

# Rui Hu

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5144316/publications.pdf>

Version: 2024-02-01

96  
papers

1,705  
citations

331670

21  
h-index

361022

35  
g-index

96  
all docs

96  
docs citations

96  
times ranked

1053  
citing authors

#	ARTICLE	IF	CITATIONS
1	Precipitation behavior of grain boundary M23C6 and its effect on tensile properties of Ni-Cr-W based superalloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 548, 83-88.	5.6	119
2	Effect of temperature on tensile behavior of Ni-Cr-W based superalloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 1974-1978.	5.6	79
3	Hydrogenation thermodynamics of melt-spun magnesium rich Mg-Ni nanocrystalline alloys with the addition of multiwalled carbon nanotubes and TiF3. <i>Journal of Power Sources</i> , 2016, 306, 437-447.	7.8	66
4	Effect of thermal exposure on the stability of carbides in Ni-Cr-W based superalloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 2339-2344.	5.6	61
5	Mechanical properties of porous titanium with different distributions of pore size. <i>Transactions of Nonferrous Metals Society of China</i> , 2013, 23, 2317-2322.	4.2	57
6	Tensile properties and fracture behavior of in-situ synthesized Ti <sub>2</sub> AlN/Ti <sub>48</sub> Al <sub>2</sub> Cr <sub>2</sub> Nb composites at room and elevated temperatures. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 679, 7-13.	5.6	55
7	Hydrogen desorption performance of high-energy ball milled Mg <sub>2</sub> NiH <sub>4</sub> catalyzed by multi-walled carbon nanotubes coupling with TiF <sub>3</sub> . <i>International Journal of Hydrogen Energy</i> , 2014, 39, 19672-19681.	7.1	51
8	Refinement of massive $\beta$ phase with enhanced properties in a Ta containing $\beta$ -TiAl-based alloys. <i>Scripta Materialia</i> , 2019, 172, 113-118.	5.2	42
9	Enhanced hydrogen generation behaviors and hydrolysis thermodynamics of as-cast Mg-Ni-Ce magnesium-rich alloys in simulate seawater. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 24086-24097.	7.1	40
10	Microstructure evolution and controlled hydrolytic hydrogen generation strategy of Mg-rich Mg-Ni-La ternary alloys. <i>Energy</i> , 2019, 188, 116081.	8.8	40
11	Hot working characteristic of as-cast and homogenized Ni-Cr-W superalloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009, 508, 141-147.	5.6	36
12	Mechanical properties and pore structure deformation behaviour of biomedical porous titanium. <i>Transactions of Nonferrous Metals Society of China</i> , 2015, 25, 1543-1550.	4.2	35
13	Tailoring the Microstructure of a $\beta$ -Solidifying TiAl Alloy by Controlled Post-solidification Isothermal Holding and Cooling. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2017, 48, 5095-5105.	2.2	32
14	Elements segregation and phase precipitation behavior at grain boundary in a Ni-Cr-W based superalloy. <i>Materials Characterization</i> , 2016, 122, 189-196.	4.4	30
15	Modification based on internal refinement and external decoration: A powerful strategy for superior thermodynamics and hysteresis of Mg-Ni hydrogen energy storage alloys. <i>Journal of Alloys and Compounds</i> , 2018, 766, 112-122.	5.5	30
16	Microstructure and electrochemical hydrogenation/dehydrogenation performance of melt-spun La-doped Mg <sub>2</sub> Ni alloys. <i>Materials Characterization</i> , 2015, 106, 163-174.	4.4	29
17	Grain boundary character correlated carbide precipitation and mechanical properties of Ni-20Cr-18W-1Mo superalloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 667, 391-401.	5.6	29
18	Microstructure determined fracture behavior of a high Nb containing TiAl alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 666, 297-304.	5.6	28

