Ondrej MurÃ¡nsky

List of Publications by Year
in descending order

97 papers	2,055 citations	304743 22 h-index	265206 42 g-index
99 all docs	99 docs citations	99 times ranked	1524 citing authors

#	Article	IF	Citations
1	Annealing-induced strengthening and stabilization in ultrafine-grained Al and Alâ€“Mg alloys prepared by rapid powder consolidation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 833, 142539.	5.6	1
2	Impact of pre-existing crystal lattice defects on the accumulation of irradiation-induced damage in a C/C composite. Journal of Nuclear Materials, 2022, 564, 153684.	2.7	4
3	On the Accurate Prediction of Residual Stress in a Three-Pass Slot Nickel-Base Repair Weld by Numerical Simulations. Journal of Manufacturing and Materials Processing, 2022, 6, 61.	2.2	2
4	On the prediction of creep behaviour of alloy 617 using Kachanov-Rabotnov model coupled with multi-objective genetic algorithm optimisation. International Journal of Pressure Vessels and Piping, 2022, 199, 104721.	2.6	6
5	Microstructural characterisation and hardness assessment of wire arc cladded Hastelloy C276 on creep resistant steel P91. Journal of Materials Research and Technology, 2022, 19, 3818-3827.	5.8	8
6	The incremental contour method using asymmetric stiffness cuts. Materials and Design, 2021, 197, 109268.	7.0	7
7	The characterisation and formation of novel microstructural features in a Tiâ^'Nbâ^'Zrâ^'Moâ^'Sn alloy manufactured by Laser Engineered Net Shaping (LENS). Additive Manufacturing, 2021, 37, 101705.	3.0	5
8	On the development of pseudo-eutectic AlCoCrFeNi2.1 high entropy alloy using Powder-bed Arc Additive Manufacturing (PAAM) process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 802, 140639.	5.6	34
9	On the irradiation tolerance of nano-grained Niâ€“Moâ€“Cr alloy: 1ÂMeV He+ irradiation experiment. Journal of Nuclear Materials, 2021, 544, 152694.	2.7	23
10	The effect of applied stress on the high-temperature creep behaviour and microstructure of NiMoCr Hastelloy-NÂ® alloy. Materialia, 2021, 16, 101069.	2.7	7
11	The effect of microstructure and welding-induced plasticity on the strength of Niâ€“Moâ€“Cr alloy welds. Materialia, 2021, 17, 101126.	2.7	3
12	Effects of post heat treatment on the microstructure and mechanical properties of wire arc additively manufactured Hastelloy C276 alloy. Materials Characterization, 2021, 177, 111158.	4.4	22
13	Corrosion performance of Ni-based structural alloys for applications in molten-salt based energy systems: Experiment & numerical validation. Corrosion Science, 2021, 190, 109607.	6.6	7
14	Multiple strengthening mechanisms in high strength ultrafine-grained Alâ€“Mg alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 771, 138613.	5.6	23
15	On the evolution of mechanical properties and microstructure of ferritic-bainitic (FB) 2.25Cr-1Mo (Grade 22) steel during high-temperature creep. Materialia, 2020, 9, 100513.	2.7	8
16	Molten salt corrosion (FLiNaK) of a Niâ€“Moâ€“Cr alloy and its welds for application in energy-generation and energy-storage systems. Corrosion Science, 2020, 164, 108306.	6.6	27
17	Assessment of modelling methodologies for prediction of high-temperature creep-fatigue behaviour of Alloy 617. International Journal of Pressure Vessels and Piping, 2020, 187, 104150.	2.6	7
18	A residual stress measurement and numerical analysis round robin on a three-pass slot nickel-base repair weld. Procedia Manufacturing, 2020, 51, 779-786.	1.9	2

