Alexander M. Korsunsky

List of Publications by Year
in descending order

455	10,382	38742 50	64796 79
papers	citations	h-index	g-index

479	479	479	8821
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	On the hardness of coated systems. Surface and Coatings Technology, 1998, 99, 171-183.	4.8	518
2	Ultrafast Three-Dimensional Imaging of Lattice Dynamics in Individual Gold Nanocrystals. Science, 2013, 341, 56-59.	12.6	264
3	Solution of Crack Problems. Solid Mechanics and Its Applications, 1996, , .	0.2	263
4	3D-printed PEEK-carbon fiber (CF) composites: Structure and thermal properties. Composites Science and Technology, 2018, 164, 319-326.	7.8	185
5	A review of experimental approaches to fracture toughness evaluation at the micro-scale. Materials and Design, 2019, 173, 107762.	7.0	167
6	A Na+ Superionic Conductor for Room-Temperature Sodium Batteries. Scientific Reports, 2016, 6, 32330.	3.3	160
7	Residual stress evaluation at the micrometer scale: Analysis of thin coatings by FIB milling and digital image correlation. Surface and Coatings Technology, 2010, 205, 2393-2403.	4.8	152
8	Focused ion beam ring drilling for residual stress evaluation. Materials Letters, 2009, 63, 1961-1963.	2.6	146
9	Comparative assessment of dissipated energy and other fatigue criteriaâ˜†. International Journal of Fatigue, 2007, 29, 1990-1995.	5.7	141
10	A neutron-diffraction study of the low-cycle fatigue behaviour of an austenitic stainless steel 316. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s125-s125.	0.3	140
11	Crack growth micro-mechanisms in the IN718 alloy under the combined influence of fatigue, creep and oxidation. International Journal of Fatigue, 2009, 31, 1966-1977.	5.7	119
12	Composite NASICON (Na₃Zr₂Si₂PO₁₂) Solid-State Electrolyte with Enhanced Na⁺ Ionic Conductivity: Effect of Liquid Phase Sintering. ACS Applied Materials & Interfaces, 2019, 11, 40125-40133.	8.0	115
13	Advances in additive manufacturing process simulation: Residual stresses and distortion predictions in complex metallic components. Materials and Design, 2020, 193, 108779.	7.0	113
14	On the application of the work-of-indentation approach to depth-sensing indentation experiments in coated systems. Surface and Coatings Technology, 2001, 137, 217-224.	4.8	112
15	A review of geometrical and microstructural size effects in micro-scale deformation processing of metallic alloy components. International Journal of Machine Tools and Manufacture, 2016, 109, 94-125.	13.4	109
16	Separating plasticity-induced closure and residual stress contributions to fatigue crack retardation following an overload. Journal of the Mechanics and Physics of Solids, 2017, 98, 222-235.	4.8	108
17	Evaluation of residual stresses and strains using the Eigenstrain Reconstruction Method. International Journal of Solids and Structures, 2010, 47, 1678-1686.	2.7	106
18	Variational eigenstrain analysis of residual stresses in a welded plate. International Journal of Solids and Structures, 2007, 44, 4574-4591.	2.7	89

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19	On the fragmentation of active material secondary particles in lithium ion battery cathodes induced by charge cycling. Extreme Mechanics Letters, 2016, 9, 449-458.	4.1	86
20	The modelling of residual stresses due to surface peening using eigenstrain distributions. Journal of Strain Analysis for Engineering Design, 2005, 40, 817-824.	1.8	83
21	Modelling of the hardness of electroplated nickel coatings on copper substrates. Surface and Coatings Technology, 2000, 127, 1-8.	4.8	82
22	A review of micro-scale focused ion beam milling and digital image correlation analysis for residual stress evaluation and error estimation. Surface and Coatings Technology, 2015, 283, 373-388.	4.8	81
23	Highly stretchable two-dimensional auxetic metamaterial sheets fabricated via direct-laser cutting. International Journal of Mechanical Sciences, 2020, 167, 105242.	6.7	81
24	An analysis of macro- and micro-scale residual stresses of Type I, II and III using FIB-DIC micro-ring-core milling and crystal plasticity FE modelling. International Journal of Plasticity, 2017, 98, 123-138.	8.8	79
