

# Richard Moat

## List of Publications by Year in descending order

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42  
papers

1,212  
citations

430754

18  
h-index

377752

34  
g-index

42  
all docs

42  
docs citations

42  
times ranked

1167  
citing authors

#	ARTICLE	IF	CITATIONS
1	Residual stresses in laser direct metal deposited Waspaloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 2288-2298.	2.6	149
2	A comparative study of laser direct metal deposition characteristics using gas and plasma-atomized Ti-6Al-4V powders. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7648-7657.	2.6	129
3	Deformation twinning in Ti-6Al-4V during low strain rate deformation to moderate strains at room temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 5734-5744.	2.6	95
4	Linear friction welding of AISI 316L stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 528, 680-690.	2.6	86
5	Additive manufacturing of bio-inspired multi-scale hierarchically strengthened lattice structures. International Journal of Machine Tools and Manufacture, 2021, 167, 103764.	6.2	74
6	Crystallographic texture and microstructure of pulsed diode laser-deposited Waspaloy. Acta Materialia, 2009, 57, 1220-1229.	3.8	70
7	In situ observation of strain and phase transformation in plastically deformed 301 austenitic stainless steel. Materials and Design, 2016, 112, 107-116.	3.3	58
8	In situ neutron diffraction study of texture evolution and variant selection during the $\beta \rightarrow \alpha'$ phase transformation in Ti-6Al-4V. Acta Materialia, 2012, 60, 7169-7182.	3.8	50
9	Design of weld fillers for mitigation of residual stresses in ferritic and austenitic steel welds. Science and Technology of Welding and Joining, 2011, 16, 279-284.	1.5	46
10	Effect of interpass temperature on residual stresses in multipass welds produced using low transformation temperature filler alloy. Science and Technology of Welding and Joining, 2014, 19, 44-51.	1.5	44
11	Linear friction welding of aluminium to magnesium. Science and Technology of Welding and Joining, 2012, 17, 368-374.	1.5	39
12	Linear friction welding of aluminium to copper. Science and Technology of Welding and Joining, 2012, 17, 314-320.	1.5	38
13	Origin of the Bauschinger effect in a polycrystalline material. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 707, 576-584.	2.6	37
14	Work hardening induced by martensite during transformation-induced plasticity in plain carbon steel. Acta Materialia, 2012, 60, 6931-6939.	3.8	29
15	In-Situ observation of primary $\gamma$ melting in Ni-base superalloy using confocal laser scanning microscopy. Materials Characterization, 2011, 62, 760-767.	1.9	27
16	Phase transformations across high strength dissimilar steel inertia friction weld. Journal of Materials Processing Technology, 2008, 204, 48-58.	3.1	25
17	Prediction of residual stresses in girth welded pipes using an artificial neural network approach. International Journal of Pressure Vessels and Piping, 2017, 150, 89-95.	1.2	25
18	Surface residual stresses in multipass welds produced using low transformation temperature filler alloys. Science and Technology of Welding and Joining, 2014, 19, 623-630.	1.5	23

#	ARTICLE	IF	CITATIONS
19	Through-Thickness Residual Stress Profiles in Austenitic Stainless Steel Welds: A Combined Experimental and Prediction Study. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 6178-6191.	1.1	18
20	Residual stress control of multipass welds using low transformation temperature fillers. Materials Science and Technology, 2018, 34, 519-528.	0.8	18
21	Residual Stresses in Inertia-Friction-Welded Dissimilar High-Strength Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 2098-2108.	1.1	17
22	Back Stress Work Hardening Confirmed by Bauschinger Effect in a TRIP Steel Using Bending Tests. ISIJ International, 2014, 54, 1715-1718.	0.6	16
23	Substructure Development and Deformation Twinning Stimulation through Regulating the Processing Path during Multi-axial Forging of Twinning Induced Plasticity Steel. Advanced Engineering Materials, 2018, 20, 1800453.	1.6	11
24	ENGIN-X “ instrument for materials science and engineering research. Neutron News, 2013, 24, 22-26.	0.1	10
25	Generation of intergranular strains during high temperature creep fatigue loading of 316H stainless steel. Materials at High Temperatures, 2014, 31, 378-382.	0.5	10
26	On the Accuracy of Finite Element Models Predicting Residual Stresses in Quenched Stainless Steel. Metals, 2019, 9, 1308.	1.0	10
27	pyCM: An open-source computational framework for residual stress analysis employing the Contour Method. SoftwareX, 2020, 11, 100458.	1.2	10
28	The influence of temperature on deformation-induced martensitic transformation in 301 stainless steel. Materials Science and Technology, 2018, 34, 2114-2125.	0.8	8
29	The effect of cyclic-loading generated intergranular strains on the creep deformation of a polycrystalline material. Materialia, 2019, 7, 100385.	1.3	7
30	Modelling the Interpass Temperature Effect on Residual Stress in Low Transformation Temperature Stainless Steel Welds. , 2011, , .		6
31	A new method for quantifying anisotropic martensitic transformation strains accumulated during constrained cooling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 611, 354-361.	2.6	6
32	Mechanical property heterogeneity in additively manufactured nickel superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 712, 681-684.	2.6	6
33	Detailed Diffraction and Electron Microscopy Study of Inertia-Friction-Welded Dissimilar High-Strength Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3130-3140.	1.1	5
34	Modelling and control of neutron and synchrotron beamline positioning systems. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 813, 123-131.	0.7	3
35	Mesoscale modelling of miscible and immiscible multicomponent fluids. Scientific Reports, 2019, 9, 8277.	1.6	2
36	Compressive behaviour of cellular structures with aperiodic order. Results in Materials, 2022, 15, 100293.	0.9	2

#	ARTICLE	IF	CITATIONS
37	<i>In Situ</i> Observation on the Influence of Å Grain Growth on Texture Evolution during Phase Transformation in Ti-6Al-4V. Materials Science Forum, 0, 702-703, 854-857.	0.3	1
38	Prediction of Pipe Girth Weld Residual Stress Profiles Using Artificial Neural Networks. , 2013, , .		1
39	Optimised Neural Network Prediction of Residual Stress Profiles for Structural Integrity Assessment of Pipe Girth Welds. , 2014, , .		1
40	An Assessment of the Mechanisms of Transformation Plasticity in SA508 Grade 3 Steel during Simulated Welding Thermal Cycles. Materials Science Forum, 2014, 777, 188-193.	0.3	0
41	Origin and Effect of Back Stress on Cyclic Creep Deformation of 316H Stainless Steel. , 2015, , .		0
42	The I <sub>1</sub> -plot, a multicomponent 1-D pole figure plot, to quantify the heterogeneity of plastic deformation. Materials Characterization, 2020, 160, 110114.	1.9	0