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19	Impact of dislocations and dislocation substructures on molten salt corrosion of alloys under plasticity-imparting conditions. Corrosion Science, 2020, 176, 108915.	6.6	8
20	On the kinetics of gamma prime (Î³â€™) precipitation and its strengthening mechanism in Alloy 617 during a long-term thermal aging. Materialia, 2020, 11, 100682.	2.7	16
21	Fracture and fatigue behaviour of a laser additive manufactured Zr-based bulk metallic glass. Additive Manufacturing, 2020, 36, 101416.	3.0	24
22	Neutron diffraction measurements of weld residual stresses in three-pass slot weld (Alloy 600/82) and assessment of the measurement uncertainty. Journal of Applied Crystallography, 2020, 53, 1181-1194.	4.5	11
23	Assessment of Mechanical Properties and Microstructure Characterizing Techniques in Their Ability to Quantify Amount of Cold Work in 316L Alloy. Journal of Engineering Materials and Technology, Transactions of the ASME, 2020, 142, .	1.4	1
24	On the Formation of Nanoscale Intergranular Intermetallic Compound Films in a Cu-5 at. pct Zr Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 4569-4581.	2.2	1
25	Molten salt corrosion of Ni-Mo-Cr candidate structural materials for Molten Salt Reactor (MSR) systems. Corrosion Science, 2019, 159, 108087.	6.6	35
26	Hallâ€“Petch Slope in Ultrafine Grained Al-Mg Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 4047-4057.	2.2	11
27	Assessment of creep damage models in the prediction of high-temperature creep behaviour of Alloy 617. International Journal of Pressure Vessels and Piping, 2019, 177, 103974.	2.6	14
28	On the effect of cold-rolling on the corrosion of SS316L alloy in a molten carbonate salt. Solar Energy Materials and Solar Cells, 2019, 202, 110136.	6.2	16
29	Validated prediction of weld residual stresses in austenitic steel pipe girth welds before and after thermal ageing, part 1: Mock-up manufacture, residual stress measurements, and materials characterisation. International Journal of Pressure Vessels and Piping, 2019, 172, 233-250.	2.6	14
30	On the measurement of dislocations and dislocation substructures using EBSD and HRSD techniques. Acta Materialia, 2019, 175, 297-313.	7.9	128
31	Energy-resolved neutron imaging options at a small angle neutron scattering instrument at the Australian Center for Neutron Scattering. Review of Scientific Instruments, 2019, 90, 035114.	1.3	9
32	Controlling Oxygen Defect Formation and Its Effect on Reversible Symmetry Lowering and Disorder-to-Order Phase Transformations in Nonstoichiometric Ternary Uranium Oxides. Inorganic Chemistry, 2019, 58, 6143-6154.	4.0	14
33	Validated prediction of weld residual stresses in austenitic steel pipe girth welds before and after thermal ageing, part 2: Modelling and validation. International Journal of Pressure Vessels and Piping, 2019, 172, 430-448.	2.6	6
34	The effect of ball-milling time and annealing temperature on fracture toughness of Ni-3â€¯wt.% SiC using small punch testing. Materials Characterization, 2018, 138, 289-295.	4.4	10
35	Investigating optimal cutting configurations for the contour method of weld residual stress measurement. International Journal of Pressure Vessels and Piping, 2018, 164, 55-67.	2.6	21
36	Assessment of welding-induced plasticity via electron backscatter diffraction. International Journal of Pressure Vessels and Piping, 2018, 164, 32-38.	2.6	5

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37	Evaluation of a self-equilibrium cutting strategy for the contour method of residual stress measurement. International Journal of Pressure Vessels and Piping, 2018, 164, 22-31.	2.6	10
38	Simultaneous X-ray diffraction, crystallography and fluorescence mapping using the Maia detector. Acta Materialia, 2018, 144, 1-10.	7.9	12
39	Optimised modelling of AISI 316L(N) material behaviour in the NeT TG4 international weld simulation and measurement benchmark. International Journal of Pressure Vessels and Piping, 2018, 164, 93-108.	2.6	11
40	Corrosion performance of Ni-16%wt.Mo-X%wt.SiC alloys in FLiNaK molten salt. Corrosion Science, 2018, 143, 240-248.	6.6	15
41	The effect of cold-rolling on the microstructure and corrosion behaviour of 316L alloy in FLiNaK molten salt. Corrosion Science, 2018, 142, 133-144.	6.6	38
42	Heterogeneous microstructure of an Al2O3 dispersion strengthened Cu by spark plasma sintering and extrusion and its effect on tensile properties and electrical conductivity. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 730, 328-335.	5.6	23
43	Effects of strain rate on the microstructure evolution and mechanical response of magnesium alloy AZ31. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 684, 37-46.	5.6	41
44	On the origin of strengthening mechanisms in Ni-Mo alloys prepared via powder metallurgy. Materials and Design, 2017, 113, 223-231.	7.0	21
45	The Effect of Milling Time on the Microstructural Characteristics and Strengthening Mechanisms of NiMo-SiC Alloys Prepared via Powder Metallurgy. Materials, 2017, 10, 389.	2.9	5
46	The NeT Task Group 6 Weld Residual Stress Measurement and Simulation Round Robin in Alloy 600/82. , 2016, , .		2
47	Nuclear-Related Materials and Technology Research at ANSTO. , 2016, , .		0
48	Mitigating cutting-induced plasticity in the contour method, part 1: Experimental. International Journal of Solids and Structures, 2016, 94-95, 247-253.	2.7	28
49	Assessment of Welding-Induced Plasticity in Austenitic Steel Weldments. , 2016, , .		0
50	Mitigating cutting-induced plasticity in the contour method. Part 2: Numerical analysis. International Journal of Solids and Structures, 2016, 94-95, 254-262.	2.7	22
51	Measured Biaxial Residual Stress Maps in a Stainless Steel Weld. Journal of Nuclear Engineering and Radiation Science, 2015, 1, .	0.4	3
52	Numerical Analysis of Weld Residual Stress in a Pressurizer Surge Nozzle Full-Scale Mockup: The Effect of Hardening Constitutive Model and Interpass Temperature. , 2015, , .		0
53	Assessment of Weld Residual Stress Measurement Precision: Mock-Up Design and Results for the Contour Method. Journal of Nuclear Engineering and Radiation Science, 2015, 1, .	0.4	5
54	The influence of constitutive material models on accumulated plastic strain in finite element weld analyses. International Journal of Solids and Structures, 2015, 69-70, 518-530.	2.7	29