25	Mapping two-dimensional state of strain using synchroton X-ray diffraction. Scripta Materialia, 1998, 39, 1705-1712.	5.2	77
26	Indentation hardness evaluation of cathodic arc deposited thin hard coatings. Surface and Coatings Technology, 2001, 139, 63-74.	4.8	77
27	Nano-structural changes in Li-ion battery cathodes during cycling revealed by FIB-SEM serial sectioning tomography. Journal of Materials Chemistry A, 2015, 3, 18171-18179.	10.3	74
28	Eigenstrain reconstruction of residual strains in an additively manufactured and shot peened nickel superalloy compressor blade. Computer Methods in Applied Mechanics and Engineering, 2017, 320, 335-351.	6.6	74
29	A nonlocal coupled damage-plasticity model for the analysis of ductile failure. International Journal of Plasticity, 2015, 64, 56-75.	8.8	73
30	Crystallochemical aspects of solid state reactions in mechanically alloyed Alâ€“Cuâ€“Fe quasicrystalline powders. Acta Materialia, 2001, 49, 1821-1833.	7.9	67
31	High Li ion conductivity in a garnet-type solid electrolyte via unusual site occupation of the doping Ca ions. Materials and Design, 2016, 93, 232-237.	7.0	67
32	Grain refinement and fatigue strengthening mechanisms in as-extruded Mgâ€“6Znâ€“0.5Zr and Mgâ€“10Gdâ€“3Yâ€“0.5Zr magnesium alloys by shot peening. International Journal of Plasticity, 2013, 49, 16-35.	8.8	66
33	Multi-scale mechanisms of twinning-detwinning in magnesium alloy AZ31B simulated by crystal plasticity modeling and validated via in situ synchrotron XRD and in situ SEM-EBSD. International Journal of Plasticity, 2019, 119, 43-56.	8.8	64
34	Three-dimensional crack observation, quantification and simulation in a quasi-brittle material. Acta Materialia, 2013, 61, 6276-6289.	7.9	62
35	Nanoscale chemical mapping of Li-ion battery cathode material by FIB-SEM and TOF-SIMS multi-modal microscopy. Nano Energy, 2015, 17, 254-260.	16.0	62
36	Micro selective laser melting of NiTi shape memory alloy: Defects, microstructures and thermal/mechanical properties. Optics and Laser Technology, 2020, 131, 106374.	4.6	61

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37	Residual stresses in Linear Friction Welding of aluminium alloys. Materials & Design, 2013, 50, 360-369.	5.1	60
38	Influence of heat treatment on fatigue behaviour of high-strength Mgâ€“10Gdâ€“3Y alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 6053-6063.	5.6	59
39	Imaging transient melting of a nanocrystal using an X-ray laser. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7444-7448.	7.1	59
40	Photoluminescence Segmentation within Individual Hexagonal Monolayer Tungsten Disulfide Domains Grown by Chemical Vapor Deposition. ACS Applied Materials & Interfaces, 2017, 9, 15005-15014.	8.0	59
41	A critical comparison between XRD and FIB residual stress measurement techniques in thin films. Thin Solid Films, 2014, 572, 224-231.	1.8	58
42	Residual elastic strain due to laser shock peening: Modelling by eigenstrain distribution. Journal of Strain Analysis for Engineering Design, 2006, 41, 195-204.	1.8	57
43	Development of an approach to constitutive modelling of concrete: Isotropic damage coupled with plasticity. International Journal of Solids and Structures, 2008, 45, 5483-5501.	2.7	56
44	Improvement of fatigue properties by shot peening for Mgâ€“10Gdâ€“3Y alloys under different conditions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 5935-5944.	5.6	56
45	Eigenstrain analysis of residual strains and stresses. Journal of Strain Analysis for Engineering Design, 2009, 44, 29-43.	1.8	55
46	A study of overload effect on fatigue crack propagation using EBSD, FIBâ€“DIC and FEM methods. Engineering Fracture Mechanics, 2016, 167, 210-223.	4.3	54
47	The influence of welding procedure and plate geometry on residual stresses in thick components. International Journal of Solids and Structures, 2016, 80, 420-429.	2.7	54
48	Nanoscale residual stress depth profiling by Focused Ion Beam milling and eigenstrain analysis. Materials and Design, 2018, 145, 55-64.	7.0	54