#	ARTICLE	IF	CITATIONS
19	Isothermal activation, thermodynamic and hysteresis of MgH <sub>2</sub> hydrides catalytically modified by high-energy ball milling with MWCNTs and TiF <sub>3</sub> . <i>International Journal of Hydrogen Energy</i> , 2017, 42, 22953-22964.	7.1	28
20	Microstructure evolution and mechanical properties of a Ti-45Al-8.5Nb-(W, B, Y) alloy obtained by controlled cooling from a single $\beta$ region. <i>Journal of Alloys and Compounds</i> , 2018, 740, 1140-1148.	5.5	25
21	A Newly Generated Nearly Lamellar Microstructure in Cast Ti-48Al-2Nb-2Cr Alloy for High-Temperature Strengthening. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019, 50, 5839-5852.	2.2	23
22	Stress induced deformation in the solidification of undercooled Co <sub>80</sub> Pd <sub>20</sub> alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 973-977.	5.6	22
23	A mixture of massive and feathery microstructures of Ti <sub>48</sub> Al <sub>2</sub> Cr <sub>2</sub> Nb alloy by high undercooled solidification. <i>Materials Characterization</i> , 2015, 100, 104-107.	4.4	22
24	Hydrogenation behavior of high-energy ball milled amorphous Mg <sub>2</sub> Ni catalyzed by multi-walled carbon nanotubes. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 16168-16176.	7.1	21
25	Synergetic catalytic effect of MWCNTs and TiF <sub>3</sub> on hydrogenation properties of nanocrystalline Mg-10wt%Ni alloys. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 12904-12911.	7.1	20
26	Structure, composition and morphology of bioactive titanate layer on porous titanium surfaces. <i>Applied Surface Science</i> , 2014, 308, 1-9.	6.1	20
27	Hot corrosion characteristics of Ni-20Cr-18W superalloy in molten salt. <i>Transactions of Nonferrous Metals Society of China</i> , 2015, 25, 3840-3846.	4.2	20
28	Facile synthesis of mesoporous CuCo <sub>2</sub> O <sub>4</sub> nanorods@MnO <sub>2</sub> with core-shell structure grown on RGO for high-performance supercapacitor. <i>Materials Letters</i> , 2019, 249, 151-154.	2.6	20
29	Evolution and micromechanical properties of interface structures in TiNb/TiAl composites prepared by powder metallurgy. <i>Journal of Materials Science</i> , 2020, 55, 12421-12433.	3.7	19
30	Precipitation of nanosized DO <sub>22</sub> superlattice with high thermal stability in an Ni-Cr-W superalloy. <i>Scripta Materialia</i> , 2014, 76, 49-52.	5.2	18
31	The effect of Ti on precipitation of fully coherent DO <sub>22</sub> superlattice in an Ni-Cr-W-based superalloy. <i>Scripta Materialia</i> , 2017, 134, 15-19.	5.2	18
32	Microstructural evolution and creep deformation behavior of novel Ti-22Al-25Nb-1Mo-1V-1Zr-0.2Si (at.%) orthorhombic alloy. <i>Transactions of Nonferrous Metals Society of China</i> , 2019, 29, 313-321.	4.2	18
33	Investigations of interfacial reaction and toughening mechanisms of Ta fiber-reinforced TiAl-matrix composites. <i>Materials Characterization</i> , 2022, 183, 111584.	4.4	18
34	Microstructure Characterization and Mechanical Properties of In Situ Synthesized Ti <sub>2</sub> AlN <sub>2</sub> Composites. <i>Advanced Engineering Materials</i> , 2014, 16, 507-510.	3.5	17
35	Solidification characteristics of high Nb-containing $\beta$ -TiAl-based alloys with different aluminum contents. <i>Rare Metals</i> , 2015, 34, 381-386.	7.1	17
36	Oxidation behavior of a novel multi-element alloyed Ti <sub>2</sub> AlNb-based alloy in temperature range of 650-850°C. <i>Rare Metals</i> , 2018, 37, 838-845.	7.1	17

