

# 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	Compressive behaviour of cellular structures with aperiodic order. Results in Materials, 2022, 15, 100293.	0.9	2
2	Additive manufacturing of bio-inspired multi-scale hierarchically strengthened lattice structures. International Journal of Machine Tools and Manufacture, 2021, 167, 103764.	6.2	74
3	The $\bar{\epsilon}_p$ -plot, a multicomponent 1-D pole figure plot, to quantify the heterogeneity of plastic deformation. Materials Characterization, 2020, 160, 110114.	1.9	0
4	pyCM: An open-source computational framework for residual stress analysis employing the Contour Method. SoftwareX, 2020, 11, 100458.	1.2	10
5	The effect of cyclic-loading generated intergranular strains on the creep deformation of a polycrystalline material. Materialia, 2019, 7, 100385.	1.3	7
6	Mesoscale modelling of miscible and immiscible multicomponent fluids. Scientific Reports, 2019, 9, 8277.	1.6	2
7	On the Accuracy of Finite Element Models Predicting Residual Stresses in Quenched Stainless Steel. Metals, 2019, 9, 1308.	1.0	10
8	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
9	Residual stress control of multipass welds using low transformation temperature fillers. Materials Science and Technology, 2018, 34, 519-528.	0.8	18
10	The influence of temperature on deformation-induced martensitic transformation in 301 stainless steel. Materials Science and Technology, 2018, 34, 2114-2125.	0.8	8
11	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
12	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
13	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
14	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
15	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
16	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
17	Origin and Effect of Back Stress on Cyclic Creep Deformation of 316H Stainless Steel. , 2015, , .		0
18	Back Stress Work Hardening Confirmed by Bauschinger Effect in a TRIP Steel Using Bending Tests. ISIJ International, 2014, 54, 1715-1718.	0.6	16

#	ARTICLE	IF	CITATIONS
19	Optimised Neural Network Prediction of Residual Stress Profiles for Structural Integrity Assessment of Pipe Girth Welds. , 2014, , .		1
20	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
21	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
22	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
23	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
24	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
25	Prediction of Pipe Girth Weld Residual Stress Profiles Using Artificial Neural Networks. , 2013, , .		1
26	ENGIN-X “ instrument for materials science and engineering research. Neutron News, 2013, 24, 22-26.	0.1	10
27	Linear friction welding of aluminium to magnesium. Science and Technology of Welding and Joining, 2012, 17, 368-374.	1.5	39
28	Linear friction welding of aluminium to copper. Science and Technology of Welding and Joining, 2012, 17, 314-320.	1.5	38
29	Work hardening induced by martensite during transformation-induced plasticity in plain carbon steel. Acta Materialia, 2012, 60, 6931-6939.	3.8	29
30	In situ neutron diffraction study of texture evolution and variant selection during the $\beta \rightarrow \beta'$ phase transformation in Ti-6Al-4V. Acta Materialia, 2012, 60, 7169-7182.	3.8	50
31	In-Situ observation of primary $\beta$ melting in Ni-base superalloy using confocal laser scanning microscopy. Materials Characterization, 2011, 62, 760-767.	1.9	27
32	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
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	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
35	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
36	Modelling the Interpass Temperature Effect on Residual Stress in Low Transformation Temperature Stainless Steel Welds. , 2011, , .		6

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37	Deformation twinning in Ti-6Al-4V during low strain rate deformation to moderate strains at room temperature. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 5734-5744.	2.6	95
38	Linear friction welding of AISI 316L stainless steel. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 528, 680-690.	2.6	86
39	Residual Stresses in Inertia-Friction-Welded Dissimilar High-Strength Steels. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009, 40, 2098-2108.	1.1	17
40	Crystallographic texture and microstructure of pulsed diode laser-deposited Waspaloy. <i>Acta Materialia</i> , 2009, 57, 1220-1229.	3.8	70
41	Phase transformations across high strength dissimilar steel inertia friction weld. <i>Journal of Materials Processing Technology</i> , 2008, 204, 48-58.	3.1	25
42	<i>In Situ</i> Observation on the Influence of Å Grain Growth on Texture Evolution during Phase Transformation in Ti-6Al-4V. <i>Materials Science Forum</i> , 0, 702-703, 854-857.	0.3	1