49	Mechanical and microstructural characterization of 2124Al/25vol.%SiCp joints obtained by linear friction welding (LFW). Composites Part A: Applied Science and Manufacturing, 2010, 41, 1028-1037.	7.6	52
50	An eigenstrain-based finite element model and the evolution of shot peening residual stresses during fatigue of GW103 magnesium alloy. International Journal of Fatigue, 2012, 42, 284-295.	5.7	51
51	Synchrotron X-ray quantitative evaluation of transient deformation and damage phenomena in a single nickel-rich cathode particle. Energy and Environmental Science, 2020, 13, 3556-3566.	30.8	51
52	Crack tip deformation fields and fatigue crack growth rates in Tiâ€“6Alâ€“4Vâ˜†. International Journal of Fatigue, 2009, 31, 1771-1779.	5.7	50
53	The effect of eigenstrain induced by ion beam damage on the apparent strain relief in FIB-DIC residual stress evaluation. Materials and Design, 2016, 92, 649-658.	7.0	50
54	Fast residual stress mapping using energy-dispersive synchrotron X-ray diffraction on station 16.3 at the SRS. Journal of Synchrotron Radiation, 2002, 9, 77-81.	2.4	49

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55	An analysis of fatigue failure mechanisms in an additively manufactured and shot peened IN 718 nickel superalloy. Materials and Design, 2020, 191, 108605.	7.0	48
56	Evaluation and analysis of residual stresses due to foreign object damage. Mechanics of Materials, 2007, 39, 199-211.	3.2	46
57	Structure-morphology correlation in electrospun fibers of semicrystalline polymers by simultaneous synchrotron SAXS-WAXD. Polymer, 2015, 63, 154-163.	3.8	46
58	A state-of-the-art review of micron-scale spatially resolved residual stress analysis by FIB-DIC ring-core milling and other techniques. Journal of Strain Analysis for Engineering Design, 2015, 50, 426-444.	1.8	46
59	In situ neutron diffraction investigation of texture-dependent Shape Memory Effect in a near equiatomic NiTi alloy. Acta Materialia, 2021, 202, 135-148.	7.9	45
60	Micro-scale measurement & FEM modelling of residual stresses in AA6082-T6 Al alloy generated by wire EDM cutting. Journal of Materials Processing Technology, 2020, 275, 116373.	6.3	44
61	Intergranular stresses in polycrystalline fatigue: diffraction measurement and self-consistent modelling. Engineering Fracture Mechanics, 2004, 71, 805-812.	4.3	43
62	Development and characterization of low friction coatings for protection against fretting wear in aerospace components. Thin Solid Films, 2008, 516, 5690-5699.	1.8	43
63	Uncertainty quantification of residual stress evaluation by the FIBâ€“DIC ring-core method due to elastic anisotropy effects. International Journal of Solids and Structures, 2016, 87, 61-69.	2.7	43
64	Strain tomography of polycrystalline zirconia dental prostheses by synchrotron X-ray diffraction. Acta Materialia, 2011, 59, 2501-2513.	7.9	42
65	Residual stress measurement in thin films at sub-micron scale using Focused Ion Beam milling and imaging. Thin Solid Films, 2012, 520, 2073-2076.	1.8	42
66	Strengthening mechanisms in an Al-Fe-Cr-Ti nano-quasicrystalline alloy and composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 672, 175-183.	5.6	42
67	How to connect two scales of behaviour in constitutive modelling of geomaterials. Geotechnique Letters, 2012, 2, 129-134.	1.2	41
68	An Arrhenius equation-based model to predict the residual stress relief of post weld heat treatment of Ti-6Al-4V plate. Journal of Manufacturing Processes, 2018, 32, 763-772.	5.9	41
69	Residual stresses in single particle splat of metal cold spray process â€“ Numerical simulation and direct measurement. Materials Letters, 2018, 230, 152-156.	2.6	41
70	Residual Strain Measurement by Synchrotron Diffraction. Materials Science Forum, 2002, 404-407, 1-12.	0.3	40
71	Multiple-length-scale deformation analysis in a thermoplastic polyurethane. Nature Communications, 2015, 6, 6583.	12.8	40
72	The principle of strain reconstruction tomography: Determination of quench strain distribution from diffraction measurements. Acta Materialia, 2006, 54, 2101-2108.	7.9	39

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73	The character of dislocation structure evolution in nanocrystalline FCC Ni-Co alloys prepared by high-energy mechanical milling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1999, 271, 196-205.	5.6	38