#	ARTICLE	IF	CITATIONS
37	Grain refinement of 1 at.% Ta-containing cast TiAl-based alloy by cyclic air-cooling heat treatment. <i>Materials Letters</i> , 2020, 274, 127940.	2.6	17
38	Widmannstatten laths in Ti48Al2Cr2Nb alloy by undercooled solidification. <i>Materials Characterization</i> , 2015, 107, 156-160.	4.4	16
39	Dendritic Growth and Microstructure Evolution with Different Cooling Rates in Ti48Al2Cr2Nb Alloy. <i>Journal of Materials Engineering and Performance</i> , 2016, 25, 38-45.	2.5	16
40	Continuous-Cooling-Transformation (CCT) Behaviors and Fine-Grained Nearly Lamellar (FGNL) Microstructure Formation in a Cast Ti-48Al-4Nb-2Cr Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020, 51, 5285-5295.	2.2	16
41	New insights into serrated flow in Pt 2 Mo-type superlattice strengthened Ni-Cr-Mo alloy at room temperature. <i>Materials Letters</i> , 2016, 163, 94-97.	2.6	15
42	Microstructure stability of Ti2AlN/Ti-48Al-2Cr-2Nb composite at 900 °C. <i>Transactions of Nonferrous Metals Society of China</i> , 2016, 26, 423-430.	4.2	14
43	High-temperature rotary-bending fatigue characteristics of a high Nb-containing beta-gamma TiAl alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 735, 40-48.	5.6	14
44	Erosion behaviors and the control of fiber structure in Al2O3,f/TiAl composites. <i>Journal of Alloys and Compounds</i> , 2021, 882, 160734.	5.5	14
45	Continuous cooling transformation (CCT) behavior of a high Nb-containing TiAl alloy. <i>Materialia</i> , 2019, 5, 100169.	2.7	13
46	High temperature micromechanical behavior of Ti2AlN particle reinforced TiAl based composites investigated by in-situ high-energy X-ray diffraction. <i>Materials and Design</i> , 2021, 212, 110225.	7.0	13
47	Microstructural stability of long term aging treated Ti-22Al-26Nb-1Zr orthorhombic titanium aluminide. <i>Transactions of Nonferrous Metals Society of China</i> , 2015, 25, 2549-2555.	4.2	12
48	The effect of Ni3(Cr0.2W0.4Ti0.4) particles with DO22 structure on the deformation mode and mechanical properties of the aged Ni-Cr-W-Ti alloy. <i>Scripta Materialia</i> , 2018, 153, 44-48.	5.2	12
49	Catalytic effect of EG and MoS <sub>2</sub> on hydrolysis hydrogen generation behavior of high-energy ball-milled Mg-10wt.%Ni alloys in NaCl solution: A powerful strategy for superior hydrogen generation performance. <i>International Journal of Energy Research</i> , 2019, 43, 8426.	4.5	12
50	Flexible wire-shaped symmetric supercapacitors with Zn-Co layered double hydroxide nanosheets grown on Ag-coated cotton wire. <i>Journal of Materials Science</i> , 2020, 55, 16683-16696.	3.7	12
51	Performance assessment of TiNb/TiAl composites with different fiber structural characteristics. <i>Journal of Materials Research and Technology</i> , 2021, 11, 2265-2276.	5.8	12
52	Portevin-Le Chatelier effect in a Ni-Cr-Mo alloy containing ordered phase with Pt2Mo-type structure at room temperature. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 650, 317-322.	5.6	11
53	The phase transformation behavior between $\beta^3$ lamellae and massive $\beta^3$ in a Ta containing TiAl-based alloy. <i>Journal of Alloys and Compounds</i> , 2020, 821, 153290.	5.5	11
54	In-situ observation of microstructure evolution and phase transformation under continuous cooling in Ru-containing TiAl alloys. <i>Materials Characterization</i> , 2020, 163, 110296.	4.4	11