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55	A Validated Numerical Model for Residual Stress Predictions in an Eight-Pass-Welded Stainless Steel Plate. Materials Science Forum, 2014, 777, 46-51.	0.3	1
56	Modelling and Measuring Residual Stresses in Pipe Girth Welds: Lessons From the Style Framework 7 Project. , 2014, , .		1
57	Finite Element Modelling of Welded Austenitic Stainless Steel Plate With 8-Passes. , 2014, , .		2
58	Numerical analysis of retained residual stresses in C(T) specimen extracted from a multi-pass austenitic weld and their effect on crack growth. Engineering Fracture Mechanics, 2014, 126, 40-53.	4.3	13
59	Validation of a numerical model used to predict phase distribution and residual stress in ferritic steel weldments. Acta Materialia, 2014, 75, 1-19.	7.9	81
60	Load partitioning and evidence of deformation twinning in dual-phase fine-grained Zrâ€“2.5%Nb alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 564, 548-558.	5.6	17
61	Evaluation of residual stresses in electron-beam welded Zr2.5Nb0.9Hf Zircadyne flange mock-up of a reflector vessel beam tube flange. Journal of Nuclear Materials, 2013, 438, 154-162.	2.7	7
62	Influence of Phase Transformations on Residual Stresses in Welded Structures. , 2013, , .		0
63	The Role of Plasticity Theory on the Predicted Residual Stress Field of Weld Structures. Materials Science Forum, 2013, 772, 65-71.	0.3	6
64	Round Robin Prediction of Residual Stresses in the Edge-Welded Beam R6 Validation Benchmark Problem. , 2013, , .		3
65	Optimised Modelling of Weld Metal Constitutive Behaviour in the Net TG4 International Weld Simulation and Measurement Benchmark. , 2012, , .		4
66	The Impact of Axi-Symmetric Boundary Conditions on Predicted Residual Stress and Shrinkage in a PWR Nozzle Dissimilar Metal Weld. , 2012, , .		1
67	Prediction and Measurement of Weld Residual Stresses in Thermally Aged Girth-Welded Austenitic Steel Pipes. , 2012, , .		1
68	Predicting Post-Weld Residual Stresses in Ferritic Steel Weldments. , 2012, , .		1
69	Validated numerical analysis of residual stresses in safety relief valve (SRV) nozzle mock-ups: Influence of axial restraint on distortion and residual stress predictions. Computational Materials Science, 2012, 62, 285-288.	3.0	9
70	The effect of plasticity theory on predicted residual stress fields in numerical weld analyses. Computational Materials Science, 2012, 54, 125-134.	3.0	102
71	Numerical analysis of the effect of weld-induced residual stress and plastic damage on the ballistic performance of welded steel plate. Computational Materials Science, 2012, 58, 131-139.	3.0	37
72	Comprehensive numerical analysis of a three-pass bead-in-slot weld and its critical validation using neutron and synchrotron diffraction residual stress measurements. International Journal of Solids and Structures, 2012, 49, 1045-1062.	2.7	73