74	Work of indentation approach to the analysis of hardness and modulus of thin coatings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 423, 28-35.	5.6	38
75	Evaluation of the overload effect on fatigue crack growth with the help of synchrotron XRD strain mapping. Engineering Fracture Mechanics, 2010, 77, 3216-3226.	4.3	38
76	Dissipated energy and fretting damage in CoCrAlY-MoS2 coatings. Tribology International, 2010, 43, 676-684.	5.9	38
77	Nanoscale structural damage due to focused ion beam milling of silicon with Ga ions. Materials Letters, 2018, 213, 346-349.	2.6	38
78	Separating macro- (Type I) and micro- (Type II+III) residual stresses by ring-core FIB-DIC milling and eigenstrain modelling of a plastically bent titanium alloy bar. Acta Materialia, 2018, 156, 43-51.	7.9	38
79	The principle of equivalent eigenstrain for inhomogeneous inclusion problems. International Journal of Solids and Structures, 2014, 51, 4477-4484.	2.7	37
80	A constitutive modelling framework featuring two scales of behaviour: Fundamentals and applications to quasi-brittle failure. Engineering Fracture Mechanics, 2014, 115, 221-240.	4.3	37
81	Quantifying eigenstrain distributions induced by focused ion beam damage in silicon. Materials Letters, 2016, 185, 47-49.	2.6	36
82	An experimental and numerical analysis of residual stresses in a TIG weldment of a single crystal nickel-base superalloy. Journal of Manufacturing Processes, 2020, 53, 190-200.	5.9	36
83	A simplified FEM eigenstrain residual stress reconstruction for surface treatments in arbitrary 3D geometries. International Journal of Mechanical Sciences, 2018, 138-139, 457-466.	6.7	35
84	Feasibility study of neutron strain tomography. Procedia Engineering, 2009, 1, 185-188.	1.2	34
85	Effect of microstructures and texture development on tensile properties of Mgâ€“10Gdâ€“3Y alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 2250-2258.	5.6	34
86	Reconstruction of axisymmetric strain distributions via neutron strain tomography. Nuclear Instruments & Methods in Physics Research B, 2012, 270, 28-35.	1.4	33
87	Residual stresses and microstructure in Powder Bed Direct Laser Deposition (PB DLD) samples. International Journal of Material Forming, 2015, 8, 245-254.	2.0	33
88	Mitigated phase transition during first cycle of a Li-rich layered cathode studied by in operando synchrotron X-ray powder diffraction. Physical Chemistry Chemical Physics, 2016, 18, 4745-4752.	2.8	33
89	Finite element modelling and diffraction measurement of elastic strains during tensile deformation of HCP polycrystals. Computational Materials Science, 2008, 44, 131-137.	3.0	32
90	Symbolic and numerical solution of the axisymmetric indentation problem for a multilayered elastic coating. International Journal of Solids and Structures, 2013, 50, 2798-2807.	2.7	32

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91	Design and mechanical properties of 3D-printed auxetic honeycomb structure. Materials Today Communications, 2020, 24, 101173.	1.9	32
92	Inverse Eigenstrain Analysis of the Effect of Non-uniform Sample Shape on the Residual Stress Due to Shot Peening. Experimental Mechanics, 2011, 51, 165-174.	2.0	31
93	On The Use Of Vector J-Integral In Crack Growth Criteria For Brittle Solids. International Journal of Fracture, 2005, 133, L39-L46.	2.2	30
94	Operando X-ray Absorption Spectroscopy Study of Atomic Phase Reversibility with Wavelet Transform in the Lithium-Rich Manganese Based Oxide Cathode. Chemistry of Materials, 2016, 28, 4191-4203.	6.7	30
95	Influence of Particle Velocity When Propelled Using N2 or N2-He Mixed Gas on the Properties of Cold-Sprayed Ti6Al4V Coatings. Coatings, 2018, 8, 327.	2.6	30
96	Focused ion beam four-slot milling for Poisson's ratio and residual stress evaluation at the micron scale. Surface and Coatings Technology, 2014, 251, 151-161.	4.8	29
97	Explicit formulae for the internal stress in spherical particles of active material within lithium ion battery cathodes during charging and discharging. Materials & Design, 2015, 69, 247-252.	5.1	29