#	ARTICLE	IF	CITATIONS
55	Metastable transformation behavior in a Ta-containing TiAl-Nb alloy during continuous cooling. <i>Journal of Alloys and Compounds</i> , 2022, 904, 164088.	5.5	11
56	Microstructure evolution during the precipitation and growth of fully coherent DO22 superlattice in an Ni-Cr-W alloy. <i>Materials Characterization</i> , 2016, 118, 244-251.	4.4	10
57	Generation of high-performance Ni-Cr-Mo-based superalloys via $\gamma$ to DO22 superlattice ordered phase transformation upon addition of trace alloying elements. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 738, 38-43.	5.6	10
58	Formation of nano-sized M <sub>2</sub> C carbides in Si-free GH3535 alloy. <i>Scientific Reports</i> , 2018, 8, 8158.	3.3	10
59	Evolution of $\gamma$ CSL boundaries in Ni-Cr-Mo alloy during aging treatment. <i>Materials Characterization</i> , 2017, 134, 379-386.	4.4	9
60	Sustainable synthesis of N/S-doped porous carbon sheets derived from waste newspaper for high-performance asymmetric supercapacitor. <i>Materials Research Express</i> , 2019, 6, 095605.	1.6	9
61	Effect of Nb Content on Solidification Characteristics and Microsegregation in Cast Ti-48Al-xNb Alloys. <i>Acta Metallurgica Sinica (English Letters)</i> , 2016, 29, 714-721.	2.9	8
62	Mechanical properties of an aged Ni-Cr-Mo alloy and effect of long-range order phase on deformation behavior. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 731, 29-35.	5.6	8
63	On the eutectoid decomposition of $\gamma + \gamma_2 + \gamma_1$ in a Ru-containing TiAl alloy. <i>Journal of Alloys and Compounds</i> , 2019, 790, 42-47.	5.5	8
64	Formation mechanism of Si-Y-C ceramic matrix by reactive melt infiltration using Si-Y alloy and properties of C/Si-Y-C composites. <i>Ceramics International</i> , 2020, 46, 18976-18984.	4.8	8
65	Mechanical properties and microstructure of in situ formed Ti <sub>2</sub> AlN/TiAl(WMS) composites. <i>Rare Metals</i> , 2021, 40, 190-194.	7.1	8
66	Precipitation Behavior of Pt <sub>2</sub> Mo-Type Superlattices in Hastelloy C-2000 Superalloy with Low Mo/Cr Ratio. <i>Journal of Materials Engineering and Performance</i> , 2014, 23, 3314-3320.	2.5	7
67	Microstructural refinement of Ni-Cr-W superalloy by isothermal treatment near the liquidus. <i>Materials Letters</i> , 2016, 175, 271-274.	2.6	7
68	Precipitation of two kinds of $\gamma$ laths in massive $\gamma$ coexisting with $\gamma$ lamellae in as-cast Ta-containing TiAl-Nb alloys. <i>Materials Letters</i> , 2016, 185, 480-483.	2.6	7
69	The Effect of Pressure Stress on the Evolution of B <sub>2</sub> ( $\gamma$ ) Phase in High Nb Containing TiAl Alloy. <i>Advanced Engineering Materials</i> , 2017, 19, 1600844.	3.5	7
70	Microstructure refinement assisted by $\gamma$ -recrystallization in a peritectic TiAl alloy. <i>Journal of Materials Research and Technology</i> , 2021, 11, 1135-1141.	5.8	7
71	Heredity of medium-range order structure from melts to the microstructure of Ni-Cr-W superalloy. <i>Applied Physics A: Materials Science and Processing</i> , 2015, 120, 183-188.	2.3	6
72	Oxidation behavior of Hastelloy C-2000 superalloy at 800 °C and 1000 °C. <i>Transactions of Nonferrous Metals Society of China</i> , 2015, 25, 354-362.	4.2	6

