate on precipitation characteristics of MC-type carbides in a nickel-based directionally solidified superalloy with high Re content. <i>Vacuum</i> , 2021, 183, 109800.	3.5	7
50	Halo formation of Zn-Al alloys under conventional solidification and intensive convection solidification. <i>Journal of Alloys and Compounds</i> , 2017, 696, 460-469.	5.5	6
51	Formation mechanisms and control method for stray grains at melt-back region of Ni-based single crystal seed. <i>Progress in Natural Science: Materials International</i> , 2021, 31, 624-632.	4.4	6
52	Abnormal Grain Refinement Behavior in High-Pressure Die Casting of Pure Mg with Addition of Zr as Grain Refiner. <i>Jom</i> , 2018, 70, 2555-2560.	1.9	4
53	Inhibition of stray grains at melt-back region for re-using seed to prepare Ni-based single crystal superalloys. <i>Progress in Natural Science: Materials International</i> , 2019, 29, 582-586.	4.4	3
54	Microstructure on remelting interface of Ni-W heterogeneous seed in preparing Ni-based single crystal superalloys. <i>Journal of Materials Research and Technology</i> , 2021, 12, 264-270.	5.8	3

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55	Collaborative enhancement of luminous efficacy and fracture toughness based on interface design of Al <sub>2</sub> O <sub>3</sub> /YAG:Ce <sup>3+</sup> eutectic phosphor ceramic grown by laser floating zone melting. <i>Ceramics International</i> , 2022, 48, 10144-10154.	4.8	3
56	Temperature Field Evolution of Seeding during Directional Solidification of Single-Crystal Ni-Based Superalloy Castings. <i>Metals</i> , 2022, 12, 817.	2.3	2
57	Different roles of stacking fault energy and diffusivity in the creep performance of nickel-based single-crystal superalloys. <i>Materials Research Express</i> , 2021, 8, 036510.	1.6	0