98	Strain softening of nano-scale fuzzy interfaces causes Mullins effect in thermoplastic polyurethane. Scientific Reports, 2017, 7, 916.	3.3	29
99	Generalised residual stress depth profiling at the nanoscale using focused ion beam milling. Journal of the Mechanics and Physics of Solids, 2019, 125, 488-501.	4.8	29
100	Mechanical properties of thin carbon overcoats. Tribology International, 1998, 31, 547-551.	5.9	28
101	Quasicrystalline phase formation by heating a mechanically alloyed Al65Cu23Fe12 powder mixture. Journal of Non-Crystalline Solids, 2002, 312-314, 522-526.	3.1	28
102	Energy calibration and full-pattern refinement for strain analysis using energy-dispersive and monochromatic X-ray diffraction. Journal of Applied Crystallography, 2005, 38, 661-667.	4.5	28
103	Analysis of strain error sources in micro-beam Laue diffraction. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 660, 130-137.	1.6	28
104	Diametrical growth in the forward flow forming process: simulation, validation, and prediction. International Journal of Advanced Manufacturing Technology, 2014, 71, 207-217.	3.0	28
105	On the identification of eigenstrain sources of welding residual stress in bead-on-plate inconel 740H specimens. International Journal of Mechanical Sciences, 2018, 145, 231-245.	6.7	27
106	Probing the complex thermo-mechanical properties of a 3D-printed polylactide-hydroxyapatite composite using in situ synchrotron X-ray scattering. Journal of Advanced Research, 2019, 16, 113-122.	9.5	27
107	The correlation between plastic strain and anisotropy strain in aluminium alloy polycrystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 334, 41-48.	5.6	26
108	The effect of path cut on Somigliana ring dislocation elastic fields. International Journal of Solids and Structures, 2007, 44, 6653-6677.	2.7	26

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109	On the micromechanics of micro-cantilever sensors: Property analysis and eigenstrain modeling. Sensors and Actuators A: Physical, 2007, 139, 70-77.	4.1	26
110	Dissipated energy and friction coefficient evolution during fretting wear of solid lubricant coatings. Tribology International, 2010, 43, 861-867.	5.9	26
111	Neutron Strain Tomography using the Radon Transform. Materials Today: Proceedings, 2015, 2, S414-S423.	1.8	26
112	Influence of size effect and plastic strain gradient on the springback behaviour of metallic materials in microbending process. International Journal of Mechanical Sciences, 2018, 146-147, 105-115.	6.7	26
113	On the analysis of post weld heat treatment residual stress relaxation in Inconel alloy 740H by combining the principles of artificial intelligence with the eigenstrain theory. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 752, 180-191.	5.6	26
114	Fundamental formulation for frictional contact problems of coated systems. International Journal of Solids and Structures, 2004, 41, 2837-2854.	2.7	25
115	Effect of Substrate Surface Roughness on Microstructure and Mechanical Properties of Cold-Sprayed Ti6Al4V Coatings on Ti6Al4V Substrates. Journal of Thermal Spray Technology, 2019, 28, 1959-1973.	3.1	25
116	Evolution of thermal and mechanical properties of Nitinol wire as a function of ageing treatment conditions. Journal of Alloys and Compounds, 2020, 819, 153024.	5.5	25
117	The Solution of Crack Problems by Using Distributed Strain Nuclei. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 1996, 210, 23-31.	2.1	24
118	Direct evidence of initial pitting corrosion. Electrochemistry Communications, 2008, 10, 1000-1004.	4.7	24
119	The influence of indenter bluntness on the apparent contact stiffness of thin coatings. Thin Solid Films, 2009, 517, 4835-4844.	1.8	24
120	Analysis of the spray field development on a vertical surface during water spray-quenching using a flat spray nozzle. Applied Thermal Engineering, 2009, 29, 1406-1416.	6.0	24
121	In situ X-ray scattering evaluation of heat-induced ultrastructural changes in dental tissues and synthetic hydroxyapatite. Journal of the Royal Society Interface, 2014, 11, 20130928.	3.4	24