#	ARTICLE	IF	CITATIONS
73	Evolution behavior of superlattice phase with Pt <sub>2</sub> Mo-type structure in Ni-Cr-Mo alloy with low atomic Mo/Cr ratio. <i>Journal of Materials Research</i> , 2016, 31, 427-434.	2.6	6
74	Hot corrosion behavior and mechanical properties degradation of a Ni-Cr-W-based superalloy. <i>Rare Metals</i> , 2017, 36, 23-31.	7.1	6
75	Competitive growth of Si and YSi <sub>2</sub> phases in a eutectic Si-Y alloy prepared by the Bridgeman method. <i>Ceramics International</i> , 2018, 44, 13232-13239.	4.8	6
76	Plasma electrolytic deposition of $\gamma$ -Al <sub>2</sub> O <sub>3</sub> on TiNb fibres and their mechanical properties. <i>Ceramics International</i> , 2021, 47, 32915-32926.	4.8	6
77	Phase transformation pathway and microstructural refinement by feathery transformation of Ru-containing $\gamma$ -TiAl alloy. <i>Journal of Materials Research and Technology</i> , 2022, 18, 5290-5300.	5.8	6
78	Interface morphology evolution and microstructure characteristics of hypoeutectic Cu-1.0 wt%Cr alloy during unidirectional solidification. <i>Science and Technology of Advanced Materials</i> , 2005, 6, 950-955.	6.1	5
79	Microstructure evolution in undercooled Co <sub>80</sub> Pd <sub>20</sub> alloys. <i>Journal of Materials Science</i> , 2011, 46, 5495-5502.	3.7	5
80	Effects of hot compression on carbide precipitation behavior of Ni <sub>20</sub> Cr <sub>18</sub> W <sub>1</sub> Mo superalloy. <i>Transactions of Nonferrous Metals Society of China</i> , 2016, 26, 2883-2891.	4.2	5
81	Ordering Transformation and Age Hardening in a Ni-Cr-W Superalloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016, 47, 5907-5917.	2.2	5
82	Precipitation of coherent Ni <sub>2</sub> (Cr, W) superlattice in an Ni-Cr-W superalloy. <i>Materials Characterization</i> , 2016, 111, 86-92.	4.4	5
83	Nucleation behavior of $\gamma$ ' phase in TiAl alloys at different elevated temperatures. <i>Journal of Materials Science</i> , 2018, 53, 5287-5295.	3.7	5
84	Portevin-Le Chatelier effect, twinning-detwinning and disordering in an aged Ni-Cr-Mo alloy during large plastic deformation. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 803, 140506.	5.6	5
85	Effects of Ru content on phase transformation and compression property of cast TiAl alloys. <i>China Foundry</i> , 2020, 17, 393-401.	1.4	5
86	Corrosion Behavior of Ni <sub>20</sub> Cr <sub>18</sub> W <sub>1</sub> Mo Superalloy in Supercritical Water. <i>Acta Metallurgica Sinica (English Letters)</i> , 2014, 27, 1046-1056.	2.9	4
87	Preparation of Al <sub>2</sub> O <sub>3</sub> coating on Nb fiber and the effect on interfacial microstructure of Nb/TiAl composite. <i>Materials Characterization</i> , 2022, 190, 112061.	4.4	4
88	Precipitation Behavior of $\gamma$ -FeCr Phases in Hastelloy C-2000 Superalloy Under Plastic Deformation and Aging Treatment. <i>Journal of Materials Engineering and Performance</i> , 2015, 24, 565-571.	2.5	3
89	Correlation between mechanism of ordering transformation and microstructure of interfaces in Ni-Cr-W superalloys. <i>Materials Letters</i> , 2016, 181, 63-66.	2.6	3
90	Phase selection and solidification path transition of Ti <sub>48</sub> Al <sub>x</sub> Nb alloys with different cooling rates. <i>Rare Metals</i> , 2023, 42, 288-295.	7.1	3

#	ARTICLE	IF	CITATIONS
91	Anomalous Tensile Strength and Fracture Behavior of Polycrystalline Iridium from Room Temperature to 1600°C. <i>Advanced Engineering Materials</i> , 2018, 20, 1701114.	3.5	3
92	Evolution of Metastable $\beta$ Phase in a Quenched High-Nb-Containing TiAl Alloy at 800°C. <i>Advanced Engineering Materials</i> , 2020, 22, 1901539.	3.5	2
93	Active Eutectoid Decomposition of $\beta$ and $\beta_1$ and the Morphological Evolution in a Ru-Containing TiAl Alloy. <i>Acta Metallurgica Sinica (English Letters)</i> , 2021, 34, 1042-1050.	2.9	2
94	High temperature micro-deformation behavior of continuous TiNb fiber reinforced TiAl matrix composite investigated by in-situ high-energy X-ray diffraction. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 846, 143255.	5.6	2
95	Effects of $\beta$ -Dendrite Growth Velocity on $\beta$ Transformation of Hypoperitectic Ti-46Al-7Nb Alloy. <i>Acta Metallurgica Sinica (English Letters)</i> , 2015, 28, 58-63.	2.9	0
96	Transition of solidification path in nonequilibrium solidification of Ti-48Al-8Nb alloy. <i>Rare Metals</i> , 2016, 35, 48-53.	7.1	0