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73	Validated numerical analysis of residual stresses in Safety Relief Valve (SRV) nozzle mock-ups. Computational Materials Science, 2011, 50, 2203-2215.	3.0	50
74	The Impact of Key Simulation Variables on Predicted Residual Stresses in Pressuriser Nozzle Dissimilar Metal Weld Mock-Ups: Part 2â€"Comparison of Simulation and Measurements. , 2010, , .		8
75	On the correlation between deformation twinning and LÃ¼ders-like deformation in an extruded Mg alloy: In situ neutron diffraction and EPSC.4 modelling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 1383-1394.	5.6	76
76	Investigation of deformation twinning in a fine-grained and coarse-grained ZM20 Mg alloy: Combined in situ neutron diffraction and acoustic emission. Acta Materialia, 2010, 58, 1503-1517.	7.9	175
77	In situ neutron diffraction investigation of deformation twinning and pseudoelastic-like behaviour of extruded AZ31 magnesium alloy. International Journal of Plasticity, 2009, 25, 1107-1127.	8.8	184
78	The Structure Dependence of Deformation Behavior of Transformation-Induced Plasticityâ€"Assisted Steel Monitoring by In-Situ Neutron Diffraction. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 3097-3104.	2.2	13
79	In situ neutron diffraction investigation of the collaborative deformationâ€"transformation mechanism in TRIP-assisted steels at room and elevated temperatures. Acta Materialia, 2008, 56, 3367-3379.	7.9	113
80	Effect of processing conditions on structure development and mechanical response of Siâ€"Mn â€˜TRIPâ€™ steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 483-484, 71-75.	5.6	13
81	Investigation of deformation mechanisms involved in the plasticity of AZ31 Mg alloy: In situ neutron diffraction and EPSC modelling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 496, 14-24.	5.6	147
82	In Situ Neutron Diffraction Studies of the Pseudoelastic-Like Behaviour of Hydrostatically Extruded Mg-Al-Zn Alloy. Materials Science Forum, 2008, 571-572, 107-112.	0.3	3
83	In situ neutron diffraction study of the low cycle fatigue of the Î±â^²Î³ duplex stainless steel. Physica B: Condensed Matter, 2006, 385-386, 597-599.	2.7	8
84	Retained austenite stability investigation in TRIP steel using neutron diffraction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 437, 114-119.	5.6	24
85	Austenite-to-ferrite transformation in low alloy steels during thermomechanically controlled process studied by in situ neutron diffraction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 435-436, 46-53.	5.6	25
86	Neutron diffraction analysis of retained austenite stability in Mnâ€"Si steel during plastic deformation. Physica B: Condensed Matter, 2006, 385-386, 587-589.	2.7	7
87	In Situ Neutron Diffraction during Thermo-Mechanically Controlled Process in Low Alloy Steels. Solid State Phenomena, 2006, 118, 419-424.	0.3	1
88	In Situ Neutron Diffraction Analysis of Phase Transformation Kinetics in TRIP Steel. Materials Science Forum, 2005, 502, 339-344.	0.3	7
89	Neutron Diffraction Studies of Si-Mn Trip Steel In Situ upon Thermomechanical Processing. Journal of Neutron Research, 2004, 12, 243-248.	1.1	1
90	Degradation of creep properties in a long-term thermally exposed nickel base superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 387-389, 728-733.	5.6	26

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91	Combined <i>In Situ</i> Neutron Diffraction and Acoustic Emission of Twin Nucleation & Twin Growth in Extruded ZM20 Mg Alloy. Materials Science Forum, 0, 652, 149-154.	0.3	3
92	Deformation Behaviour of TRIP Steel Monitoring by <i>in-Situ</i> Neutron Diffraction. Key Engineering Materials, 0, 465, 390-394.	0.4	1
93	Predicting Solid-State Phase Transformations during Welding of Ferritic Steels. Materials Science Forum, 0, 706-709, 1403-1408.	0.3	4
94	Deformation Behaviour of TRIP Steel Monitored by <i>In Situ</i> Neutron Diffraction. Advanced Materials Research, 0, 939, 25-30.	0.3	0
95	Impact of Microstructure Modification on Deformation Behaviour of Bulk TRIP Steel. Materials Science Forum, 0, 782, 99-103.	0.3	0
96	The Influence of Austenite Grain Size during Welding Simulations of Ferritic Steels. Advanced Materials Research, 0, 996, 512-517.	0.3	2
97	A Comparison of the Constitutive Response of Austenitic and Ferritic Steels under Welding Processes. Materials Science Forum, 0, 905, 83-90.	0.3	0