122	Xâ€ray Scattering Evaluation of Ultrastructural Changes in Human Dental Tissues with Thermal Treatment. Journal of Forensic Sciences, 2014, 59, 769-774.	1.6	24
123	Full in-plane strain tensor analysis using the microscale ring-core FIB milling and DIC approach. Journal of the Mechanics and Physics of Solids, 2016, 94, 47-67.	4.8	24
124	The effect of surface damage and residual stresses on the fatigue life of nickel superalloys at high temperature. International Journal of Fatigue, 2019, 119, 34-42.	5.7	24
125	Laue-DIC: a new method for improved stress field measurements at the micrometer scale. Journal of Synchrotron Radiation, 2015, 22, 980-994.	2.4	23
126	Understanding natureâ€™s residual strain engineering at the human dentineâ€“enamel junction interface. Acta Biomaterialia, 2016, 32, 256-263.	8.3	23

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127	Nanoscale Depth Profiling of Residual Stresses Due to Fine Surface Finishing. Advanced Materials Interfaces, 2019, 6, 1900947.	3.7	23
128	The thermal expansion coefficient of mechanically alloyed Al-Cu-Fe quasicrystalline powders. Scripta Materialia, 2001, 44, 217-222.	5.2	22
129	Exponential evolution law of fretting wear damage in low-friction coatings for aerospace components. Surface and Coatings Technology, 2008, 202, 5838-5846.	4.8	22
130	Probing intra-granular deformation by micro-beam Laue diffraction. Procedia Engineering, 2009, 1, 193-196.	1.2	22
131	Multiscale modelling and diffraction-based characterization of elastic behaviour of human dentine. Acta Biomaterialia, 2013, 9, 7937-7947.	8.3	22
132	Elucidating the Mechanism of Fatigue Crack Acceleration Following the Occurrence of an Underload. Advanced Engineering Materials, 2016, 18, 2076-2087.	3.5	22
133	Nano-scale residual stress depth profiling in Cu/W nano-multilayers as a function of magnetron sputtering pressure. Surface and Coatings Technology, 2020, 381, 125142.	4.8	22
134	Acid-induced demineralisation of human enamel as a function of time and pH observed using X-ray and polarised light imaging. Acta Biomaterialia, 2021, 120, 240-248.	8.3	22
135	Imaging of grain-level orientation and strain in thicker metallic polycrystals by high energy transmission micro-beam Laue (HETL) diffraction techniques. International Journal of Materials Research, 2012, 103, 192-199.	0.3	22
136	Fundamental eigenstrain solutions for axisymmetric crack problems. Journal of the Mechanics and Physics of Solids, 1995, 43, 1221-1241.	4.8	21
137	High energy transmission micro-beam Laue synchrotron X-ray diffraction. Materials Letters, 2010, 64, 1302-1305.	2.6	21
138	Residual stress measurement in thin films using the semi-destructive ring-core drilling method using Focused Ion Beam. Procedia Engineering, 2011, 10, 2190-2195.	1.2	21
139	Transverse fatigue behaviour and residual stress analyses of double sided FSW aluminium alloy joints. Fatigue and Fracture of Engineering Materials and Structures, 2019, 42, 1980-1990.	3.4	21
140	Fast Mass-Production of Medical Safety Shields under COVID-19 Quarantine: Optimizing the Use of University Fabrication Facilities and Volunteer Labor. International Journal of Environmental Research and Public Health, 2020, 17, 3418.	2.6	21
141	Increased connectivity of hiPSC-derived neural networks in multiphase granular hydrogel scaffolds. Bioactive Materials, 2022, 9, 358-372.	15.6	21
142	Variational eigenstrain analysis of synchrotron diffraction measurements of residual elastic strain in a bent titanium alloy bar. Journal of Mechanics of Materials and Structures, 2006, 1, 259-277.	0.6	20
143	Residual elastic strain due to laser shock peening: Synchrotron diffraction measurement. Journal of Strain Analysis for Engineering Design, 2006, 41, 113-120.	1.8	20
144	Inverse eigenstrain analysis of residual stresses in friction stir welds. Procedia Engineering, 2009, 1, 213-216.	1.2	20

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145	Residual strains in AA2024/AlSiCp composite linear friction welds. Materials & Design, 2010, 31, S117-S120.	5.1	20
146	Structure-mechanical function relations at nano-scale in heat-affected human dental tissue. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 32, 113-124.	3.1	20
147	In operando X-ray absorption spectroscopy study of charge rate effects on the atomic environment in graphene-coated Li-rich mixed oxide cathode. Materials and Design, 2016, 98, 231-242.	7.0	20
148	Achieving Triply Periodic Minimal Surface Thin-Walled Structures by Micro Laser Powder Bed Fusion Process. Micromachines, 2021, 12, 705.	2.9	20
149	Gauss-Chebyshev quadrature formulae for strongly singular integrals. Quarterly of Applied Mathematics, 1998, 56, 461-472.	0.7	19
150	Determination of essential work of necking and tearing from a single tensile test. International Journal of Fracture, 2005, 132, 37-44.	2.2	19
151	Triaxial residual strains in a railway rail measured by neutron diffraction. Journal of Strain Analysis for Engineering Design, 2009, 44, 563-568.	1.8	19
152	The use of coupled nonlocal damage-plasticity to predict crack growth in ductile metal plates. Engineering Fracture Mechanics, 2010, 77, 1721-1729.	4.3	19
153	Calculations of single crystal elastic constants for yttria partially stabilised zirconia from powder diffraction data. Journal of Applied Physics, 2014, 116, .	2.5	19
154	Experimental and modelling characterisation of residual stresses in cylindrical samples of rapidly cooled bulk metallic glass. Materials and Design, 2016, 104, 235-241.	7.0	19
155	Multiscale analysis of bamboo deformation mechanisms following NaOH treatment using X-ray and correlative microscopy. Acta Biomaterialia, 2018, 72, 329-341.	8.3	19
156	Coupled Eulerian-Lagrangian (CEL) simulation of multiple particle impact during Metal Cold Spray process for coating porosity prediction. Surface and Coatings Technology, 2020, 385, 125433.	4.8	19
157	Preparation and Analysis of Quasicrystalline Phases by High Energy Ball Milling and X-Ray Diffraction. Materials Science Forum, 2000, 321-324, 676-681.	0.3	18
158	Residual Elastic Strains in Autofrettaged Tubes: Elasticâ€“Ideally Plastic Model Analysis. Journal of Engineering Materials and Technology, Transactions of the ASME, 2007, 129, 77-81.	1.4	18
159	High-tech composites to ancient metals. Materials Today, 2009, 12, 78-84.	14.2	18
160	Analysis of residual strain and stress states due to heat treatment and thermal processing. Journal of Strain Analysis for Engineering Design, 2009, 44, 71-91.	1.8	18
161	Microstructure, residual strain, and eigenstrain analysis of dissimilar friction stir welds. Materials & Design, 2010, 31, S121-S125.	5.1	18
162	Dislocation-based plasticity model and micro-beam Laue diffraction analysis of polycrystalline Ni foil: A forward prediction. Philosophical Magazine, 2010, 90, 3999-4011.	1.6	18

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163	Effects of imposed displacement and initial coating thickness on fretting behaviour of a thermally sprayed coating. Wear, 2011, 271, 1080-1085.	3.1	18
164	Investigation of Martensite Transformation in 316L Stainless Steel. Materials Today: Proceedings, 2015, 2, S251-S260.	1.8	18
165	The inclusion of short-transverse displacements in the eigenstrain reconstruction of residual stress and distortion in in740h weldments. Journal of Manufacturing Processes, 2018, 36, 601-612.	5.9	18
166	Evaluation of macro- and microscopic residual stresses in laser shock-peened titanium alloy by FIB-DIC ring-core milling with different core diameters. Surface and Coatings Technology, 2018, 349, 719-724.	4.8	18
167	Analysis of in vitro demineralised human enamel using multi-scale correlative optical and scanning electron microscopy, and high-resolution synchrotron wide-angle X-ray scattering. Materials and Design, 2021, 206, 109739.	7.0	18
168	Residual stresses in rolled and machined nickel alloy plates: Synchrotron X-ray diffraction measurement and three-dimensional eigenstrain analysis. Journal of Strain Analysis for Engineering Design, 2007, 42, 1-12.	1.8	17
169	Nano-scale mapping of lattice strain and orientation inside carbon core SiC fibres by synchrotron X-ray diffraction. Carbon, 2014, 79, 85-92.	10.3	17
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